

MEMORANDUM

DATE: August 11, 2025

To: Sean Reilly, Principal Planner, City of Redlands

FROM: Lauren Peachey, Environmental Planner
Ryan Bensley, Principal Environmental Planner

SUBJECT: 913 California Street Initial Study/Mitigated Negative Declaration - Response to Comments

In accordance with Section 15074 of the *State CEQA Guidelines*, prior to approving a project, the decision-making body of the lead agency shall consider the proposed environmental document together with any comments received during the public review process. Although there is no legal requirement to formally respond to comments on a proposed Mitigated Negative Declaration (MND) as there is for an Environmental Impact Report (EIR), this memorandum provides a response to the written comments received on the 913 California Street Project Initial Study/Mitigated Negative Declaration (IS/MND) to aid the City of Redlands (City) decision-makers in their review of the proposed project.

The IS/MND was initially circulated for public review for a period of 32 days, from June 5, 2025, to July 7, 2025. On July 7, 2025, the City sent a notice to the State Clearinghouse to extend the public review period an additional 21 days, until July 28, 2025. Copies of the Draft IS/MND were made available for public review on the City's website (available at: <https://www.cityofredlands.org/post/environmental-review>) and at the City's office located at 35 Cajon Street, Suite 20, Redlands, California. Three comment letters were received during the public review period.

The comment letters received by the City during the IS/MND public review period are included in this memorandum, followed by the respective responses. As noted above, CEQA does not require or provide guidance on responding to comments on MNDs; therefore, this memorandum follows *State CEQA Guidelines* Section 15088, applicable to responses to comments on EIRs, which requires that agencies respond only to significant environmental issues raised in connection with the proposed project. Therefore, this document focuses primarily on responding to comments that relate to the adequacy of the information and environmental analysis provided in the IS/MND.

COMMENTS AND RESPONSES

This section includes responses to each substantive CEQA-related comment. The following is a list of the interested parties that commented on the IS/MND prior to the close of the public comment period. The comments received have been organized in a manner that facilitates a particular comment or set of comments. Each comment letter received is indexed with an alphanumeric code below.

Comment Letter Index

Comment Code	Signatory	Date
State Agencies		
S-1	Department of Toxic Substances Control (DTSC)	June 11, 2025
Organizations		
O-1	Adams, Broadwell, Joseph, and Cardozo, Attorneys at Law on behalf of Californians Allied for a Responsible Economy (CARE CA)	July 2, 2025
O-2	Adams, Broadwell, Joseph, and Cardozo, Attorneys at Law on behalf of CARE CA	July 28, 2025

The comment letter index number is provided at the top of the comment letter, and individual points within the letter are numbered along the right-hand margin of the letter. Written responses to all comments on the adequacy of the IS/MND are provided below. A reproduction of each comment letter received is provided as an attachment to this memorandum (Attachment A).

COMMENT LETTER S-1

Tamara Purvis, California Department of Toxic Substances Control (DTSC)
June 11, 2025

Response to Comment S-1-1

This introductory comment does not contain any substantive comments or questions about the environmental analysis or conclusions contained in the IS/MND and is noted. No further response is required.

Response to Comment S-1-2

This comment recommends that the City of Redlands address contamination found to be present within the project site through oversight from a self-certified local agency, the DTSC, or the Santa Ana Regional Water Quality Control Board (RWQCB), and provides the process for applying for DTSC oversight.

As discussed in Section 3.9, Hazards and Hazardous Materials, of the IS/MND, the project site currently contains three potential areas of concern associated with historical pesticide use at the project site. However, the results from the Phase II Limited Soil Vapor Assessment, which is included in Appendix F to the IS/MND, determined that perchloroethylene (PCE) concentrations near the proposed project are not deemed to pose a significant health risk to future on-site workers and did not recommend additional site remediation. Therefore, no additional remediation at the project site is required in conjunction with the proposed project.

Response to Comment S-1-3

This comment recommends that all imported soil and fill material should be tested to assess that any contaminants of concern meet screening levels as outlined in DTSC's Preliminary Endangerment Assessment (PEA) Guidance Manual in order to minimize the possibility of introducing contaminated soil and fill material to the project site. Additionally, DTSC advises referencing the DTSC Information Advisory Clean Imported Fill Material Fact Sheet if importing fill is necessary.

Construction of the proposed project is anticipated to result in approximately 5,000 cubic yards of cut and require approximately 35,000 cubic yards of fill, requiring the import of approximately 30,000 cubic yards of soil. Consistent with DTSC's guidance, the proposed project would be conditions to require all imported soil and fill material be tested or be provided from a source that is able to certify that the soil has been tested and meets established safety standards in order to minimize the possibility of introducing contaminated soil and fill material to the project site.

Response to Comment S-1-4

This comment concludes the comment letter. As this comment does not contain any substantive comments or questions about the environmental analysis or conclusions contained in the IS/MND, no further response is required.

COMMENT LETTER O-1

Alaura McGuire, Adams, Broadwell, Joseph, and Cardozo, Attorneys at Law on behalf of Californians Allied for a Responsible Economy (CARE CA)

July 2, 2025

Response to Comment O-1-1

This comment is introductory and requests that the public review period for the IS/MND be extended as not all of the documents referenced and relied upon in the IS/MND have been provided.

In response to this letter, the City extended the public review period by 20 days, until July 28, 2025.

Response to Comment O-1-2

This comment summarizes the law office's request for the documents referenced in the IS/MND on June 20, 2025, and the City's response on June 23, 2025, and provides a list of the remaining reference documents that still need to be provided.

The City sent a response letter on July 3, 2025, confirming receipt of the comment letter, stating that the reference documents would be provided. The response letter also confirmed that the City would extend the public review period until July 28, 2025.

Response to Comment O-1-3

This comment summarizes the requests contained in the comment letter, which are provided above, and requests that the City respond to the comment letter by July 3, 2025.

As described above in Response to Comment O-1-2, the City sent a response letter on July 3, 2025, confirming receipt of the comment letter, stating that all reference documents would be provided, and confirming that the public review period would be extended until July 28, 2025.

COMMENT LETTER O-2

**Alaura McGuire, Adams, Broadwell, Joseph, and Cardozo, Attorneys at Law on behalf of
CARE CA**

July 28, 2025

Response to Comment O-2-1

This comment is introductory, provides a summary of the proposed project, and does not contain any substantive comments or questions about the environmental analysis or conclusions contained in the IS/MND. No further response is required.

Response to Comment O-2-2

This comment states that the IS/MND has been reviewed by an air quality expert (James Clark, Ph.D.) and a noise expert (Jack Meighan of Wilson Ihrig) and that the IS/MND lacks substantial evidence to support the conclusions that potential impacts related to air quality, public health, noise, and hazards would be less than significant. The response to the specific concerns raised in the comment letter are provided in Response to Comment O-2-6 through O-2-16, below. As such, no further response to this comment is required.

Response to Comment O-2-3

This comment provides CARE CA's statement of interest and does not contain any substantive comments or questions about the environmental analysis or conclusions contained in the IS/MND. No further response is required.

Response to Comment O-2-4

This comment provides legal background regarding CEQA and the "fair argument" standard for environmental review. This comment also claims that the IS/MND fails to adequately disclose, investigate, and analyze the proposed project's potentially significant impacts during construction and operation, and fails to provide substantial evidence to support its conclusions that impacts will be mitigated to a less than significant level. The response to the specific concerns raised in the comment letter are provided in Responses to Comments O-2-6 through O-2-16, below. As such, no further response to this comment is required.

Response to Comment O-2-5

This comment asserts that the IS/MND fails to disclose or mitigate the potentially significant effects from exposure to Valley Fever spores disturbed during project construction, lacks a quantified construction health risk analysis of the proposed project's expected toxic air contaminant (TAC) emissions, fails to disclose significant health risk associated with construction TAC emissions, and fails to adequately analyze the proposed project's cumulative air quality impacts. These specific concerns are elaborated on in subsequent comments and the response to these specific concerns are provided in Responses to Comments O-2-6 through O-2-16, below. As such, no further response to this comment is required.

Response to Comment O-2-6

This comment relies on analysis provided by the commenter's air quality expert and claims that the proposed project would pose a significant public health risk to construction workers, nearby residences, and surrounding community members from exposure to Valley Fever spores released during project construction, and that the IS/MND does not adequately address this potential impact. Specifically, the comment argues that compliance with South Coast Air Quality Management District's (SCAQMD) Rule 403 related to fugitive dust control measures is inadequate to reduce the risks of Valley Fever exposure and that specific Valley Fever mitigation measures must be incorporated into the proposed project's mitigation plan, such as offering filtration for residences near the project site.

Although cases of Valley Fever have been reported in San Bernardino County, Valley Fever is not highly endemic to San Bernardino County. The closest sensitive receptors are located approximately 165 feet from the project boundary. Except under high wind conditions, this distance is sufficient for particulate matter to settle prior to reaching the nearest sensitive receptor. In addition, crosswinds influenced by the adjacent roadways would help dissipate any particulate matter associated with the construction phase of the project. Therefore, any Valley Fever spores suspended with the dust would not be anticipated to reach the sensitive receptors. In addition, most homes are equipped with heating, ventilation, and air conditioning (HVAC) filters to improve indoor air quality. While some older homes might have filters only at the main HVAC unit, newer homes often incorporate filters at return air vents throughout the house as well. Therefore, it is not anticipated that sensitive receptors would be exposed to Valley Fever spores.

However, during project construction, it is possible that workers could be exposed to Valley Fever spores through fugitive dust. San Bernardino County's Public Health Department recommends dust suppression methods such as wetting the soil during work or covering bare soil. Similarly, the California Department of Public Health recommends stopping outside activity during conditions where the dust cannot be controlled well. The proposed project would be required to comply with SCAQMD Rule 403 for dust suppression and would be required to implement measures that are consistent with the requirements of the County's Public Health Department and the California Department of Public Health. Furthermore, the proposed project would need to comply with SCAQMD Rule 403.1, which requires projects with 5,000 or more square feet of surface area disturbance to submit a Fugitive Dust Control Plan that would need to be approved by the SCAQMD or an authorized local government agency prior to initiating any construction/ earth-moving activity. The California Code of Regulations, Title 8, also includes additional regulations that the proposed project would need to comply with to further reduce worker exposure, such as Section 342 (Reporting Work-Connected Fatalities and Serious Injuries), Section 3203 (Injury and Illness Prevention), Section 5141 (Control of Harmful Exposures), Section 5144 (Respiratory Protection), and Section 14300 (Employer Records-Log 300). Therefore, with implementation of SCAQMD Rule 403, 403.1, and the California Code of Regulations, Title 8, and implementing measures consistent with the best practices recommended by the County's Public Health Department and the California Department of Public Health, dust from construction of the project is not anticipated to significantly add to the existing exposure of people to Valley Fever. As such, Valley Fever specific mitigation measures do not need to be incorporated into the proposed project's mitigation plan. The Air Quality, Greenhouse Gas, and Energy Impact Study prepared by MD Acoustics for the proposed

project has been revised to include a discussion of Valley Fever, and is provided in Attachment C of this memorandum.

Response to Comment O-2-7

This comment states that the IS/MND fails to analyze the potentially significant air quality and health risk impacts from the proposed project's use of fire pumps and back-up generators.

The proposed project would include a diesel-fueled back-up generator as an emergency power source for the proposed fire pump. The diesel-fueled back-up generator would only be active during emergency situations and for routine maintenance and testing and would not contribute to regular daily emissions from proposed project operations. Furthermore, as provided in Table 3.3.C of the IS/MND, operational particulate matter less than 10 microns in size (PM₁₀) emissions, which include diesel particulate matter (DPM), from operation of the proposed project would be 12.05 pounds per day (lbs/day), which is far below the SCAQMD's operational threshold of 150 lbs/day for regional emissions. In addition, operational PM₁₀ emissions associated with the proposed project would be 1.25 lbs/day for localized conditions, which is far below the SCAQMD's threshold of 11 lbs/day for localized emissions. The diesel fuel back-up generator would need to increase on-site emissions of PM₁₀ by approximately 880 percent in a single day for there to be a significant impact.

To account for the emissions generated by the emergency back-up diesel generator, a model run was prepared using the California Emissions Estimator Model (CalEEMod) version 2022.1.1.22, in compliance with SCAQMD guidelines for estimating air quality emissions and consistent with the methodology used to prepare the air quality analysis included in the IS/MND. The diesel generator and fire pump are conservatively assumed to be 550 horsepower and estimated to run for approximately 50 hours per year, which is representative of the expected operational runtime for back-up generators and fire pumps and represents the maximum operational hours limits allowed by SCAQMD for maintenance and testing of permitted units. The emission results were added to the proposed project's operational emissions, as provided on pages 3-18 and 3-20 of the IS/MND. The results of the model indicate that emissions associated with the diesel generator would not substantially increase emissions. Emissions of all criteria pollutants would remain below the established SCAQMD thresholds, and therefore would be less than significant. In addition, the emergency diesel generator and fire pump would be required to comply with SCAQMD permitting and regulatory requirements, which would establish project-specific health protective requirements for the operation of the back-up generator and fire pump. As such, the inclusion of the emergency backup generator and fire pump as part of the proposed project's operational activities would not result in a significant health risk. Tables 3.3.C and 3.3.E in Section 3.3, Air Quality, of the IS/MND have been revised to include this additional modeling, as provided in the Initial Study/Mitigated Negative Declaration Text Revisions section of this memorandum.

Response to Comment O-2-8

This comment states that the IS/MND does not contain a quantitative health risk analysis for the proposed project's construction related to DPM emissions.

As discussed on pages 3-19 and 3-20 of the IS/MND, a Local Significance Thresholds (LSTs) analysis was prepared for the proposed project to evaluate potential ambient concentrations of pollutants to nearby sensitive receptors. Based on the SCAQMD's Final Localized Significance Threshold

Methodology,¹ SCAQMD staff developed LSTs similar to the regional significance thresholds, which are based on the pounds of emissions per day generated by a proposed project that would cause or contribute to adverse localized air quality impacts. The same emissions estimated for regional significance thresholds should be compared to allowable emissions presented in the LST lookup tables for the source/receptor area closest to the proposed project. The screening procedures set forth in the SCAQMD's Methodology, are conservative by design; that is, the predicted impacts tend to overestimate the actual impacts. If the predicted impacts are acceptable using the LST approach presented, then a more detailed evaluation is not necessary. As identified in Tables 3.3.D and 3.3.E of the IS/MND, the proposed project's on-site maximum localized construction and operational emissions would be below the SCAQMD's localized significance thresholds.

In addition, the SCAQMD *CEQA Air Quality Handbook*² states that emissions of toxic air contaminants (TACs) are considered significant if a health risk assessment (HRA) shows an increased cancer risk of greater than 10 in 1 million. The California Office of Environmental Health Hazard Assessment (OEHHA) *Air Toxic Hot Spots Program Risk Assessment Guidelines*³ has determined that long-term exposure to diesel exhaust particulates poses the highest cancer risk of any TAC it has evaluated. In addition, the California Air Resources Board (CARB) has also identified DPM emitted by off-road, diesel-fueled engines that as a TAC.⁴ As such, the TAC of concern would be DPM associated with the use of diesel engines during project construction. For risk assessment procedures, the OEHHA specifies that the surrogate for whole diesel exhaust is DPM. HRA analyses typically use PM₁₀ emissions to represent DPM emissions, consistent with OEHHA guidance. As shown in Table 3.3.B of the IS/MND, PM₁₀ emissions, which are a surrogate for TAC emissions during construction, would be 1.7 lbs/day, which is well below the SCAQMD threshold of 150 lbs/day, indicating that significant mass emissions of PM₁₀ would not occur and a significant health risk would also not occur. Additionally, as shown in Table 3.3.C of the IS/MND, once operational, the proposed project would result in a total of PM₁₀ emissions of 12.05 lbs/day, which is also well below the SCAQMD threshold of 150 lbs/day, indicating that significant mass emissions of PM₁₀ would not occur. Therefore, the proposed project would not generate a substantial amount of diesel PM emissions from off-road equipment use or truck idling that would result in the generation of a substantial amount of TACs, and a significant health risk would not occur.

Furthermore, since publication of the IS/MND and at the request of City staff, an HRA has been prepared by LSA to quantify the health risk from construction of the proposed project to nearby sensitive receptors. The HRA analysis is included as Attachment D of this memorandum. The results

¹ South Coast Air Quality Management District (SCAQMD). 2008. *Final Localized Significance Threshold Methodology*. July. Website: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf> (accessed August 2025).

² South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook*. Website: [https://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-\(1993\)](https://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993)) (accessed August 2025).

³ California Office of Environmental Health Hazard Assessment (OEHHA). 2015. *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*. March. Website: <https://oehha.ca.gov/air/air-toxics-hot-spots> (accessed August 2025).

⁴ California Air Resources Board (CARB). 2022. *Proposed Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation*. November 17. Website: <https://ww2.arb.ca.gov/sites/default/files/barcu/board/res/2022/res22-19.pdf> (accessed August 2025).

of the HRA at the maximally exposure individual (MEI) indicate that the maximum cancer risk for the residential maximally exposed individual (MEI) would be 6.85 in 1 million, which would not exceed the SCAQMD cancer risk threshold of 10 in 1 million. Therefore, construction of the proposed project would not exceed SCAQMD thresholds and would not expose nearby sensitive receptors to substantial pollutant concentrations. Once the proposed project is constructed, the proposed project would not be a source of substantial emissions. Therefore, implementation of the proposed project would not result in new sources of TACs. Therefore, the project would not expose sensitive receptors to substantial levels of TACs, and impacts would be less than significant.

Response to Comment O-2-9

This comment provides the results of the HRA completed by the commenter's air quality expert and provides mitigation measures recommendations to reduce potential air quality impacts. Specifically, the comment claims that the proposed project would exceed the SCAQMD's significant threshold for DPM and that project construction may expose sensitive receptors to cancer risks above established thresholds.

As discussed in Response to Comment O-2-8 above, LSA prepared a separate HRA at the request of City staff to quantify the health risk from construction of the proposed project to nearby sensitive receptors. The HRA analysis is included as Attachment D of this memorandum. The results of the HRA indicate that the maximum cancer risk for the residential MEI would be 6.85 in 1 million, which would not exceed the SCAQMD cancer risk threshold of 10 in 1 million. Therefore, contrary to the commenter's claim, construction of the proposed project would not exceed SCAQMD thresholds and would not expose nearby sensitive receptors to substantial pollutant concentrations. Once the proposed project is constructed, the proposed project would not be a source of substantial emissions. Therefore, implementation of the proposed project would not result in new sources of TACs. Therefore, the project would not expose sensitive receptors to substantial levels of TACs.

Response to Comment O-2-10

This comment claims that the IS/MND fails to adequately disclose, analysis, or mitigate the proposed project's cumulative air quality impacts.

The cumulative impact area for air quality related to the proposed project is the South Coast Air Basin (Basin). Each project in the Basin is required to comply with SCAQMD rules and regulations and is subject to independent review. The Basin is currently designated as a nonattainment area for the federal ozone (O₃) standard and particulate matter less than 2.5 microns in size (PM_{2.5}) standard and as a nonattainment area for the State O₃, PM₁₀, and PM_{2.5} standard. Thus, the Basin has not met the federal and State standards for these air pollutants.

Air pollution is inherently a cumulative type of impact measured across an air basin. A project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. The SCAQMD air quality significance thresholds consider the emission levels for which a project's individual emissions would be cumulatively considerable. Therefore, if a project falls below the SCAQMD significance threshold, it can be determined that its contribution would not be cumulatively considerable. The City relies on the SCAQMD's recommended methodology to evaluate cumulative impacts, which is to conclude that an impact considered to be significant on a project-specific basis would also result in a significant cumulative impact. Pages 3-15 through 3-18 of the

IS/MND include an analysis of the proposed project's contribution to cumulative air impacts. As discussed, construction emissions associated with the proposed project would not exceed the SCAQMD thresholds for volatile organic compounds (VOCs), nitrogen oxides (NO_x), carbon monoxide (CO), sulfur oxides (SO_x), PM_{2.5}, or PM₁₀ emissions. The proposed project's modeled construction- and operation-related regional daily emissions are less than the SCAQMD significance thresholds for all criteria pollutants. In addition, adherence to SCAQMD rules and regulations on a project-by-project basis would substantially reduce potential impacts associated with the related projects and basin-wide air pollutant emissions. Therefore, the proposed project would not result in cumulative air quality impacts and the IS/MND adequately discloses and analyzes the proposed project's cumulative air quality impacts.

Response to Comment O-2-11

This comment claims that the proposed project would result in potentially significant, unmitigated impacts related to hazards as the Phase I Environmental Site Assessment (ESA) and Phase II Limited Soil Vapor Assessment did not include the entire project site. Specifically, the comment claims that the proposed project may result in significant public health impacts from exposure to unmitigated soil vapor and perchloroethylene (PCE) during construction and operation.

As discussed in Section 3.9, Hazards and Hazardous Materials, of the IS/MND, a Phase I ESA was prepared for the proposed car wash parcel in accordance with the standards and procedures outlined in the American Society for Testing and Materials E 1527-21 (provided as Appendix E of the IS/MND). The Phase I ESA included a review of official government databases concerning the locations of known hazardous materials releases for the purpose of identifying any listings suggesting a potential impact to the proposed car wash parcel due to presence or migration of hazardous substances and/or petroleum products. The report provided a search of standard environmental record sources for listings of the proposed car wash parcel, adjoining properties (which included the entire project site) and sites within the surrounding area. In addition, the project site and the surrounding area were evaluated via the State Water Resources Control Board (SWRCB) GeoTracker database, the DTSC's EnviroStor database, and the Hazardous Waste and Substances Sites (Cortese) list for the purposes of identifying recognized environmental conditions or historical recognized environmental conditions. The results of these database searches indicated that there are no hazardous materials sites associated with the proposed hotel and drive-through coffee shop parcels and that no historical uses associated with these parcels could present a hazardous materials concern for the project site. As such, there is no evidence to suggest that subsurface hazardous conditions exist on these parcels.

In addition, the PCE soil vapor contamination on the proposed car wash parcel is associated with the former dry cleaner that was located approximately 130 feet east of the project site, across California Street. As discussed in the Phase II Limited Soil Vapor Assessment prepared for the proposed car wash parcel (provided as Appendix F of the IS/MND), PCE was detected above the Commercial environmental screening level (ESL) at only one location, along the eastern boundary of the car wash parcel. PCE concentrations from all of the other testing sites were determined to be below the Commercial ESL. As also discussed in the Phase II Limited Soil Vapor Assessment and Section 3.9 of the IS/MND, the results of the soil vapor assessment indicate a nonhomogeneous PCE soil vapor concentration on the proposed car wash parcel, with a significant reduction from the eastern boundary to the central portion of the parcel. As the proposed hotel and drive through coffee shop

parcels are located even further west and north of the PCE soil vapor "hot spot" located along the eastern boundary of the proposed car wash parcel and the former dry cleaner facility across California Street, PCE soil vapor concentrations are expected to be further reduced at the proposed hotel and drive through coffee shop parcels, and therefore below the Commercial ESL. As such, future workers and guests on the proposed hotel and drive through coffee shop parcels are not expected to face significant health risks from PCE exposure.

In addition, the use of Office of Solid Waste and Emergency Response (OSWER) Technical Guidance to discuss that the findings and conclusions from the Phase II Limited Soil Vapor Assessment are sufficient and with merit for the data collected on and for the proposed car wash site. Since the possible vapor intrusion sources (former dry cleaners to east and leaking underground storage tank (LUST) gasoline site to the north) are both located off-site, and because there is no historical evidence of the project site using PCE, there is no need for the lateral and vertical extent of the PCE plume on the project site to be determined. Further, as the Phase II Limited Soil Vapor Assessment compares the detected PCE concentrations to the applicable corresponding Commercial ESL (67 micrograms per cubic meter [$\mu\text{g}/\text{m}^3$]), the conclusions provided in the Phase II Limited Soil Vapor Assessment and IS/MND are supported by a meaningful standard of evaluation.

This comment also stated that construction of the proposed project could result in potentially significant health risks to construction workers who are exposed to PCE contamination during site excavation and construction activities. According to the California Regional Water Quality Control Board (RWQCB) and DTSC, the ESL of $67 \mu\text{g}/\text{m}^3$ is applied to determine potential risks for PCE soil vapor inhalation for commercial workers and construction crews (i.e., Commercial ESL). As previously discussed, PCE was detected above the Commercial ESL of $67 \mu\text{g}/\text{m}^3$ at only one location, the "hot spot" located along the eastern boundary of the car wash parcel. All other detected concentrations were determined to be below the Commercial ESL of $67 \mu\text{g}/\text{m}^3$, with the second highest PCE concentration being $13 \mu\text{g}/\text{m}^3$. As discussed in Section 3.9, the proposed car wash would be located away from the PCE "hot spot" along the eastern boundary of the car wash parcel and the eastern boundary of the parcel would consist of landscaping. As such, significant excavation and ground disturbance activities on the project site would not occur within the PCE "hot spot" area and, as the PCE concentration on the remainder of the project site would be below the Commercial ESL of $67 \mu\text{g}/\text{m}^3$, construction of the proposed project is not expected to result in significant health risks to construction workers. Further, construction workers would adhere to standard best practices, such as preparation and implementation of an Occupational Safety and Health Administration (OSHA)-mandated Health and Safety Plan, worker training, dust control, and the use of personal protective equipment (PPE), which would further reduce potential risks to construction workers. These measures are common industry-wide best practices that are employed on all construction sites. Overall, current data suggests that PCE soil vapor concentration on the project site is well below the PCE's California Occupational Safety and Health Administration (Cal/OSHA) exposure limits. Therefore, the anticipated health risks to construction workers who are exposed to PCE contamination in outdoor air during site excavation and construction are low and would not be considered a health risk to construction workers during the development of the project site.

It should also be noted that DTSC reviewed the IS/MND (see Comment letter S-1) and did not raise any concerns regarding the hazards and hazardous materials analysis contained in the IS/MND, Phase I ESA, or Phase II Limited Soil Vapor Assessment. As such, implementation of the proposed

project would not result in significant, unmitigated impacts related to hazards or hazardous materials, as discussed in the IS/MND.

Response to Comment O-2-12

This comment claims that the IS/MND fails to adequately analyze potentially significant construction noise impacts as the IS/MND fails to compare the proposed project's expected construction noise levels against either an absolute noise threshold or a threshold for increase over ambient noise levels.

As discussed in Section 3.13, Noise, of the IS/MND, construction noise associated with each phase of the proposed project was calculated at nearby sensitive receptors using the methodology provided in the Federal Highway Administration (FHWA) Construction Noise Model along with several key construction parameters including distance to each sensitive receptor, equipment usage factor, and baseline parameters for the project site. As provided in Table 3.13.F in Section 3.13 of the IS/MND, the proposed project's construction noise would range between 57 to 69 equivalent continuous sound level measured in A-weighted decibels (dBA L_{eq}) at the nearest residential property to the southwest and 56 to 68 dBA L_{eq} at the nearest commercial property to the east. The IS/MND determined that although noise generated from project construction activities would temporarily increase ambient noise levels, construction noise would stop once project construction is completed. In addition, compliance with the City's Municipal Code, as detailed in Regulatory Compliance Measure NOI-1, would ensure that construction noise impacts would be minimized to the greatest extent feasible.

The Federal Transit Administration (FTA) provides construction noise criteria to evaluate construction noise for residential and commercial uses. According to the FTA, residential and commercial uses would experience significant construction noise impacts if construction noise exceeds 80 dBA and 85 dBA, respectively. As project construction noise would range between 57 to 69 dBA L_{eq} at the nearest residential property to the southwest and 56 to 68 dBA L_{eq} at the nearest commercial property to the east, construction noise associated with the proposed project would not exceed the FTA's construction noise criteria of 80 dBA for residences and 85 dBA for commercial uses. As the proposed project would not exceed the FTA's construction noise criteria, nearby residential and commercial uses would not experience significant noise impacts during construction of the proposed project. Therefore, construction noise impacts would be less than significant, as identified in the IS/MND. Section 3.13, Noise, of the IS/MND has been revised to include this discussion, as provided in the Initial Study/Mitigated Negative Declaration Text Revisions section of this memorandum.

Response to Comment O-2-13

This comment claims that the vibration analysis in the IS/MND is inaccurate because it relies on a distance of 175 feet from the nearest sensitive receptor when the distance to the nearest sensitive receptor is approximately 165 feet, and that applying the correct distance could reveal significant impacts that were not previously disclosed.

As discussed in Section 3.13, Noise, of the IS/MND, at a distance of 175 feet, a large bulldozer would generate a vibration level of 0.010 peak particle velocity (PPV) (in inches per second [in/sec]). In response to this comment, the Noise Study prepared by MD Acoustics was revised to analyze the

potential construction vibration impacts based on a distance of 165 feet from the nearest sensitive receptor. The revised Noise Study is provided in Attachment E of this memorandum. The results of the revised Noise Study determined that at a distance of 165 feet, a large bulldozer would generate a vibration level of 0.011 in/sec PPV. Consistent with the analysis provided in Section 3.13 of the IS/MND, this vibration level would not be perceptible and would not have the potential to result in annoyance. As provided in the Initial Study/Mitigated Negative Declaration Text Revisions section of this memorandum, Section 3.13 of the IS/MND has been revised to reflect a distance of 165 feet to the nearest sensitive receptor and vibration level of 0.011 in/sec PPV.

Response to Comment O-2-14

This comment asserts that the IS/MND fails to consider potential impacts associated with increases in existing pedestrian noise, particularly around the proposed pool area, which could result in significant noise impacts on nearby residences.

In response to this comment, the Noise Study prepared by MD Acoustics revised the SoundPLAN noise model to include pedestrian noise at the proposed pool area. The revised Noise Study is provided in Attachment E of this memorandum. This noise source was modeled as an area source considering a gathering of 30 individuals that could generate noise levels of approximately 62 dBA at 12 feet and includes mechanical pool equipment. As provided in the revised Noise Study and based on the revised SoundPLAN noise model, operational noise levels associated with the proposed project are expected to range between 48 and 56 dBA at the adjacent commercial and residential receptors. When factoring in the existing ambient noise level of 64 dBA L_{eq} , the combined noise level would continue to range between 64 and 65 dBA L_{eq} and the project-related noise increase would be less than 1 dBA, as provided in Section 3.13, Noise, of the IS/MND. As such, the combined noise level would not exceed the City's daytime noise standard of 65 dBA L_{eq} for both residential and commercial uses and the project-related noise increase of up to 1 dBA would not be substantial because the noise increase would not be perceptible to the human ear in an outdoor environment. Therefore, noise generated from proposed project operations would be less than significant, as provided in Section 3.13 of the IS/MND. As provided in the Initial Study/Mitigated Negative Declaration Text Revisions section of this memorandum, Section 3.13 of the IS/MND has been revised to reflect this analysis and Figure 3-2 in the IS/MND has been updated to include pedestrian noise at the proposed pool area.

Response to Comment O-2-15

This comment claims that the IS/MND fails to adequately analyze the proposed project's potentially significant energy impacts as the IS/MND fails to evaluate whether feasible energy conservation measures could reduce construction energy use, as required by *State CEQA Guidelines* Appendix F. The comment argues that without this analysis, the IS/MND cannot demonstrate that the proposed project's energy consumption would not be wasteful, inefficient, or unnecessary, and that reliance on compliance with standard regulations such as Title 24 is insufficient.

The thresholds for impacts related to energy used in the analysis are consistent with Appendix G of the *State CEQA Guidelines*, which state that development of the proposed project would result in a significant impact related to energy if it would result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation; or conflict with or obstruct a State or local plan for renewable energy or

energy efficiency. As demonstrated in Section 3.6, Energy, of the IS/MND, there is no quantitative energy threshold under CEQA.

As shown in Tables 3.6.A, 3.6.B, 3.6.C, and 3.6.D, of the IS/MND, project construction would have a negligible effect on local and regional energy supplies. Furthermore, no unusual project characteristics would necessitate the use of construction equipment that would be less energy efficient than at comparable construction sites in the region or the State. In addition, construction activities are not anticipated to result in an inefficient use of energy as gasoline and diesel fuel because gasoline and diesel fuel would be supplied by construction contractors who would conserve the use of their supplies to minimize their costs on the project. The proposed project would not cause or result in the need for additional energy facilities or an additional or expanded delivery system.

Although the proposed project would result in an increase in demand for electricity, this increase would not require Southern California Edison (SCE) to expand or construct infrastructure that could cause substantial environmental impacts. Total electricity consumption in the SCE service area in 2022 was 85,870 gigawatt-hours (GWh). By 2030, consumption is anticipated to increase by 12,000 GWh for the low-demand scenario and by 22,000 GWh for the high-demand scenario.⁵ While this forecast represents a large increase in electricity consumption, the proposed project's share of cumulative consumption would be negligible. Similarly, additional natural gas infrastructure is not anticipated due to implementation of the proposed project. Transportation-related energy use would also not represent a major amount of energy use compared to the amount of existing development and to the total number of vehicle trips and vehicle miles traveled (VMT) throughout San Bernardino County and the region. Therefore, given that the proposed project's energy demand would be a minimal fraction of electricity and fuel consumption in San Bernardino County, the proposed project would not result in inefficient, wasteful, and unnecessary consumption of energy. The proposed project would not result in a significant energy impact and the IS/MND adequately analyzes the proposed project's impact on energy.

Response to Comment O-2-16

This comment claims that the City cannot make the requisite findings to approve the proposed Conditional Use Permits (CUPs) or Tentative Parcel Map as the IS/MND fails to adequately analyze or mitigate several significant environmental impacts provided in the comment letter and the proposed Tentative Parcel Map is inconsistent with the City's General Plan due to potential noise impacts.

Response to Comment O-2-17

This comment concludes the comment letter and reiterates the claims that the IS/MND is inadequate under CEQA. This comment also claims that an Environmental Impact Report (EIR) must be prepared to address the potential impacts discussed in the comment letter.

⁵ California Energy Commission (CEC). 2018. *California Energy Demand, 2018–2030 Revised Forecast*. Publication Number: CEC-200-2018-002-CMF. February. Website: <https://efiling.energy.ca.gov/getdocument.aspx?tn=223244> (accessed August 2024).

As provided in Responses to Comments O-2-6 through O-2-15 above, the IS/MND adequately analyzes, discusses, and mitigates all potential impacts of the proposed project, including those related to air quality, energy, hazards and hazardous materials, and noise raised in the comment letter. As such, the IS/MND is adequate under CEQA, and an EIR does not need to be prepared.

INITIAL STUDY/MITIGATED NEGATIVE DECLARATION TEXT REVISIONS

This section presents specific changes to the text of the IS/MND that are being made to clarify and supplement materials in the IS/MND. The revised text does not provide new information that would result in any new significant impact not already identified in the IS/MND or a substantial increase in the severity of an impact identified in the IS/MND that cannot be mitigated to a less than significant level with implementation of mitigation measures agreed to by the project sponsor. Thus, none of the text revisions would require recirculation pursuant to *State CEQA Guidelines* Section 15088.5. The IS/MND and this memorandum together constitute the Final IS/MND for the 913 California Street Project. In the revisions shown below, added text is indicated with underlined text. Deleted text is shown in ~~strikeout~~.

Revisions to Section 3.3, Air Quality

Based on comments received during the public review period, the analysis of construction health risks in Section 3.3(c) has been revised to include a discussion of the project-specific Health Risk Assessment (HRA), prepared by LSA in August 2025. The HRA analysis is included as Attachment D of this memorandum. The additional discussion is intended to support the conclusions of the Local Significance Thresholds (LSTs) analysis that was prepared for the proposed project and does not provide new information that would result in any new significant impact not already identified in the IS/MND or a substantial increase in the severity of an impact identified in the IS/MND. In addition, Tables 3.3.C and 3.3.E in Section 3.3(b) of the IS/MND have been updated to include emissions generated by the proposed fire pump and emergency back-up diesel generator

Revisions to Section 3.3(b)

Operational Emissions. Long-term air quality impacts would consist of mobile source emissions generated from project-related traffic, and emissions from stationary area and energy sources. Emissions associated with each of these sources were calculated and are discussed below.

Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, VOC, NO_x, SO_x, PM₁₀, and PM_{2.5} are all pollutants of regional concern (NO_x and VOC react with sunlight to form O₃ [photochemical smog], and wind currents readily transport SO_x, PM₁₀, and PM_{2.5}); however, CO tends to be a localized pollutant, dispersing rapidly at the source.

Energy source emissions would be generated as a result of electricity and natural gas (non-hearth) usage associated with the proposed residential development. The primary use of electricity and natural gas by the proposed project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and electronics. Criteria air pollutant emissions from electricity use were not quantified since criteria pollutants emissions occur at the site of the power plant, which is

off site. Therefore, energy source emissions from electricity usage would be zero and the emissions would only be generated from consumption of the natural gas.

Typically, area source emissions consist of direct sources of air emissions located at the project site, including architectural coatings and the use of landscape maintenance equipment. Area source emissions associated with the proposed project would include emissions from the use of landscaping equipment, architectural coating, and consumer products. In addition, stationary source emissions associated with the proposed project would include the proposed fire pump and the proposed diesel-fueled back-up generator, which would act as the emergency power source for the proposed fire pump. The diesel generator and fire pump are conservatively assumed to be 550 horsepower and estimated to run for approximately 50 hours a year, which is representative of the expected operational runtime for back-up generators and fire pumps and represents the maximum operational hours limits allowed by SCAQMD for maintenance and testing of permitted units.

Operational emissions generated by the proposed project were calculated with CalEEMod and are detailed in **Table 3.3.C: Project Operational Emissions**, below.

Table 3.3.C: Project Operational Emissions

Activity	Pollutant Emissions (lbs/day) ¹					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Area Sources ²	2.04	0.02	2.84	0.00	0.01	0.00
Energy Usage ³	0.03	0.57	0.48	0.00	0.04	0.04
Mobile Sources ⁴	6.60	6.65	58.50	0.14	12.00	3.12
Stationary Source ⁵	<u>0.25</u>	<u>0.70</u>	<u>0.64</u>	<u><0.01</u>	<u>0.04</u>	<u>0.04</u>
Total Emissions	<u>8.67 8.92</u>	<u>7.24 7.93</u>	<u>61.82 62.46</u>	<u>0.14</u>	<u>12.05 12.09</u>	<u>3.16 3.20</u>
SCAQMD Threshold	55.0	55.0	550.0	150.0	150.0	55.0
Exceeds Threshold?	No	No	No	No	No	No

Source: 913 California Street Air Quality, Greenhouse Gas, and Energy Impact Study (MD Acoustics, LLC, February 17, 2025) (**Appendix A**) and additional modeling performed in August 2025.

¹ Emissions were calculated using CalEEMod, version 2022.1.1.22.

² Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

³ Energy usage consists of emissions from on-site natural gas usage.

⁴ Mobile sources consist of emissions from vehicles and road dust.

⁵ Stationary sources consist of emissions from the back-up diesel generator and fire pump

CalEEMod = California Emissions Estimator Model

CO = carbon monoxide

lbs/day = pounds per day

NO_x = nitrogen oxides

PM₁₀ = particulate matter less than 10 microns in size

PM_{2.5} = particulate matter less than 2.5 microns in size

SCAQMD = South Coast Air Quality Management District

SO_x = sulfur oxides

VOCs = volatile organic compounds

As shown in **Table 3.3.C**, above, the proposed project would not exceed the significance criteria for daily VOCs, NO_x, CO, SO_x, PM₁₀, or PM_{2.5} emissions. Therefore, operation of the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or State ambient air quality standard. Impacts would be **less than significant**, and no mitigation is required.

Revisions to Section 3.3(c)

Discussion of Effects: Sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the

elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis. The nearest sensitive receptors to the project site include the single-family residences located approximately 165 feet to the southwest of the project site.

Local Significance Thresholds (LSTs) were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 and revised 2008) for guidance. The LST methodology assists lead agencies in analyzing localized air quality impacts. The SCAQMD provides the LST screening lookup tables for projects that disturb/grade 1, 2, or 5 acres per day emitting CO, NO_x, PM_{2.5}, or PM₁₀. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The SCAQMD recommends that air quality dispersion modeling be completed for any project over 5 acres in size to assess impacts to nearby sensitive receptors from area source emissions. For LST analysis purposes, the SCAQMD is divided into 38 Source Receptor Areas (SRAs), each of which contain specific localized air quality emission thresholds for CO, NO_x, PM_{2.5}, and PM₁₀ to determine local air quality impacts. The proposed project would be located in SRA 35, East San Bernardino Valley.

The SCAQMD provides LST thresholds for 1-, 2-, and 5-acre site disturbance areas per day; it is noted that the SCAQMD does not provide LST thresholds for projects disturbing over 5 acres per day. The SCAQMD guidance on applying CalEEMod to LSTs specifies the number of acres a particular piece of equipment would likely disturb per day.⁶ As the SCAQMD provides LST thresholds for 1-, 2-, and 5-acre disturbance areas, with lower thresholds for smaller disturbance areas, the emission thresholds were based on a disturbance of 2 acres per day to provide a conservative analysis. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. As the nearest sensitive receptor is located approximately 50 meters from the project site's boundary, the LST values for 50 meters were used.

Table 3.3.D: Localized Significance of Construction Emissions, shows the localized construction-related emissions. It is noted that the localized emissions presented in **Table 3.3.D: Localized Significance of Construction Emissions** are less than those in **Table 3.3.A** because localized emissions include only on-site emissions (i.e., from construction equipment and fugitive dust), and do not include off-site emissions (i.e., from worker, vendor, and hauling trips).

⁶ The number of acres represents the total acres traversed by grading equipment. In order to properly grade a piece of land, multiple passes with equipment may be required. The disturbance acreage is based on the equipment list and days of the grading phase according to the anticipated maximum number of acres a given piece of equipment can pass over in an 8-hour workday.

Table 3.3.D: Localized Significance of Construction Emissions

Phase	On-Site Pollutant Emissions (lbs/day) ¹			
	NO _x	CO	PM ₁₀	PM _{2.5}
Site Preparation	36.00	32.90	9.27	5.41
Grading	18.20	18.80	3.62	2.11
Building Construction	11.20	13.10	0.50	0.46
Paving	6.52	8.84	0.29	0.26
Architectural Coating	0.88	1.14	0.03	0.03
Peak Daily Emissions²	36.00	32.90	9.27	5.41
Localized Significance Threshold ³	200	1,1712	21	7
Exceeds Threshold?	No	No	No	No

Source: 913 California Street Air Quality, Greenhouse Gas, and Energy Impact Study (MD Acoustics, LLC, February 17, 2025)

(Appendix A).

¹ Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for two acres in East San Bernardino Valley Source Receptor Area (SRA 35). This is a conservative threshold as the project will disturb a maximum of 3.5 acres per day.

² Considers overlapping phases.

³ The nearest sensitive receptor is located 50 meters southwest; therefore, the 50-meter threshold has been used.

CalEEMod = California Emissions Estimator Model

PM₁₀ = particulate matter less than 10 microns in size

CO = carbon monoxide

PM_{2.5} = particulate matter less than 2.5 microns in size

lbs/day = pounds per day

SCAQMD = South Coast Air Quality Management District

NO_x = nitrogen oxides

As shown in **Table 3.3.D**, emissions would not exceed the LSTs for SRA 35. Therefore, construction LST impacts would be **less than significant**.

Further, a construction health risk assessment (HRA) has been prepared for the proposed project to quantify the health risk from construction of the proposed project to nearby sensitive receptors. The results of the HRA indicate that the maximum cancer risk for the residential MEI would be 6.85 in 1 million, which would not exceed the SCAQMD cancer risk threshold of 10 in 1 million. Therefore, construction of the proposed project would not exceed SCAQMD thresholds and would not expose nearby sensitive receptors to substantial pollutant concentrations. Once the proposed project is constructed, the proposed project would not be a source of substantial emissions. Therefore, implementation of the proposed project would not result in new sources of TACs. Therefore, the project would not expose sensitive receptors to substantial levels of TACs, and impacts would be less than significant.

In addition, according to SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project if the project includes stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site (e.g., warehouse or transfer facilities). For operational emissions, the screening tables for a disturbance area of 5 acres per day, as the proposed project is approximately 5 acres, and a distance of 50 meters were used to determine significance. The tables were then compared to the proposed project's on-site operational emissions. **Table 3.3.E: Localized Significance of Operational Emissions**, shows the localized construction-related emissions.

Table 3.3.E: Localized Significance of Operational Emissions

Phase	On-Site Pollutant Emissions (lbs/day) ¹			
	NO _x	CO	PM ₁₀	PM _{2.5}
Area Sources ²	0.02	2.84	0.01	0.00
Energy Usage ³	0.57	0.48	0.04	0.04
On-Site Vehicle Emissions ⁴	0.67	5.85	1.20	0.31
Stationary Sources ⁶	<u>0.70</u>	<u>0.64</u>	<u>0.04</u>	<u>0.04</u>
Total Emissions	<u>1.26 1.96</u>	<u>9.17 9.81</u>	<u>1.25 1.29</u>	<u>0.35 0.39</u>
Localized Significance Threshold ⁵	302	2,890	11	3
Exceeds Threshold?	No	No	No	No

Source: 913 California Street Air Quality, Greenhouse Gas, and Energy Impact Study (MD Acoustics, LLC, February 17, 2025) (**Appendix A**) and additional modeling performed in August 2025.

¹ Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for five acres in East San Bernardino Valley Source Receptor Area (SRA 35). The project site includes 5.093 acres.

² Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

³ Energy usage consists of emissions from generation of electricity and on-site natural gas usage.

⁴ On-site vehicular emissions based on 1/10 of the gross vehicular emissions and road dust.

⁵ The nearest sensitive receptor is located 50 meters southwest; therefore, the 50-meter threshold has been used.

⁶ Stationary sources consist of emissions from the back-up diesel generator and fire pump

CalEEMod = California Emissions Estimator Model

PM₁₀ = particulate matter less than 10 microns in size

CO = carbon monoxide

PM_{2.5} = particulate matter less than 2.5 microns in size

lbs/day = pounds per day

SCAQMD = South Coast Air Quality Management District

NO_x = nitrogen oxides

As shown in **Table 3.3.E**, operational emissions would not exceed the LSTs for SRA 35. Therefore, operational LST impacts would be **less than significant**.

Revisions to Section 3.13, Noise

Based on comments received during the public review period, the analysis of short term (construction) noise impacts and long-term (operational) stationary noise in Section 3.13(a) has been revised in order to compare the anticipated construction noise levels to an adopted noise threshold and discuss potential noise impacts associated with the proposed pool. Figure 3-2: SoundPLAN Operational Noise Modeling Results has also been updated to depict the new noise modeling location at the proposed pool.

In addition, the discussion of short term (construction) vibration impacts in Section 3.13(b) has been revised to correct the distance to the nearest sensitive receptor.

Revisions to Section 3.13(a)

Short-Term (Construction) Noise. The degree of construction noise during construction activities may vary for different areas of the project site and depends on the specific construction activity. Project construction would occur in five phases, including site preparation, grading, building construction, paving, and architectural coating. **Table 3.13.E: Typical Construction Equipment Noise Levels** provides the typical construction equipment noise levels at a distance of 50 feet. Construction noise associated with each phase of the proposed project was calculated at nearby sensitive receptors using methodology provided in the Federal Highway Administration (FHWA) Construction Noise Model along with several key construction parameters including distance to each sensitive receptor, equipment usage factor, and baseline parameters for the project site.

Construction equipment typically moves back and forth across the site, and it is an industry-standard to use the acoustical center of the site to model average construction noise levels.

Table 3.13.E: Typical Construction Equipment Noise Levels

Equipment Description	Maximum Noise Level (L_{max}) at 50 ft ¹
Compactors (Ground)	80
Front End Loader	80
Backhoe	80
Tractor	84
Scraper	85
Grader	85
Pavers	85
Dump Truck	84
Concrete Mixer Truck	85
Concrete Pump Truck	82
Crane	85
Pumps	77
Generator	82
Compressors	80
Concrete Saws	90
Vibratory Pile Driver	95

Source: FHWA Highway Construction Noise Handbook, Table 9.1 (FHWA 2006).

Note: The noise levels reported in this table are rounded to the nearest whole number.

¹ The maximum noise levels were developed based on Specification 721.560 from the CA/T program to be consistent with the City of Boston, Massachusetts, Noise Code for the “Big Dig” project.

CA/T = Central Artery/Tunnel

FHWA = Federal Highway Administration

ft = foot/feet

L_{max} = maximum instantaneous noise level

Table 3.13.F: Construction Noise Level by Phase provides the calculated construction noise levels at the closest residences and commercial use for each construction phase. The construction noise calculation output worksheet is provided in **Appendix I**. As shown in **Table 3.13.F**, project construction noise would range between 57 to 69 dBA L_{eq} at the residential property to the southwest and 56 to 68 dBA L_{eq} at the commercial property to the east.

Table 3.13.F: Construction Noise Level by Phase

Construction Phase	Noise Level at Receptors (dBA L_{eq})	
	Southwestern Residences	East Commercial
Site Preparation	67	67
Grading	67	66
Building Construction	66	66
Paving	69	68
Architectural Coating	57	56

Source: 913 California Street Noise Impact Study, City of Redlands, CA (MD Acoustics, LLC, February 18, 2025).

dBA = A-weighted decibel(s)

L_{eq} = equivalent continuous sound level

Although noise generated from project construction activities would temporarily increase ambient noise levels, construction noise would stop once project construction is completed. In addition,

compliance with the City's Municipal Code, as detailed in **RCM NOI-1**, would ensure that construction noise impacts would be minimized to the greatest extent feasible. **RCM NOI-1** would limit construction hours to between the hours of 7:00 a.m. and 8:00 p.m. Monday through Saturday provided all motorized equipment is equipped with functioning mufflers pursuant to Sections 8.06.090F (Noise Disturbances Prohibited) and 8.06.120 (Exemptions) of the City's Municipal Code.

RCM NOI-1 Construction Noise. Compliance with Sections 8.06.090F (Noise Disturbances Prohibited) and Chapter 8.06.120(G) (Exemptions) of the City of Redlands (City) Municipal Code. Construction activities, including operating or causing the operation of any tools or equipment used in site preparation, construction, drilling, repair, alteration, grading, paving, and/or architectural coating shall be restricted to the hours of 7:00 a.m. to 8:00 p.m. Mondays through Saturdays, and are prohibited at any time on Sundays and holidays unless permission is given by the City and noise levels remain below the City's noise level standards.

As required by Section 8.06.090F, all mobile or stationary internal combustion engine-powered equipment or machinery shall be equipped with exhaust and air intake silencers in proper working order and shall be maintained so that vehicles and their loads are secured from rattling and banging.

In addition, the Federal Transit Administration (FTA) provides construction noise criteria to evaluate construction noise for residential and commercial uses. According to the FTA, residential and commercial uses would experience significant construction noise impacts if construction noise exceeds 80 dBA and 85 dBA, respectively. As project construction noise would range between 57 to 69 dBA L_{eq} at the nearest residential property to the southwest and 56 to 68 dBA L_{eq} at the nearest commercial property to the east, construction noise associated with the proposed project would not exceed the FTA's construction noise criteria of 80 dBA for residences and 85 dBA for commercial uses. As the proposed project would not exceed the FTA's construction noise criteria, nearby residential and commercial uses would not experience significant noise impacts during construction of the proposed project. With compliance with **RCM NOI-1**, construction noise impacts would be less than significant. No mitigation measure is required.

Long-Term (Operational) Stationary Noise. The SoundPLAN modeling software was used to predict noise from proposed project operations at nearby sensitive receptors. The SoundPLAN software utilizes algorithms (based on the inverse square law) to calculate noise level projections. It allows the user to input specific noise sources, spectral content, sound barriers, building placement, topography, and sensitive receptor locations. It also calculates noise level increases due to the reflection of noise from hard surfaces.

Table 3.13.H: SoundPLAN Modeling Assumptions lists the measured and reference sound levels used to model the various on-site stationary noise sources associated with proposed project operations such as dryer blowers, the vacuum turbine, idling cars, parking movements, drive-through speakers, pedestrian noise at the hotel pool area, and heating, ventilation, and air conditioning (HVAC). The proposed car wash tunnel would be approximately 130 feet in length and would include a 10-foot by 16-foot entrance/exit opening. The car wash blowers (14 MacNeil blowers) were modeled at 10 to 12 feet high as point sources. The blowers would be located

approximately 5 to 10 feet inside the exit of the tunnel. The car wash vacuum bays, the vacuum turbine inside an enclosure, drive-through speaker, and HVAC were modeled as point sources.

Table 3.13.H: SoundPLAN Modeling Assumptions

Noise Source	Source Type	Reference Sound Level (dBA L _{eq})	Reference Distance (ft)
Drive-Thru Speaker	Point Source	65	5
Idling Car	Point Source	67	5
HVAC	Point Source	67	3
14 MacNeil Dryers	Point Source (inside tunnel)	97	5
Vacuum Bay	Point Source	71	2
Vacuum Turbine	Point Source (inside enclosure)	43	3
Pool Area	Area Source	<u>62</u>	<u>12</u>

Source: 913 California Street Noise Impact Study, City of Redlands, CA (MD Acoustics, LLC, February 18, 2025).

CNEL = Community Noise Equivalent Level

HVAC = heating, ventilation, and air conditioning

dBA = A-weighted decibels

L_{eq} = equivalent continuous sound level

ft = foot/feet

Idling cars at the drive-through were modeled as continuous line sources. Finally, car parking lots were modeled as 0.3 movements per space per hour. Finally, the pool area at the proposed hotel was modeled as an area source, considering a typical group of 30 individuals that can generate noise levels of approximately 62 dBA at 12 feet. SoundPLAN noise modeling input and results are provided in **Appendix I**.

The closest receptors surrounding the project site include multifamily residences to the southwest, represented by Receptors R1 and R2, and commercial to the east represented by R3. **Figure 3-2: SoundPLAN Operational Noise Modeling Results** depicts the locations of these receptors.

Table 3.13.I: Daytime Operational Noise Levels summarizes the results of the SoundPLAN modeling, which show proposed project operational noise levels ranging between ~~46~~ 48 and 56 dBA L_{eq}. When factoring the existing ambient noise level of 64 dBA L_{eq}, the combined noise level would range between 64 and 65 dBA L_{eq} and project-related noise increase would reach up to 1 dBA.

Table 3.13.I: Daytime Operational Noise Levels

Receptor	Land Use	Noise Level (dBA L _{eq})				Noise Level Change (dBA)
		Existing Ambient Noise Level	Project Noise Level	Combined Noise Level	Daytime Noise Standard ¹	
R-1	Multifamily	64	52	64	65	0
R-2	Multifamily	64	<u>46-48</u>	64	65	0
R-3	Commercial	64	56	65	65	1

Source: 913 California Street Noise Impact Study, City of Redlands, CA (MD Acoustics, LLC, February 18, 2025).

¹ In accordance with Section 8.06.070(C) of the City Municipal Code, the allowable standard shall be adjusted in 5 dB increments if the ambient level exceeds the limit.

dBA = A-weighted decibels

L_{eq} = Equivalent continuous sound level

As shown in **Table 3.13.I**, the combined noise level would not exceed the City's daytime noise standard of 65 dBA L_{eq} for both residential and commercial uses and the project-related noise

increase of up to 1 dBA would not be substantial because the noise increase would not be perceptible to the human ear in an outdoor environment. Therefore, noise generated from proposed project operations would be **less than significant**, and no mitigation measure is required.

Revisions to Section 3.13(b)

Short-Term Construction Vibration. Construction activities can generate vibration that may be felt by adjacent land uses. However, the construction of the proposed project would not require the use of construction equipment which are known to generate substantial vibration levels, such as pile drivers. The primary vibration source during construction is anticipated to be from a bulldozer.

Table 3.13.J: Vibration Source Levels for Construction Equipment shows that a large bulldozer has a reference vibration level of 0.089 inches per second PPV at a distance of 25 feet.⁷ The following equation is used to calculate vibration propagation through average soil conditions and distance is as follows:

$$PPV_{\text{equipment}} = PPV_{\text{ref}} (100/D_{\text{rec}})^n$$

Where: PPV_{ref} = reference PPV at 100ft.

D_{rec} = distance from equipment to receiver in ft.

$n = 1.1$ (the value related to the attenuation rate through ground)

Table 3.13.J: Vibration Source Levels for Construction Equipment

Equipment		Reference PPV/LV at 25 ft	
		PPV (in/sec)	Approximate L_v (VdB) ¹
Pile Driver (impact)	upper range	1.518	112
	typical	0.644	104
Pile Driver (sonic)	upper range	0.734	105
	typical	0.170	93
Clam shovel drop (slurry wall)		0.202	94
Hydromill (slurry wall)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

Source: Transit Noise and Vibration Impact Assessment Manual (FTA 2018).

¹ RMS vibration velocity in decibels (VdB) is 1 $\mu\text{in/sec}$.

$\mu\text{in/sec}$ = microinches per second

ft = foot/feet

FTA = Federal Transit Administration

in/sec = inches per second

LV = vibration velocity in decibels

PPV = peak particle velocity

RMS = root-mean-square

VdB = vibration velocity decibels

⁷ Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. September. Website: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf (accessed March 2025).

The nearest existing buildings are the residential building approximately 165 ~~175~~ feet west of the project site. At this distance, a large bulldozer would generate a vibration level of 0.011 ~~0.010~~ PPV (in inches per second [in/sec]). This vibration level would not be perceptible and would not have the potential to result in annoyance. Additionally, no structures are located within 15 feet of construction activities and the project proposes to use standard construction equipment (i.e. no blasting or pile driving), thus, construction vibration would not result in damage to surrounding buildings. Therefore, vibration generated from project construction activities would be **less than significant**, and no mitigation is required.

Attachments: A: Comment Letters
 B: Revised Figure 3-2: SoundPLAN Operational Noise Modeling Results
 C: Revised Air Quality Report
 D: Health Risk Assessment
 E: Revised Noise Study

ATTACHMENT A

COMMENT LETTERS



Yana Garcia
Secretary for
Environmental Protection



Department of Toxic Substances Control

Katherine M. Butler, MPH, Director
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Gavin Newsom
Governor

SENT VIA ELECTRONIC MAIL

June 11, 2025

Sean Reilly
Principal Planner
City of Redlands
35 Cajon Street Suite 20
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sreilly@cityofredlands.org

RE: MITIGATED NEGATIVE DECLARATION FOR 913 CALIFORNIA STREET, THE
COMMONS AT CALIFORNIA PROJECT DATED JUNE 4, 2025, STATE
CLEARINGHOUSE NUMBER [2025060163](#)

Dear Sean Reilly,

The Department of Toxic Substances Control (DTSC) reviewed the Mitigated Negative Declaration (MND) for 913 California Street, The Commons at California Project (Project). The proposed Project includes the subdivision of the Project site into three parcels to facilitate the development of a four story, 55,186-square-foot business hotel containing 90 rooms (Parcel 1), an approximately 1,450-square-foot drive-through coffee shop (Parcel 2), a 3,588-square-foot semi-automated car wash (Parcel 3). DTSC recommends and requests consideration of the following comments:

1. The City of Redlands address contamination found to be present within the Project area through oversight from a [self-certified local agency](#), DTSC or Regional Water Quality Control Board. If entering into one of DTSC's voluntary agreements, please note that DTSC uses a single standard Request for Lead Agency Oversight Application for all agreement types. Please apply for DTSC oversight using this link: [Request for Agency](#)

S-1-1

S-1-2

[Oversight Application](#). Submittal of the online application includes an agreement to pay costs incurred during agreement preparation. If you have any questions about the application portal, please contact the relevant [Regional Brownfield Coordinator](#) for your Project.

S-1-2 cont.

2. DTSC recommends that all imported soil and fill material should be tested to assess any contaminants of concern meet screening levels as outlined in [DTSC's PEA Guidance Manual](#). Additionally, DTSC advises referencing the [DTSC Information Advisory Clean Imported Fill Material Fact Sheet](#) if importing fill is necessary. To minimize the possibility of introducing contaminated soil and fill material there should be documentation of the origins of the soil or fill material and, if applicable, sampling be conducted to ensure that the imported soil and fill material are suitable for the intended land use. The soil sampling should include analysis based on the source of the fill and knowledge of prior land use. Additional information can be found by visiting [DTSC's Human and Ecological Risk Office \(HERO\) webpage](#).

S-1-3

DTSC would like to thank you for the opportunity to comment on the MND for 913 California Street, The Commons at California Project. Thank you for your assistance in protecting California's people and environment from the harmful effects of toxic substances. If you have any questions or would like clarification on DTSC's comments, please respond to this letter or via our [CEQA Review email](#) for additional guidance.

S-1-4

Sincerely,



Tamara Purvis
Associate Environmental Planner
HWMP - Permitting Division – CEQA Unit
Department of Toxic Substances Control
Tamara.Purvis@dtsc.ca.gov

Sean Reilly
June 11, 2025
Page 3

cc: (via email)

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July 2, 2025

Via U.S. Mail and Email

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Via Email Only

Sean Reilly, Principal Planner
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Re: Request to Extend Public Review and Comment Period on Initial Study/Mitigated Negative Declaration – the Commons at California Project, 913 California Street (CUP Nos. 1200, 1203; TPM No. 20854; Commission Review & Approval No. 0937; SCH No. 2025060163)

Dear Mr. Desatnik and Mr. Reilly:

We are writing on behalf of Californians Allied for a Responsible Economy (“CARE CA”) to respectfully request that the City of Redlands (“City”) extend the public review and comment period on the Initial Study/Mitigated Negative Declaration (“MND”)¹ for the Commons at California Project, 913 California Street (CUP Nos. 1200, 1203; TPM No. 20854; Commission Review & Approval No. 0937; SCH No. 2025060163) (“Project”) due to the City’s failure to provide timely access to documents referenced and relied upon in the MND. The MND public review period

O-1-1

¹ City of Redlands, Initial Study/Mitigated Negative Declaration for the Commons at California Project (June 2025), available at: https://www.cityofredlands.org/sites/main/files/file-attachments/913_california_street_ismnd_reduced.pdf.

currently ends on July 7, 2025.² CARE CA asks that the public review period be extended **by at least 30 days** from the date on which the City releases *all* MND reference documents for public review. **Given the short time remaining in the public comment period, we request the City's response to this letter by July 3, 2025.**

O-1-1 cont.

On June 20, 2025, our office submitted a request, pursuant to the California Environmental Quality Act ("CEQA"),³ for immediate access to any and all *documents referenced, incorporated by reference, and relied upon in the MND.*^{4 5} CEQA's section 21092(b)(1) and CEQA Guidelines section 15072(g)(4) require that "all documents referenced" and "all documents incorporated by reference" in a mitigated negative declaration shall be "readily accessible to the public during the lead agency's normal working hours" during the entire public comment period.⁶

On June 23, 2025, we received a response from the City acknowledging receipt of our request. On June 30, 2025, the City provided access to seven (7) MND reference documents and informed us that our request was marked as completed. However, our review of the MND demonstrates that there are numerous critical MND reference documents that were not provided by the City, are missing from the MND, and are not readily available online, including the following:

O-1-2

1. Documents referenced in the MND's environmental impact analysis with missing PDF or weblink access:
 - _____. 2021. 2020 Integrated Regional Urban Water Management Plan (IRUWMP), Part 2, Chapter 4, Redlands 2020 UWMP. May 27.
 - _____. 2024a. Annual Report of Development Impact Fees. December 17.

² City of Redlands Development Services Department, Notice of Intent to Adopt a Mitigated Negative Declaration for the Commons at California Project, available at:

https://www.cityofredlands.org/sites/main/files/file-attachments/noi_signed_5.30.25_california_st_project.pdf.

³ Pub. Resources Code §§ 21000 *et seq.*

⁴ **Exhibit A** – Letter to Brian Desatnik, Jeanne Donaldson, and Sean Reilly, City of Redlands from Sheila M. Sannadan, Adams Broadwell Joseph & Cardozo re: Request for Immediate Access to Documents Referenced in the Initial Study/Mitigated Negative Declaration – the Commons at California Project, 913 California Street (SCH No.2025060163) (June 20, 2025).

⁵ The same day, our office submitted a separate public records request pursuant to the Public Records Act ("PRA") for access to other *public records* related to the Project. **Exhibit B** – Letter to Brian Desatnik, Jeanne Donaldson, and Sean Reilly, City of Redlands from Sheila M. Sannadan, Adams Broadwell Joseph & Cardozo re: Request for Immediate Access to Public Records – the Commons at California Project, 913 California Street (SCH NO. 2025060163) (June 20, 2025).

⁶ Pub. Resources Code § 21092(b)(1); 14 C.C.R. § 15072(g)(4).

- Lutz and Associated Consulting. 2024. The Commons at California Fire Master Plan. April 30.
2. Documents referenced in MND's environmental impact analysis with broken weblinks:
 - United States Environmental Protection Agency (USEPA). n.d. Carbon Monoxide Emissions. Website:
https://cfpub.epa.gov/roe/indicator_pdf.cfm?i=10 (accessed March 2025).
 3. Documents Referenced in the MND Appendix E—Phase I ESA with missing PDF or weblink access:
 - American Society for Testing and Materials (ASTM), Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment (ESA) Process, ASTM Designation: E 1527-21.
 - ASTM, Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions, ASTM Designation E 2600-10.
 - Environmental Data Resources, Inc. (EDR), Aerial photographs, Microsoft® Research Maps, Certified Sanborn Map Report, City Directory Abstract, Regulatory Database Report, Topographic Map Report.
 - Rebecca Abuhamra, the Phase I ESA User.
 4. Documents Referenced in the MND Appendix I—Noise Impact Study with missing PDF or weblink access:
 - 2019 SoundPLAN Essential 8.1 Manual.
 - 2018 Technical Noise Supplement to the Traffic Noise Analysis Protocol. Sept.
 5. Documents referenced in MND Appendix B—Biological Resources Letter with missing PDF or weblink access:
 - Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, second edition. University of California Press, Berkeley.
 6. Documents referenced in MND Appendix B—Biological Resources Letter with broken weblinks:
 - U.S. Fish and Wildlife Service (USFWS). 2024a. Occurrence Information for Multiple Species within Jurisdiction of the Carlsbad

O-1-2
cont.

Fish and Wildlife Office (CFWO). Retrieved from:
<http://www.fws.gov/carlsbad/gis/cfwogis.html>.

7. Documents referenced in MND Appendix C– Cultural Resources Assessment with missing PDF or weblink access:

- Barrows, David Prescott 1900 *The Ethno-botany of the Coahilla [sic] Indians of Southern California*. University of Chicago Press.
- Bean, Lowell John 1978 Cahuilla. In *California*, edited by R. F. Heizer, pp. 575–587. *Handbook of North American Indians*, vol. 8, W.C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.
- Bean, Lowell John, and Charles R. Smith 1978 Serrano. In *California*, edited by R.F. Heizer, pp. 570–574. *Handbook of North American Indians*, vol. 8, W.C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.
- Beck, Warren A., and Ynez D. Haase 1974 *Historical Atlas of California*. University of Oklahoma Press, Norman.
- Bright, William 1975 Two Notes on Takic Classification: Paper read at the Third Annual Uto-Aztecan Conference, Flagstaff, June 19–20, 1975. (Copy, Manuscript No. 76–66 in National Anthropological Archives, Smithsonian Institution, Washington, D.C.)
- Gudde, Erwin G. 1998 *California Place Names: The Origin and Etymology of Current Geographical Names*. Fourth edition, revised and enlarged by William Bright. University of California Press, Berkeley and Los Angeles.
- Harley, R. Bruce 1988 Rev. Juan Caballeria: Historian or Storyteller? Rethinking the 1810 Dumetz Expedition. *San Bernardino County Museum Quarterly* 35(2), 42p.
- Heizer, Robert F., and Albert B. Elsasser 1980 *The Natural World of the California Indians*. University of California Press, Berkeley and Los Angeles.
- Hooper, Lucile 1920 *The Cahuilla Indians*. University of California Publication in American Archaeology and Ethnology. Vol. 16, No. 6. Reprinted by Malki Museum Press. Banning, California.
- James, Harry C. 1960 *The Cahuilla Indians*. Los Angeles: Westernlore Press. Reprinted in 1969 and 1985 by Malki Museum Press. Banning, California.
- Kroeber, Alfred L. 1908 *Ethnography of the Cahuilla Indians*. University of California Publications in American Archaeology and Ethnology. Vol. 8. No. 2. Reprinted by Malki Museum Press, Banning, California.

O-1-2
cont.

- McGroarty, John Steve 1914 Southern California. Southern California Panama Exposition Commission.
 - Moratto, Michael J. 2004 California Archaeology. Academic Press, Orlando, Florida. Reprinted by Coyote Press in 2004.
 - Norris, R.M., and R.W. Webb 1976 Geology of California. John Wiley and Sons, Inc., New York
 - Richards, Elizabeth W. 1966 Guideposts to History: Concerning Origins of Place and Street Names in San Bernardino County. Santa Fe Federal Savings.
 - Schoenherr, Allan A. 1992 A Natural History of California. University of California Press, Berkeley and Los Angeles.
 - Strong, William D. 1929 Aboriginal Society in Southern California. University of California Publications in American Archaeology and Ethnology 26(1): 1–358. Berkeley.
 - Wallace, William J. 1955 A Suggested Chronology for Southern California Coastal Archaeology. Southwestern Journal of Anthropology 11(3):214-230. 1978
 - Post-Pleistocene Archaeology. In California, edited by R. Heizer, pp. 550–563. Handbook of North American Indians, Vol. 8. W.C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.
 - Warren, Claude N. 1968 Cultural Tradition and Ecological Adaptation on the Southern California Coast. Eastern New Mexico University Contributions in Anthropology 1(3). Portales.
 - 1984 The Desert Region. In California Archaeology, by M. Moratto with contributions by D.A. Fredrickson, C. Raven, and C. N. Warren, pp. 339–430. Academic Press, Orlando, Florida.
 - Warren, Claude N., and Robert H. Crabtree 1986 Prehistory of the Southwestern Area. In W.L. D'Azevedoed., Handbook of the North American Indians, Vol. 11, Great Basin. pp. 183–193. Smithsonian Institution, Washington, D.C.
8. Other Agency Guidance Documents with missing weblinks that are not readily available from an internet search, referenced in MND Appendix A—Air Quality, Greenhouse Gas, and Energy Impact Study:
- 2008 ARB Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk – Frequently Asked Questions
 - 2018 Historical Air Quality, Top 4 Summary
 - Governor’s Office of Planning and Research, 2009 CEQA Guideline Sections to be Added or Amended

O-1-2
cont.

To date, the City has failed to provide access to these documents referenced and relied upon in the MND, in violation of CEQA. CEQA compels a lead agency to make all documents referenced in a negative declaration “available for review” during the entire public comment period.⁷ We ask that the City fully and immediately comply with our June 20, 2025, request for immediate access by providing access to the above-listed MND reference documents.

The courts have held that the failure to provide even a few pages of a CEQA document for a portion of the public review period invalidates the entire CEQA process, and that such a failure must be remedied by permitting additional public comment.⁸ It is also well settled that a CEQA document may not rely on hidden studies or documents that are not provided to the public.⁹

By failing to make all documents and underlying data referenced in the MND readily available during the entirety of the public comment period, the City is depriving members of the public the ability to meaningfully comment on the potentially significant environmental impacts of the Project and is violating the procedural mandates of CEQA.

O-1-3

In sum, we request the City:

- 1) Extend the public review and comment period **for at least 30 days from the date on which the City releases *all* MND reference documents** for public review.
- 2) Immediately provide access to the MND reference documents referenced herein.

Given the short time before the current comment deadline ends, please contact me as soon as possible with your response to this request, but no later than close of business on **Thursday, July 3, 2025.**

⁷ *Id.*

⁸ *Ultra mar v. South Coast Air Quality Man. Dist.* (1993) 17 Cal.App.4th 689, 699.

⁹ *Santiago County Water District v. County of Orange* (1981) 118 Cal.App.3rd 818, 831 (“Whatever is required to be considered in an EIR must be in that formal report; what any official might have known from other writings or oral presentations cannot supply what is lacking in the report”).

July 2, 2025
Page 7

Thank you for your prompt attention and response to this matter.

O-1-3 cont.

Sincerely,



Alaura McGuire

Attachments
ARM:acp

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July 28, 2025

Via Email and Overnight Mail

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**Re: Comments on Initial Study/Mitigated Negative Declaration for
The Commons at California Project, 913 California Street (CUP Nos.
1200, 1203; TPM No. 20854; Commission Review & Approval No. 0973;
SCH No. 2025060163)**

Dear Mr. Reilly:

On behalf of Californians Allied for a Responsible Economy (“CARE CA”), we submit these comments on the Initial Study/Mitigated Negative Declaration (“MND”) for the Commons at California Project, 913 California Street (CUP Nos. 1200, 1203; TPM No. 20854; Commission Review & Approval No. 0973; SCH No. 2025060163), proposed by Heimann Development Group, LLC (“Applicant”).

The proposed Project includes the subdivision of the Project site into three parcels.¹ A four story, 55,186-square-foot business hotel containing 90 rooms would be constructed on Parcel 1.² An approximately 1,450-square-foot drive-through coffee shop would be constructed on Parcel 2.³ Lastly, a 3,588-square-foot semi-automated car wash would be constructed on Parcel 3.⁴ The Project would also include associated circulation, parking, infrastructure, a 7,471-square-foot infiltration basin at the northwest corner of the site, and landscaping improvements on the undeveloped, 5.1-acre project site.⁵ The 5.1-acre project site is at 913

¹ MND, p. 2-9.

² *Id.*

³ *Id.*

⁴ *Id.*

⁵ *Id.*

California Street in Redlands, San Bernardino County, California (APNs 292-034-10 and -17).⁶

O-2-1 cont.

We reviewed the MND with the assistance of CARE CA's expert consultants, including air quality expert, James Clark, PhD, and noise expert, Jack Meighan of Wilson Ihrig. Dr. Clark's technical comments and curriculum vitae are attached hereto as Exhibit A.⁷ Mr. Meighan's technical comments and curriculum vitae are attached hereto as Exhibit B.⁸ These comment letters and all attachments thereto are incorporated by reference as if fully set forth herein.

Based on our review of the MND, the MND fails to comply with the California Environmental Quality Act ("CEQA").⁹ It fails as an informational document and lacks substantial evidence to support its conclusions that the Project's significant impacts will be mitigated to less than significant levels. There is also substantial evidence supporting a fair argument that the Project will have potentially significant, unmitigated environmental impacts on air quality, public health, noise, and from hazards.

O-2-2

In particular, CARE CA's air quality expert provides substantial evidence demonstrating that the Project is likely to have significant hazards and health risk impacts during construction from exposure to diesel particulate matter ("DPM") and Valley Fever spores, each of which pose serious health risks to nearby sensitive receptors and construction workers. Additionally, Dr. Clark demonstrates that both construction and future on-site workers may be exposed to unmitigated perchloroethylene ("PCE") in the site's soil—a known carcinogen that can lead to serious health effects. CARE CA's noise expert also provides substantial evidence that the Project may result in significant construction-related vibration and noise impacts, as well as operational noise from increased pedestrian activity. Substantial evidence provided by CARE CA's experts supports a fair argument that the Project may have significant effects on the environment which the MND fails to disclose or mitigate.¹⁰ The City must prepare an environmental impact report ("EIR") to address these impacts and comply with CEQA.

⁶ *Id.* at 2-1.

⁷ Exhibit A, Dr. James Clark, *Comments on the Initial Study/Mitigated Negative Declaration for the Commons at California Project* (hereinafter "Clark Comments").

⁸ Exhibit B, Jack Meighan, *Comments on the Initial Study/Mitigated Negative Declaration for the Commons at California Project* (hereinafter "Meighan Comments").

⁹ Pub. Res. Code (or "PRC") §§ 21000 et seq.; 14 Cal. Code Regs. ("CCR" or "CEQA Guidelines") §§ 15000 et seq.

¹⁰ *Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 928.

The MND also fails to support its significance findings with substantial evidence. As a result, the City cannot make the requisite findings to approve the Project's entitlements under local land use codes or the Subdivision Map Act. For the foregoing reasons and as explained in detail herein, the City must prepare an EIR for the Project before the City may consider Project approval.

O-2-2 cont.

I. STATEMENT OF INTEREST

CARE CA is a non-profit organization which advocates for a sustainable construction industry and protecting the environment and health of its communities' workforces. The organization includes Redlands residents Christian Casillas, Eduardo Torres, and Gene Connally, the District Council of Ironworkers and Southern California Pipe Trades DC 16, along with their members, their families, and other individuals who live and work in Redlands and in San Bernardino County.

CARE CA advocates for protecting the environment and the health of their communities' workforces. CARE CA seeks to ensure a sustainable construction industry over the long-term by supporting projects that offer genuine economic and employment benefits, and which minimize adverse environmental and other impacts on local communities. CARE CA members live, work, recreate, and raise their families in Redlands and its communities. Accordingly, they would be directly affected by the Project's environmental, public health and worker health and safety impacts. Individual members may also work on the Project itself. They will be first in line to be exposed to any health and safety hazards that exist onsite.

O-2-3

In addition, CARE CA has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for business and industry to expand in the region, and by making the area less desirable for new businesses and new residents. Indeed, continued environmental degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduce future employment opportunities.

II. LEGAL BACKGROUND

CEQA is designed to inform decision-makers and the public about the potential, significant environmental effects of a project.¹¹ “CEQA’s fundamental goal [is] fostering informed decision-making.”¹²

The EIR is the very heart of CEQA because it acts as an “environmental ‘alarm bell’ whose purpose is to alert the public and its responsible officials to environmental changes before they have reached the ecological points of no return.”¹³ The EIR aids an agency in identifying, analyzing, disclosing, and, to the extent possible, avoiding a project’s significant environmental effects through implementing feasible mitigation measures.¹⁴ The EIR also serves “to demonstrate to an apprehensive citizenry that the Agency has analyzed and considered the ecological implications of its action.”¹⁵ Thus, an EIR “protects not only the environment but also informed self-government.”¹⁶

O-2-4

In limited circumstances, an agency may avoid preparing an EIR. However, because “[t]he adoption of a negative declaration...has a terminal effect on the environmental review process” by allowing the agency to dispense with the duty to prepare an EIR, negative declarations are allowed only in cases that satisfy the fair argument standard.¹⁷

The “fair argument” standard is an exceptionally “low threshold” favoring environmental review in an EIR rather than a negative declaration.¹⁸ Under the fair argument standard, a lead agency “shall” prepare an EIR whenever substantial evidence in the whole record before the agency supports a fair argument that a project may have a significant effect on the environment.¹⁹ The phrase “significant

¹¹ CEQA Guidelines § 15002.

¹² *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 406; PRC § 21100.

¹³ *Dunn-Edwards v. Bay Area Air Quality Management Dist.* (1992) 9 Cal.App.4th 644, 652; *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1220.

¹⁴ PRC § 21002.1(a); CEQA Guidelines § 15002(a), (f).

¹⁵ *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 86.

¹⁶ *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564.

¹⁷ *Citizens of Lake Murray v. San Diego* (1989) 129 Cal.App.3d 436, 440; PRC §§ 21100, 21064.

¹⁸ *Consolidated Irrigation District v. City of Selma* (2012) 204 Cal.App.4th 187, 207; *Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 928.

¹⁹ PRC §§ 21080(d), 21082.2(d); 14 CCR §§ 15002(k)(3), 15064(f)(1), (h)(1); *Laurel Heights Improvement Assn. v. Regents of the Univ. of Cal.* (1993) 6 Cal.4th 1112, 1123; *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 75, 82; *Stanislaus Audubon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 150-151; *Quail Botanical Gardens Found., Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1601-1602.

effect on the environment” is defined as “a substantial, or potentially substantial, adverse change in the environment.”²⁰ “Substantial evidence” required to support a fair argument is defined as “enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached.”²¹ As a matter of law, substantial evidence includes both expert and lay opinion.²²

Accordingly, a mitigated negative declaration may be prepared only when, after preparing an initial study, a lead agency determines that a project may have a significant effect on the environment, but:

- (1) Revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed negative declaration and initial study are released for public review *would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would*, and
- (2) there is *no substantial evidence* in light of the whole record before the public agency that the project, as revised, *may* have a significant effect on the environment.²³

O-2-4
cont.

With respect to this Project, the MND fails to satisfy the basic purposes of CEQA. The MND fails to adequately disclose, investigate, and analyze the Project’s potentially significant impacts during construction and operation, and fails to provide substantial evidence to support its conclusions that impacts will be mitigated to a less than significant level.²⁴ Because substantial evidence shows that the Project may result in potentially significant impacts, a fair argument can be made that the Project may cause significant impacts requiring the preparation of an EIR.

III. SUBSTANTIAL EVIDENCE SUPPORTS A FAIR ARGUMENT THAT THE PROJECT’S IMPACTS ON AIR QUALITY AND PUBLIC HEALTH ARE POTENTIALLY SIGNIFICANT

The MND concludes that the Project would result in less than significant impacts on air quality and public health from Project-related emissions.²⁵ This conclusion is unsupported and is contradicted by substantial expert evidence which

O-2-5

²⁰ PRC § 21068.

²¹ 14 CCR § 15384(a).

²² PRC § 21080, subd. (e)(1); CEQA Guidelines § 15064(f)(5).

²³ PRC § 21064.5 (emphasis added).

²⁴ PRC § 21064.5.

²⁵ MND, p. 3-12.

supports a fair argument that the Project has significant, unmitigated impacts on air quality and public health.

The MND fails to disclose or mitigate the potentially significant effects from exposure to Valley Fever spores disturbed during Project construction, lacks a quantified construction health risk analysis of the Project's expected toxic air contaminant ("TAC") emissions, fails to disclose significant health risk associated with construction TAC emissions, and fails to adequately analyze the Project's cumulative air quality impacts, as required by CEQA. Dr. Clark's comments provide substantial evidence supporting a fair argument that the expected exposure to Valley Fever and diesel particulate matter ("DPM") pose potentially significant individual and cumulative air quality and public health impacts that must be disclosed, analyzed, and mitigated in an EIR before the Project can be approved.

O-2-5
cont.

A. Substantial Evidence Supports a Fair Argument that the Project Will Result in Significant, Unmitigated Valley Fever Impacts

Dr. Clark's comments provide substantial evidence demonstrating that the Project would pose a significant public health risk to construction workers, nearby residences, and surrounding community members from exposure to Valley Fever spores released during Project construction.²⁶ The MND fails to disclose and mitigate this risk.

O-2-6

Valley Fever is an infectious disease caused by inhaling *Coccidioides* spores, a fungus that lives in the top 2 to 12 inches of soil.²⁷ Valley Fever spores are tiny, ranging from approximately 0.002–0.005 millimeters ("mm"), and are not adequately controlled by standard dust control measures because standard dust control largely focuses on visible dust or larger dust particles—the PM10 fraction—not the very fine particles where the Valley Fever spores are found.²⁸ When soil containing this fungus is disturbed by activities such as digging, vehicles, or construction activities, the fungal spores become airborne and pose a significant health risk to workers and other nearby sensitive receptors.²⁹ Valley Fever often manifests as a mild respiratory illness, but it can progress to serious chronic forms, especially in immunocompromised individuals, and may even spread, impacting

²⁶ Clark Comments, pp. 19-23.

²⁷ *Id.* at p. 20.

²⁸ *Id.*; Frederick S. Fisher, Mark W. Bultman, and Demosthenes Pappagianis, Operational Guidelines (version 1.0) for Geological Fieldwork in Areas Endemic for Coccidioidomycosis (Valley Fever), U.S. Geological Survey Open-File Report 00-348, 2000, pp. 5, 7, available at: <https://pubs.usgs.gov/of/2000/0348/pdf/of00-348.pdf>.

²⁹ Clark Comments, p. 20.

organs including the skin, bones, brain, and spinal cord.³⁰ Valley Fever that spreads is associated with severe symptoms like meningitis, painful lesions, and swollen joints.³¹

One of CEQA's basic purposes is to inform government decision-makers and the public about the potential significant environmental effects of proposed projects.³² Courts have previously found environmental documents deficient for failing to correlate adverse air pollution effects with indirect health effects.³³ Thus, impacts from potential Valley Fever exposure must be analyzed and mitigated to the greatest extent feasible pursuant to CEQA. Additionally, counties where Valley Fever is endemic are required to provide worker awareness training.³⁴ While San Bernardino County is not expressly identified as an endemic county in Labor Code 6709, recent evidence demonstrates that Valley Fever in San Bernardino is highly endemic and may pose a significant risk of exposure to construction workers and local residents.

O-2-6
cont.

Valley Fever is highly endemic (native and common) to semiarid regions of the United States.³⁵ "Highly endemic" means that the annual incidence rate of Valley Fever is greater than 20 cases per 100,000 per year.³⁶ The Project at issue proposes to construct a business hotel, a drive-through coffee shop, and a semi-automated car wash on a currently undeveloped 5.1-acre project site in the City of Redlands, County of San Bernardino.³⁷ Dr. Clark's comments demonstrate that Valley Fever is highly endemic to San Bernardino County and that the incidence rates have been rising at an alarming rate.³⁸ According to the California Department of Public Health, in just the first 8 months of 2024, 210 cases of Valley Fever were reported—representing a 552% increase compared to the number of cases reported in all of 2016.³⁹ As such, the proposed Project will exacerbate an existing and growing problem, resulting in a potentially significant public health risk which the MND fails to disclose or mitigate, in violation of CEQA. The MND also fails to include worker awareness training as a requirement for Project approval, in violation of the California Labor Code requirement of worker

³⁰ *Id.* at p. 22.

³¹ *Id.*

³² CEQA Guidelines § 15002(a)(1).

³³ *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502; *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184.

³⁴ Cal. Lab. Code § 6709(a).

³⁵ Cal. Lab. Code § 6709(a).

³⁶ Cal. Lab. Code § 6709(a).

³⁷ MND, p. 2-1.

³⁸ Clark Comments, p. 20.

³⁹ *Id.*

awareness training for Project sites located in counties where Valley Fever is endemic.⁴⁰

The MND's failure to discuss Valley Fever is a major omission. The entire 5.1-acre project site is anticipated to be disturbed during construction activities.⁴¹ Site preparation and grading of the proposed Project site is expected to last 13 days and to disturb approximately 15.5 acres of soil.⁴² Additionally, grading of the project site would result in approximately 5,000 cubic yards of cut and require approximately 35,000 cubic yards of fill, requiring the import of approximately 30,000 cubic yards of soil.⁴³ These activities will generate a large amount of dust.⁴⁴ Dust exposure is a primary risk factor for contracting Valley Fever.⁴⁵ A study from Antelope Valley identified a clear link between soil disturbance and increased incidences of Valley Fever, with construction workers facing the greatest risk due to their direct and prolonged exposure.⁴⁶ However, the risk is not limited to the Project site.⁴⁷ The microscopic size of Valley Fever spores means they easily become airborne, allowing them to travel long distances.⁴⁸ This poses a significant health risk not only to nearby sensitive receptors—residences within 165 ft⁴⁹ and a school within 316 ft⁵⁰—but also to communities located much further from the Project site.⁵¹

O-2-6
cont.

Additionally, these very small particles are not controlled by conventional construction dust control mitigation measures.⁵² Even when standard dust control measures are in place, high winds can mobilize substantial amounts of dust from graded areas that carry Valley Fever spores and silica dust into surrounding communities.⁵³ Thus, compliance with South Coast Air Quality Management District's ("SCAQMD") Rule 403 fugitive dust control measures, discussed in the

⁴⁰ Labor Code § 6709(b), (c).

⁴¹ MND, p. 2-15.

⁴² Clark Comments, p. 19.

⁴³ MND, p. 2-15.

⁴⁴ Clark Comments, p. 19.

⁴⁵ *Id.* at p. 19.

⁴⁶ *Id.* at p. 20.

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ MND, p. 3-19.

⁵⁰ *Id.* at p. 3-54.

⁵¹ Clark Comments, p. 20.

⁵² *Id.* at p. 20; Frederick S. Fisher, Mark W. Bultman, and Demosthenes Pappagianis, Operational Guidelines (version 1.0) for Geological Fieldwork in Areas Endemic for Coccidioidomycosis (Valley Fever), U.S. Geological Survey Open-File Report 00-348, 2000, pp. 5, 7, available at: <https://pubs.usgs.gov/of/2000/0348/pdf/of00-348.pdf>.

⁵³ Clark Comments, p. 20.

MND, is inadequate to reduce the risks of Valley Fever exposure.⁵⁴ The Project site's desert location and exposure to desert winds contribute to this ineffectiveness.⁵⁵ Because of this, specific Valley Fever mitigation measures must be incorporated into the Project's mitigation plan. Given that the Project will be directly responsible for the generation of the spores into the local environment, Dr. Clark recommends that the City offer filtration for residences near the Project site.⁵⁶ Use of minimum efficiency reporting value 16 filters on the residences nearby would reduce exposure to the spores by as much as 95%.⁵⁷

O-2-6
cont.

The MND violates CEQA by not disclosing or mitigating the potentially significant impacts of Valley Fever. The MND also violates the California Labor Code by not including worker awareness training as a requirement for Project approval. Dr. Clark's comments provide substantial evidence supporting a fair argument that Project construction may result in significant air quality and public health impacts from Valley Fever exposure. Thus, an EIR must be prepared that discloses the risks of Valley Fever, identifies ways to mitigate exposure to *Coccidioides*, and includes worker awareness training in accordance with California's Labor Code.

B. The MND Fails to Analyze the Potentially Significant Air Quality and Health Risks from the Project's Use of Fire Pumps and Back-up Generators

The MND's assessment of the Project's air quality impacts is inaccurate and unsupported because it omits fire pumps and back-up generators from its emissions estimates. Dr. Clark provides substantial evidence demonstrating that, due to emissions of both criteria air pollutants and TACs that will be generated by the Project's diesel fire pump and back-up generator. The City's failure to include these emissions in the air quality analysis is a failure to disclose and analyze potentially significant air quality and public health impacts.

O-2-7

The Project proposes to develop a four-story, 58-foot-tall business hotel totaling 55,185 square feet and containing 90 rooms.⁵⁸ As part of the proposed fire protection system, the Project includes plans to install a fire pump.⁵⁹ Pursuant to Section 913.1 of the California Fire Code, fire pumps must be installed in

⁵⁴ *Id.* at p. 22.

⁵⁵ *Id.*

⁵⁶ *Id.*

⁵⁷ *Id.*

⁵⁸ MND, p. 2-9.

⁵⁹ The Commons at California Fire Master Plan.

accordance with the National Fire Protection Association Standard 20 (“NFPA 20”).⁶⁰ NFPA 20 requires that fire pumps be supplied by a reliable power source to ensure continued operation during an emergency.⁶¹ One of the most common methods of providing emergency power is through a diesel-fueled generator.⁶² These systems emit harmful air pollutants, including diesel particulate matter (“DPM”)—a human carcinogen.⁶³ As Dr. Clark explains, even if these systems are operated only for routine maintenance and testing, CARB’s Airborne Toxic Control Measure for stationary diesel engines permits up to 100 hours of annual operation.⁶⁴ Generator testing may therefore result in TAC emissions which the MND failed to disclose.

CEQA requires lead agencies to use their best efforts to investigate and disclose all that they reasonably can about a Project’s potential environmental impacts.⁶⁵ When uncertain future events could lead to a range of possible outcomes, analysis may be based on a reasonable worst-case scenario.⁶⁶ Accordingly, the City must also consider foreseeable scenarios that would result in prolonged operation of backup generators, such as Public Safety Power Shutoffs and extreme heat events.⁶⁷

O-2-7
cont.

By failing to account for emissions from diesel fire pumps and backup generators, the City has underestimated the Project’s true air quality and health risk impacts, which may be significant. This omission renders the MND’s analysis incomplete and unsupported by substantial evidence. The City must analyze, disclose, and mitigate the air quality and public health risks that emissions from the installation and operation of the Project’s fire pump and generator systems pose in an EIR.

⁶⁰ 2022 California Fire Code § 913.1.

⁶¹ NFPA 20 §§ 9.2.1, 9.2.2;

⁶² Shawn Mahoney, NFPA, *Maintaining Your Emergency Power Supply System is Critical, Particularly During Hurricane Season* (June 14, 2024), available at: <https://www.nfpa.org/news-blogs-and-articles/blogs/2020/09/18/maintaining-your-emergency-power-supply-system-is-critical-particularly-during-hurricane-season>.

⁶³ California Air Resources Board, Overview: Diesel Exhaust & Health, available at: <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>.

⁶⁴ Clark Comments, p. 5.

⁶⁵ 14 CCR § 15144; *Rodeo Citizens Ass’n v. County of Contra Costa* (2018) 22 CA5th 214, 226.

⁶⁶ *Planning & Conserv. League v. Castaic Lake Water Agency* (2009) 180 CA4th 210, 244.

⁶⁷ Clark Comments, p. 5.

C. The MND Lacks a Quantitative Health Risk Analysis for the Project's Construction Related Diesel Particulate Matter Emissions

The MND fails to analyze the health risk posed to sensitive receptors close to the Project's construction zone, in violation of CEQA. A quantitative health risk analysis ("HRA") is necessary to determine whether the health risk posed by the Project's construction air emissions will result in a cancer risk that exceeds adopted thresholds of significance.

CEQA Guidelines section 15126.2, subdivision (a) requires the CEQA document to "analyze any significant environmental effects the project might cause by bringing development and people into the area affected."⁶⁸ The CEQA Guidelines require the CEQA document to identify "relevant specifics of...health and safety problems caused by the physical changes."⁶⁹ CEQA Appendix G specifically requires the lead agency to evaluate whether the Project will "expose sensitive receptors to substantial pollutant concentrations."⁷⁰

O-2-8

The California Supreme Court has upheld CEQA's requirement to disclose the extent to which a project's air emissions may result in adverse health impacts. In *Sierra Club v. County of Fresno*, the County's failure to include a health risk analysis in an EIR enabled the Court to find "the EIR insufficient because it failed to explain why it was not feasible to provide an analysis that connected the air quality effects to human health consequences."⁷¹ Here, the MND fails to provide the requisite discussion of the potential public health impacts that will result from the Project's emissions of TACs during construction and fails to indicate the concentration at which such pollutants would trigger adverse health effects. "Without such information, the general public and its responsible officials cannot make an informed decision on whether to approve the project."⁷² The City must prepare an EIR which includes a quantified health risk analysis to connect the Project's air quality impacts with human health consequences.

⁶⁸ 14 CCR § 15126.2(a).

⁶⁹ 14 CCR § 15126.2(a).

⁷⁰ CEQA Appendix G, Section III.D.

⁷¹ *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502, 519; *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 134 Cal.App.4th 1184, 1220 ("After reading the EIRs, the public would have no idea of the health consequences that result when more pollutants are added to a nonattainment basin. On remand, the health impacts resulting from the adverse air quality impacts must be identified and analyzed in the new EIRs).

⁷² *Santa Clarita Org. v. County of Los Angeles* (2003) 106 Cal.App.4th 715, 724.

Project construction is anticipated to last 13 months.⁷³ The construction activities are expected to generate significant short-term air quality impacts, including emissions of particulate matter (PM2.5 and PM10), carbon monoxide, nitrogen oxides, volatile organic compounds (“VOC”), and TACs, such as DPM from heavy-duty construction equipment.⁷⁴ The MND acknowledges these emissions but improperly provides only a qualitative analysis of the Project’s construction related health risk impacts, and fails to compare emissions to applicable quantitative health risk thresholds, rendering the analysis inadequate.⁷⁵ Specifically, the MND omits a comparison of the Project’s health risk impacts to SCAQMD’s adopted numeric threshold of 10 in one million.⁷⁶ The omission of this information makes the MND’s impact analysis inadequate and renders its conclusions unsupported.

The MND’s omission of an HRA also conflicts with standard regulatory guidance. A quantitative health risk analysis of construction TAC emissions is regularly used to evaluate impacts on sensitive receptors. SCAQMD defines sensitive receptors as “any residence including private homes, condominiums, apartments, and living quarters, schools as defined under paragraph (b)(57), preschools, daycare centers and health facilities such as hospitals or retirement and nursing homes.”⁷⁷ The location of sensitive receptors is relevant to assessing toxic impacts on public health.⁷⁸ Here, the closest residence to the Project site is 165 feet away⁷⁹ and the closest school is an elementary school approximately 316 feet away⁸⁰. There are therefore several sensitive receptors located in close proximity to the Project site who may be adversely impacted by the Project’s TAC emissions. An HRA must be conducted to analyze the potential impacts to these receptors. Without this analysis, the MND lacks substantial evidence to conclude that health risk impacts will be less than significant.

The MND’s failure to analyze construction-related health risks is also inconsistent with the Office of Environmental Health Hazard Assessment’s (“OEHHA”) *Risk Assessment Guidelines: Guidance Manual for Preparation of*

O-2-8
cont.

⁷³ MND, p. 2-15.

⁷⁴ *Id.* at p. 3-15.

⁷⁵ MND Appendix A, p. 53.

⁷⁶ SCAQMD, Air Quality Significance Thresholds, available at: <https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25> (last visited 7/5/25).

⁷⁷ SCAQMD Rule 1470(b)(60).

⁷⁸ SCAQMD AB 2588 and Rule 1402 Supplemental Guidelines, p. 10, available at: <https://www.aqmd.gov/docs/default-source/planning/risk-assessment/forms-and-guidelines/ab-2588-supplemental-guidelines-2024.pdf?sfvrsn=6>.

⁷⁹ MND, p. 3-19.

⁸⁰ *Id.* at p. 3-54.

Health Risk Assessments. These guidelines recommend that all short-term projects lasting at least 2 months assess cancer risks and that exposure from projects lasting more than 6 months should be evaluated for the duration of the project.⁸¹ Here, the Project's construction is anticipated to take 13 months.⁸² Because the anticipated duration of the Project's construction would exceed the 2-month and 6-month requirements set forth by OEHHA, a quantified HRA under OEHHA guidance should have been prepared to evaluate the Project for its entire duration.

For the foregoing reasons, the MND's failure to include an HRA to quantify the adverse health risk impacts that will be caused by exposure to TACs from the Project's construction-related DPM emissions renders the MND's air quality analysis inadequate and demonstrates that the MND lacks substantial evidence for its conclusion that no significant health impacts will result. Therefore, an HRA must be conducted, and this must be set forth in an EIR, along with mitigation measures to reduce any significant health risks to less than significant levels.

O-2-8
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D. Substantial Evidence Supports a Fair Argument that the Project's Construction Health Risk is Significant and Unmitigated

Dr. Clark performed an HRA using SCAQMD's AERMOD Health Risk Assessment Tool and Guidance from the OEHHA Air Toxics Hot Spots Program Manual.⁸³ This analysis provides substantial evidence demonstrating that the Project may result in significant cancer risks to nearby sensitive receptors that the MND fails to disclose and mitigate.

Specifically, Dr. Clark calculated that the cancer risk to infants from exposure to DPM emitted during Project construction would be 37 in 1,000,000, which far exceeds the SCAQMD significance threshold of 10 in 1,000,000.⁸⁴ This constitutes a significant environmental impact under CEQA that must be fully analyzed and mitigated to the greatest extent feasible. Dr. Clark identifies several mitigation measures that could reduce the Project's DPM emissions, including: (1) use of Tier 4 final rated equipment on off-road construction equipment, (2) use of diesel particle filters to off-road construction equipment, (3) use of aqueous fuels, and (4) use of cooled exhaust gas recirculation technology on off-road construction

O-2-9

⁸¹ OEHHA, *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments*, pp. 8-18, available at: <https://oehha.ca.gov/air/crnrr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0>.

⁸² MND, p. 2-15.

⁸³ Clark Comments, pp. 13, 15.

⁸⁴ *Id.* at p. 16.

equipment.⁸⁵ The MND includes no air quality mitigation measures because it incorrectly concludes that air quality impacts are less than significant.

Dr. Clark provides substantial evidence supporting a fair argument that the Project's construction emissions may expose sensitive receptors to cancer risks well above established thresholds, which the MND fails to identify, analyze, or mitigate. The City cannot approve the Project until it prepares an EIR that discloses the Project's potentially significant health risks and adopts all feasible mitigation measures to reduce DPM emissions to less than significant levels.

O-2-9
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E. The MND Fails to Adequately Disclose, Analyze, or Mitigate the Project's Cumulative Air Quality Impacts

The MND concludes that the Project's cumulative air quality impacts would be less than significant.⁸⁶ However, this conclusion is not supported by substantial evidence because the MND fails to analyze the Project's impacts combined with the impacts of past, present, or foreseeable future projects, as required by CEQA.

A CEQA document must evaluate a cumulative impact if the project's incremental effect combined with the effects of other projects is "cumulatively considerable."⁸⁷ This determination is based on an assessment of the project's incremental impacts "viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."⁸⁸ Proper cumulative impact analysis is vital because "the full environmental impact of a proposed project cannot be gauged in a vacuum. One of the most important environmental lessons that has been learned is that environmental damage often occurs incrementally from a variety of small sources. These sources appear insignificant when considered individually, but assume threatening dimensions when considered collectively with other sources with which they interact."⁸⁹

O-2-10

The MND asserts that the Project will not result in cumulative air quality impacts simply because its construction and operational emissions fall below SCAQMD'S project-level significance thresholds.⁹⁰ It claims that this analysis is sufficient because the thresholds already account for when a project's emissions

⁸⁵ *Id.*

⁸⁶ MND, p. 3-15.

⁸⁷ CEQA Guidelines § 15130(a).

⁸⁸ CEQA Guidelines §§ 15065(a)(3), 15355(b).

⁸⁹ *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 114.

⁹⁰ MND, pp. 3-17, 3-18.

would be cumulatively considerable.⁹¹ However, this approach ignores the Project's potential cumulative contribution to the existing environment and violates CEQA.

The MND's "drop in the bucket" approach has been rejected by the courts for failing to comply with CEQA's requirement that a project mitigate impacts that are "cumulatively considerable."⁹² A leading case on this issue is *Kings County Farm Bureau v. City of Hanford*.⁹³ In *Kings County*, the city prepared an EIR for a 26.4-megawatt coal-fired cogeneration plant.⁹⁴ Notwithstanding the fact that the EIR found that the project region was out of attainment for PM₁₀ and ozone, the city failed to incorporate mitigation for the project's cumulative air quality impacts from project emissions because it concluded that the Project would contribute "less than one percent of area emissions for all criteria pollutants."⁹⁵ The city reasoned that, because the project's air emissions were small in ratio to existing air quality problems, that this necessarily rendered the project's "incremental contribution" minimal under CEQA.⁹⁶ The court rejected this approach, finding it "contrary to the intent of CEQA." The court stated:

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We find the analysis used in the EIR and urged by GWF avoids analyzing the severity of the problem and allows the approval of projects which, when taken in isolation, appear insignificant, but when viewed together, appear startling. Under GWF's "ratio" theory, the greater the over-all problem, the less significance a project has in a cumulative impacts analysis. We conclude the standard for a cumulative impacts analysis is defined by the use of the term "collectively significant" in Guidelines section 15355 and the analysis must assess the collective or combined effect of energy development. The EIR improperly focused upon the individual project's relative effects and omitted facts relevant to an analysis of the collective effect this and other sources will have upon air quality.⁹⁷

⁹¹ *Id.* at 3-15.

⁹² PRC § 21083(b)(2); CEQA Guidelines § 15130; *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 719-21.

⁹³ *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal. App. 3d 692 ("Kings County"); see also, *Friends of Oroville v. City of Oroville* (2013) 219 Cal. App. 4th 832, 841-42.

⁹⁴ *Kings County*, *supra*, at 707.

⁹⁵ *Id.* at 719.

⁹⁶ *Id.* at 720.

⁹⁷ *Id.* at 721; see also *People of the State of California v. City of Fontana*, Case No. CIVSB2121829, Petition for Writ of Mandate, available at https://climatecasechart.com/wp-content/uploads/case-documents/2021/20210723_docket-CIVSB2121829_petition-for-writ-of-mandate.pdf ("The MND's cumulative air quality impact analysis does not account for—or even acknowledge—the multitude of other warehouses near the Project. Rather than consider the environmental setting within which the

Furthermore, SCAQMD is updating its cumulative impact guidance to eliminate the project-level approach and adopt cumulative impact thresholds. Guidance from SCAQMD's November 6, 2024 Working Group recommends that agencies use a more stringent health risk significance threshold.⁹⁸ The draft SCAQMD protocols lower the cancer risk threshold (from 10 in one million) if certain factors reflecting high pollution burden are met.⁹⁹ These factors include determining (1) the background cancer risk affecting the Project area via the SCAQMD Multiple Air Toxics Exposure Study (MATES), (2) if there are 951 daily heavy-duty truck trips or more that would traverse the truck route, and (3) if the Project is located in a SB 535 disadvantaged community or an AB 617 community.¹⁰⁰ Although the new protocols have not yet been formally adopted, the proposed guidance demonstrates that SCAQMD intends for agencies to conduct a detailed analysis of cumulative impacts, and demonstrates the insufficiency of the MND's cumulative impacts analysis.

O-2-10
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Therefore, the MND's cumulative impacts analysis is inadequate because it improperly focuses on the individual project's relative effects and omits facts relevant to an analysis of the collective effect this and other sources will have upon air quality. The City must prepare an EIR that provides a comprehensive analysis of the Project's potentially significant cumulative air quality impacts.

IV. SUBSTANTIAL EVIDENCE SUPPORTS A FAIR ARGUMENT THAT THE PROJECT WILL RESULT IN POTENTIALLY SIGNIFICANT, UNMITIGATED IMPACTS RELATED TO HAZARDS

O-2-11

The MND concludes that the Project will not result in significant impacts from hazards.¹⁰¹ However, this conclusion is not supported by substantial evidence

Project will be situated, the MND simply states that the Project will not result in a cumulatively considerable increase in emissions because the Project's individual air quality impacts will be less than significant. The MND even applies this reasoning to its analysis of health impacts from localized emissions, despite making no attempt to determine or disclose the severity of the existing health impacts from localized emissions in the community")

⁹⁸ SCAQMD, CEQA Policy Development: Analyzing Cumulative Impacts from Air Toxics in CEQA Documents, available at: [https://www.aqmd.gov/home/rules-compliance/ceqa/ceqa-policy-development-\(new\)](https://www.aqmd.gov/home/rules-compliance/ceqa/ceqa-policy-development-(new)); SCAQMD, Working Group Meeting #6: Cumulative Impacts from Air Toxics for CEQA Projects, available at: https://www.aqmd.gov/docs/default-source/ceqa/documents/wgm-6-20241106.pdf?sfvrsn=405a8561_13.

⁹⁹ *Id.*

¹⁰⁰ SCAQMD, Comments on Draft Environmental Impact Report (DEIR) for the Proposed DJT4 Parcel Delivery Facility Project (Proposed Project) (SCH No. 2023070241) (December 20, 2024), pp. 2-62–2-63, available at: <https://www.cityofbrea.gov/DocumentCenter/View/17864/DJT4-Parcel-Delivery-Facility-Final-EIR->.

¹⁰¹ MND, p. 3-50.

and is contradicted by substantial evidence from Dr. Clark which supports a fair argument that the Project may pose significant public health impacts from unmitigated soil vapor exposure. The Phase I and Phase II Environmental Site Assessments (“ESA”) failed to analyze the entire Project site by limiting their review to the car wash parcel.¹⁰² Additionally, the MND does not compare the detected levels of perchloroethylene (“PCE”) to any established significance thresholds.¹⁰³ Dr. Clark’s comments provide substantial evidence supporting a fair argument that the Project could expose construction workers and future guests to potentially significant health risks.¹⁰⁴ These risks must be disclosed and mitigated to the greatest extent feasible in an EIR.

The Project site contains residual soil contamination from historic uses. A Phase I ESA was prepared for the proposed car wash parcel.¹⁰⁵ The assessment identified a former dry cleaner located approximately 130 feet east of the project site.¹⁰⁶ The dry cleaner operated from at least 1997 until 2014 and used PCE, a hazardous VOC, in its operation.¹⁰⁷ Due to the proximity of this facility, the Phase I ESA concluded that the former dry cleaner represented a potential area of concern and recommended a Phase II Limited Soil Vapor Assessment to evaluate the possible presence of VOCs on the car wash parcel.¹⁰⁸ Accordingly, the Phase II assessment was conducted and detected elevated levels of PCE in soil vapor exceeding the applicable Commercial Environmental Screening Level (“ESL”).¹⁰⁹ However, the results showed variations across the car wash parcel.¹¹⁰ A concentrated “hot spot” of PCE contamination was found along the eastern boundary, while lower levels were detected toward the central portion of the site.¹¹¹ Based on this discrepancy, the assessment concludes that the elevated concentrations at the eastern edge were not representative of the overall conditions of the site’s subsoil.¹¹² Relying on the USEPA’s “OSWER Technical Guide For Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air”, the assessment further stated that situating the proposed building away from the “hot spot” would act as a vapor intrusion mitigation

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¹⁰² *Id.* at pp. 3-52, 3-53.

¹⁰³ MND Appendix F: Phase II Limited Soil Vapor Assessment, p. 4.

¹⁰⁴ Clark Comments, p. 8.

¹⁰⁵ MND, p. 3-52.

¹⁰⁶ *Id.* at p. 3-53.

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

¹⁰⁹ MND Appendix F, p. 4.

¹¹⁰ *Id.*

¹¹¹ *Id.*

¹¹² *Id.*

measure.¹¹³ As a result, the City concluded that the elevated PCE levels would not pose a significant health risk to future onsite workers.¹¹⁴

However, the MND's significance determination is not supported by substantial evidence for several reasons. First, as explained by Dr. Clark, the Phase I and II ESAs evaluated only the car wash parcel and entirely excluded the drive-through coffee shop and hotel parcels.¹¹⁵ The MND lacks any supporting evidence for the City's decision to exclude an analysis of potential contamination on these parcels. Furthermore, Dr. Clark explains that, due to the fact that only four soil borings were installed on the Project site, it is possible that the ESAs' investigation missed additional subsurface contamination at the future location of the hotel (parcel 1) and coffee shop (parcel 3).¹¹⁶ Without samples from parcel 1 and parcel 3, the MND lacks substantial evidence to conclude that future workers and guests on those parcels will not face significant health risks from PCE exposure. Second, the Phase II assessment's reliance on the OSWER Technical Guide alone is inadequate and without merit. As Dr. Clark explains, the vertical and horizontal extent of the PCE soil vapor plume has yet to be determined.¹¹⁷ Because of this, the MND's assumption that the PCE levels found at the eastern edge of the car wash parcel do not exist on other parts of the Project site is unsupported.¹¹⁸ Additionally, the MND fails to compare the PCE concentrations detected to any applicable significance threshold, leaving the MND's conclusion unsupported by any meaningful standard of evaluation.

O-2-11
cont.

Dr. Clark's comments also provide substantial evidence that the Project's PCE levels may result in significant health impacts from both indoor exposure during operation and outdoor exposure during construction that must be disclosed and mitigated in an EIR.¹¹⁹ Specifically, the highest concentrations of PCE detected were measured at 86 ug/m³ and 200 ug/m³.¹²⁰ Dr. Clark explains that the MND failed to follow applicable regulatory guidance for assessing vapor intrusion sites established by the California Department of Toxic Substances Control ("DTSC").¹²¹ When Dr. Clark applied DTSC's methodology, he found that the detected concentration of 200 ug/m³ in soil gas would result in an estimated indoor air

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ MND, pp. 3-52, 3-53.

¹¹⁶ Clark Comments, p. 6.

¹¹⁷ Clark Comments, p. 7.

¹¹⁸ *Id.*

¹¹⁹ *Id.* at pp. 8-9.

¹²⁰ MND Appendix F, p. 4.

¹²¹ Clark Comments, pp. 7-8.

concentration of up to 6 ug/m³.¹²² This is three times higher than DTSC's screening threshold for commercial workers and thirteen times higher than the residential exposure threshold,¹²³ resulting in a significant public health risk from indoor exposure that the MND fails to disclose or mitigate.¹²⁴ Absent mitigation, onsite workers and guests may be exposed to unsafe levels of toxic PCE vapors.¹²⁵

Dr. Clark also provides substantial evidence supporting a fair argument that the Project may result in potentially significant health risks to construction workers who are exposed to PCE contamination during site excavation and construction.¹²⁶ According to the EPA's 2020 risk evaluation of PCE, both acute and chronic inhalation or dermal exposure to PCE can lead to serious health effects, including neurotoxicity, liver damage, and cancer.¹²⁷ Despite these known risks, the MND does not include a Health Risk Assessment or identify any mitigation measure or cleanup requirements to reduce worker exposure.¹²⁸

O-2-11
cont.

For these reasons, the MND lacks substantial evidence to conclude that the Project will not result in significant hazard or health risk impacts. Dr. Clark provides substantial evidence supporting a fair argument that the Project will result in potentially significant health risks related to exposure to PCE. Therefore, the City must prepare an EIR that fully addresses these impacts prior to Project approval.

V. SUBSTANTIAL EVIDENCE SUPPORTS A FAIR ARGUMENT THAT THE PROJECT'S NOISE IMPACTS ARE POTENTIALLY SIGNIFICANT AND UNMITIGATED

A. The MND Fails to Analyze Construction Noise Against Applicable Thresholds or Disclose Noise Increases Over Ambient Levels

O-2-12

The MND fails to adequately assess the Project's potentially significant construction noise impacts. Specifically, the MND fails to compare the Project's expected construction noise levels against either an absolute noise threshold or a threshold for increase over ambient noise levels. Despite this, the MND concludes that the Project's construction noise will be less than significant.¹²⁹ This conclusion

¹²² *Id.* at p. 8.

¹²³ *Id.*

¹²⁴ *Id.*

¹²⁵ *Id.*

¹²⁶ *Id.* at pp. 8-9.

¹²⁷ *Id.* at p. 8.

¹²⁸ *Id.* at p. 9.

¹²⁹ MND, p. 3-86.

is not supported by substantial evidence and reflects a failure to engage in the fundamental impact analysis required by CEQA.

Under CEQA, lead agencies have discretion to choose the noise significance thresholds to apply to a project.¹³⁰ In applying these significance thresholds, the lead agency must consider both the “absolute noise level” associated with a project as well as the increase in the level of noise that will result from a project.¹³¹ The MND calculates that the Project’s construction noise would range between 57 to 69 dBA Leq at the residential property to the southwest and from 56 to 60 dBA Leq at the commercial property to the east.¹³² However, rather than evaluating these noise levels against a defined significance threshold, the MND relies solely on compliance with Sections 8.06.090(F) and 8.06.120(G) of the City of Redlands Municipal Code to conclude that the Project’s impacts will be less than significant.¹³³ These sections exempt construction activities from the City’s noise ordinance, provided the work occurs between 7:00am and 8:00pm, Mondays through Saturdays, and that all combustion-powered machinery is equipped with standard mufflers and silencing equipment.¹³⁴

O-2-12
cont.

This approach is inadequate under CEQA because the MND offers no evidence or analysis to demonstrate that compliance with the City’s construction-hour and muffler requirements will avoid significant noise impacts. As Mr. Meighan explains, under the City’s logic, there is effectively no upper limit to daytime construction noise that would ever be considered significant as long as it occurs during permitted hours.¹³⁵ Without applying a meaningful significance threshold—or any threshold at all—the MND fails to evaluate the Project’s potential impacts on the nearby sensitive receptors and the community, and its conclusion of a less than significant impact lacks substantial evidence.¹³⁶

Because the MND omits a legally adequate analysis of the Project’s construction noise impacts, an EIR is required under CEQA to fully analyze these potential impacts and to propose mitigation, if necessary.

¹³⁰ *King & Gardiner Farms, LLC v. County of Kern* (2022) 45 CA5th 814, 884.

¹³¹ *King & Gardiner Farms, LLC v. County of Kern* (2022) 45 CA5th 814, 887, 893; *Keep Our Mountains Quiet v. County of Santa Clara* (2015) 236 CA4th 714, 733.

¹³² MND, p. 3-86.

¹³³ *Id.* at pp. 3-80, 3-81, 3-86.

¹³⁴ *Id.* at pp. 3-80, 3-81, 3-86.

¹³⁵ Meighan Comments, p. 3.

¹³⁶ *Id.*

B. The MND's Vibration Impacts Analysis is Inaccurate and Unsupported by Substantial Evidence

The MND concludes that vibration generated by the Project's construction activities would be less than significant.¹³⁷ However, this conclusion is not supported by substantial evidence. The analysis assumes that the nearest sensitive receptor is 175 feet away¹³⁸ when the nearest sensitive receptor actually is a residence located only 165 feet away from the Project site.¹³⁹ As Mr. Meighan explains, the MND's use of this further distance in its vibration analysis underestimates the Project's true impacts.¹⁴⁰ Applying the correct distance may reveal significant impacts that were not previously disclosed or mitigated in the MND.¹⁴¹

O-2-13

Therefore, the MND lacks substantial evidence to support its significance determination, and an EIR is required to address this deficiency using accurate and appropriate distance measurements.

C. Substantial Evidence Supports a Fair Argument That Project-Related Pedestrian Noise Will Result in a Significant Impact

The MND concludes that the Project's noise impacts will be less than significant.¹⁴² However, the MND fails to consider the potential impacts associated with increases in existing pedestrian noise, particularly around the Project's proposed pool area. Mr. Meighan provides substantial evidence demonstrating that the increase in pedestrian-generated noise could result in significant noise impacts on nearby residences that were not previously disclosed or mitigated in the MND.¹⁴³

O-2-14

For example, as Mr. Meighan explains, a typical group of 30 individuals in an outdoor social setting can generate noise levels of approximately 62 dBA at a distance of 12 feet.¹⁴⁴ Because noise levels at the closest receivers could be much lower than the measured daytime ambient minimum of 62dBA used in the MND, noise generated at the pool could combine with existing ambient noise levels and

¹³⁷ MND, p. 3-92.

¹³⁸ *Id.*

¹³⁹ *Id.* at p. 3-19.

¹⁴⁰ Meighan Comments, p. 4.

¹⁴¹ *Id.*

¹⁴² MND, p. 3-73.

¹⁴³ Meighan Comments, p. 4.

¹⁴⁴ *Id.*

cause a significant increase above ambient noise levels at the closest residences.¹⁴⁵ This is a potentially significant noise impact that is not disclosed in the MND.

Moreover, several key factors of pool-related activities could further increase noise above acceptable levels.¹⁴⁶ Amplified music and pool mechanical equipment, which are common noise sources in pool areas, could further increase noise levels. Additionally, the hard surfaces surrounding a pool can reflect and amplify sound, further intensifying the impact on nearby residences.¹⁴⁷

By failing to consider these foreseeable noise sources, the MND underestimates the Project's true noise impacts and fails to support its less than significant finding with substantial evidence. In order to comply with CEQA, a comprehensive analysis of Project's noise impacts, including pedestrian noise, must be conducted in an EIR.

VI. THE MND FAILS TO ADEQUATELY ANALYZE THE PROJECT'S POTENTIALLY SIGNIFICANT ENERGY IMPACTS

The MND's conclusion that the Project's construction-related energy impacts would be less than significant is not supported by substantial evidence.¹⁴⁸ The MND fails to evaluate whether feasible energy conservation measures could reduce construction energy use, as required by CEQA Guidelines Appendix F. Without this analysis, the MND cannot demonstrate that the Project's energy consumption would not be wasteful, inefficient, or unnecessary. Accordingly, the Project's energy impacts remain potentially significant.

CEQA requires an environmental document to discuss mitigation measures for significant environmental impacts, including "measures to reduce the wasteful, inefficient, and unnecessary consumption of energy."¹⁴⁹ The CEQA Guidelines require discussion of energy conservation measures when relevant, and provide the following examples in Appendix F:

- Potential measures to reduce wasteful, inefficient and unnecessary consumption of energy during construction, operation, maintenance and/or removal. The discussion should explain why certain measures were incorporated in the project and why other measures were dismissed.

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ MND, p. 3-32.

¹⁴⁹ PRC § 21100(b)(3); *Tracy First v. City of Tracy* (2009) 177 Cal.App.4th 912, 930.

- The potential of siting, orientation, and design to minimize energy consumption, including transportation energy, increase water conservation and reduce solid waste.
- The potential for reducing peak energy demand.
- Alternate fuels (particularly renewable ones) or energy systems.
- Energy conservation which could result from recycling efforts.¹⁵⁰

Courts have rejected CEQA documents that fail to include adequate analysis investigation into energy conservation measures that might be available or appropriate for a project.¹⁵¹ In *California Clean Energy Commission v. City of Woodland* (“CCEC”), the Court of Appeal reviewed an EIR for a shopping center on undeveloped agricultural land.¹⁵² The EIR in CCEC concluded that, due to the proposed project’s compliance with Title 24 guidelines and regulations, the project would be expected to have a less-than-significant impact regarding the wasteful, inefficient, or unnecessary consumption of energy.¹⁵³ But the lead agency’s EIR did not include discussion regarding the different renewable energy options that might be available or appropriate for the project.¹⁵⁴ The Court held “the City’s EIRs failed to comply with the requirements of Appendix F to the Guidelines by not discussing or analyzing renewable energy options.”¹⁵⁵ The lead agency argued that compliance with the Building Code sufficed to address energy impact concerns for the project.¹⁵⁶ But the Court explained:

Although the Building Code addresses energy savings for components of a new commercial construction, it does not address many of the considerations required under Appendix F of the CEQA Guidelines... These considerations include whether a building should be constructed at all, how large it should be, where it should be located, whether it should incorporate renewable energy resources, or anything else external to the building’s envelope. Here, a requirement that Gateway II comply with the Building Code does not, by itself, constitute an adequate assessment of mitigation measures that can be taken to address the energy impacts during construction and operation of the project.¹⁵⁷

¹⁵⁰ CEQA Guidelines § 15126.4(a)(1)(C) (stating “Energy conservation measures, as well as other appropriate mitigation measures, shall be discussed when relevant.”).

¹⁵¹ *Ukiah Citizens for Safety First v. City of Ukiah* (2016) 248 CA4th 256; *Spring Valley Lake Ass’n v. City of Victorville* (2016) 248 CA4th 91.

¹⁵² CCEC (2014) 225 CA4th 173.

¹⁵³ *Id.* at 184.

¹⁵⁴ *Id.* at 213.

¹⁵⁵ *Id.* at 213.

¹⁵⁶ *Id.* at 210, 211.

¹⁵⁷ *Id.* at 211.

The Supreme Court of California agreed with the *CCEC* court’s decision in *League to Save Lake Tahoe Mtn. Area Preservation Found. v County of Placer* (“*League to Save Lake Tahoe*”), holding that even projects that find a less-than-significant energy impact must “discuss whether any renewable energy features could be incorporated into the project.”¹⁵⁸ In *Save Lake Tahoe*, the Court considered an EIR for a land use specific plan and rezoning to permit residential and commercial development and preserve forest land near Truckee and Lake Tahoe.¹⁵⁹ The EIR did not consider whether it was feasible to power the project on 100 percent renewable electrical energy or some lesser percentage, nor evaluate strategies for reducing reliance on fossil fuels, increasing reliance on renewable resources, reducing peak loads, and reducing the impacts of relying on remote generation facilities.¹⁶⁰ The lead agency reasoned that this analysis was not required because energy impacts would be less than significant.¹⁶¹ Citing CEQA Guidelines Section 15126.2, subdivision (b) and the decision in *CCEC*, the Court held that when an EIR analyzes the project’s energy use to determine if it creates significant effects, it should discuss whether any renewable energy features could be incorporated into the project.¹⁶² The Court found that the EIR violated CEQA for not discussing whether the project could increase its reliance on renewable energy sources to meet its energy demand.¹⁶³

O-2-15
cont.

Here, the MND acknowledges that “[c]onstruction of the proposed project would consume fuel from construction equipment, worker trips, and construction vendor/hauling trips”¹⁶⁴, and that “[i]n addition to fuel consumption by construction equipment, the proposed project would generate fuel consumption through construction worker trips.”¹⁶⁵ Despite recognizing these sources of energy use, the MND concludes without analysis that, because construction will be temporary and the Project will comply with applicable federal and state regulations, its construction-related energy use will not be wasteful, inefficient, or unnecessary.¹⁶⁶

However, this conclusion fails to meet CEQA’s standard for evaluating energy impacts. As in *League to Save Lake Tahoe*, the City does not discuss whether any energy conservation or renewable energy features could be incorporated into the Project. For example, the MND failed to consider the use of Tier 4 Final

¹⁵⁸ *League to Save Lake Tahoe* (2022) 75 CA5th 63, 167–68.

¹⁵⁹ *Id.* at 70.

¹⁶⁰ *Id.* at 165-166.

¹⁶¹ *Id.* at 166.

¹⁶² *Id.* at 167-168.

¹⁶³ *Id.* at 168.

¹⁶⁴ MND, p. 3-32.

¹⁶⁵ *Id.* at p. 3-33.

¹⁶⁶ *Id.* at pp. 3-32—3-35.

construction equipment, electric or hybrid vehicles, or recycled or locally sourced materials—all of which are feasible and commonly implemented to reduce construction energy impacts.

Furthermore, reliance on compliance with standard regulations such as Title 24 is insufficient. As the cases above demonstrate, compliance with Title 24 regulations alone does not support the conclusion that energy impacts are less than significant.¹⁶⁷ The MND must consider energy conservation measures that go beyond the Title 24 mandatory standards, in order to demonstrate that the Project's energy consumption would not be wasteful, inefficient, or unnecessary. The MND's failure to do so renders its conclusion unsupported and the Project's construction related energy impacts remain potentially significant.

O-2-15
cont.

In sum, the MND's energy analysis fails to adequately analyze measures that would reduce the wasteful, inefficient, and unnecessary consumption of energy during the Project's construction. It also fails to meaningfully address Appendix F's considerations of whether a buildings should be constructed at all, how large it should be, where it should be located, whether it should incorporate renewable energy resources, or anything else external to the building's envelope.¹⁶⁸ This violates CEQA and thus an EIR must be prepared that includes this analysis.

VII. THE PLANNING COMMISSION CANNOT MAKE THE REQUISITE FINDINGS TO RECOMMEND APPROVAL OF THE PROJECT'S ENTITLEMENTS

The Project requires the City to issue several discretionary approvals, including: two Conditional Use Permits ("CUP") for the proposed hotel and drive through coffee shop; a Tentative Parcel Map ("TPM"); and Commission review and approval of the site plan, site improvements, landscaping plans, and architectural elevations for each portion of the Project.¹⁶⁹ However, as discussed above, the MND fails to adequately analyze or mitigate several significant environmental impacts. As a result, the City cannot make the requisite findings to approve the Project's CUP or TPM.

O-2-16

Conditional Use Permit

To approve a CUP, the City must make the following findings:

¹⁶⁷ *Ukiah Citizens for Safety First v. City of Ukiah* (2016) 248 CA4th 256, 264; *California Clean Energy Comm. v. City of Woodland* (2014) 225 CA4th 173, 208.

¹⁶⁸ *Ukiah Citizens for Safety First v. City of Ukiah* (2016) 248 CA4th 256, 264.

¹⁶⁹ MND, pp. 2-15, 2-23.

- That the proposed development will not adversely affect the applicable land use plans of the city;
- That the proposed development will not be detrimental to the public health, safety and welfare;
- That the proposed development will comply to the maximum extent feasible with the regulations of the city's general plan, the applicable zoning district and the city's development standards;
- That the proposed development is appropriate at the proposed location.¹⁷⁰

As detailed in our comments and those of our experts, there is substantial evidence that the Project may result in several potentially significant environmental impacts. These include: (1) serious health risks to future onsite workers and guests from vapor intrusion due to PCE contamination; (2) exposure to Valley Fever and DPM emissions during construction, (3) significant noise impacts to nearby residences from construction related vibration noise and project related increase in pedestrian noise, and (4) potentially significant cumulative air quality impacts. The MND fails to adequately analyze or mitigate these impacts. These unaddressed impacts would be detrimental to the public health, safety, or welfare of the community. As such, the City may not approve the CUP until it prepares an EIR to adequately analyze and mitigate the Project's significant impacts and incorporate all feasible mitigation measures to avoid or minimize these impacts to the greatest extent feasible.

O-2-16
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Tentative Parcel Map

Before approving the Project's proposed tentative parcel map, the City must make the following findings:

- That the proposed map is consistent with the general plan or applicable specific plan, or other applicable provisions of the Municipal Code;
- That the site is physically suitable for the type of development;
- That the site is physically suitable for the proposed density of development;
- That the design of the subdivision or the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat;

¹⁷⁰ Redlands Municipal Code ("RMC") § 18.192.060.

- That the design of the subdivision or the type of improvements are not likely to cause serious public health problems;
- That the design of the subdivision or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of, property within the proposed subdivision;
- Subject to section 66474.4 of the subdivision map act, that the land is not subject to a contract entered into pursuant to the California land conservation act of 1965 and that the resulting parcels following a subdivision of the land would be too small to sustain their agricultural use.¹⁷¹

For the same reasons stated above, the City cannot make these required findings because the Project presents potentially significant environmental impacts which have not been properly analyzed or disclosed in the MND. Accordingly, the City lacks substantial evidence to support a finding that the design of the subdivision or the proposed improvements are not likely to cause substantial environmental damage or serious public health problems. The City must first prepare an EIR that fully addresses all of the Project's potentially significant environmental impacts, as required by CEQA.

O-2-16
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Additionally, the City lacks substantial evidence to conclude that the proposed map is consistent with the City's General Plan. For example, the City's General Plan contains specific noise policies and thresholds designed to protect sensitive receptors from intrusive or excessive noise levels. As discussed above and in Mr. Meighan's comments, the Project may result in potentially significant noise impacts that would affect the nearby residences that were not disclosed or mitigated in the MND. Therefore, because the Project could result in violation of adopted noise policies, the TPM is inconsistent with the General Plan.

In short, the MND's failure to address the Project's significant impacts preclude the Planning Commission from making the findings required to approve the Project. Therefore, the Planning Commission cannot approve the MND or the Project entitlements without first requiring preparation of an EIR that accurately analyzes and discloses the Project's significant environmental effects.

VIII. CONCLUSION

For the reasons discussed above, the MND for the Project is inadequate under CEQA. There is substantial evidence supporting a fair argument that the Project will result in significant, unmitigated impacts which the MND fails to

O-2-17

¹⁷¹ RMC §§ 17.11.040(C), 17.07.070(D); Subdivision Map Act §§ 66474, 66473.5.

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disclose or mitigate. The County must prepare an EIR and circulate it for public review to address these impacts. Until then, the City may not lawfully approve the Project.

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cont.

Thank you for your attention to these comments. Please include them in the record of proceedings for the Project.

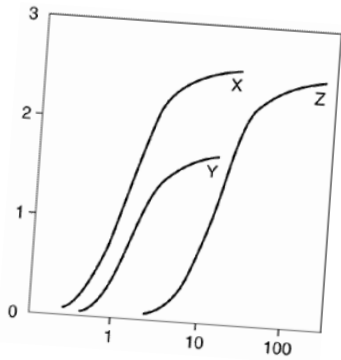
Sincerely,



Alaura R. McGuire

Attachments
ARM:acp

EXHIBIT A



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July 28, 2025

Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080

Attn: Ms. Alaura McGuire

Subject: Comment Letter on Initial Study/Mitigated Negative Declaration, 913 California Street, The Commons At California Project, City of Redlands, San Bernardino County, California

Dear Ms. McGuire:

At the request of Adams Broadwell Joseph & Cardozo (ABJC), Clark and Associates (Clark) has reviewed the materials related to the City of Redland's (the City) Initial Study and Mitigated Negative Declaration (IS/MND) for the above referenced project.

Clark's review of the materials in no way constitutes a validation of the conclusions or materials contained within the Project file from the City of Redlands. If we do not comment on a specific item, this does not constitute acceptance of the item.

Project Description:

The Project proposes to develop a four story, 55,186 square foot business hotel containing 90 rooms, an approximately 1,450 square foot drive-through coffee shop, and a 3,588 square foot semi-automated car wash on a 5.1 acre undeveloped project site, that consists of two parcels (Assessor's Parcel Numbers [APNs] 292-034-10 and -17).¹

The irregularly shaped project site is bounded by a flood control channel, Mission Channel, along the southwestern site boundary, California Street to the east, and a railroad line to the north. The nearest

¹ LSA. 2025. Initial Study/Mitigated Negative Declaration, 913 California Street, The Commons At California Project, City of Redlands, San Bernardino County, California. Pg 2-1.

arterial streets to the project site include California Street and Redlands Boulevard, located directly east and approximately 200 feet south of the project site, respectively. The City of Loma Linda is directly southwest of the project site.

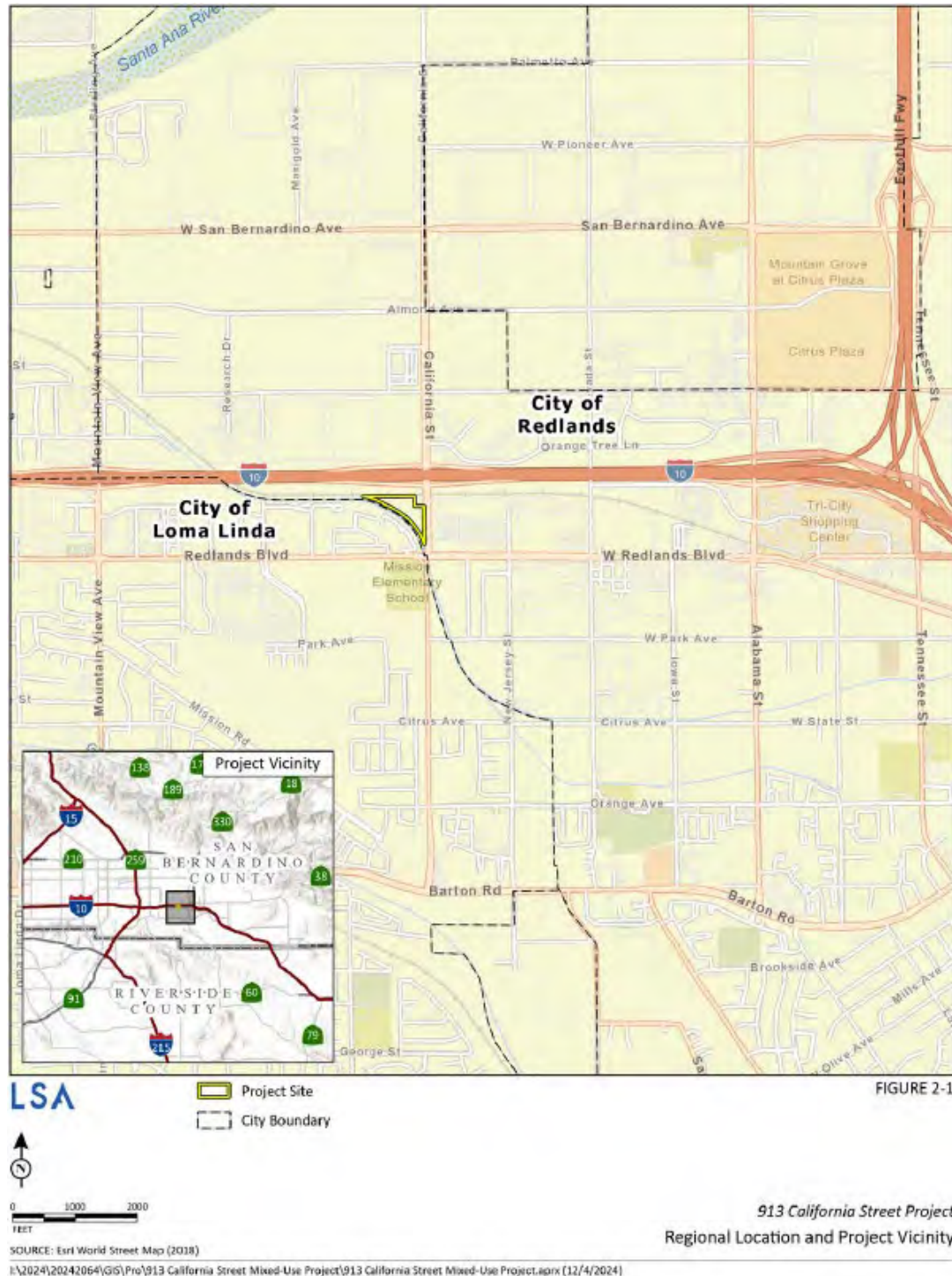


Figure 1: Regional and Project Location

The proposed hotel building would have a maximum height of 58 feet, including the parapet, and would include a lobby, dining area, bar area, business center, meeting room, fitness center, prep areas and market, commercial laundry, utility room, storage rooms, pool equipment and elevator equipment rooms, bedrooms, and associated operational areas. The total building area would be 55,186 square feet with 41,307 square feet dedicated to guestrooms. The proposed hotel would include 119 parking spaces and a loading zone near the northeast corner of the hotel. In addition, the hotel would include two trash enclosures, one of which would be located at the northeast corner of the hotel, and the second, smaller enclosure would be located in the southeast corner of the hotel's parking area. Proposed outdoor amenities would include an outdoor pool with restrooms, an outdoor lounging area near the southeast corner, and a large porte cochere for loading and unloading of hotel guests and their personal belongings.

The proposed coffee shop would consist of a single tenant drive-through building, totaling approximately 1,450 square feet with a maximum building height of 22 feet. The proposed drive-through coffee shop would include a small outdoor patio on the east side of the building and the drive through would include room for approximately 14 cars at a time. A total of 14 parking spaces would be associated with the drive through coffee shop. The proposed coffee shop would be open from 6 a.m. to 9 p.m. every day.

The proposed car wash would consist of a single tenant drive through building, totaling 3,588 square feet with a maximum height of 26 feet. The proposed car wash would include a check-in area for payment and the drive-through would include space for approximately 15 cars at a time. All mechanical equipment associated with car wash activities would be located within the proposed building. In addition, a trash enclosure would be located at the northwest corner of the car wash. A total of 22 parking spaces would be associated with the drive-through car wash, many of which would include vacuums. The proposed car wash would be open from 7 a.m. to 7 p.m. every day.

Other site improvements include a new main signalized entrance, a secondary right-in/right-out entrance, a new street connection from the main entrance to the proposed car wash, a drainage basin at the northwest corner of the site, retaining walls along Mission Channel at the west side of the project site, landscaping, drive aisles, pedestrian walkways, and trash enclosures.

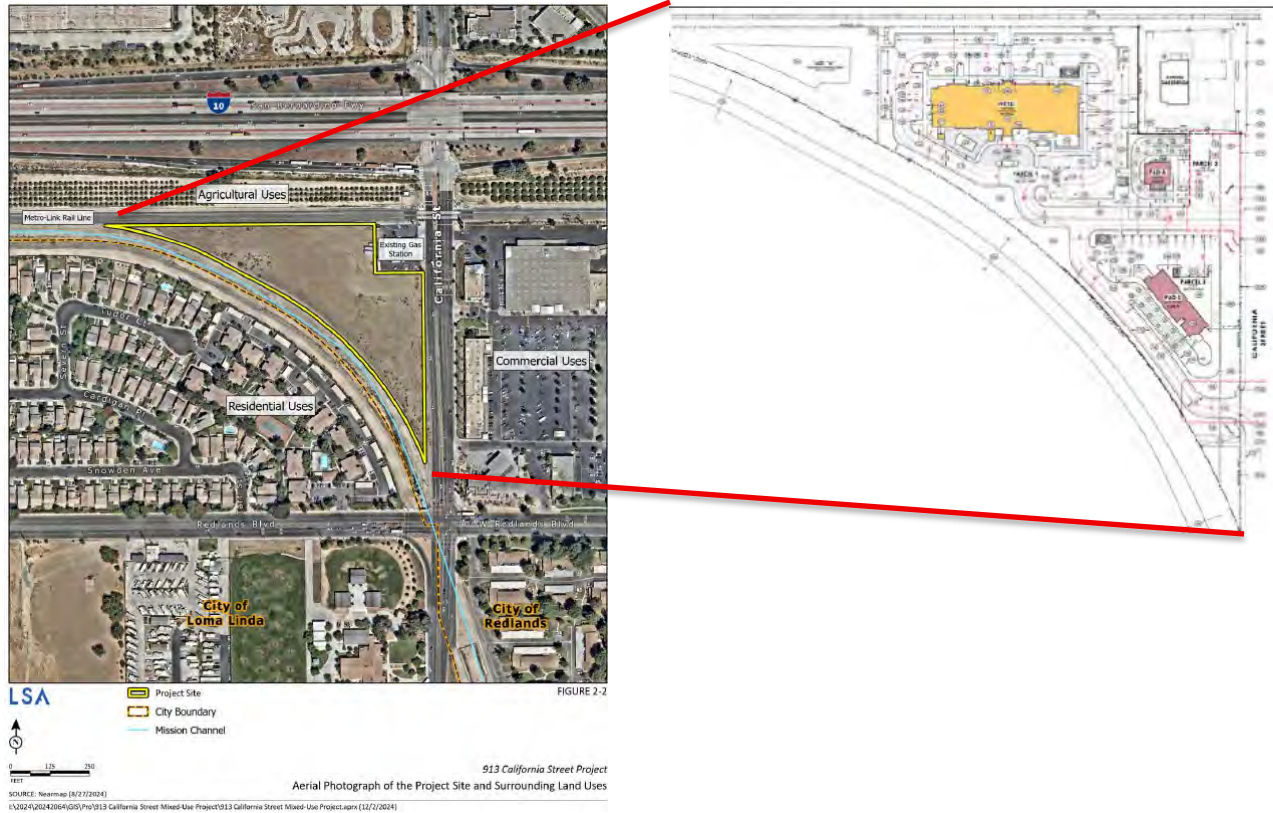


Figure 2: Project Site and Surrounding Land Uses

Construction of the proposed project would include site preparation, installation of utilities, paving, building construction, landscaping, and architectural coating activities. The proposed project would be constructed over approximately 13 months, with construction anticipated to begin in late 2025. Construction activities are anticipated between the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday.

The preliminary proposed project construction phasing is presented below.

Preliminary Project Construction Phasing

Phase	Begin Date	End Date
Site Preparation	October 1, 2025	October 8, 2025
Grading	October 9, 2025	October 20, 2025
Building Construction	October 21, 2025	September 8, 2026
Paving	September 9, 2026	October 4, 2026
Architectural Coating	October 5, 2026	October 30, 2026

Source: MD Acoustics, LLC (2024).

Construction of the proposed project is anticipated to require excavation to a maximum depth of 15 feet for construction of utilities and drainage facilities. The entire 5.1-acre project site is anticipated to be disturbed during construction activities. Grading of the project site would result in approximately 5,000 cubic yards of cut and require approximately 35,000 cubic yards of fill, requiring the import of approximately 30,000 cubic yards of soil.

After careful review of the IS/MND and supporting documents it is clear that the IS/MND's conclusion that there are no significant air quality, public health or hazards impacts from the Project is not supported by the data contained in the IS/MND, and is contradicted by evidence demonstrating that these impacts may be significant and unmitigated. These errors should be corrected in an environmental impact report (EIR).

1. The CalEEMod Analysis For The Operational Phase Does Not Include Back-Up Generators Or Fire Pumps, Omitting Disclosure of Potentially Significant Air Quality Impacts.

The Project includes plans to install a fire pump.² To comply with the California Fire Code and local fire authority requirements, the Project will also likely need to install an on-site back-up generator (BUG).³ The fire pump and BUG will need to be tested and maintained annually. Under the California Air Resources Board (CARB) Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines Guidance, the District may allow a new stationary emergency standby diesel-fueled CI engine (> 50 hp) to operate up to 100 hours per year for maintenance and testing purposes on a site-specific basis, provided the diesel PM emission rate is less than or equal to 0.01 g/bhp-hr. In addition to the testing emissions the air quality analysis in the IS/MND must include the substantial increase in operational emissions from BUGs in the Air Basin due to unscheduled events, including but not limited to Public Safety Power Shutoff (PSPS) events and extreme heat events. Therefore, fire pumps and BUGS are significant operational emission sources for the Project that were not disclosed in the IS/MND. The City's CalEEMOD analysis of the operational emissions of the Project's stationary equipment does not include the expected emissions from fire pumps or BUGs.

The City's failure to include these emissions demonstrates that the IS/MND's emissions

² The Commons at California Fire Master Plan.

³ 2022 California Fire Code § 913.1 (requiring compliance with NFPA 20 when fire pumps installed); NFPA 20 §§ 9.2.1, 9.2.2 (requiring reliable power source to ensure continuous operation of fire pump).

calculations underreport actual emissions and renders the IS/MND's air quality analysis incomplete and unsupported. This must be corrected in a revised EIR for the Project.

2. The IS/MND Fails To Address The Potentially Significant Health Risks From Exposure To Tetrachloroethylene (PCE) Measured In Soil Gases Onsite.

According to the report prepared by Krazan⁴ for the Project Site (Phase II Environmental Site Assessment or ESA), a former dry cleaner was located approximately 130 feet east of the subject site at 2094 West Redlands Boulevard, Suite G. The Environmental Data Resources, Inc. (EDR) database report showed that the former dry cleaner facility's equipment used perchloroethylene (PCE) in its operation. The dry cleaner operated from at least 1997 until 2014 and under the names Redlands Pavilion Cleaners, Cleaners For Less, and Rainbow Cleaners. No spills, releases, or violations were reported for this facility; however, based on the length of operation (approximately 17 years) there is potential for contamination. Also, a review of the DTSC's Envirostor and the State Water Resources Control Board's Geotracker websites, shows that there were no investigations previously performed and reported to the agencies at the former dry cleaner to rule out potential for contamination.

According to the IS/MND⁵, "As recommended by the Phase I ESA, a Phase II Limited Soil Vapor Assessment (**Appendix F**) was prepared for the proposed car wash parcel. As part of the Phase II Limited Soil Vapor Assessment, four soil borings were drilled on the proposed car wash parcel to collect and test soil vapor samples for VOCs. The Phase II Limited Soil Vapor Assessment determined that 14 of the 53 VOCs analyzed were detected at or above the laboratory reporting limits (RLs). Of the 14 VOCs detected above the RLs, only PCE, was detected above its corresponding Commercial environmental screening level (ESL). No other VOCs detected at or above the laboratory's RLs were reported above their corresponding Commercial ESLs, where established. It must be pointed out that given the limited number of borings (only 4) installed on the Project Site it is possible that the investigation missed additional subsurface contamination at the location of the future hotel (Parcel 1)

⁴ Krazan. 2024. Report of Findings Phase II Limited Soil Vapor Assessment Proposed Car Wash Property QQ 44-352 913 California Street APNs 0292-034-10 and -17 (1.5-acre portion) Redlands, California 92374. Dated October 17, 2024.

⁵ LSA. 2025 Initial Study/Mitigated Negative Declaration, 913 California Street, The Commons At California Project, City of Redlands, San Bernardino County, California. Pg 3-53.

and coffee shop (pad B in parcel 3). The accuracy of the previous soil vapor sampling is dependent on the intensity (number of samples) of the sample in the impacted area. The Project Site area is approximately 18,000 square meters (m²). The area covered by the soil vapor sampling is only approximately 1/10th the total area of the Project Site area (approximately 1,800 m²). Additionally, according to U.S. EPA, the horizontal and vertical distance over which vapors may migrate in the subsurface (primarily by diffusion) depends on the concentration of the source, the source depth, the soil matrix properties (e.g., porosity and moisture content), and the time since the release occurred.⁶ As EPA notes, soil vapor moves by diffusion from higher to lower concentrations; soil gas also carries contaminants wherever it moves, by advection (i.e., soil gas flow), in particular from the sub-slab region into buildings.⁷ Given that the area assessed is only a fraction of the total site, additional sampling is warranted in those Parcels.

The results of the ESAs indicate a nonhomogeneous PCE soil vapor concentration on the proposed car wash parcel, with a significant reduction from the eastern boundary to the central portion of the parcel. In addition, the Phase II Limited Soil Vapor Assessment indicated the location of the contamination serves as a "hot spot" for PCE soil vapor and does not accurately reflect the subsoil conditions of the proposed car wash parcel and surrounding area."⁸ This assertion is without merit given that the vertical and horizontal extent of the PCE soil vapor plume has yet to be determined.

In Appendix F to the IS/MND, the Phase II Report prepared by Krazan shows that, within the area investigated, concentrations of PCE above the reporting limit (6.9 ug/m³) were measured in 3 of the 4 sampling wells installed onsite. The highest concentrations were measured at soil vapor prone SV-2 at depths of 5 feet below ground surface (bgs) and 15 feet bgs (86 ug/m³ and 200 ug/m³, respectively). According to the IS/MND⁹, it is anticipated that the entire 5.1 acre Project Site will be disturbed and that excavations will be required to a maximum depth 15 feet for the construction of utilities and drainage facilities. The excavations will increase the number of pathways to the surface for soil vapor to come from the deeper subsurface, meaning construction activities will likely increase exposure risk for future workers and nearby residents. It is also clear that the vertical and lateral extent

⁶ U.S. EPA. 2012. Conceptual Model Scenarios for the Vapor Intrusion Pathway. Pg 1

⁷ *Ibid.* pg 2

⁸ MND, p. 3-53.

⁹ MND, p. 2-15

of the contamination has yet to be determined, since the concentration of PCE can be shown to be increasing as the depth from the surface increases and the remaining 90% of the Project Site has yet to be tested.



Figure 3: Soil Vapor Sample Location Map

A default assumption in the U.S. EPA's Vapor Intrusion Guidance (VIG) cited by Krazan, is that when the distance between the slab and top of the plume is shallow, the subslab attenuation factor (SSAF) or alpha (α) is assumed to be 0.03 (meaning the soil gas concentration is multiplied by 3% to calculate the indoor air concentration) regardless of the actual subsurface conditions existing beneath a barrier. The California Department of Toxic Substances Control (DTSC) uses this attenuation factor when assessing vapor intrusion sites. Vapor emissions pose a potential hazard to receptors within

buildings constructed over the VOC-affected soil and/or soil vapor plume.^{10,11,12,13} A building may trap the emissions indoors, and the resultant indoor air concentrations may be significantly higher than those in the ambient air.

Based on this, the measurement of 200 ug/m³ in soil gas from the Project site would result in an indoor air concentration of up to 6 ug/m³. Indoor air concentrations of PCE of 6 ug/m³ are three times higher than DTSC's screening threshold for commercial workers. The 6 ug/m³ concentration is also 13 times higher than the screening level for residential exposures, resulting in a significant public health risk from indoor exposure that the MND fails to disclose. Absent mitigation, onsite workers and guests might be exposed to unsafe levels of toxic PCE vapors. Furthermore, in its revised risk determination based on the 2020 risk evaluation of PCE, EPA found that PCE presents unreasonable risk to the health of workers (including construction workers), occupational non-users (workers nearby but not in direct contact with this chemical), as well as consumers and bystanders.¹⁴ EPA identified risks for adverse human health effects not related to cancer, including neurotoxicity and liver effects, from acute and chronic inhalation and dermal exposures to PCE.¹⁵ EPA also identified risks for cancer from chronic inhalation and dermal exposures to PCE.¹⁶ Despite this, the MND does not conduct a Human Health Risk Assessment (HHRA) to disclose and analyze these potential risks, and lacks any mitigation measures or required cleanup plan.

¹⁰ DTSC. 2015. Preliminary Endangerment Assessment Guidance Manual. 2015. (California Environmental Protection Agency [Cal/EPA] DTSC, original 1994, second printing 1999, third printing 2015)

¹¹ DTSC. 2020. Human Health Risk Assessment Note Number 3: DTSC-modified Screening Levels (DTSC-SLs). (DTSC/HERO, June, 2020)

¹² U.S. EPA. 2015. OSWER Technical Guide For Assessing and Mitigating The Vapor Intrusion Pathway From Subsurface Vapor Sources To Indoor Air. OSWER Publication 9200.2-154. Dated June 2015.

¹³ DTSC and CSWRCB. 2023. Final Draft Supplemental Guidance: Screening and Evaluating Vapor Intrusion. Dated February 2023.

¹⁴ U.S. EPA. 2020. Final Revised Unreasonable Risk Determination for Perchloroethylene (PCE). https://www.epa.gov/system/files/documents/2022-12/PCE_Final%20Revised%20RD_12-5-22.pdf.

¹⁵ U.S. EPA. 2020. Final Revised Unreasonable Risk Determination for Perchloroethylene (PCE). https://www.epa.gov/system/files/documents/2022-12/PCE_Final%20Revised%20RD_12-5-22.pdf.

¹⁶ U.S. EPA. 2020. Final Revised Unreasonable Risk Determination for Perchloroethylene (PCE). https://www.epa.gov/system/files/documents/2022-12/PCE_Final%20Revised%20RD_12-5-22.pdf.

Given that the vertical depth of soil vapor impacts are not defined fully and that an HHRA has not been prepared for the site, the IS/MND fails to disclose and adequately assess the Project's potentially significant health risks related to vapor intrusion from PCE. As such, these impacts remain potentially significant and unmitigated. The City should not allow any construction activities until the "bottom" of the soil vapor has been fully characterized and a health risk assessment has been conducted. The results should be presented, and mitigation should be proposed in a revised DEIR for the Project.

3. The IS/MND Fails to Analyze the Human Health Risk from Exposure to the Project's Construction-Related DPM Emissions

According to the Air Quality Analysis in the IS/MND, "The SCAQMD does not require land use development projects to prepare quantitative construction HRAs and therefore has no guidance on the preparation of construction HRAs. SCAQMD recommends a 30-year health risk analysis period. Given the relatively limited construction schedule (13 months) and number of heavy-duty construction equipment, the proposed Project would not result in a long-term substantial source of toxic air containment emissions and corresponding individual cancer risk. Furthermore, construction-based DPM emissions (including diesel exhaust emissions) do not exceed any local or regional thresholds. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed Project."¹⁷

This conclusion is incorrect, ignores CEQA's requirement to disclose health risk posed by exposure to the Project's air emissions, fails to compare the Project's emissions to applicable health-based thresholds, and fails to incorporate regulatory standards for assessing health risk throughout the state of California. The primary pollutant emitted during the construction phase will be diesel exhaust typically considered as diesel particulate matter (DPM). DPM is known to the State of California to be a toxic air contaminant (TAC). TACs including DPM, contribute to a host of respiratory impacts and may lead to the development of various cancers. Failing to quantify those impacts places the community at risk for unwanted adverse health impacts. *Even brief exposures to the TACs could lead to the development of adverse health impacts over the life of an individual.*

¹⁷ MD Acoustics, LLC. 2025. 913 California Street, Air Quality, Greenhouse Gas, and Energy Impact Study. City of Redlands, CA. Prepared by MD Acoustic, LLC for JD Fuel, Inc. Dated 2/17/2025. Pg 53

Diesel exhaust contains nearly 40 toxic substances, including TACs and may pose a serious public health risk for residents in the vicinity of the facility. TACs are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. The current California list of TACs includes approximately 200 compounds, including particulate emissions from diesel-fueled engines.

Diesel exhaust has been linked to a range of serious health problems including an increase in respiratory disease, lung damage, cancer, and premature death.^{18,19,20} Fine DPM is deposited deep in the lungs in the smallest airways and can result in increased respiratory symptoms and disease; decreased lung function, particularly in children and individuals with asthma; alterations in lung tissue and respiratory tract defense mechanisms; and premature death.²¹ Exposure to DPM increases the risk of lung cancer. It also causes non-cancer effects including chronic bronchitis, inflammation of lung tissue, thickening of the alveolar walls, immunological allergic reactions, and airway constriction.²² DPM is a TAC that is recognized by state and federal agencies as causing severe health risk because it contains toxic materials, unlike PM_{2.5} and PM₁₀.²³

The inherent toxicity of the TACs requires the City to first quantify the concentration released into the environment at each of the sensitive receptor locations through air dispersion modeling, calculate the dose of each TAC at that location, and quantify the cancer risk and hazard index for each of the chemicals of concern. Following that analysis, then the City can make a determination of the

¹⁸ California Air Resources Board, Initial Statement of Reasons for Rulemaking, Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant, Staff Report, June 1998; see also California Air Resources Board, Overview: Diesel Exhaust & Health, <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health#:~:text=Diesel%20Particulate%20Matter%20and%20Health&text=In%201998%2C%20CARB%20identified%20DPM,and%20other%20adverse%20health%20effects.>

¹⁹ U.S. EPA, Health Assessment Document for Diesel Engine Exhaust, Report EPA/600/8-90/057F, May 2002.

²⁰ Environmental Defense Fund, Cleaner Diesel Handbook, Bring Cleaner Fuel and Diesel Retrofits into Your Neighborhood, April 2005; http://www.edf.org/documents/4941_cleanerdieselhandbook.pdf, accessed July 5, 2020.

²¹ California Air Resources Board, Initial Statement of Reasons for Rulemaking, Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant, Staff Report, June 1998.

²² Findings of the Scientific Review Panel on The Report on Diesel Exhaust as adopted at the Panel's April 22, 1998 Meeting.

²³ Health & Safety Code § 39655(a) (defining "toxic air contaminant" as air pollutants "which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the federal act (42 U.S.C. Sec. 7412 (b)) is a toxic air contaminant.")

relative significance of the emissions. As my own calculations below demonstrate, the DPM emissions from this Project's construction may result in health risks in excess of applicable standards (incremental cancer risk would exceed 10 persons in one million at a sensitive receptor or the calculated Hazard Index for chronic or acute risks would exceed a value of 1.0 at a sensitive receptor). This is a significant health risk that the IS/MND failed to disclose or mitigate. Therefore, the City's failure to perform such an analysis is clearly a major flaw in the IS/MND and may be placing the residents of the adjacent structures at risk from the construction and operational phases of the Project.

The IS/MND also ignores risk assessment guidance from the Office of Environmental Health Hazard Assessment's ("OEHHA"), which recommends a formal health risk analysis ("HRA") for short-term construction exposures to TACs lasting longer than 2 months and exposures from projects lasting more than 6 months should be evaluated for the duration of the project.²⁴

The City must prepare a quantified health risk analysis of the Project's emissions, present the results in an EIR, and propose any mitigation necessary to ensure that health impacts are reduced to less than significant levels.

4. An Air Dispersion Model And Health Risk Analysis Of The Construction DPM Emissions Shows The Project Will Exceed The SCAQMD Risk Significance Threshold Without Mitigation

Using the City's own air quality analysis, I performed a quantitative health risk analysis of the TAC emissions from the offroad equipment that will be used during the Construction Phase of the Project. Using the daily average emissions of PM₁₀ emissions (PM_{10E}) from tables 3.1, 3.3, 3.5, 3.7, 3.9, and 3.11 of the CalEEMod analysis labeled 913 Redlands Detailed Report (dated 5/14/2024) from Appendix A to the DEIR, I have calculated the emissions of DPM as PM_{10E} for each phase of the construction phase.

Using the emission rate calculated in the CalEEMOD model for each construction phase, the total amount of DPM emitted from off-road equipment would be equal to the number of workdays multiplied by the emission rate calculated in the CalEEMOD model.

²⁴ Office of Environmental Health Hazard Assessment (OEHHA), Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments, February 2015 (OEHHA 2015), Section 8.2.10: Cancer Risk Evaluation of Short Term Projects, pp. 8-17/18; <https://oehha.ca.gov/air/cmr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0>.

$$DPM (lbs) = \sum Emission Rate \left(\frac{lbs}{day} \right) * Number Of Work Days (days)$$

The total amount of emissions over the site was calculated to be 32.4725 lbs of DPM over 248 days of construction.

To calculate the daily emission rate of DPM for each year of construction period, the total mass of DPM emitted was divided by the area of the construction site (approximately 194,000 ft²) divided by the number of hours of construction (8 hours/day).

$$Emission Rate For Model \left(\frac{lbs}{hr * ft^2} \right) = \frac{Emission (lbs)}{Duration (hr) * Area (ft^2)}$$

Limiting the emissions to an 8-hour period during weekdays, the emission rate was calculated to be 8.43 x 10⁻⁸ lbs per hour of operation per square foot.

Using AERMOD, the US EPA's preferred air dispersion model, it is possible to calculate the concentrations of DPM from the construction area at the closest receptors near the construction site. AERMOD is an acronym for the American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee's Dispersion Model. AERMOD contains the necessary algorithms to model air concentrations from a wide range of emission source types, including stack-based point sources, fugitive area sources, and volume sources. The modeling domain around the Project site are indicated in the figure below. The red dashed area is the source area of DPM from construction of the Project.

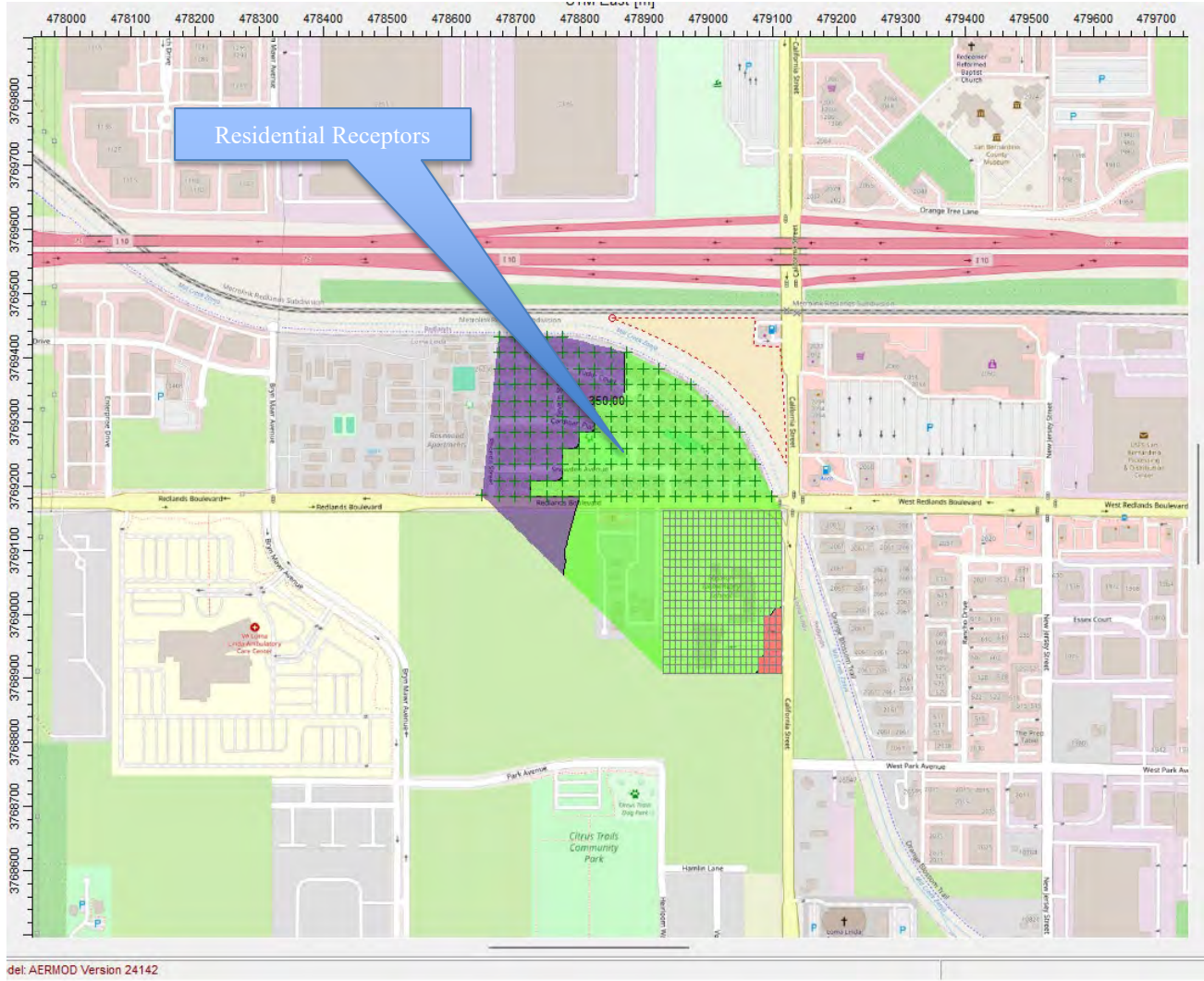


Figure 8: Receptors In Model

Using the SCAQMD's AERMOD Health Risk Assessment Tool and AERMOD-Ready Meteorological Data Files website,²⁵ I determined that the Project Site resides in the area designated by SCAQMD as SRA-35. The designated surface meteorological station for SRA-35 is RDLA. The data for the site cover the years 2018, 2019, 2021, 2022, and 2023.

²⁵ https://www.aqmd.gov/assets/aermet/AERMET_files_And_HRA_Tool.html

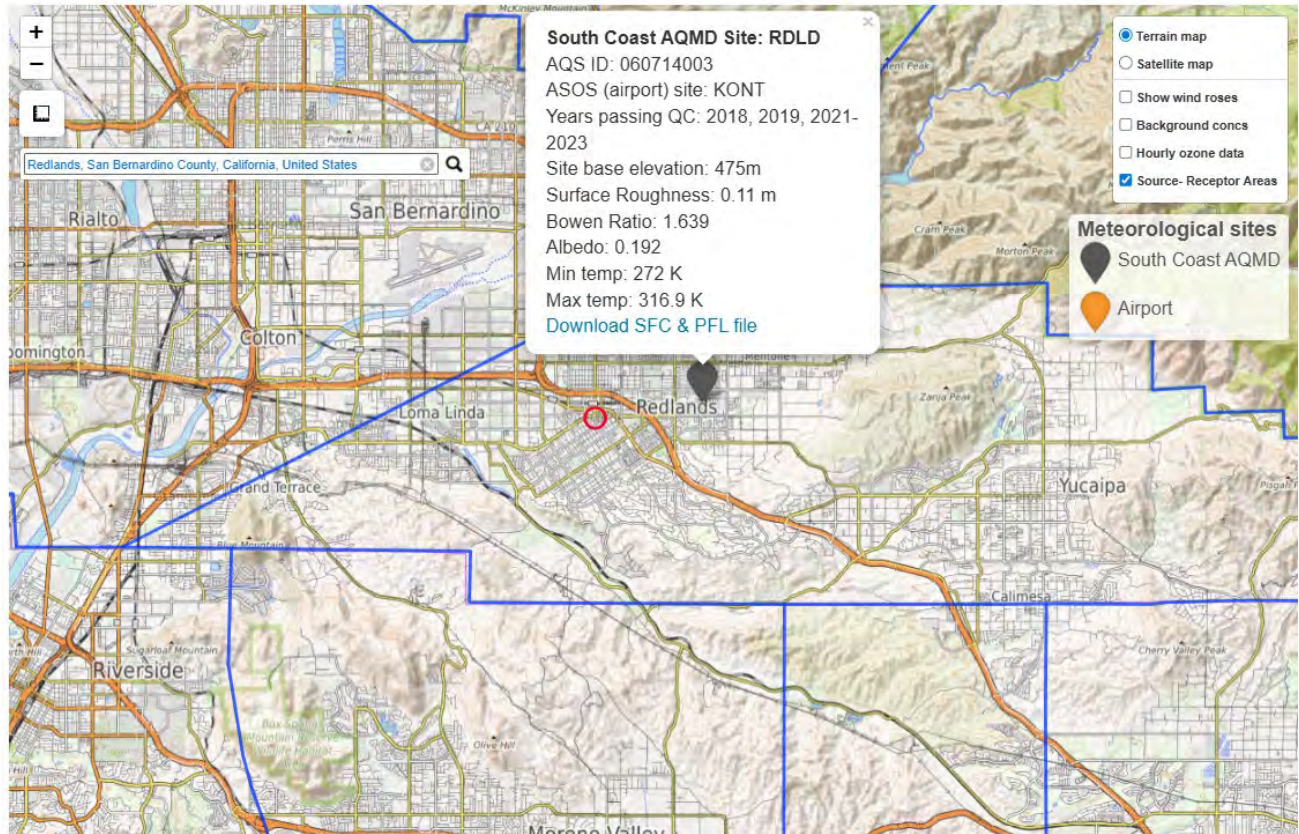


Figure 9: SCAQMD AERMOD Site Location Website

The AERMOD model was run assuming that emissions occurred only during the weekdays during an 8-hour period. The results of the model are attached as an Exhibit to this letter. The maximum annual DPM concentrations calculated for the period of the construction at the closest receptors was calculated to be 0.282979 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

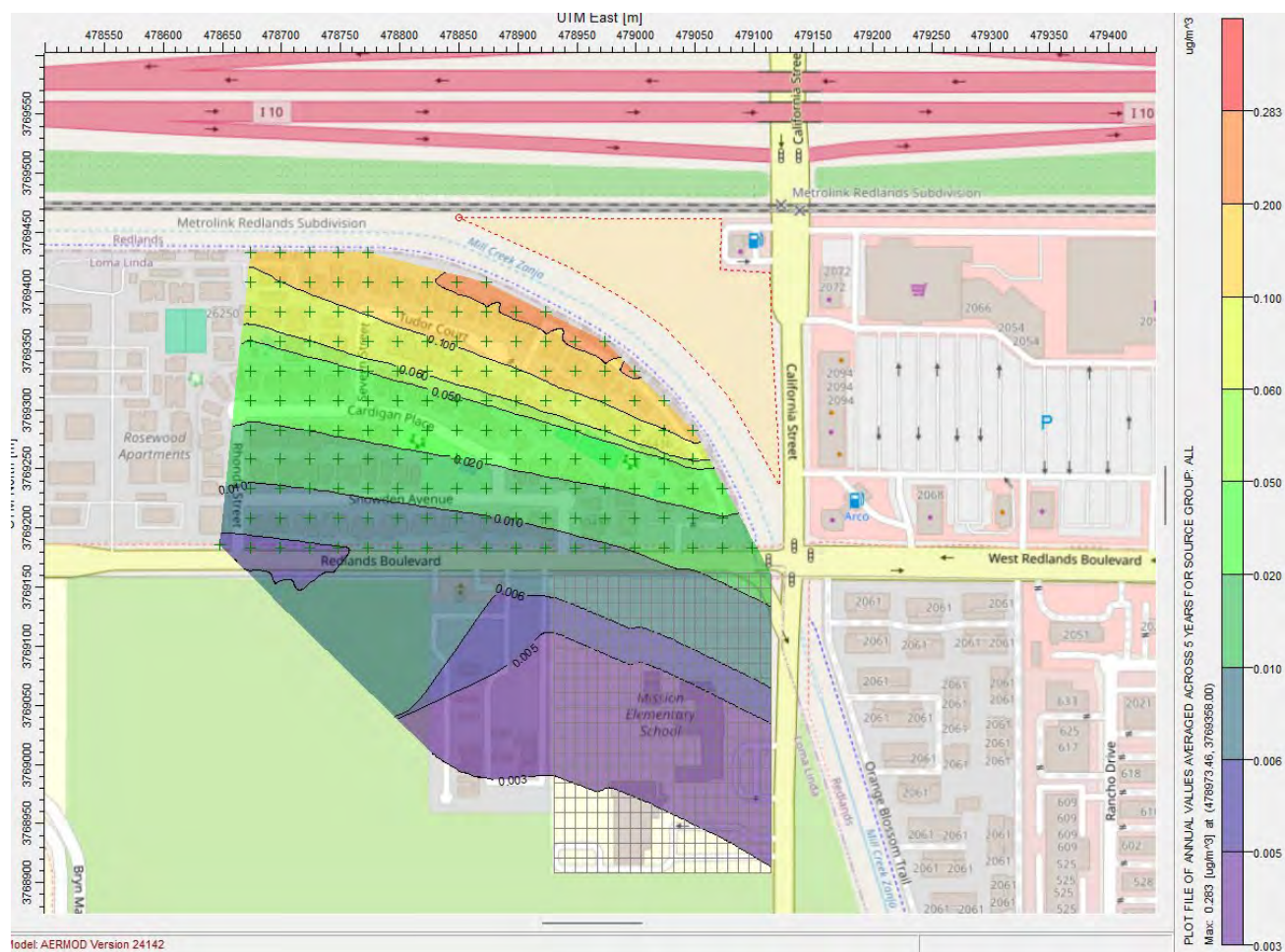


Figure 10: Annual Average Concentration At Closest Receptors To Project Construction Site

To calculate the cancer risk from exposure to the construction emissions, I utilized the algorithms outlined in the Office of Environmental Health Hazard Assessment's (OEHHA) Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments and the SCAQMD's Risk Assessment Procedures for Rules 1401, 1401.1, and 212. To calculate the inhalation cancer risk for any receptor in the modeling domain dose of the chemical in air ($Dose_{air}$) is calculated from the annual concentration of the carcinogen (C_{air}). The exposure concentration is then multiplied by the breathing rate per body weight (BR/BW), inhalation absorption factor (A), the exposure frequency (days per 365 days) and a conversion factor of 10^{-6} (micrograms to milligrams, liters to cubic meters). This annual average concentration is multiplied by the cancer slope (CPF) for the chemical along with the appropriate age sensitivity factor (ASF) the exposure duration (ED) and then divided by the averaging time (AT)

$$1. \quad Dose_{air} = C_{air} * \{BR/BW\} * A * EF * 10^{-6}$$

$$2. \quad Risk_{inh} = Dose_{air} * CPF * ASF * ED/AT$$

Using the concentration modeled for the construction phase and the appropriate exposure factors for each age range (see table below) the cumulative risk for exposure of infants during the 1.083 years (13 months) of construction is 37.0 in 1,000,000, much greater than the 10 in 1,000,000 significance threshold outlined by SCAQMD, resulting in a significant impact.

Age Group	Risk Per Million	ASF	FAH	ED	CPF	Dose Air	Cair	BR/BW	A	EF
3rd Trimester	3.85E+00	10	1	0.25	1.1	9.80E-05	0.283	361	1	0.958904
0-1	3.32E+01	10	0.85	0.84	1.1	2.96E-04	0.283	1090	1	0.958904
Total	3.70E+01									

The City must require mitigation measures sufficient to reduce the exposure concentrations of DPM at the closest residences in an EIR for the Project. Among the most effective mitigation measures that are available for the reduction of DPM emissions are the requirement to use only Tier 4 final rated equipment on off-road construction equipment (reducing emissions by as much as 90% when compared to Tier 3 equipment), the additional of diesel particle filters to off-road construction equipment (reducing emissions by as much as 80%), the use of aqueous fuels (reducing emissions by as much as 63%), and the use of cooled exhaust gas recirculation technology on off-road construction equipment (reducing emissions by as much as 85%).

5. The IS/MND Fails To Assess The Air Quality Impacts And Resulting Health Risk On The Closest Elementary School To The Project Site.

According to the IS/MND, “The project site is located within the Redlands Unified School District (RUSD). RUSD currently operates 16 elementary schools (serving kindergarten through fifth grade); four middle schools (servings grades sixth through eighth); and three high schools (serving grades ninth through twelfth).”²⁶ The IS/MND goes on to detail that “The nearest school facility in proximity to the project site is Mission Elementary School, located at 10568 California Street in the

²⁶ LSA. 2025. IS/MND For 913 California Street . Pg 3-99

City of Loma Linda, approximately 0.06 mile to the south.” The Air Quality Analysis of the Project identifies the closest residences, but does not identify the Mission Elementary School as a sensitive receptor, even though it states that for CEQA purposes, a sensitive receptor would be a location where a sensitive individual could remain for 24-hours or longer, such as residencies, hospitals, and schools (etc). Children are particularly susceptible to the adverse effects of air pollution due to various physiological and behavioral factors. Children are at a higher risk of outcomes such as acute respiratory infections, asthma and decreased lung function due to air pollution exposure. It has been well established that even prenatal exposure to air pollution may also contribute to adverse respiratory outcomes later in life .This oversight must be corrected in an EIR for the Project.

6. The Project Site Is Located In The Top 5% Of Zipcodes In California For Exposure To Ozone And PM_{2.5}, Adding Additional Sources Of Ozone Precursors and PM_{2.5} That Would Adversely Impact The Community

The Project Site is located in census tract 6071007800 (zip code 92374). Using the Office of Environmental Health and Hazard Assessment’s (OEHHA’s) California Communities Environmental Health Screening Tool Version 4.0 (CalEnviroScreen) it is possible to assess the existing concerns for the census tract in which the Project is located.

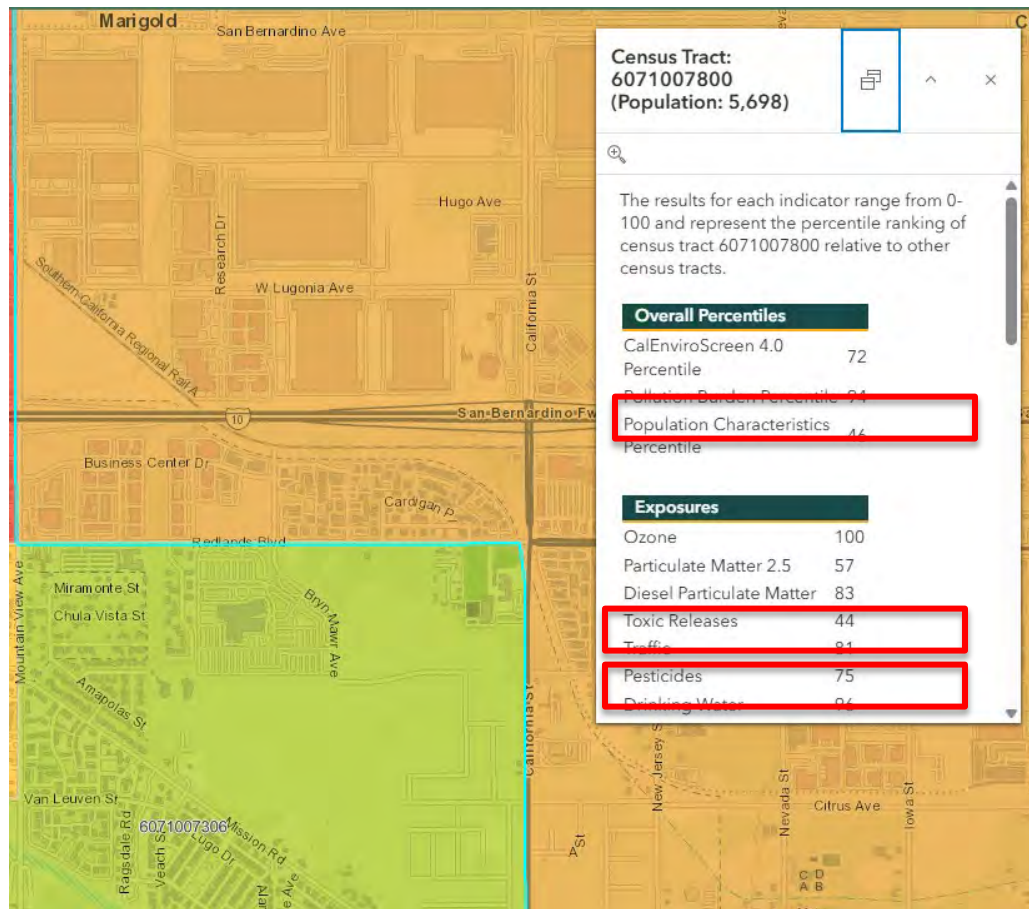


Figure 4: EnviroScreen 4.0 Map Of Project Site

Based on the CalEnviroScreen summary of zipcode 92734, it is clear that the area is in the top 6% of all communities in the State of California impacted by pollution. The Project Site is in the top 1% of communities in the State of California impacted by ozone and the top 17% of communities in California impacted by diesel particulate matter (DPM). Increasing the number of sources of ozone precursors within the community via the construction of the Project will exacerbate pollution levels, resulting in a substantially greater health burden on the community which the MND fails to disclose.

7. The Project May Result in Significant Health Risk to Construction Workers and Nearby Residences from Exposure to Valley Fever.

Given the proximity of the Project Site to nearby residential receptors to the west of the Site, it is clear that sensitive receptors as well as workers at the project site could be exposed to Valley Fever (*Coccidioides immitis*) from fugitive dust generated during construction.

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	10/1/2024	10/8/2024	5.00	5.00	—
Grading	Grading	10/9/2024	10/20/2024	5.00	8.00	—
Building Construction	Building Construction	10/21/2024	9/8/2025	5.00	230	—

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Paving	Paving	9/9/2025	10/4/2025	5.00	18.0	—
Architectural Coating	Architectural Coating	10/5/2025	10/30/2025	5.00	18.0	—

Figure 5: Construction Schedule

According to the CalEEMod model provided in the Air Quality Analysis, the Project will involve 13 days of site preparation and grading. During that time approximately 15.5 acres will be disturbed during the site preparation and grading phases. Additionally, the MND states that grading of the project site would result in approximately 5,000 cubic yards of cut and require approximately 35,000 cubic yards of fill, requiring the import of approximately 30,000 yards of soil.²⁷ These activities will release large quantities of dust.

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	7.50	0.00	—
Grading	—	5,000	8.00	0.00	—
Paving	0.00	0.00	0.00	0.00	1.31

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

Figure 6: Earthmoving Activities

Dust exposure is a primary risk factor for contracting Valley Fever (via *Coccidioides immitis* (cocci) exposure). When soil containing the cocci spores are disturbed by construction activities,

²⁷ IS/MND, pg. 2-15.

the fungal spores become airborne, exposing construction workers and other nearby sensitive receptors.

The fungus lives in the top 2 to 12 inches of soil. When soil containing this fungus is disturbed by activities such as digging, vehicles, construction activities, dust storms, or during earthquakes, the fungal spores become airborne. The most at-risk populations are construction and agricultural workers.²⁸ Here, construction workers are the population that would be most directly exposed by the Project. A refereed journal article on occupational exposures notes that “[l]abor groups where occupation involves close contact with the soil are at greater risk, especially if the work involves dusty digging operations.”²⁹

The potentially exposed population in surrounding areas is much larger than construction workers because the nonselective raising of dust during Project construction will carry the very small spores, 0.002–0.005 millimeters (“mm”), into nonendemic areas, potentially exposing large non-Project-related populations.^{30,31} These very small particles are not controlled by conventional construction dust control mitigation measures.

Recent data from the California Department of Public Health underscore the severity of this public health issue. Since 2016, the number of cases of Valley Fever in San Bernardino County has increased from 1.8 per 100,000 in 2016 to 10.5 in 2022 (an increase of 583%).³² In 2021, the number of cases of Valley Fever in San Bernardino County reached a high of 250 cases. In the first 8 months of 2024, San Bernardino County reported 210 cases, representing a nearly 552% increase over the baseline year of 2016 in only three quarters of the year. Since Valley Fever cases are directly related

²⁸ Lawrence L. Schmelzer and R. Tabershaw, Exposure Factors in Occupational Coccidioidomycosis, *American Journal of Public Health and the Nation’s Health*, v. 58, no. 1, 1968, pp. 107–113, Table 3; available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1228046/?page=1>.

²⁹ *Ibid.*, p. 110.

³⁰ Schmelzer and Tabershaw, 1968, p. 110; Pappagianis and Einstein, 1978

³¹ Pappagianis and Einstein, 1978, p. 527 (“The northern areas were not directly affected by the ground level windstorm that had struck Kern County but the dust was lifted to several thousand feet elevation and, borne on high currents, the soil and arthrospores along with some moisture were gently deposited on sidewalks and automobiles as ‘a mud storm’ that vexed the residents of much of California.” The storm originating in Kern County, for example, had major impacts in the San Francisco Bay Area and Sacramento).

³² CDPH. 2022. Epidemiologic Summary of Valley Fever (Coccidioidomycosis) In California, 2022. Surveillance and Statistics Section, Infection Diseases Branch, Division of Communicable Disease Control, Center For Infectious Diseases, California Department of Public Health. <https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/CocciEpiSummary2022.pdf>

to the disturbance of soils in the area, the City must directly address the impacts that the project's construction phase will have on the community.

A study in Antelope Valley identified a clear link between soil disturbance - due to large-scale renewable energy construction projects, agricultural management practices and PM₁₀ fugitive dust emissions - and increased incidence of coccidioidomycosis.³³

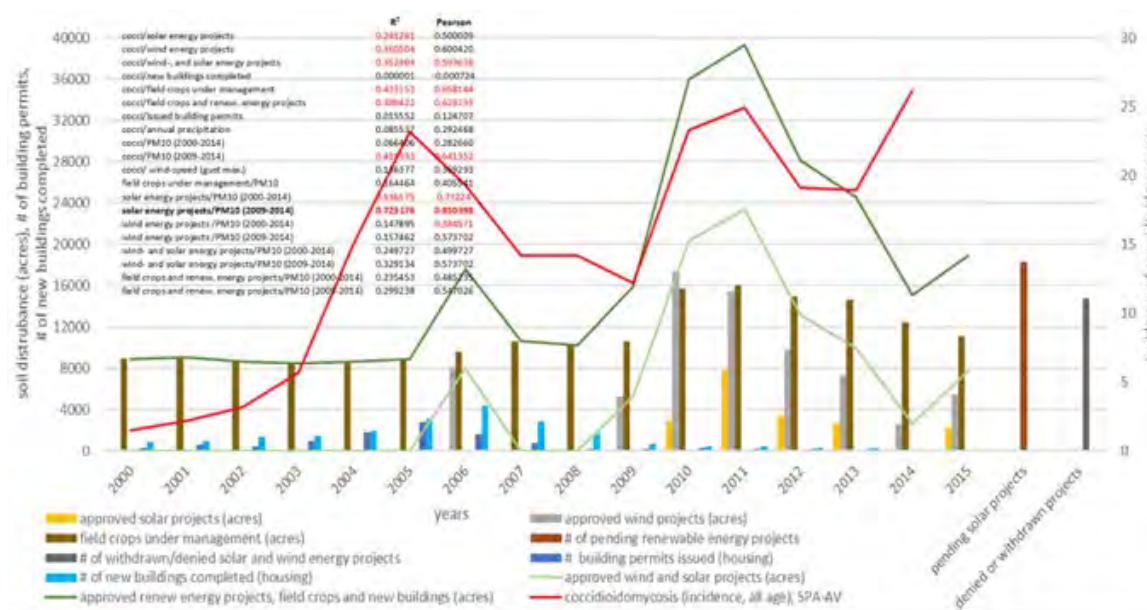


Figure 7: Valley Fever Incidence And Soil Disturbance

It is evident from the figure above that, as the number of acres of soil in the Antelope Valley were disturbed, the incidence rate of Valley Fever also increased. The mass disturbance of soils anticipated by the proposed Project will create the same conditions that were detailed in the study by Colson.³⁴

According to research on Valley Fever, outbreaks in populations with intense exposure to aerosolized arthroconidia are at greater risk for infection.³⁵ These groups include agricultural or construction workers, or persons who participate in outdoor activities such as hunting or digging in

³³ Colson. 2017. Large-Scale Land Development, Fugitive Dust, and Increased Coccidioidomycosis Incidence in the Antelope Valley of California, 1999-2014. <https://knowthecause.com/wp-content/uploads/2017/03/Colson2017FugitiveDustCoccidiodes.pdf>

³⁴ *ibid*

³⁵ Frederick S. Fisher, Mark W. Bultman, and Demosthenes Pappagianis, Operational Guidelines (version 1.0) for Geological Fieldwork in Areas Endemic for Coccidioidomycosis (Valley Fever), U.S. Geological Survey Open-File Report 00-348, 2000, pp. 5, 7; <https://pubs.usgs.gov/of/2000/0348/pdf/of00-348.pdf>.

the soil. Outbreaks of coccidioidomycosis have been linked to a variety of activities involving disturbance of impacted soils.^{36,37,38,39} Since Valley Fever cases are directly related to the disturbance of soils in the area, the City must directly address the impacts that the project's construction phase will have on the community.

Valley Fever often manifests as a mild respiratory illness, but it can progress to serious chronic forms, especially in immunocompromised individuals, and may even become disseminated, impacting organs including the skin, bones, brain, and spinal cord. Disseminated Valley Fever is associated with severe symptoms like meningitis, painful lesions, and swollen joints.

As shown above, the risk that nearby residences would be exposed to Valley Fever disturbed during Project construction is substantial. This risk would not be mitigated by Rule 403 standard dust control measures, as discussed in the MND, because the measures do not consider the drift of spores from a Project Site to the adjacent residential structures. The Project site's desert location and exposure to desert winds amplify these risks. The City should add a requirement to offer filtration for the residences near the Project Site. The use of minimum efficiency reporting value (MERV) 16 filters on the residences nearby would reduce exposure to the spores by as much as 95 percent (95%). Given that the Project will be directly responsible for the generation of the spores into the local environment it is reasonable that they provide the necessary mitigation measures for the surrounding community. This measure should be included in an EIR for the Project.

³⁶ Brown. Et al. 2013. Coccidioidomycosis: epidemiology. *Clinical Epidemiology*. 5:185-197.

³⁷ Rafael Laniado-Laborin, Expanding Understanding of Epidemiology of Coccidioidomycosis in the Western Hemisphere, *Annals of the New York Academy of Sciences*, v. 111, 2007, pp. 20–22, available at <https://nyaspubs.onlinelibrary.wiley.com/doi/abs/10.1196/annals.1406.004>; Frederick S. Fisher, Mark

W. Bultman, Suzanne M. Johnson, Demosthenes Pappagianis, and Erik Zaborsky, Coccidioides Niches and Habitat Parameters in the Southwestern United States, a Matter of Scale, *Annals of the New York Academy of Sciences*, v. 111, 2007, pp. 47–72 (“All of the examined soil locations are noteworthy as generally 50% of the individuals who were exposed to the dust or were excavating dirt at the sites were infected.”), available at <https://nyaspubs.onlinelibrary.wiley.com/doi/abs/10.1196/annals.1406.031>.

³⁸ Lawrence L. Schmelzer and R. Tabershaw, Exposure Factors in Occupational Coccidioidomycosis, *American Journal of Public Health and the Nation's Health*, v. 58, no. 1, 1968, pp. 107–113, Table 3; available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1228046/?page=1>.

³⁹ Frederick S. Fisher, Mark W. Bultman, and Demosthenes Pappagianis, Operational Guidelines (version 1.0) for Geological Fieldwork in Areas Endemic for Coccidioidomycosis (Valley Fever), U.S. Geological Survey Open-File Report 00-348, 2000, pp. 5, 7; <https://pubs.usgs.gov/of/2000/0348/pdf/of00-348.pdf>.

Conclusion

The facts identified and referenced in this comment letter lead me to reasonably conclude that the Project will result in significant, unmitigated impacts if allowed to proceed without the preparation of an EIR.

Sincerely,

A handwritten signature in black ink, appearing to read "J. J. Con". The signature is written in a cursive, flowing style with a horizontal line extending from the first letter.

Exhibit A:

AERMOD Model Of Construction Phase

Control Pathway

AERMOD

Dispersion Options

Titles C:\Lakes\AERMOD View\15605 HRA Con\Commons At California\Commons At Construction At Commons At California	
Dispersion Options ☐ Regulatory Default ☒ Non-Default Options	Dispersion Coefficient Urban Population: Name (Optional): Roughness Length:
☒ Flat & Elevated Terrain ☐ No Stack-Tip Downwash (NOSTD) ☐ Run in Screening Mode ☐ Conversion of NOx to NO2 (OLM or PVMRM) ☐ No Checks for Non-Sequential Met Data ☐ Fast All Sources (FASTALL) ☐ Fast Area Sources (FASTAREA) ☐ Optimized Area Source Plume Depletion ☐ Gas Deposition	Output Type ☒ Concentration ☐ Total Deposition (Dry & Wet) ☐ Dry Deposition ☐ Wet Deposition
BETA Options: ☐ Capped and Horizontal Stack Releases ☐ Adjusted Friction Velocity (u*) in AERMET (ADJ_U*) ☐ Low Wind Options ☐ SCIM (Sampled Chronological Input Model) ☐ Ignore Urban Night / Daytime Transition (NOURBTRAN)	Plume Depletion ☐ Dry Removal ☐ Wet Removal
	Output Warnings ☐ No Output Warnings ☐ Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type OTHER - DPM	Exponential Decay ☐ Yes ☒ No
Averaging Time Options Hours ☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 6 ☒ 8 ☐ 12 ☐ 24 ☐ Month ☐ Period ☒ Annual	Terrain Height Options ☐ Flat ☒ Elevated SO: Meters RE: Meters TG: Meters
Flagpole Receptors ☒ Yes ☐ No Default Height = 1.50 m	

Source Pathway - Source Inputs

AERMOD

Polygon Area Sources

Source Type: AREA POLY

Source: PAREA1 (Constructon Area)

Base Elevation (Optional)	Release Height [m]	Emission Rate [g/ (s-m^2)]	Initial Vertical Dim. [m]	Number of Vertices (or sides)	X Coordinate for Vertices [m]	Y Coordinate for Vertices [m]
348.95	4.15	8.43E-8		12	478850.32	3769462.16
		8.43E-8			479072.05	3769461.59
		8.43E-8			479070.93	3769418.71
		8.43E-8			479113.24	3769416.46
		8.43E-8			479115.50	3769359.47
		8.43E-8			479120.58	3769268.63
		8.43E-8			479121.14	3769235.91
		8.43E-8			479077.70	3769312.08
		8.43E-8			479023.53	3769370.19
		8.43E-8			478982.34	3769397.84
		8.43E-8			478943.98	3769420.41
		8.43E-8			478891.50	3769444.10

Optional Files



Re-Start File



Init File



Multi-Year Analyses



Event Input File



Error Listing File

Detailed Error Listing File

Filename: Commons At California.err

Receptor Pathway

AERMOD

Terrain Elevations and Flagpole Heights for Network Grids

Uniform Cartesian Grid

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	478930.53	3768908.10	352.30	
	478939.71	3768908.10	352.50	
	478948.89	3768908.10	352.70	
	478958.07	3768908.10	353.00	
	478967.25	3768908.10	353.00	
	478976.43	3768908.10	353.00	
	478985.61	3768908.10	353.00	
	478994.79	3768908.10	353.00	
	479003.97	3768908.10	353.00	
	479013.15	3768908.10	353.00	
	479022.33	3768908.10	353.10	
	479031.51	3768908.10	353.40	
	479040.69	3768908.10	353.70	
	479049.87	3768908.10	354.00	
	479059.05	3768908.10	354.00	
	479068.23	3768908.10	354.00	
	479077.41	3768908.10	354.00	
	479086.59	3768908.10	354.00	
	479095.77	3768908.10	354.00	
	479104.95	3768908.10	354.00	
	479114.13	3768908.10	354.00	
	478930.53	3768920.79	352.00	
	478939.71	3768920.79	352.30	
	478948.89	3768920.79	352.60	
	478958.07	3768920.79	352.90	
	478967.25	3768920.79	353.00	
	478976.43	3768920.79	353.00	
	478985.61	3768920.79	353.00	
	478994.79	3768920.79	353.00	
	479003.97	3768920.79	353.00	
	479013.15	3768920.79	353.00	
	479022.33	3768920.79	353.10	
	479031.51	3768920.79	353.30	
	479040.69	3768920.79	353.60	
	479049.87	3768920.79	353.90	
	479059.05	3768920.79	353.90	
	479068.23	3768920.79	353.90	
	479077.41	3768920.79	354.00	
	479086.59	3768920.79	354.00	
	479095.77	3768920.79	354.00	
	479104.95	3768920.79	354.00	
	479114.13	3768920.79	354.00	
	478930.53	3768933.48	352.00	
	478939.71	3768933.48	352.30	
	478948.89	3768933.48	352.60	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	478958.07	3768933.48	352.90	
	478967.25	3768933.48	353.00	
	478976.43	3768933.48	353.00	
	478985.61	3768933.48	353.00	
	478994.79	3768933.48	353.00	
	479003.97	3768933.48	353.00	
	479013.15	3768933.48	353.00	
	479022.33	3768933.48	353.00	
	479031.51	3768933.48	353.20	
	479040.69	3768933.48	353.30	
	479049.87	3768933.48	353.40	
	479059.05	3768933.48	353.60	
	479068.23	3768933.48	353.80	
	479077.41	3768933.48	354.00	
	479086.59	3768933.48	354.00	
	479095.77	3768933.48	354.00	
	479104.95	3768933.48	354.00	
	479114.13	3768933.48	354.00	
	478930.53	3768946.17	352.00	
	478939.71	3768946.17	352.30	
	478948.89	3768946.17	352.60	
	478958.07	3768946.17	352.90	
	478967.25	3768946.17	353.00	
	478976.43	3768946.17	353.00	
	478985.61	3768946.17	353.00	
	478994.79	3768946.17	353.00	
	479003.97	3768946.17	353.00	
	479013.15	3768946.17	353.00	
	479022.33	3768946.17	353.00	
	479031.51	3768946.17	353.00	
	479040.69	3768946.17	353.00	
	479049.87	3768946.17	353.00	
	479059.05	3768946.17	353.30	
	479068.23	3768946.17	353.60	
	479077.41	3768946.17	353.90	
	479086.59	3768946.17	354.00	
	479095.77	3768946.17	354.00	
	479104.95	3768946.17	354.00	
	479114.13	3768946.17	354.00	
	478930.53	3768958.86	352.00	
	478939.71	3768958.86	352.20	
	478948.89	3768958.86	352.40	
	478958.07	3768958.86	352.50	
	478967.25	3768958.86	352.70	
	478976.43	3768958.86	352.80	
	478985.61	3768958.86	352.90	
	478994.79	3768958.86	353.00	
	479003.97	3768958.86	353.00	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	479013.15	3768958.86	353.00	
	479022.33	3768958.86	353.00	
	479031.51	3768958.86	353.00	
	479040.69	3768958.86	353.00	
	479049.87	3768958.86	353.00	
	479059.05	3768958.86	353.30	
	479068.23	3768958.86	353.60	
	479077.41	3768958.86	353.90	
	479086.59	3768958.86	354.00	
	479095.77	3768958.86	354.00	
	479104.95	3768958.86	354.00	
	479114.13	3768958.86	354.00	
	478930.53	3768971.55	352.00	
	478939.71	3768971.55	352.10	
	478948.89	3768971.55	352.10	
	478958.07	3768971.55	352.10	
	478967.25	3768971.55	352.40	
	478976.43	3768971.55	352.60	
	478985.61	3768971.55	352.90	
	478994.79	3768971.55	353.00	
	479003.97	3768971.55	353.00	
	479013.15	3768971.55	353.00	
	479022.33	3768971.55	353.00	
	479031.51	3768971.55	353.00	
	479040.69	3768971.55	353.00	
	479049.87	3768971.55	353.00	
	479059.05	3768971.55	353.30	
	479068.23	3768971.55	353.60	
	479077.41	3768971.55	353.90	
	479086.59	3768971.55	354.00	
	479095.77	3768971.55	354.00	
	479104.95	3768971.55	354.00	
	479114.13	3768971.55	354.00	
	478930.53	3768984.24	352.00	
	478939.71	3768984.24	352.00	
	478948.89	3768984.24	352.00	
	478958.07	3768984.24	352.00	
	478967.25	3768984.24	352.20	
	478976.43	3768984.24	352.60	
	478985.61	3768984.24	352.90	
	478994.79	3768984.24	353.00	
	479003.97	3768984.24	353.00	
	479013.15	3768984.24	353.00	
	479022.33	3768984.24	353.00	
	479031.51	3768984.24	353.00	
	479040.69	3768984.24	353.00	
	479049.87	3768984.24	353.00	
	479059.05	3768984.24	353.30	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	479068.23	3768984.24	353.60	
	479077.41	3768984.24	353.90	
	479086.59	3768984.24	354.00	
	479095.77	3768984.24	354.00	
	479104.95	3768984.24	354.00	
	479114.13	3768984.24	354.00	
	478930.53	3768996.93	352.00	
	478939.71	3768996.93	352.00	
	478948.89	3768996.93	352.00	
	478958.07	3768996.93	352.00	
	478967.25	3768996.93	352.20	
	478976.43	3768996.93	352.60	
	478985.61	3768996.93	352.90	
	478994.79	3768996.93	353.00	
	479003.97	3768996.93	353.00	
	479013.15	3768996.93	353.00	
	479022.33	3768996.93	353.00	
	479031.51	3768996.93	353.00	
	479040.69	3768996.93	353.00	
	479049.87	3768996.93	353.00	
	479059.05	3768996.93	353.30	
	479068.23	3768996.93	353.60	
	479077.41	3768996.93	353.90	
	479086.59	3768996.93	354.00	
	479095.77	3768996.93	354.00	
	479104.95	3768996.93	354.00	
	479114.13	3768996.93	354.00	
	478930.53	3769009.62	352.00	
	478939.71	3769009.62	352.00	
	478948.89	3769009.62	352.00	
	478958.07	3769009.62	352.00	
	478967.25	3769009.62	352.20	
	478976.43	3769009.62	352.60	
	478985.61	3769009.62	352.90	
	478994.79	3769009.62	353.00	
	479003.97	3769009.62	353.00	
	479013.15	3769009.62	353.00	
	479022.33	3769009.62	353.00	
	479031.51	3769009.62	353.00	
	479040.69	3769009.62	353.00	
	479049.87	3769009.62	353.00	
	479059.05	3769009.62	353.30	
	479068.23	3769009.62	353.50	
	479077.41	3769009.62	353.80	
	479086.59	3769009.62	353.90	
	479095.77	3769009.62	353.90	
	479104.95	3769009.62	354.00	
	479114.13	3769009.62	354.00	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	478930.53	3769022.31	352.00	
	478939.71	3769022.31	352.00	
	478948.89	3769022.31	352.00	
	478958.07	3769022.31	352.00	
	478967.25	3769022.31	352.20	
	478976.43	3769022.31	352.60	
	478985.61	3769022.31	352.90	
	478994.79	3769022.31	353.00	
	479003.97	3769022.31	353.00	
	479013.15	3769022.31	353.00	
	479022.33	3769022.31	353.00	
	479031.51	3769022.31	353.00	
	479040.69	3769022.31	353.00	
	479049.87	3769022.31	353.00	
	479059.05	3769022.31	353.10	
	479068.23	3769022.31	353.30	
	479077.41	3769022.31	353.40	
	479086.59	3769022.31	353.60	
	479095.77	3769022.31	353.70	
	479104.95	3769022.31	353.90	
	479114.13	3769022.31	354.00	
	478930.53	3769035.00	352.00	
	478939.71	3769035.00	352.00	
	478948.89	3769035.00	352.00	
	478958.07	3769035.00	352.00	
	478967.25	3769035.00	352.20	
	478976.43	3769035.00	352.60	
	478985.61	3769035.00	352.90	
	478994.79	3769035.00	353.00	
	479003.97	3769035.00	353.00	
	479013.15	3769035.00	353.00	
	479022.33	3769035.00	353.00	
	479031.51	3769035.00	353.00	
	479040.69	3769035.00	353.00	
	479049.87	3769035.00	353.00	
	479059.05	3769035.00	353.00	
	479068.23	3769035.00	353.00	
	479077.41	3769035.00	353.00	
	479086.59	3769035.00	353.30	
	479095.77	3769035.00	353.60	
	479104.95	3769035.00	353.80	
	479114.13	3769035.00	354.00	
	478930.53	3769047.69	352.00	
	478939.71	3769047.69	352.00	
	478948.89	3769047.69	352.00	
	478958.07	3769047.69	352.00	
	478967.25	3769047.69	352.20	
	478976.43	3769047.69	352.30	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	478985.61	3769047.69	352.50	
	478994.79	3769047.69	352.70	
	479003.97	3769047.69	352.80	
	479013.15	3769047.69	352.90	
	479022.33	3769047.69	353.00	
	479031.51	3769047.69	353.00	
	479040.69	3769047.69	353.00	
	479049.87	3769047.69	353.00	
	479059.05	3769047.69	353.00	
	479068.23	3769047.69	353.00	
	479077.41	3769047.69	353.00	
	479086.59	3769047.69	353.20	
	479095.77	3769047.69	353.50	
	479104.95	3769047.69	353.80	
	479114.13	3769047.69	354.00	
	478930.53	3769060.38	352.00	
	478939.71	3769060.38	352.00	
	478948.89	3769060.38	352.00	
	478958.07	3769060.38	352.00	
	478967.25	3769060.38	352.00	
	478976.43	3769060.38	352.10	
	478985.61	3769060.38	352.20	
	478994.79	3769060.38	352.30	
	479003.97	3769060.38	352.60	
	479013.15	3769060.38	352.80	
	479022.33	3769060.38	353.00	
	479031.51	3769060.38	353.00	
	479040.69	3769060.38	353.00	
	479049.87	3769060.38	353.00	
	479059.05	3769060.38	353.00	
	479068.23	3769060.38	353.00	
	479077.41	3769060.38	353.00	
	479086.59	3769060.38	353.20	
	479095.77	3769060.38	353.50	
	479104.95	3769060.38	353.80	
	479114.13	3769060.38	354.00	
	478930.53	3769073.07	352.00	
	478939.71	3769073.07	352.00	
	478948.89	3769073.07	352.00	
	478958.07	3769073.07	352.00	
	478967.25	3769073.07	352.00	
	478976.43	3769073.07	352.00	
	478985.61	3769073.07	352.00	
	478994.79	3769073.07	352.20	
	479003.97	3769073.07	352.50	
	479013.15	3769073.07	352.80	
	479022.33	3769073.07	353.00	
	479031.51	3769073.07	353.00	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	479040.69	3769073.07	353.00	
	479049.87	3769073.07	353.00	
	479059.05	3769073.07	353.00	
	479068.23	3769073.07	353.00	
	479077.41	3769073.07	353.00	
	479086.59	3769073.07	353.20	
	479095.77	3769073.07	353.50	
	479104.95	3769073.07	353.80	
	479114.13	3769073.07	354.00	
	478930.53	3769085.76	352.00	
	478939.71	3769085.76	352.00	
	478948.89	3769085.76	352.00	
	478958.07	3769085.76	352.00	
	478967.25	3769085.76	352.00	
	478976.43	3769085.76	352.00	
	478985.61	3769085.76	352.00	
	478994.79	3769085.76	352.20	
	479003.97	3769085.76	352.50	
	479013.15	3769085.76	352.80	
	479022.33	3769085.76	353.00	
	479031.51	3769085.76	353.00	
	479040.69	3769085.76	353.00	
	479049.87	3769085.76	353.00	
	479059.05	3769085.76	353.00	
	479068.23	3769085.76	353.00	
	479077.41	3769085.76	353.00	
	479086.59	3769085.76	353.20	
	479095.77	3769085.76	353.50	
	479104.95	3769085.76	353.80	
	479114.13	3769085.76	354.00	
	478930.53	3769098.45	352.00	
	478939.71	3769098.45	352.00	
	478948.89	3769098.45	352.00	
	478958.07	3769098.45	352.00	
	478967.25	3769098.45	352.00	
	478976.43	3769098.45	352.00	
	478985.61	3769098.45	352.00	
	478994.79	3769098.45	352.20	
	479003.97	3769098.45	352.50	
	479013.15	3769098.45	352.80	
	479022.33	3769098.45	353.00	
	479031.51	3769098.45	353.00	
	479040.69	3769098.45	353.00	
	479049.87	3769098.45	353.00	
	479059.05	3769098.45	353.00	
	479068.23	3769098.45	353.00	
	479077.41	3769098.45	353.00	
	479086.59	3769098.45	353.20	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	479095.77	3769098.45	353.50	
	479104.95	3769098.45	353.80	
	479114.13	3769098.45	354.00	
	478930.53	3769111.14	352.00	
	478939.71	3769111.14	352.00	
	478948.89	3769111.14	352.00	
	478958.07	3769111.14	352.00	
	478967.25	3769111.14	352.00	
	478976.43	3769111.14	352.00	
	478985.61	3769111.14	352.00	
	478994.79	3769111.14	352.20	
	479003.97	3769111.14	352.50	
	479013.15	3769111.14	352.80	
	479022.33	3769111.14	353.00	
	479031.51	3769111.14	353.00	
	479040.69	3769111.14	353.00	
	479049.87	3769111.14	353.00	
	479059.05	3769111.14	353.00	
	479068.23	3769111.14	353.00	
	479077.41	3769111.14	353.00	
	479086.59	3769111.14	353.20	
	479095.77	3769111.14	353.50	
	479104.95	3769111.14	353.80	
	479114.13	3769111.14	353.90	
	478930.53	3769123.83	352.00	
	478939.71	3769123.83	352.00	
	478948.89	3769123.83	352.00	
	478958.07	3769123.83	352.00	
	478967.25	3769123.83	352.00	
	478976.43	3769123.83	352.00	
	478985.61	3769123.83	352.00	
	478994.79	3769123.83	352.20	
	479003.97	3769123.83	352.50	
	479013.15	3769123.83	352.80	
	479022.33	3769123.83	353.00	
	479031.51	3769123.83	353.00	
	479040.69	3769123.83	353.00	
	479049.87	3769123.83	353.00	
	479059.05	3769123.83	353.00	
	479068.23	3769123.83	353.00	
	479077.41	3769123.83	353.00	
	479086.59	3769123.83	353.20	
	479095.77	3769123.83	353.50	
	479104.95	3769123.83	353.80	
	479114.13	3769123.83	353.90	
	478930.53	3769136.52	352.00	
	478939.71	3769136.52	352.00	
	478948.89	3769136.52	352.00	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	478958.07	3769136.52	352.00	
	478967.25	3769136.52	352.00	
	478976.43	3769136.52	352.00	
	478985.61	3769136.52	352.00	
	478994.79	3769136.52	352.10	
	479003.97	3769136.52	352.30	
	479013.15	3769136.52	352.50	
	479022.33	3769136.52	352.70	
	479031.51	3769136.52	352.80	
	479040.69	3769136.52	352.90	
	479049.87	3769136.52	353.00	
	479059.05	3769136.52	353.00	
	479068.23	3769136.52	353.00	
	479077.41	3769136.52	353.00	
	479086.59	3769136.52	353.10	
	479095.77	3769136.52	353.40	
	479104.95	3769136.52	353.60	
	479114.13	3769136.52	353.60	
	478930.53	3769149.21	352.00	
	478939.71	3769149.21	352.00	
	478948.89	3769149.21	352.00	
	478958.07	3769149.21	352.00	
	478967.25	3769149.21	352.00	
	478976.43	3769149.21	352.00	
	478985.61	3769149.21	352.00	
	478994.79	3769149.21	352.00	
	479003.97	3769149.21	352.10	
	479013.15	3769149.21	352.20	
	479022.33	3769149.21	352.30	
	479031.51	3769149.21	352.50	
	479040.69	3769149.21	352.80	
	479049.87	3769149.21	353.00	
	479059.05	3769149.21	353.00	
	479068.23	3769149.21	353.00	
	479077.41	3769149.21	353.00	
	479086.59	3769149.21	353.10	
	479095.77	3769149.21	353.10	
	479104.95	3769149.21	353.20	
	479114.13	3769149.21	353.30	
	478930.53	3769161.90	352.00	
	478939.71	3769161.90	352.00	
	478948.89	3769161.90	352.00	
	478958.07	3769161.90	352.00	
	478967.25	3769161.90	352.00	
	478976.43	3769161.90	352.00	
	478985.61	3769161.90	352.00	
	478994.79	3769161.90	352.00	
	479003.97	3769161.90	352.00	

Receptor Pathway

AERMOD

Receptor Network ID	Location: X-Coordinate [m]	Location: Y-Coordinate [m]	Terrain Elevations (Optional)	Flagpole Heights (Optional)
UCART1	479013.15	3769161.90	352.00	
	479022.33	3769161.90	352.10	
	479031.51	3769161.90	352.40	
	479040.69	3769161.90	352.70	
	479049.87	3769161.90	353.00	
	479059.05	3769161.90	353.00	
	479068.23	3769161.90	353.00	
	479077.41	3769161.90	353.00	
	479086.59	3769161.90	353.00	
	479095.77	3769161.90	353.00	
	479104.95	3769161.90	353.00	
	479114.13	3769161.90	353.10	

Receptor Pathway

AERMOD

Receptor Networks

Note: Terrain Elevations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Uniform Cartesian Grid

Receptor Network ID	Grid Origin X Coordinate [m]	Grid Origin Y Coordinate [m]	No. of X-Axis Receptors	No. of Y-Axis Receptors	Spacing for X-Axis [m]	Spacing for Y-Axis [m]
UCART1	478930.53	3768908.10	21	21	9.18	12.69

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	478647.56	3769185.69		349.00	0.00
2	478673.46	3769183.00		349.05	0.00
3	478673.46	3769208.00		349.00	0.00
4	478673.46	3769233.00		349.00	0.00
5	478673.46	3769258.00		349.00	0.00
6	478673.46	3769283.00		348.88	0.00
7	478673.46	3769308.00		348.43	0.00
8	478673.46	3769333.00		348.05	0.00
9	478673.46	3769358.00		348.00	0.00
10	478673.46	3769383.00		348.00	0.00
11	478673.46	3769408.00		348.00	0.00
12	478673.46	3769433.00		348.00	0.00
13	478698.46	3769183.00		349.37	0.00
14	478698.46	3769208.00		349.29	0.00
15	478698.46	3769233.00		349.13	0.00
16	478698.46	3769258.00		349.00	0.00
17	478698.46	3769283.00		349.00	0.00
18	478698.46	3769308.00		348.96	0.00
19	478698.46	3769333.00		348.37	0.00
20	478698.46	3769358.00		348.08	0.00
21	478698.46	3769383.00		348.00	0.00
22	478698.46	3769408.00		348.00	0.00
23	478698.46	3769433.00		348.00	0.00
24	478723.46	3769183.00		350.00	0.00
25	478723.46	3769208.00		350.00	0.00
26	478723.46	3769233.00		349.51	0.00

Receptor Pathway

				AERMOD
27	478723.46	3769258.00	349.12	0.00
28	478723.46	3769283.00	349.09	0.00
29	478723.46	3769308.00	349.00	0.00
30	478723.46	3769333.00	349.00	0.00
31	478723.46	3769358.00	348.28	0.00
32	478723.46	3769383.00	348.00	0.00
33	478723.46	3769408.00	348.00	0.00
34	478723.46	3769433.00	348.00	0.00
35	478748.46	3769183.00	350.00	0.00
36	478748.46	3769208.00	350.00	0.00
37	478748.46	3769233.00	349.97	0.00
38	478748.46	3769258.00	349.95	0.00
39	478748.46	3769283.00	349.74	0.00
40	478748.46	3769308.00	349.00	0.00
41	478748.46	3769333.00	349.00	0.00
42	478748.46	3769358.00	348.28	0.00
43	478748.46	3769383.00	348.00	0.00
44	478748.46	3769408.00	348.00	0.00
45	478748.46	3769433.00	348.00	0.00
46	478773.46	3769183.00	350.00	0.00
47	478773.46	3769208.00	350.00	0.00
48	478773.46	3769233.00	350.00	0.00
49	478773.46	3769258.00	350.00	0.00
50	478773.46	3769283.00	349.95	0.00
51	478773.46	3769308.00	349.74	0.00
52	478773.46	3769333.00	349.09	0.00
53	478773.46	3769358.00	348.85	0.00
54	478773.46	3769383.00	348.35	0.00
55	478773.46	3769408.00	348.00	0.00
56	478773.46	3769433.00	348.00	0.00
57	478798.46	3769183.00	350.00	0.00
58	478798.46	3769208.00	350.00	0.00
59	478798.46	3769233.00	350.00	0.00
60	478798.46	3769258.00	350.00	0.00
61	478798.46	3769283.00	350.00	0.00
62	478798.46	3769308.00	349.98	0.00
63	478798.46	3769333.00	349.66	0.00
64	478798.46	3769358.00	349.17	0.00

Receptor Pathway

				AERMOD
65	478798.46	3769383.00	348.44	0.00
66	478798.46	3769408.00	348.00	0.00
67	478823.46	3769183.00	350.45	0.00
68	478823.46	3769208.00	350.45	0.00
69	478823.46	3769233.00	350.45	0.00
70	478823.46	3769258.00	350.28	0.00
71	478823.46	3769283.00	350.00	0.00
72	478823.46	3769308.00	350.00	0.00
73	478823.46	3769333.00	350.00	0.00
74	478823.46	3769358.00	349.28	0.00
75	478823.46	3769383.00	348.70	0.00
76	478823.46	3769408.00	348.28	0.00
77	478848.46	3769183.00	351.00	0.00
78	478848.46	3769208.00	351.00	0.00
79	478848.46	3769233.00	351.00	0.00
80	478848.46	3769258.00	350.72	0.00
81	478848.46	3769283.00	350.22	0.00
82	478848.46	3769308.00	350.00	0.00
83	478848.46	3769333.00	350.00	0.00
84	478848.46	3769358.00	349.48	0.00
85	478848.46	3769383.00	349.29	0.00
86	478848.46	3769408.00	349.01	0.00
87	478873.46	3769183.00	351.01	0.00
88	478873.46	3769208.00	351.00	0.00
89	478873.46	3769233.00	351.00	0.00
90	478873.46	3769258.00	351.00	0.00
91	478873.46	3769283.00	350.80	0.00
92	478873.46	3769308.00	350.12	0.00
93	478873.46	3769333.00	350.12	0.00
94	478873.46	3769358.00	350.12	0.00
95	478873.46	3769383.00	350.12	0.00
96	478873.46	3769408.00	350.12	0.00
97	478898.46	3769183.00	351.11	0.00
98	478898.46	3769208.00	351.00	0.00
99	478898.46	3769233.00	351.00	0.00
100	478898.46	3769258.00	351.00	0.00
101	478898.46	3769283.00	350.99	0.00
102	478898.46	3769308.00	350.95	0.00

Receptor Pathway

				AERMOD
103	478898.46	3769333.00	350.95	0.00
104	478898.46	3769358.00	350.95	0.00
105	478898.46	3769383.00	350.95	0.00
106	478923.46	3769183.00	351.81	0.00
107	478923.46	3769208.00	351.79	0.00
108	478923.46	3769233.00	351.79	0.00
109	478923.46	3769258.00	351.48	0.00
110	478923.46	3769283.00	351.00	0.00
111	478923.46	3769308.00	351.00	0.00
112	478923.46	3769333.00	351.00	0.00
113	478923.46	3769358.00	351.00	0.00
114	478923.46	3769383.00	351.00	0.00
115	478948.46	3769183.00	352.00	0.00
116	478948.46	3769208.00	352.00	0.00
117	478948.46	3769233.00	352.00	0.00
118	478948.46	3769258.00	351.85	0.00
119	478948.46	3769283.00	351.62	0.00
120	478948.46	3769308.00	351.62	0.00
121	478948.46	3769333.00	351.62	0.00
122	478948.46	3769358.00	351.62	0.00
123	478973.46	3769183.00	352.00	0.00
124	478973.46	3769208.00	352.00	0.00
125	478973.46	3769233.00	352.00	0.00
126	478973.46	3769258.00	352.00	0.00
127	478973.46	3769283.00	352.00	0.00
128	478973.46	3769308.00	352.00	0.00
129	478973.46	3769333.00	352.00	0.00
130	478973.46	3769358.00	352.00	0.00
131	478998.46	3769183.00	352.00	0.00
132	478998.46	3769208.00	352.00	0.00
133	478998.46	3769233.00	352.00	0.00
134	478998.46	3769258.00	352.11	0.00
135	478998.46	3769283.00	352.29	0.00
136	478998.46	3769308.00	352.29	0.00
137	478998.46	3769333.00	352.29	0.00
138	479023.46	3769183.00	352.12	0.00
139	479023.46	3769208.00	352.12	0.00
140	479023.46	3769233.00	352.12	0.00

Receptor Pathway

				AERMOD
141	479023.46	3769258.00	352.46	0.00
142	479023.46	3769283.00	353.00	0.00
143	479023.46	3769308.00	353.00	0.00
144	479048.46	3769183.00	352.95	0.00
145	479048.46	3769208.00	352.95	0.00
146	479048.46	3769233.00	352.95	0.00
147	479048.46	3769258.00	352.97	0.00
148	479048.46	3769283.00	353.00	0.00
149	479073.46	3769183.00	353.00	0.00
150	479073.46	3769208.00	353.00	0.00
151	479073.46	3769233.00	353.00	0.00
152	479098.46	3769183.00	353.00	0.00

Plant Boundary Receptors

Receptor Groups

Record Number	Group ID	Group Description
1	ARCREC	Discrete Cartesian Receptors for EVALFILE Output
2	PDISCR	Discrete polar receptors

Meteorology Pathway

AERMOD

Met Input Data

Surface Met Data

Filename: C:\Users\jclar\OneDrive\Clark and Associates\Project 321 - ABJC - Commons At California Street ISMND\rdld
Format Type: Default AERMET format

Profile Met Data

Filename: C:\Users\jclar\OneDrive\Clark and Associates\Project 321 - ABJC - Commons At California Street ISMND\rdld
Format Type: Default AERMET format

Wind Speed



Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 475.00 [m]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2018			Redlands
Upper Air		2018			
On-Site		2018			

Data Period

Data Period to Process

Start Date: 1/1/2018 Start Hour: 1 End Date: 12/31/2023 End Hour: 24

Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

Output Pathway

AERMOD

Tabular Printed Outputs

Short Term Averaging Period	RECTABLE Highest Values Table										MAXTABLE Maximum Values Table	DAYTABLE Daily Values Table
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th		
1												Yes
8												No
24												No

Contour Plot Files (PLOTFILE)

Path for PLOTFILES: Commons At California.AD

Averaging Period	Source Group ID	High Value	File Name
1	ALL	1st	01H1GALL.PLT
8	ALL	1st	08H1GALL.PLT
24	ALL	1st	24H1GALL.PLT
1	ALL	2nd	01H2GALL.PLT
8	ALL	2nd	08H2GALL.PLT
24	ALL	2nd	24H2GALL.PLT
1	ALL	3rd	01H3GALL.PLT
8	ALL	3rd	08H3GALL.PLT
24	ALL	3rd	24H3GALL.PLT
1	ALL	4th	01H4GALL.PLT
8	ALL	4th	08H4GALL.PLT
24	ALL	4th	24H4GALL.PLT
1	ALL	5th	01H5GALL.PLT
8	ALL	5th	08H5GALL.PLT
24	ALL	5th	24H5GALL.PLT
1	ALL	6th	01H6GALL.PLT
8	ALL	6th	08H6GALL.PLT
24	ALL	6th	24H6GALL.PLT
1	ALL	7th	01H7GALL.PLT
8	ALL	7th	08H7GALL.PLT
24	ALL	7th	24H7GALL.PLT
1	ALL	8th	01H8GALL.PLT
8	ALL	8th	08H8GALL.PLT
24	ALL	8th	24H8GALL.PLT
1	ALL	9th	01H9GALL.PLT
8	ALL	9th	08H9GALL.PLT
24	ALL	9th	24H9GALL.PLT
1	ALL	10th	01H10GALL.PLT
8	ALL	10th	08H10GALL.PLT
24	ALL	10th	24H10GALL.PLT
1	ALL	N/A	01H12GALL.PLT

Output Pathway

AERMOD

8	ALL	N/A	08H12GALL.PLT
24	ALL	N/A	24H12GALL.PLT
1	ALL	N/A	01H24GALL.PLT
8	ALL	N/A	08H24GALL.PLT
24	ALL	N/A	24H24GALL.PLT
Annual	ALL	N/A	AN00GALL.PLT

Results Summary

C:\Lakes\AERMOD View\15605 HRA Con\Commons At California\Commons At
Construction At Commons At California

DPM - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	1ST	1.57362	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	6/4/2021, 6
8-HR	1ST	1.22429	ug/m^3	478923.46	3769383.00	351.00	0.00	351.00	10/9/2021, 8
24-HR	1ST	0.78249	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	12/26/2023, 24
1-HR	2ND	1.53818	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	7/4/2023, 6
8-HR	2ND	1.17259	ug/m^3	478923.46	3769383.00	351.00	0.00	351.00	12/6/2022, 8
24-HR	2ND	0.70294	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	12/3/2022, 24
1-HR	3RD	1.49278	ug/m^3	478923.46	3769383.00	351.00	0.00	351.00	4/2/2018, 7
8-HR	3RD	1.16100	ug/m^3	478923.46	3769383.00	351.00	0.00	351.00	12/31/2023, 8
24-HR	3RD	0.70219	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	11/5/2023, 24
1-HR	4TH	1.47199	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	1/30/2023, 8
8-HR	4TH	1.13956	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	12/31/2023, 8
24-HR	4TH	0.68770	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	11/14/2022, 24
1-HR	5TH	1.46460	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	3/22/2019, 7
8-HR	5TH	1.11366	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	11/24/2023, 8
24-HR	5TH	0.68134	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	12/6/2022, 24
1-HR	6TH	1.44360	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	6/27/2019, 6
8-HR	6TH	1.08589	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	11/23/2018, 8
24-HR	6TH	0.67702	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	2/16/2023, 24
1-HR	7TH	1.42703	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	6/16/2023, 6
8-HR	7TH	1.08050	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	12/13/2022, 8

Results Summary

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DPM - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
24-HR	7TH	0.65738	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	12/12/2022, 24
1-HR	8TH	1.41601	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	10/22/2022, 7
8-HR	8TH	1.06975	ug/m^3	478923.46	3769383.00	351.00	0.00	351.00	11/23/2018, 8
24-HR	8TH	0.65191	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	12/3/2023, 24
1-HR	9TH	1.41269	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	7/19/2018, 6
8-HR	9TH	1.05757	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	12/17/2023, 24
24-HR	9TH	0.64597	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	12/13/2022, 24
1-HR	10TH	1.40915	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	7/1/2023, 6
8-HR	10TH	1.05538	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	3/31/2023, 8
24-HR	10TH	0.64416	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	11/3/2023, 24
1-HR	12TH	1.39044	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	12/10/2021, 8
8-HR	12TH	1.04798	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	2/9/2019, 8
24-HR	12TH	0.64064	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	11/1/2023, 24
1-HR	24TH	1.34829	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	10/14/2022, 7
8-HR	24TH	1.00683	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	12/3/2023, 8
24-HR	24TH	0.62172	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	11/15/2022, 24
ANNUAL		0.28298	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	
1-HR	1ST	1.57362	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
1-HR	2ND	1.53818	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
1-HR	3RD	1.49278	ug/m^3	478923.46	3769383.00	351.00	0.00	351.00	

Results Summary

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Construction At Commons At California

DPM - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
1-HR	4TH	1.47199	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	
1-HR	5TH	1.46460	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	
1-HR	6TH	1.44360	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	
1-HR	7TH	1.42703	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	
1-HR	8TH	1.41601	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	
1-HR	9TH	1.41269	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	
1-HR	10TH	1.40915	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
1-HR		1.39044	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
1-HR		1.34829	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	
8-HR	1ST	1.20416	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	
8-HR	2ND	1.17259	ug/m^3	478923.46	3769383.00	351.00	0.00	351.00	
8-HR	3RD	1.17154	ug/m^3	478923.46	3769383.00	351.00	0.00	351.00	
8-HR	4TH	1.16498	ug/m^3	478923.46	3769383.00	351.00	0.00	351.00	
8-HR	5TH	1.16100	ug/m^3	478923.46	3769383.00	351.00	0.00	351.00	
8-HR	6TH	1.13921	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
8-HR	7TH	1.13006	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
8-HR	8TH	1.12719	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
8-HR	9TH	1.12549	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
8-HR	10TH	1.12248	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
8-HR		1.12182	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	

Results Summary

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Construction At Commons At California

DPM - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
8-HR		1.09264	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
24-HR	1ST	0.71114	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
24-HR	2ND	0.70098	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
24-HR	3RD	0.69954	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
24-HR	4TH	0.69580	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
24-HR	5TH	0.69366	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
24-HR	6TH	0.68972	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
24-HR	7TH	0.68937	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
24-HR	8TH	0.68654	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
24-HR	9TH	0.68654	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
24-HR	10TH	0.68637	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
24-HR		0.68637	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
24-HR		0.67203	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
ANNUAL Y1		0.28381	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	
ANNUAL Y2		0.28151	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	
ANNUAL Y3		0.26602	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	
ANNUAL Y4		0.27489	ug/m^3	478973.46	3769358.00	352.00	0.00	352.00	
ANNUAL Y5		0.31544	ug/m^3	478873.46	3769408.00	350.12	0.00	350.12	

Exhibit B:

HRA Model Of Construction Phase

Risk Calculations For Diesel Exhaust From Construction Phase

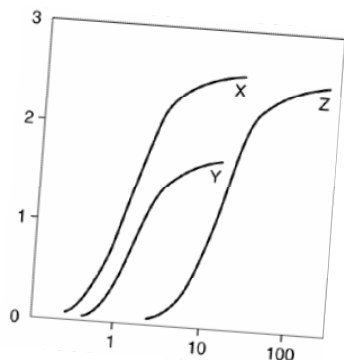
$Risk_{inh-res} = Dose_{air} * CPF * ASF * ED / AT$

$Dose_{air} = C_{air} * \{BR/BW\} * A * EF * 10^{-6}$

Variable	Description	Units	Value	Variable	Description	Units	Value
$Risk_{inh-air}$	Residential inhalation cancer risk	Unitless	Calculated	$Dose_{air}$	Daily inhalation dose	mg/kg-day	Calculated
$Dose_{air}$	Daily inhalation dose	mg/kg-day	Calculated	C_{air}	Concentration in air	ug/m ³	0.282979
CPF	Inhalation cancer potency factor	(mg/kg-day) ⁻¹	Chemical Specific	{BR/BW}	Daily Breathing rate normalized to body weight	L/kg body weight-day	Calculated
ASF	Age sensitivity factor for a specified age group	Unitless	Calculated	A	Inhalation absorption fraction	Unitless	1
ED	Exposure duration (in years) for a specified age group	years	Calculated	EF	Exposure frequency (days/365 days)	Unitless	Calculated
AT	Averaging time for lifetime cancer risk	years	70	10 ⁻⁶	micrograms to milligrams conversion, liters to cubic meters conversion	Unitless	Calculated
FAH	Fraction of time spent at home	Unitless	Calculated	1.83E+07			

Residential Exposures

Age Group	Risk Per Million	Age Sensitivity	FAH	ED	CPF	Dose Air	Cair	BR/BW	A	EF
3rd Trimester	3.85E+00	10	1	0.25	1.1	9.80E-05	0.283	361	1	0.958904
0-1	3.32E+01	10	0.85	0.84	1.1	2.96E-04	0.283	1090	1	0.958904
1-2	0.00E+00	10	0.85	0	1.1	2.96E-04	0.283	1090	1	0.958904
2-3	0.00E+00	1	0.72	0	1.1	1.55E-04	0.283	572	1	0.958904
3-4	0.00E+00	1	0.72	0	1.1	1.55E-04	0.283	572	1	0.958904
2<9	0.00E+00	3	0.72	0	1.1	2.34E-04	0.283	861	1	0.958904
2<16	0.00E+00	1	0.72	0	1.1	2.02E-04	0.283	745	1	0.958904
16<30	0.00E+00	1	0.73	0	1.1	9.09E-05	0.283	335	1	0.958904
16-70	0.00E+00	1	0.73	0	1.1	7.87E-05	0.283	290	1	0.958904
3rd trimester to 3.17	3.70E+01			13.08						



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James J. J. Clark, Ph.D.

Principal Toxicologist

Toxicology/Exposure Assessment Modeling

Risk Assessment/Analysis/Dispersion Modeling

Education:

Ph.D., Environmental Health Science, University of California, 1995

M.S., Environmental Health Science, University of California, 1993

B.S., Biophysical and Biochemical Sciences, University of Houston, 1987

Professional Experience:

Dr. Clark is a well recognized toxicologist, air modeler, and health scientist. He has 20 years of experience in researching the effects of environmental contaminants on human health including environmental fate and transport modeling (SCREEN3, AEROMOD, ISCST3, Johnson-Ettinger Vapor Intrusion Modeling); exposure assessment modeling (partitioning of contaminants in the environment as well as PBPK modeling); conducting and managing human health risk assessments for regulatory compliance and risk-based clean-up levels; and toxicological and medical literature research.

Significant projects performed by Dr. Clark include the following:

LITIGATION SUPPORT

Case: James Harold Caygle, et al, v. Drummond Company, Inc. Circuit Court for the Tenth Judicial Circuit, Jefferson County, Alabama. Civil Action. CV-2009

Client: Environmental Litigation Group, Birmingham, Alabama

Dr. Clark performed an air quality assessment of emissions from a coke factory located in Tarrant, Alabama. The assessment reviewed include a comprehensive review of air quality standards, measured concentrations of pollutants from factory, an inspection of the facility and detailed assessment of the impacts on the community. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Settlement in favor of plaintiff.

Case: Rose Roper V. Nissan North America, et al. Superior Court of the State Of California for the County Of Los Angeles – Central Civil West. Civil Action. NC041739

Client: Rose, Klein, Marias, LLP, Long Beach, California

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to multiple chemicals, including benzene, who later developed a respiratory distress. A review of the individual's medical and occupational history was performed to prepare an exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to respiratory irritants. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Settlement in favor of plaintiff.

Case: O'Neil V. Sherwin Williams, et al. United States District Court Central District of California

Client: Rose, Klein, Marias, LLP, Long Beach, California

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to petroleum distillates who later developed a bladder cancer. A review of the individual's medical and occupational history was performed to prepare a quantitative exposure assessment. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Summary judgment for defendants.

Case: Moore V., Shell Oil Company, et al. Superior Court of the State Of California for the County Of Los Angeles

Client: Rose, Klein, Marias, LLP, Long Beach, California

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to chemicals while benzene who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a quantitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Settlement in favor of plaintiff.

Case: Raymond Saltonstall V. Fuller O'Brien, KILZ, and Zinsser, et al. United States District Court Central District of California

Client: Rose, Klein, Marias, LLP, Long Beach, California

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to benzene who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a quantitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Settlement in favor of plaintiff.

Case: Richard Boyer and Elizabeth Boyer, husband and wife, V. DESCO Corporation, et al. Circuit Court of Brooke County, West Virginia. Civil Action Number 04-C-7G.

Client: Frankovitch, Anetakis, Colantonio & Simon, Morgantown, West Virginia.

Dr. Clark performed a toxicological assessment of a family exposed to chlorinated solvents released from the defendant's facility into local drinking water supplies. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to chlorinated solvents. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Settlement in favor of plaintiff.

Case: JoAnne R. Cook, V. DESCO Corporation, et al. Circuit Court of Brooke County, West Virginia. Civil Action Number 04-C-9R

Client: Frankovitch, Anetakis, Colantonio & Simon, Morgantown, West Virginia.

Dr. Clark performed a toxicological assessment of an individual exposed to chlorinated solvents released from the defendant's facility into local drinking water supplies. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to chlorinated solvents. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Settlement in favor of plaintiff.

Case: Patrick Allen And Susan Allen, husband and wife, and Andrew Allen, a minor, V. DESCO Corporation, et al. Circuit Court of Brooke County, West Virginia. Civil Action Number 04-C-W

Client: Frankovitch, Anetakis, Colantonio & Simon, Morgantown, West Virginia.

Dr. Clark performed a toxicological assessment of a family exposed to chlorinated solvents released from the defendant's facility into local drinking water supplies. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to chlorinated solvents. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Settlement in favor of plaintiff.

Case: Michael Fahey, Susan Fahey V. Atlantic Richfield Company, et al. United States District Court Central District of California Civil Action Number CV-06 7109 JCL.

Client: Rose, Klein, Marias, LLP, Long Beach, California

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to refined petroleum hydrocarbons who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Settlement in favor of plaintiff.

Case: Constance Acevedo, et al., V. California Spray-Chemical Company, et al., Superior Court of the State Of California, County Of Santa Cruz. Case No. CV 146344

Dr. Clark performed a comprehensive exposure assessment of community members exposed to toxic metals from a former lead arsenate manufacturing facility. The former manufacturing site had undergone a DTSC mandated removal action/remediation for the presence of the toxic metals at the site. Opinions were presented regarding the elevated levels of arsenic and lead (in attic dust and soils) found throughout the community and the potential for harm to the plaintiffs in question.

Case Result: Settlement in favor of defendant.

Case: Michael Nawrocki V. The Coastal Corporation, Kurk Fuel Company, Pautler Oil Service, State of New York Supreme Court, County of Erie, Index Number I2001-11247

Client: Richard G. Berger Attorney At Law, Buffalo, New York

Dr. Clark performed a toxicological assessment of an individual occupationally exposed to refined petroleum hydrocarbons who later developed a leukogenic disease. A review of the individual's medical and occupational history was performed to prepare a qualitative exposure assessment. The exposure assessment was evaluated against the

known outcomes in published literature to exposure to refined petroleum hydrocarbons. The results of the assessment and literature have been provided in a declaration to the court.

Case Result: Judgement in favor of defendant.

SELECTED AIR MODELING RESEARCH/PROJECTS

Client – Confidential

Dr. Clark performed a comprehensive evaluation of criteria pollutants, air toxins, and particulate matter emissions from a carbon black production facility to determine the impacts on the surrounding communities. The results of the dispersion model will be used to estimate acute and chronic exposure concentrations to multiple contaminants and will be incorporated into a comprehensive risk evaluation.

Client – Confidential

Dr. Clark performed a comprehensive evaluation of air toxins and particulate matter emissions from a railroad tie manufacturing facility to determine the impacts on the surrounding communities. The results of the dispersion model have been used to estimate acute and chronic exposure concentrations to multiple contaminants and have been incorporated into a comprehensive risk evaluation.

Client – Los Angeles Alliance for a New Economy (LAANE), Los Angeles, California

Dr. Clark is advising the LAANE on air quality issues related to current flight operations at the Los Angeles International Airport (LAX) operated by the Los Angeles World Airport (LAWA) Authority. He is working with the LAANE and LAX staff to develop a comprehensive strategy for meeting local community concerns over emissions from flight operations and to engage federal agencies on the issue of local impacts of community airports.

Client – City of Santa Monica, Santa Monica, California

Dr. Clark is advising the City of Santa Monica on air quality issues related to current flight operations at the facility. He is working with the City staff to develop a comprehensive strategy for meeting local community concerns over emissions from flight operations and to engage federal agencies on the issue of local impacts of community airports.

Client: Omnitrans, San Bernardino, California

Dr. Clark managed a public health survey of three communities near transit fueling facilities in San Bernardino and Montclair California in compliance with California Senate Bill 1927. The survey included an epidemiological survey of the effected communities, emission surveys of local businesses, dispersion modeling to determine potential emission concentrations within the communities, and a comprehensive risk assessment of each community. The results of the study were presented to the Governor as mandated by Senate Bill 1927.

Client: Confidential, San Francisco, California

Summarized cancer types associated with exposure to metals and smoking. Researched the specific types of cancers associated with exposure to metals and smoking. Provided causation analysis of the association between cancer types and exposure for use by non-public health professionals.

Client: Confidential, Minneapolis, Minnesota

Prepared human health risk assessment of workers exposed to VOCs from neighboring petroleum storage/transport facility. Reviewed the systems in place for distribution of petroleum hydrocarbons to identify chemicals of concern (COCs), prepared comprehensive toxicological summaries of COCs, and quantified potential risks from carcinogens and non-carcinogens to receptors at or adjacent to site. This evaluation was used in the support of litigation.

Client – United Kingdom Environmental Agency

Dr. Clark is part of team that performed comprehensive evaluation of soil vapor intrusion of VOCs from former landfill adjacent residences for the United Kingdom's Environment

Agency. The evaluation included collection of liquid and soil vapor samples at site, modeling of vapor migration using the Johnson Ettinger Vapor Intrusion model, and calculation of site-specific health based vapor thresholds for chlorinated solvents, aromatic hydrocarbons, and semi-volatile organic compounds. The evaluation also included a detailed evaluation of the use, chemical characteristics, fate and transport, and toxicology of chemicals of concern (COC). The results of the evaluation have been used as a briefing tool for public health professionals.

EMERGING/PERSISTENT CONTAMINANT RESEARCH/PROJECTS

Client: Ameren Services, St. Louis, Missouri

Managed the preparation of a comprehensive human health risk assessment of workers and residents at or near an NPL site in Missouri. The former operations at the Property included the servicing and repair of electrical transformers, which resulted in soils and groundwater beneath the Property and adjacent land becoming impacted with PCB and chlorinated solvent compounds. The results were submitted to U.S. EPA for evaluation and will be used in the final ROD.

Client: City of Santa Clarita, Santa Clarita, California

Dr. Clark is managing the oversight of the characterization, remediation and development activities of a former 1,000 acre munitions manufacturing facility for the City of Santa Clarita. The site is impacted with a number of contaminants including perchlorate, unexploded ordinance, and volatile organic compounds (VOCs). The site is currently under a number of regulatory consent orders, including an Imminent and Substantial Endangerment Order. Dr. Clark is assisting the impacted municipality with the development of remediation strategies, interaction with the responsible parties and stakeholders, as well as interfacing with the regulatory agency responsible for oversight of the site cleanup.

Client: Confidential, Los Angeles, California

Prepared comprehensive evaluation of perchlorate in environment. Dr. Clark evaluated the production, use, chemical characteristics, fate and transport, toxicology, and remediation of perchlorate. Perchlorates form the basis of solid rocket fuels and have recently been detected in water supplies in the United States. The results of this research

were presented to the USEPA, National GroundWater, and ultimately published in a recent book entitled *Perchlorate in the Environment*.

Client – Confidential, Los Angeles, California

Dr. Clark is performing a comprehensive review of the potential for pharmaceuticals and their by-products to impact groundwater and surface water supplies. This evaluation will include a review if available data on the history of pharmaceutical production in the United States; the chemical characteristics of various pharmaceuticals; environmental fate and transport; uptake by xenobiotics; the potential effects of pharmaceuticals on water treatment systems; and the potential threat to public health. The results of the evaluation may be used as a briefing tool for non-public health professionals.

PUBLIC HEALTH/TOXICOLOGY

Client: Brayton Purcell, Novato, California

Dr. Clark performed a toxicological assessment of residents exposed to methyl-tertiary butyl ether (MTBE) from leaking underground storage tanks (LUSTs) adjacent to the subject property. The symptomology of residents and guests of the subject property were evaluated against the known outcomes in published literature to exposure to MTBE. The study found that residents had been exposed to MTBE in their drinking water; that concentrations of MTBE detected at the site were above regulatory guidelines; and, that the symptoms and outcomes expressed by residents and guests were consistent with symptoms and outcomes documented in published literature.

Client: Confidential, San Francisco, California

Identified and analyzed fifty years of epidemiological literature on workplace exposures to heavy metals. This research resulted in a summary of the types of cancer and non-cancer diseases associated with occupational exposure to chromium as well as the mortality and morbidity rates.

Client: Confidential, San Francisco, California

Summarized major public health research in United States. Identified major public health research efforts within United States over last twenty years. Results were used as a briefing tool for non-public health professionals.

Client: Confidential, San Francisco, California

Quantified the potential multi-pathway dose received by humans from a pesticide applied indoors. Part of team that developed exposure model and evaluated exposure concentrations in a comprehensive report on the plausible range of doses received by a specific person. This evaluation was used in the support of litigation.

Client: Covanta Energy, Westwood, California

Evaluated health risk from metals in biosolids applied as soil amendment on agricultural lands. The biosolids were created at a forest waste cogeneration facility using 96% whole tree wood chips and 4 percent green waste. Mass loading calculations were used to estimate Cr(VI) concentrations in agricultural soils based on a maximum loading rate of 40 tons of biomass per acre of agricultural soil. The results of the study were used by the Regulatory agency to determine that the application of biosolids did not constitute a health risk to workers applying the biosolids or to residences near the agricultural lands.

Client – United Kingdom Environmental Agency

Oversaw a comprehensive toxicological evaluation of methyl-*tertiary* butyl ether (MtBE) for the United Kingdom's Environment Agency. The evaluation included available data on the production, use, chemical characteristics, fate and transport, toxicology, and remediation of MtBE. The results of the evaluation have been used as a briefing tool for public health professionals.

Client – Confidential, Los Angeles, California

Prepared comprehensive evaluation of *tertiary* butyl alcohol (TBA) in municipal drinking water system. TBA is the primary breakdown product of MtBE, and is suspected to be the primary cause of MtBE toxicity. This evaluation will include available information on the production, use, chemical characteristics, fate and transport in the environment, absorption, distribution, routes of detoxification, metabolites, carcinogenic potential, and remediation of TBA. The results of the evaluation were used as a briefing tool for non-public health professionals.

Client – Confidential, Los Angeles, California

Prepared comprehensive evaluation of methyl *tertiary* butyl ether (MTBE) in municipal drinking water system. MTBE is a chemical added to gasoline to increase the octane

rating and to meet Federally mandated emission criteria. The evaluation included available data on the production, use, chemical characteristics, fate and transport, toxicology, and remediation of MTBE. The results of the evaluation have been used as a briefing tool for non-public health professionals.

Client – Ministry of Environment, Lands & Parks, British Columbia

Dr. Clark assisted in the development of water quality guidelines for methyl tertiary-butyl ether (MTBE) to protect water uses in British Columbia (BC). The water uses to be considered includes freshwater and marine life, wildlife, industrial, and agricultural (e.g., irrigation and livestock watering) water uses. Guidelines from other jurisdictions for the protection of drinking water, recreation and aesthetics were to be identified.

Client: Confidential, Los Angeles, California

Prepared physiologically based pharmacokinetic (PBPK) assessment of lead risk of receptors at middle school built over former industrial facility. This evaluation is being used to determine cleanup goals and will be basis for regulatory closure of site.

Client: Kaiser Venture Incorporated, Fontana, California

Prepared PBPK assessment of lead risk of receptors at a 1,100-acre former steel mill. This evaluation was used as the basis for granting closure of the site by lead regulatory agency.

RISK ASSESSMENTS/REMEDIAL INVESTIGATIONS

Client: Confidential, Atlanta, Georgia

Researched potential exposure and health risks to community members potentially exposed to creosote, polycyclic aromatic hydrocarbons, pentachlorophenol, and dioxin compounds used at a former wood treatment facility. Prepared a comprehensive toxicological summary of the chemicals of concern, including the chemical characteristics, absorption, distribution, and carcinogenic potential. Prepared risk characterization of the carcinogenic and non-carcinogenic chemicals based on the exposure assessment to quantify the potential risk to members of the surrounding community. This evaluation was used to help settle class-action tort.

Client: Confidential, Escondido, California

Prepared comprehensive Preliminary Endangerment Assessment (PEA) of dense non-aqueous liquid phase hydrocarbon (chlorinated solvents) contamination at a former printed circuit board manufacturing facility. This evaluation was used for litigation support and may be used as the basis for reaching closure of the site with the lead regulatory agency.

Client: Confidential, San Francisco, California

Summarized epidemiological evidence for connective tissue and autoimmune diseases for product liability litigation. Identified epidemiological research efforts on the health effects of medical prostheses. This research was used in a meta-analysis of the health effects and as a briefing tool for non-public health professionals.

Client: Confidential, Bogotá, Columbia

Prepared comprehensive evaluation of the potential health risks associated with the redevelopment of a 13.7 hectares plastic manufacturing facility in Bogotá, Colombia. The risk assessment was used as the basis for the remedial goals and closure of the site.

Client: Confidential, Los Angeles, California

Prepared comprehensive human health risk assessment of students, staff, and residents potentially exposed to heavy metals (principally cadmium) and VOCs from soil and soil vapor at 12-acre former crude oilfield and municipal landfill. The site is currently used as a middle school housing approximately 3,000 children. The evaluation determined that the site was safe for the current and future uses and was used as the basis for regulatory closure of site.

Client: Confidential, Los Angeles, California

Managed remedial investigation (RI) of heavy metals and volatile organic chemicals (VOCs) for a 15-acre former manufacturing facility. The RI investigation of the site included over 800 different sampling locations and the collection of soil, soil gas, and groundwater samples. The site is currently used as a year round school housing approximately 3,000 children. The Remedial Investigation was performed in a manner

that did not interrupt school activities and met the time restrictions placed on the project by the overseeing regulatory agency. The RI Report identified the off-site source of metals that impacted groundwater beneath the site and the sources of VOCs in soil gas and groundwater. The RI included a numerical model of vapor intrusion into the buildings at the site from the vadose zone to determine exposure concentrations and an air dispersion model of VOCs from the proposed soil vapor treatment system. The Feasibility Study for the Site is currently being drafted and may be used as the basis for granting closure of the site by DTSC.

Client: Confidential, Los Angeles, California

Prepared comprehensive human health risk assessment of students, staff, and residents potentially exposed to heavy metals (principally lead), VOCs, SVOCs, and PCBs from soil, soil vapor, and groundwater at 15-acre former manufacturing facility. The site is currently used as a year round school housing approximately 3,000 children. The evaluation determined that the site was safe for the current and future uses and will be basis for regulatory closure of site.

Client: Confidential, Los Angeles, California

Prepared comprehensive evaluation of VOC vapor intrusion into classrooms of middle school that was former 15-acre industrial facility. Using the Johnson-Ettinger Vapor Intrusion model, the evaluation determined acceptable soil gas concentrations at the site that did not pose health threat to students, staff, and residents. This evaluation is being used to determine cleanup goals and will be basis for regulatory closure of site.

Client –Dominguez Energy, Carson, California

Prepared comprehensive evaluation of the potential health risks associated with the redevelopment of 6-acre portion of a 500-acre oil and natural gas production facility in Carson, California. The risk assessment was used as the basis for closure of the site.

Kaiser Ventures Incorporated, Fontana, California

Prepared health risk assessment of semi-volatile organic chemicals and metals for a fifty-year old wastewater treatment facility used at a 1,100-acre former steel mill. This evaluation was used as the basis for granting closure of the site by lead regulatory agency.

ANR Freight - Los Angeles, California

Prepared a comprehensive Preliminary Endangerment Assessment (PEA) of petroleum hydrocarbon and metal contamination of a former freight depot. This evaluation was as the basis for reaching closure of the site with lead regulatory agency.

Kaiser Ventures Incorporated, Fontana, California

Prepared comprehensive health risk assessment of semi-volatile organic chemicals and metals for 23-acre parcel of a 1,100-acre former steel mill. The health risk assessment was used to determine clean up goals and as the basis for granting closure of the site by lead regulatory agency. Air dispersion modeling using ISCST3 was performed to determine downwind exposure point concentrations at sensitive receptors within a 1 kilometer radius of the site. The results of the health risk assessment were presented at a public meeting sponsored by the Department of Toxic Substances Control (DTSC) in the community potentially affected by the site.

Unocal Corporation - Los Angeles, California

Prepared comprehensive assessment of petroleum hydrocarbons and metals for a former petroleum service station located next to sensitive population center (elementary school). The assessment used a probabilistic approach to estimate risks to the community and was used as the basis for granting closure of the site by lead regulatory agency.

Client: Confidential, Los Angeles, California

Managed oversight of remedial investigation most contaminated heavy metal site in California. Lead concentrations in soil excess of 68,000,000 parts per billion (ppb) have been measured at the site. This State Superfund Site was a former hard chrome plating operation that operated for approximately 40-years.

Client: Confidential, San Francisco, California

Coordinator of regional monitoring program to determine background concentrations of metals in air. Acted as liaison with SCAQMD and CARB to perform co-location sampling and comparison of accepted regulatory method with ASTM methodology.

Client: Confidential, San Francisco, California

Analyzed historical air monitoring data for South Coast Air Basin in Southern California and potential health risks related to ambient concentrations of carcinogenic metals and volatile organic compounds. Identified and reviewed the available literature and calculated risks from toxins in South Coast Air Basin.

IT Corporation, North Carolina

Prepared comprehensive evaluation of potential exposure of workers to air-borne VOCs at hazardous waste storage facility under SUPERFUND cleanup decree. Assessment used in developing health based clean-up levels.

Professional Associations

American Public Health Association (APHA)

Association for Environmental Health and Sciences (AEHS)

American Chemical Society (ACS)

California Redevelopment Association (CRA)

International Society of Environmental Forensics (ISEF)

Society of Environmental Toxicology and Chemistry (SETAC)

Publications and Presentations:**Books and Book Chapters**

Sullivan, P., **J.J. J. Clark**, F.J. Agardy, and P.E. Rosenfeld. (2007). *Synthetic Toxins In The Food, Water and Air of American Cities*. Elsevier, Inc. Burlington, MA.

Sullivan, P. and **J.J. J. Clark**. 2006. *Choosing Safer Foods, A Guide To Minimizing Synthetic Chemicals In Your Diet*. Elsevier, Inc. Burlington, MA.

Sullivan, P., Agardy, F.J., and **J.J.J. Clark**. 2005. *The Environmental Science of Drinking Water*. Elsevier, Inc. Burlington, MA.

Sullivan, P.J., Agardy, F.J., **Clark, J.J.J.** 2002. *America's Threatened Drinking Water: Hazards and Solutions*. Trafford Publishing, Victoria B.C.

Clark, J.J.J. 2001. "TBA: Chemical Properties, Production & Use, Fate and Transport, Toxicology, Detection in Groundwater, and Regulatory Standards" in *Oxygenates in the Environment*. Art Diaz, Ed.. Oxford University Press: New York.

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Clark, J.J.J. 1995. Probabilistic Forecasting of Volatile Organic Compound Concentrations At The Soil Surface From Contaminated Groundwater. UMI.

Baker, J.; **Clark, J.J.J.**; Stanford, J.T. 1994. Ex Situ Remediation of Diesel Contaminated Railroad Sand by Soil Washing. Principles and Practices for Diesel Contaminated Soils, Volume III. P.T. Kostecki, E.J. Calabrese, and C.P.L. Barkan, eds. Amherst Scientific Publishers, Amherst, MA. pp 89-96.

Journal and Proceeding Articles

- Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008) A Statistical Analysis Of Attic Dust And Blood Lipid Concentrations Of Tetrachloro-p-Dibenzodioxin (TCDD) Toxicity Equivalency Quotients (TEQ) In Two Populations Near Wood Treatment Facilities. Organohalogen Compounds, Volume 70 (2008) page 002254.
- Tam L. K., Wu C. D., Clark J. J. and **Rosenfeld, P.E.** (2008) Methods For Collect Samples For Assessing Dioxins And Other Environmental Contaminants In Attic Dust: A Review. Organohalogen Compounds, Volume 70 (2008) page 000527
- Hensley A.R., Scott, A., Rosenfeld P.E., **Clark, J.J.J.** (2007). "Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility." *Environmental Research*. 105:194-199.
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- Rosenfeld, P.E., **Clark, J. J.** and Suffet, I.H. 2005. "The Value Of An Odor Quality Classification Scheme For Compost Facility Evaluations" The U.S. Composting Council's 13th Annual Conference January 23 - 26, 2005, Crowne Plaza Riverwalk, San Antonio, TX.
- Rosenfeld, P.E., **Clark, J. J.** and Suffet, I.H. 2004. "The Value Of An Odor Quality Classification Scheme For Urban Odor" WEFTEC 2004. 77th Annual Technical Exhibition & Conference October 2 - 6, 2004, Ernest N. Morial Convention Center, New Orleans, Louisiana.
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EXHIBIT B



July 28th, 2025

Alaura R. McGuire
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080

**SUBJECT: Commons at California MND
Redlands, California
Review and Comment on Noise Analysis**

Dear Ms. McGuire

Per your request, we have reviewed the information regarding the noise and vibration impact analysis of the Mitigated Negative Declaration (MND) for the Commons at California Project. The proposed project involves the construction of a 90-room hotel, a 1,450-square-foot coffee shop, a 3,588-square-foot express-style car wash, and associated parking on a 5.1-acre property at 913 California Street in Redlands, California. The project site is currently undeveloped. The irregularly shaped project site is bounded by a flood control channel -Mission Channel- along the southwestern site boundary, California Street to the east, and a railroad line to the north. There are noise-sensitive residences across from Mission Channel to the southwest of the project site. This letter is based primarily on Appendix I of the MND, the noise and vibration analysis prepared by MD Acoustics

This letter contains our comments on the noise analysis in the subject document. Wilson Ihrig is an Acoustical Consulting firm that has practiced exclusively in the field of acoustics since 1966. During our 59 years of operation, we have prepared hundreds of noise studies for Environmental Impact Reports and Statements. We have one of the largest technical laboratories in the acoustical consulting industry. We also utilize industry-standard acoustical programs such as Roadway Construction Noise Model (RCNM), SoundPLAN, and CADNA. In short, we are well qualified to prepare environmental noise studies and review studies prepared by others.

Adverse Effects of Noise¹

Although the health effects of noise are not taken as seriously in the United States as they are in other countries, they are real and, in many parts of the country, pervasive.

Noise-Induced Hearing Loss. If a person is repeatedly exposed to loud noises, he or she may experience noise-induced hearing impairment or loss. In the United States, both the Occupational Health and Safety Administration (OSHA) and the National Institute for Occupational Safety and

¹ More information on these and other adverse effects of noise may be found in *Guidelines for Community Noise*, eds B Berglund, T Lindvall, and D Schwela, World Health Organization, Geneva, Switzerland, 1999. (<https://www.who.int/docstore/peh/noise/Comnoise-1.pdf>)

Health (NIOSH) promote standards and regulations to protect the hearing of people exposed to high levels of industrial noise.

Speech Interference. Another common problem associated with noise is speech interference. In addition to the obvious issues that may arise from misunderstandings, speech interference also leads to problems with concentration fatigue, irritation, decreased working capacity, and automatic stress reactions. For complete speech intelligibility, the sound level of the speech should be 15 to 18 dBA higher than the background noise. Typical indoor speech levels are 45 to 50 dBA at 1 meter, so any noise above 30 dBA begins to interfere with speech intelligibility. The common reaction to higher background noise levels is to raise one's voice. If this is required persistently for long periods of time, stress reactions and irritation will likely result.

Sleep Disturbance. Noise can disturb sleep by making it more difficult to fall asleep, by waking someone after they are asleep, or by altering their sleep stage, e.g., reducing the amount of rapid eye movement (REM) sleep. Noise exposure for people who are sleeping has also been linked to increased blood pressure, increased heart rate, increase in body movements, and other physiological effects. Not surprisingly, people whose sleep is disturbed by noise often experience secondary effects such as increased fatigue, depressed mood, and decreased work performance.

Cardiovascular and Physiological Effects. Human's bodily reactions to noise are rooted in the "fight or flight" response that evolved when many noises signaled imminent danger. These include increased blood pressure, elevated heart rate, and vasoconstriction. Prolonged exposure to acute noises can result in permanent effects such as hypertension and heart disease.

Impaired Cognitive Performance. Studies have established that noise exposure impairs people's abilities to perform complex tasks (tasks that require attention to detail or analytical processes) and it makes reading, paying attention, solving problems, and memorizing more difficult. This is why there are standards for classroom background noise levels and why offices and libraries are designed to provide quiet work environments.

The MND does Not Properly Determine Baseline Conditions

According to Appendix A of the Noise Study, Appendix I, the lowest daytime ambient noise level is 62 dBA. However, this measurement is recorded at the undeveloped property, not at the sensitive receivers to the southwest of the project. Noise exposure at the property is almost certainly from both California Ave and Interstate I-10. As a result, it is difficult to determine a single distance correction via sound attenuation between the long-term measurement location and nearby receivers. However, it stands to reason that the recorded level of 62 dBA would be lower at a location further from these two main noise sources. Typically, a short-term noise measurement should have been taken at location(s) within the closest noise sensitive receivers within the Somerset Apartments. This short-term noise measurement could have been used to adjust the 24-hour noise level based on the difference between the short-term and long-term measurements while both were recording. An analysis of a worst-case noise increase would be baseline noise from the quietest daytime hour minus this correction factor. As it stands now, ambient levels are overestimated at sensitive receivers, which may lead to underestimating noise impacts that are based on ambient levels.

The MND does not Consider Construction Noise Increases Over Ambient Levels

Appendix I states the project “will be required to adhere to Section 8.06.120.G of the City of Redlands Municipal Code” and under that statute “construction noise is exempt but shall be conducted during the allowed hour between 7:00 A.M and 6:00 PM on weekdays, including Saturdays, with no activities on Sundays or federal holidays.” Thus, after following these guidelines the “impact is less than significant” and “no mitigation is required.” However, this does not consider ambient conditions or increases in ambient conditions as required by CEQA.

This document’s interpretation of this statute implies that there are no thresholds of significance for daytime construction noise, and any increase in noise is insignificant so long as the construction activities are conducted only during daytime hours. Hypothetically, under the logic of this document, there is no noise level – no matter how extreme – where daytime construction noise would be considered a significant impact. CEQA as a law requires the project applicants to analyze both the “absolute noise level” and the increase over ambient, which was not done for this project.

Additionally, the MND already cites noise standards that use increases over ambient levels in the operational noise analysis, demonstrating that the City understands the scope of analysis required. There is no credible basis to omit an analysis of increased construction noise levels while performing the analysis for operational noise. Such thresholds do exist for construction noise, based on public documents that have jurisdiction over the project. Policy 9.0v of the City of Redlands 2035 General Plan² states that any increase of six dB or more is considered significant.

On page 3-86 of the MND, the City says that the construction noise will range from 57 to 69 dBA at the residential properties to the southwest of the project site. According to Appendix A of the Noise Study Appendix I, the lowest daytime ambient noise level is 62 dBA. As stated in the previous section, this 62 dBA is highly likely to be an overestimation of sound exposure at the residential properties. If the distance between the noise measurement to the noise sources is half of the distance between the noise sources and the noise sensitive receivers, which appears possible based on the site geometry, the ambient level is closer to 59 dBA. This is 10 dBA over modeled construction noise levels. An increase of 10 dB causes a doubling of perceived loudness and represents a ten-fold increase in sound level.³ It also exceeds the six dB significance threshold set by the general plan. These would constitute significant impacts that the MND fails to disclose or analyze in violation of CEQA. Without studying increases over ambient noise levels, the MND does not adequately study impacts on the community and thus lacks substantial evidence to conclude that the Project’s construction noise will have a less than significant impact. As such, new thresholds should be chosen, and an Environmental Impact Report (EIR) should be prepared that conducts a comprehensive noise analysis using these new thresholds.

The MND uses inconsistent distance measurements to the nearest sensitive receptor in its vibration analysis.

On page 3-19, the MND states that “the nearest sensitive receptors to the project site include the single-family residences located approximately 165 feet to the southwest of the project site.” However, on page 3-92, the MND states that “The nearest existing buildings are the residential building approximately 175 feet west of the project site.” This discrepancy may affect the vibration

² <https://ci.redlands.ca.us/clerk/2016staffreports/160629C1-att.pdf>

³ <https://www.nps.gov/subjects/sound/understandingsound.htm>

impact analysis and should be clarified. If different structures were studied between the air quality and vibration analyses, this should be stated as an assumption. As it currently stands, the MND is using the further distance between the two cited distances and thus may underestimate potential impacts.

The MND fails to disclose and analyze the potentially significant impact from the Project's pedestrian noise.

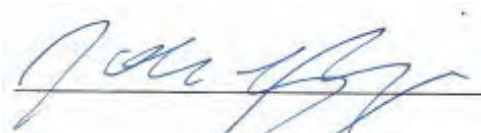
Table 3.13.H in the MND presents sound level sources used in the SoundPLAN model of long-term operational stationary noise. Of note, no noise sources regarding the outdoor pool area are considered. Page 22 of Appendix I of the MND states that the outdoor noise level at sensitive receivers within the pool area is expected to be “shielded from the highway and railroad noise by the architectural layout design of the hotel building.” This, and looking at the site layout of the single-building hotel complex, shows that pedestrian noise would be unshielded and potentially heard at residences to the southwest of the project site.

For example, a typical crowd of 30 in an outdoor social setting would generate a noise level of 62 dBA at a distance of 12 ft.⁴ As previously stated, the noise level at the closest receivers could be much lower than the measured daytime ambient minimum of 62 dBA. If the receivers were twice as far from the noise sources of Interstate 10 and California Ave, something that appears very possible based on the site geometry, pool noise would be an increase of 3 dBA, which meets the significance threshold used in Table 3.13.G. Thus, the potential exists that pool noise would combine with ambient noise and cause an exceedance at first-row receivers, which is a significant impact that the MND fails to analyze. This calculation does not include the potential sound amplifying effects of hard surfaces that would surround the pool. Amplified music could also increase potential source levels. This assumption also does not include pool equipment, which may have been included in the mechanical noise analysis (though this was not stated). This source has the potential to increase ambient levels over applicable noise thresholds and should be studied in an EIR, where potential noise mitigation, such as a sound wall, may be required.

Conclusion

The Project may result in potentially significant noise impacts. The MND does not adequately consider baseline conditions, includes an incomplete construction noise analysis, has inconsistencies with modeling distances, and does not consider all noise sources. The potential for significant increases exists, and the project should be studied in an Environmental Impact Report.

Very truly yours,
WILSON IHRIG



Jack Meighan
Associate

commons at california mnd - wilson ihrig comments on noise analysis.docx

⁴ Noise level calculated using Hayne, et al. *Prediction of Noise from Small to Medium Sized Crowds*. November 2011. *Proceedings of ACOUSTICS 2011*. Equation (8) and distance correction for spherical spreading.



JACK MEIGHAN

Associate

Jack joined Wilson Ihrig in 2021 and is an experienced acoustics engineer with expertise in projects involving rail transit systems, highways, CEQA analysis, environmental noise reduction, mechanical drawing reviews, and construction noise and vibration mitigation. He has hands-on experience with project management, including client coordination and presentations, as well as in designing, developing, and testing MATLAB code used in acoustics applications. Additionally, his expertise includes taking field measurements, developing test plans and specifying, purchasing, setting up and repairing acoustic measurement equipment. He has experience in using Traffic Noise Model (TNM), CadnaA, EASE, Visual Basic, LabView, and CAD software.

Education

- B.S. in Mechanical Engineering, University of Southern California, Los Angeles, CA
-

Project Experience

Metro Regional Connector, Los Angeles CA

Planned, took, and processed measurements as part of a team to determine the effectiveness of floating slab trackwork for a new subway in downtown Los Angeles that travels below the Walt Disney Concert Hall and the Colburn School of Music.

Rodeo Credit Enterprise CEQA Analysis for New Construction, Palmdale, CA

Wrote an accepted proposal and executed it for a noise study project to determine noise mitigation requirements on a new housing development. Led all aspects of the project and managed the budget during all phases of project completion. Completed 5 separate projects of this type for this developer.

Blackhall Studios, Santa Clarita, CA

Led the vibration measurement effort for a new soundstage directly adjacent to an existing freight and commuter rail line. Tested equipment, processed data, and analyzed results to determine the vibration propagation through the soil to the proposed soundstage locations, and was part of the team that developed mitigation techniques for the office spaces directly next to the rail line.

Octavia Residential Condos CEQA Study, San Francisco, CA

Calculated the STC ratings for the proposed windows to meet Title 24 requirements, modeled the acoustic performance of floor and ceiling structures, researched noise codes, helped with a mechanical design review, and wrote a report summarizing the results for a new Condominium project being developed in San Francisco.

San Diego International Airport Terminal I Replacement, CA

Conducted interior noise and vibration measurements, analyzed measurement data to help determine project criteria, modeled the existing and future terminals in CadnaA, and was part of a team that did a complete HVAC analysis of the entire terminal, as part of a CEQA analysis where a new terminal for the airport is being designed.

Five Points Apartments Noise Study, Whittier, CA

Took measurements, researched sound data and solutions, and recommended mitigation for a new apartment complex that was located next to an existing car wash, as part of a CEQA review.

USC Ellison Vibration Survey, Los Angeles, CA

Conducted vibration measurements as part of a survey to determine the effectiveness of vibration isolation platforms that are used to insulate cell growth in a cancer research facility. Determined the effectiveness and presented this information to the client. Researched and recommended a permanent monitoring system so the client could view data in real time.

TEN50 Condos 'Popping' Noise Investigation, Los Angeles, CA

Was part of a team that investigated the noise source of an unwanted popping noise in luxury condos in Downtown Los Angeles. Helped isolate the noise source location with accelerometers to determine where vibrations were occurring first and used an acoustic camera to determine where in the condo the noise was coming from.

2000 University Project, Berkely, CA

Wrote a construction noise monitoring plan based on environmental noise calculations, wrote a report summarizing the results, and attending a meeting with the client to discuss options.

Bay Area Rapid Transit (BART) On-Track, CA, San Francisco Bay Area, CA*

Day to day project manager, responsible for meetings, presentations, and coordination with the client for an ongoing noise study on the BART system. Developed MATLAB code to process measurements and determine areas where high corrugation was present, contributing to excessively high in-car noise levels. Performed noise measurements inside both the right of way and the vehicle cabin, in addition to rail corrugation measurements.

California I-605/SR-60 Interchange Improvement, Los Angeles, CA*

Developed a noise model of the area that predicted sound levels for abatement design, in addition to conducting noise measurements and analysis. Led the Team in use of the FHWA Traffic Noise Model Software for the project, involving three major highways and two busy interchanges extending over 17 miles in southern California.

Sound Transit On-Track, Seattle, WA*

Took measurements, fixed equipment, and developed software in MATLAB to process Corrugation Analysis Trolley measurements as part of an ongoing noise study on the Sound Transit Link system. Tested vibration data to determine the best measurement and processing techniques to store the data in an online database for in-car measurements.

LA Metro CRRC Railcar Testing, Los Angeles, CA*

Led the effort to plan the measurements, determine measurement locations and finalize the test plan. Formulated a method to capture speed data directly from legacy train vehicles. Executed noise and vibration specification measurements for new rail cars delivered by CRRC.

City of Los Angeles, Pershing Square Station Rehabilitation Noise Monitoring, CA*

Built noise models, wrote a construction noise plan, and assisted in on-site construction noise issues as they arose for a renovation of the Pershing Square metro station in downtown Los

Angeles. Trained construction personnel in techniques for noise reduction and how to conduct noise monitoring measurements to meet project specifications.

City of Orange Metrolink Parking Garage Construction Monitoring, CA*

Wrote an adaptive management vibration monitoring plan, set up equipment to monitor live vibration levels, and generated weekly reports as part of an effort to build a new parking garage. Designed, planned, and completed measurements to predict and mitigate pile driving construction impacts at three historic building locations adjacent to the construction site. Coordinated with the client whenever an on-site problem arose.

LA Metro Westside Subway Construction, Los Angeles, CA*

Planned, organized, and processed noise measurements for the Purple Line extension construction. Implemented both long term microphones to measure noise levels and accelerometers to measure vibration levels in existing subway tunnels. Oversaw noise monitoring at sensitive construction sites for the project and worked with the contractor to find ways to reduce construction noise levels by approximately 10dB.

Montreal Réseau Express Métropolitain, Canada*

Conducted vibration propagation measurements used to create models to predict operational vibration levels for an under-construction transit line. Managed equipment, solved problems in the field, and wrote parts of the report summarizing the findings of the acoustic study.

NHCRP Barrier*

Took on-highway measurements and wrote, designed, developed, and tested MATLAB code to identify specific spectrograms to use for analyses for a project evaluating barrier reflected highway traffic noise differences in the presence of a single absorptive or reflective noise barrier.

Siemens Railcar Testing for Sound Transit, Seattle, WA*

Measured in-car noise and vibration for new rail cars delivered by Siemens. Developed new internal techniques for measurements based on the written specifications. Contributed to the team that helped identify issues that new cars had in meeting the Sound Transit specifications for noise and vibration. Participated in developing the test plan and specified then acquired new equipment for the measurement.

Toronto/Ontario Eglinton Crosstown Light Rail, Final Design, Canada*

Assisted in vibration propagation measurements, analysis, and recommendations for mitigation for a 12-mile light-rail line both on and under Eglinton Avenue. Set up and ran equipment for at-grade measurements with an impact hammer for underground measurements with an impact load cell that was used during pre-construction borehole drilling.

** Work done prior to working for Wilson Ihrig*

ATTACHMENT B

REVISED FIGURE 3-2: SOUNDPLAN OPERATIONAL NOISE MODELING RESULTS

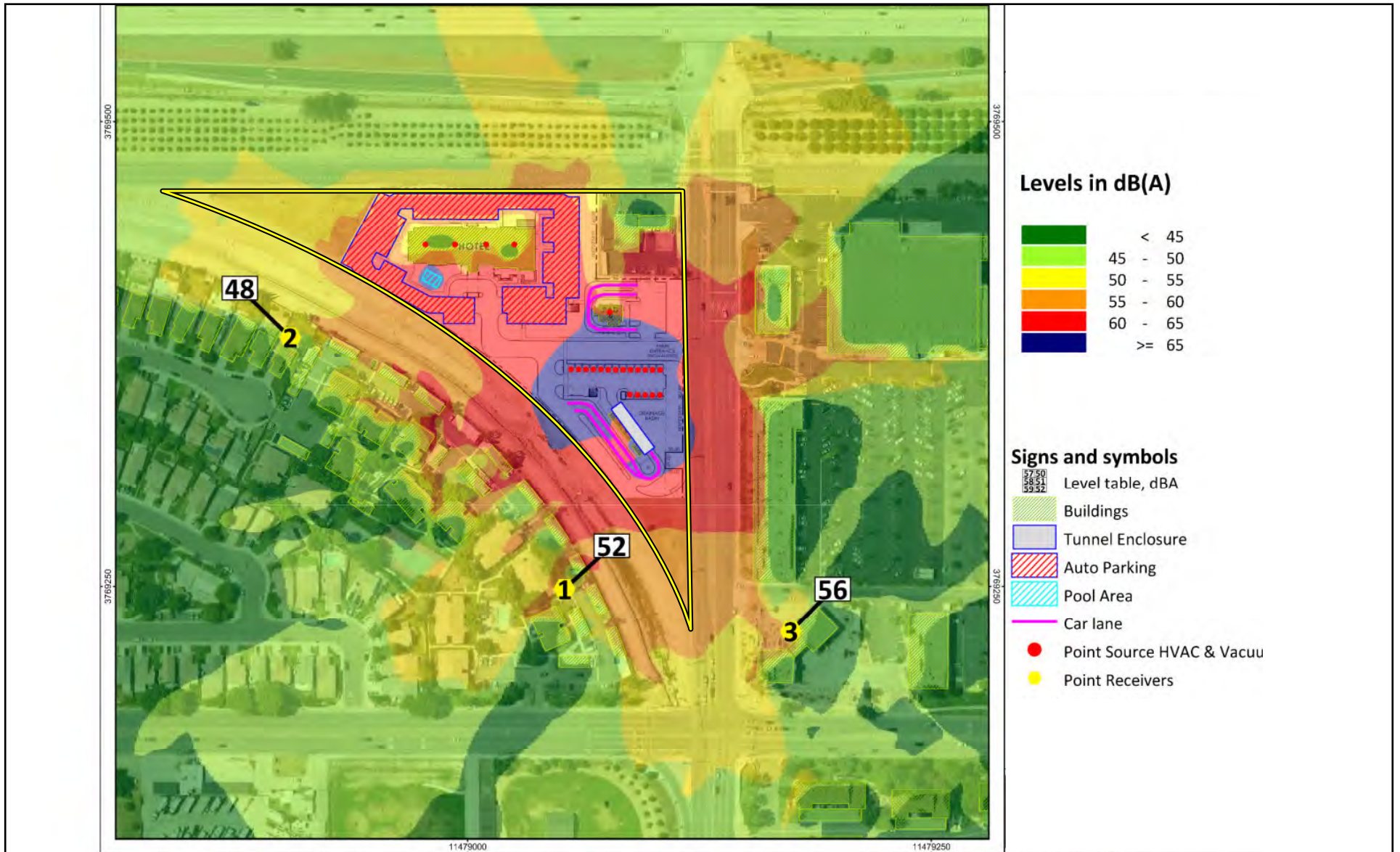


FIGURE 3-2

LSA



SOURCE: MD Acous

I:\2024\20242064\G\Noise_Results.ai (8/8/2025)

913 California Street Mixed-Use Project
SoundPLAN Operational Noise Modeling Results

ATTACHMENT C

REVISED AIR QUALITY REPORT

913 California Street

Air Quality, Greenhouse Gas, and Energy Impact Study

City of Redlands, CA

Prepared for:

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GLOSSARY OF TERMS

AQMP	Air Quality Management Plan
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH ₄	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DPM	Diesel particulate matter
GHG	Greenhouse gas
HFCs	Hydrofluorocarbons
LST	Localized Significant Thresholds
MTCO ₂ e	Metric tons of carbon dioxide equivalent
MMTCO ₂ e	Million metric tons of carbon dioxide equivalent
NAAQS	National Ambient Air Quality Standards
NO _x	Nitrogen Oxides
NO ₂	Nitrogen dioxide
N ₂ O	Nitrous oxide
O ₃	Ozone
PFCs	Perfluorocarbons
PM	Particle matter
PM ₁₀	Particles that are less than 10 micrometers in diameter
PM _{2.5}	Particles that are less than 2.5 micrometers in diameter
PMI	Point of maximum impact
PPM	Parts per million
PPB	Parts per billion
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SF ₆	Sulfur hexafluoride
SIP	State Implementation Plan
SO _x	Sulfur Oxides
SRA	Source/Receptor Area
TAC	Toxic air contaminants
VOC	Volatile organic compounds
WRCC	Western Regional Climate Center

1.0 Introduction

1.1 Purpose of Analysis and Study Objectives

This air quality and greenhouse gas (GHG) analysis was prepared to evaluate whether the estimated criteria pollutants and GHG emissions generated from the Project would cause a significant impact to the air resources in the Project area as well as evaluate whether the estimated energy usage by the project would cause a significant impact to the local energy resources. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The assessment is consistent with the methodology and emission factors endorsed by South Coast Air Quality Management District (SCAQMD), California Air Resource Board (CARB), and the United States Environmental Protection Agency (US EPA).

1.2 Project Summary

1.2.1 Site Location

The project site is located at the SWC of I-10 and California Street in the City of Redlands, CA (APN: 0631-032-04), as shown in Exhibit A. The site is currently zoned as General Commercial. The land directly surrounding the site to the north and east is zoned as Commercial General, and residential to the southwest. California Street borders the site to the east. An aerial of the project site is shown in Exhibit A.

1.2.2 Project Description

The proposed project comprises a 3,588 sq ft car wash, 1,450 coffee shop with Drive-Thru, and a 90-room hotel on approximately 5 acres. The site plan is illustrated in Exhibit B.

Construction activities within the Project area will consist of site preparation, grading, building construction, paving, and architectural coating. Table 1 summarizes the land use description for the Project Site.

Table 1: Land Use Summary

Land Use	Unit Amount	Size Metric
Hotel	90	Rooms
Automobile Care Center	3.588	Thousand Square Feet
Fast Food Restaurant with Drive Thru	1.450	Thousand Square Feet
Parking Lot	1.31	Acres

1.2.3 Sensitive Receptors

Sensitive receptors are considered land uses or other types of population groups that are more sensitive to air pollution than others due to their exposure. Sensitive population groups include children, the elderly, the acutely and chronically ill, and those with cardio-respiratory diseases. For CEQA purposes, a

sensitive receptor would be a location where a sensitive individual could remain for 24-hours or longer, such as residences, hospitals, and schools (etc).

The closest existing sensitive receptors (to the site area) are residential land uses located 165 feet to the southwest of the project site.

1.3 Executive Summary of Findings and Mitigation Measures

The following is a summary of the analysis results:

Construction-Source Emissions

Project construction-source emissions would not exceed applicable regional thresholds of significance established by the SCAQMD. For localized emissions, the Project will not exceed applicable Localized Significance Thresholds (LSTs) established by the SCAQMD.

Project construction-source emissions would not conflict with the Basin Air Quality Management Plan (AQMP). As discussed herein, the Project will comply with all applicable SCAQMD construction-source emission reduction rules and guidelines. Project construction source emissions would not cause or substantively contribute to violation of the California Ambient Air Quality Standards (CAAQS) or National Ambient Air Quality Standards (NAAQS).

Established requirements addressing construction equipment operations, and construction material use, storage, and disposal requirements act to minimize odor impacts that may result from construction activities. Moreover, construction-source odor emissions would be temporary, short-term, and intermittent in nature and would not result in persistent impacts that would affect substantial numbers of people. Potential construction-source odor impacts are therefore considered less-than-significant.

Operational-Source Emissions

The Project operational-sourced emissions would not exceed applicable regional thresholds of significance established by the SCAQMD. Project operational-source emissions would not result in or cause a significant localized air quality impact as discussed in the Operations-Related Local Air Quality Impacts section of this report. Additionally, Project-related traffic will not cause or result in carbon dioxide (CO) concentrations exceeding applicable state and/or federal standards (CO “hotspots”). Project operational-source emissions would therefore not adversely affect sensitive receptors within the vicinity of the Project.

Project operational-source emissions would not conflict with the Basin Air Quality Management Plan (AQMP). The Project’s emissions meet SCAQMD regional thresholds and will not result in a significant cumulative impact. The Project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. Potential operational-source odor impacts are therefore considered less-than-significant.

Project-related GHG emissions meet the San Bernardino County and SCAQMD draft threshold. Therefore, Project emissions are considered to be less than significant. The Project also complies with the goals of the CARB Scoping Plan, Assembly Bill (AB) 32, Senate Bill (SB) 32, County of San Bernardino

Greenhouse Gas Emissions Reduction Plan, the County of San Bernardino Climate Action Plan, and City of Redlands Climate Action Plan.

Neither construction nor operation of the project would result in wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources. The proposed project does not include any unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities and is an industrial project that is not proposing any additional features that would require a larger energy demand than other industrial projects of similar scale and configuration

Mitigation Measures

3. Construction Measures

No construction mitigation required.

B. Operational Measures

No operational mitigation required.

Exhibit A Location Map





2.0 Regulatory Framework and Background

2.1 Air Quality Regulatory Setting

Air pollutants are regulated at the national, state, and air basin level; each agency has a different level of regulatory responsibility. The United States EPA regulates at the national level. CARB regulates at the state level. SCAQMD regulates at the air basin level.

2.1.1 National and State

The EPA is responsible for global, international, and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans, provides research and guidance for air pollution programs, and sets National Air Quality Standards, also known as federal standards. There are six common air pollutants, called criteria pollutants, which were identified from the provisions of the Clean Air Act of 1970.

- Ozone
- Nitrogen Dioxide
- Lead
- Particulate Matter (PM10 and PM2.5)
- Carbon Monoxide
- Particulate Matter
- Sulfur Dioxide

The federal standards were set to protect public health, including that of sensitive individuals; thus, the standards continue to change as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health.

A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The State Implementation Plan for the State of California is administered by CARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's State Implementation Plan incorporates individual federal attainment plans for regional air districts—air district prepares their federal attainment plan, which sent to CARB to be approved and incorporated into the California State Implementation Plan. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms. See <http://www.arb.ca.gov/research/aqs/aqs.htm> for additional information on criteria pollutants and air quality standards.

The federal and state ambient air quality standards are summarized in Table 2 and can also be found at https://ww2.arb.ca.gov/sites/default/files/2024-08/AAQS%20Table_ADA_FINAL_07222024.pdf.

Table 2: Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentrations ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O3)	1-Hour	0.09 ppm	Ultraviolet Photometry	--	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 ppm		0.070 ppm (147 µg/m³)		
Respirable Particulate Matter (PM10) ⁸	24-Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µm³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		--		
Fine Particulate Matter (PM2.5) ⁸	24-Hour	--	--	35 µg/m³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	9.0 µg/m³	15 µg/m³	
Carbon Monoxide (CO)	1-Hour	20 ppm (23 µg/m³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 µg/m³)	--	Non-Dispersive Infrared Photometry (NDIR)
	8-Hour	9.0 ppm (10 µg/m³)		9 ppm (10 µg/m³)	--	
Nitrogen Dioxide (NO2) ⁹	1-Hour	0.18 ppm (339 µg/m³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m³)	--	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (357 µg/m³)		0.053 ppm (100 µg/m³)	Same as Primary Standard	
Sulfur Dioxide (SO2) ¹⁰	1-Hour	0.25 ppm (655 µg/m³)	Ultraviolet Fluorescence	75 ppb (196 µg/m³)	--	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3-Hour	--		--	0.5 ppm (1300 mg/m³)	
	24-Hour	0.04 ppm (105 µg/m³)		0.14 ppm (for certain areas) ¹⁰	--	
	Annual Arithmetic Mean	--		0.130ppm (for certain areas) ¹⁰	--	
Lead ^{11,12}	30 Day Average	1.5 µg/m³	Atomic Absorption	--	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Calendar Qtrr	--		1.5 µg/m³ (for certain areas) ¹²		
	Rolling 3-Month Average	--		0.15 µg/m³		
Visibility Reducing Particles ¹³	8-Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No National Standards		
Sulfates	24-Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹¹	24-Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

Notes:

- California standards for ozone, carbon monoxide, sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
- Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- Any equivalent measurement method which can be shown to the satisfaction of CARB to give equivalent results at or near the level of the air quality standard may be used.
- National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.

7. On February 7, 2024, the national annual PM_{2.5} primary standard was lowered from 12 µg/m³ to 9.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
8. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
9. On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

10. CARB has identified lead and vinyl chloride as ‘toxic air contaminants’ with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
11. The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
12. In 1989, CARB converted the general statewide 10-mile visibility standard to an instrumental equivalent of “extinction of 0.23 per kilometer.”

Several pollutants listed in Table 2 are not addressed in this analysis. Analysis of lead is not included in this report because the Project is not anticipated to emit lead. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed. The Project is not expected to generate or be exposed to vinyl chloride because proposed Project uses do not utilize the chemical processes that create this pollutant and there are no such uses in the Project vicinity. The proposed Project is not expected to cause exposure to hydrogen sulfide because it would not generate hydrogen sulfide in any substantial quantity.

2.1.2 South Coast Air Quality Management District

The agency for air pollution control for the South Coast Air Basin (basin) is SCAQMD. SCAQMD is responsible for controlling emissions primarily from stationary sources. SCAQMD maintains air quality monitoring stations throughout the basin. SCAQMD, in coordination with the Southern California Association of Governments, is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the basin. An AQMP is a plan prepared and implemented by an air pollution district for a county or region designated as nonattainment of the federal and/or California ambient air quality standards. The term nonattainment area is used to refer to an air basin where one or more ambient air quality standards are exceeded.

Every three (3) years the SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon.

On March 23, 2017, CARB approved the 2016 AQMP. The 2016 AQMP is a regional blueprint for achieving the federal air quality standards and healthful air.

The 2016 AQMP includes both stationary and mobile source strategies to ensure that rapidly approaching attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the Plan is not approved or if the NAAQS are not met on time. As with every AQMP, a comprehensive analysis of emissions, meteorology, atmospheric chemistry, regional growth projections, and the impact of existing control measures is updated with the latest data and methods. The most significant air quality challenge in the Basin is to reduce nitrogen oxide (Nox) emissions sufficiently to meet the upcoming ozone standard deadlines. The primary goal of the 2016 AQMP is to meet clean air standards and protect public health, including ensuring benefits to environmental justice and disadvantaged communities. Now that the plan has been approved by CARB, it has been forwarded to the U.S. Environmental Protection Agency for its review. If approved by EPA, the plan becomes federally enforceable.

South Coast AQMD adopted the 2022 AQMP on December 2, 2022, to address the attainment of the 2015 8-hour ozone standard (70 ppb) for South Coast Air Basin and Coachella Valley. To meet this standard, the AQMP determined NOx emissions must be reduced by 67% percent more than is required by adopted rules and regulations by 2037. The control strategy for the 2022 AQMP includes aggressive new regulations and the development of incentive programs to support early deployment of advanced technologies. The two key areas for incentive programs are (1) promoting widespread deployment of available zero-emission (ZE) and low NOx technologies and (2) developing new ZE and ultra-low NOx technologies for use in cases where the technology is not currently available. South Coast AQMD will prioritize distribution of incentive funding in environmental justice areas and seek opportunities to focus benefits on the most disadvantaged communities. Cost-effectiveness and affordability will be further considered during the rulemaking or incentive program development process.

South Coast Air Quality Management District Rules

The AQMP for the basin establishes a program of rules and regulations administered by SCAQMD to obtain attainment of the state and federal standards. Some of the rules and regulations that apply to this Project include, but are not limited to, the following:

SCAQMD Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

SCAQMD Rule 403 governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

Rule 403 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Applicable suppression techniques are indicated below and include but are not limited to the following:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas in active for 10 days or more).
- Water active sites in sufficient quantity to prevent generation of dust plumes.
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 2 feet of freeboard in accordance with the requirements of California Vehicle Code (CVC) section 23114.
- Pave construction access roads at least 100 feet onto the site from the main road.
- Water unpaved roads at least once every 2 hours of active operations
- Reduce traffic speeds on all unpaved roads to 15 mph or less.
- Suspension of all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph.
- Bumper strips or similar best management practices shall be provided where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip.
- Replanting disturbed areas as soon as practical.
- During all construction activities, construction contractors shall sweep on-site and off-site streets if silt is carried to adjacent public thoroughfares, to reduce the amount of particulate matter on public streets.

SCAQMD Rule 481 governs all spray painting and spray coating operations and equipment. Compliance with this rule is achieved through compliance with one of the following conditions:

- The spray coating equipment is operated inside a control enclosure which is approved by the Executive Officer. Any control enclosure for which an application for permit for new construction, alteration, or change of ownership or location is submitted after the date of adoption of this rule shall be exhausted only through filters at a design face velocity not less than 100 feet per minute nor greater than 300 feet per minute, or through a water wash system designed to be equally effective for the purpose of air pollution control.
- Coatings are applied with HVLP, electrostatic and/or airless spray equipment.
- An alternative method of coating application or control is used which has an effectiveness equal to or greater than the equipment specified above.

SCAQMD Rule 1113 governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC content of paints available during construction. Therefore, all paints and solvents used during construction and operation of Project must comply with Rule 1113.

Idling Diesel Vehicle Trucks – Idling for more than 5 minutes in any one location is prohibited within California borders.

Rule 2702. The SCAQMD adopted Rule 2702 on February 6, 2009, which establishes a voluntary air quality investment program from which SCAQMD can collect funds from parties that desire certified GHG emission reductions, pool those funds, and use them to purchase or fund GHG emission reduction projects within two years, unless extended by the Governing Board. Priority will be given to projects that result in co-benefit emission reductions of GHG emissions and criteria or toxic air pollutants within environmental justice areas. Further, this voluntary program may compete with the cap-and-trade program identified for implementation in CARB’s Scoping Plan, or a Federal cap and trade program.

2.1.3 City of Redlands

City of Redlands General Plan

The City of Redlands General Plan contains the following air quality related policies and programs that are applicable to the proposed project:

Principles

- 7-P.44 Protect air quality within the city and support efforts for enhanced regional air quality
- 7-P.45 Aim for a diverse and efficiently operated ground transportation system that generates the minimum amount of pollutants feasible.
- 7-P.46 Increase average vehicle ridership during peak commute hours as a way of reducing vehicle miles traveled and peak period auto travel.
- 7-P.47 Cooperate in efforts to expand bus, rail, and other forms of mass transit in the portion of the South Coast Air Basin within San Bernardino County.
- 7-P.48 Involve environmental groups, the business community, and the general public in the formulation and implementation of programs that enhance air quality in the city and the region.
- 7-P.49 Protect sensitive receptors from exposure to hazardous concentrations of air pollutants.

Actions

- 7-A.144 To the extent practicable and feasible, maintain a system of air quality alerts (such as through the City website, internet, e-mail to City employees, and other tools) based on South Coast Air Quality Management District forecasts. Consider providing incentives to City employees to use alternative transportation modes during alert days.
- 7-A.145 Provide, whenever possible, incentives for carpooling, flex time, shortened work weeks, telecommuting, and other means of reducing vehicular miles traveled.

- 7-A.146 Promote expansion of all forms of mass transit to the urbanized portions of San Bernardino, Orange, Los Angeles, and Riverside counties. Support public transit providers in efforts to increase funding for transit improvements to supplement other means of travel.
- 7-A.147 Cooperate with the ongoing efforts of the U.S. Environmental Protection Agency, the South Coast Air Quality Management District, and the State of California Air Resources Board in improving air quality in the regional air basin.
- 7-A.148 Develop requirements for retrofitting existing residential buildings within the 500-foot AQMD buffer along the freeway to abate air pollution, and limitations on new residential developments within the buffer.
- 7-A.149 Ensure that construction and grading projects minimize short-term impacts to air quality:
- a. Require grading projects to provide a stormwater pollution prevention plan (SWPPP) in compliance with City requirements, which include standards for best management practices (BMPs) that control pollutants from dust generated by construction activities and those related to vehicle and equipment cleaning, fueling, and maintenance;
 - b. Require grading projects to undertake measures to minimize mono-nitrogen oxides (NO_x) emissions from vehicle and equipment operations; and
 - c. Monitor all construction to ensure that proper steps are implemented.
- 7-A.150 Establish and implement a Transportation Demand Management (TDM) Program.
- 7-A.152 Enforce regulations to prevent trucks from excessive idling in residential areas.
- 7-A.153 Require applicants for sensitive land uses (e.g., residences, schools, daycare centers, playgrounds, and medical facilities) to site development and/or incorporate design features (e.g., pollution prevention, pollution reduction, barriers, landscaping, ventilation systems, or other measures) to minimize the potential impacts of air pollution on sensitive receptors.
- 7-A.154 Require applicants for sensitive land uses within a Proposition 65 warning contour to conduct a health risk assessment and mitigate any health impacts to a less than significant level.

2.2 Greenhouse Gas Regulatory Setting

2.2.1 International

Many countries around the globe have made an effort to reduce GHGs since climate change is a global issue.

Intergovernmental Panel on Climate Change. In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nations. The United States participates in the United Nations Framework Convention on Climate Change (UNFCCC) (signed on March 21, 1994). Under the Convention, governments gather and share information on greenhouse gas emissions, national policies, and best practices; launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

The 2014 UN Climate Change Conference in Lima Peru provided a unique opportunity to engage all countries to assess how developed countries are implementing actions to reduce emissions.

Kyoto Protocol. The Kyoto Protocol is a treaty made under the UNFCCC and was the first international agreement to regulate GHG emissions. It has been estimated that if the commitments outlined in the Kyoto Protocol are met, global GHG emissions could be reduced by an estimated 5 percent from 1990 levels during the first commitment period of 2008 – 2012 (UNFCCC 1997). On December 8, 2012, the Doha Amendment to the Kyoto Protocol was adopted. The amendment includes: New commitments for Annex I Parties to the Kyoto Protocol who agreed to take on commitments in a second commitment period from 2013 – 2020; a revised list of greenhouse gases (GHG) to be reported on by Parties in the second commitment period; and Amendments to several articles of the Kyoto Protocol which specifically referenced issues pertaining to the first commitment period and which needed to be updated for the second commitment period.

2.2.2 National

Greenhouse Gas Endangerment. On December 2, 2009, the EPA announced that GHGs threaten the public health and welfare of the American people. The EPA also states that GHG emissions from on-road vehicles contribute to that threat. The decision was based on *Massachusetts v. EPA* (Supreme Court Case 05-1120) which argued that GHGs are air pollutants covered by the Clean Air Act and that the EPA has authority to regulate those emissions.

Clean Vehicles. Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce greenhouse gas emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program would apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of carbon dioxide per mile, equivalent to

35.5 miles per gallon if the automobile industry were to meet this carbon dioxide level solely through fuel economy improvements. Together, these standards would cut carbon dioxide emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). The second phase of the national program would involve proposing new fuel economy and greenhouse gas standards for model years 2017 – 2025 by September 1, 2011.

On October 25, 2010, the EPA and the U.S. Department of Transportation proposed the first national standards to reduce greenhouse gas emissions and improve fuel efficiency of heavy-duty trucks and buses. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20 percent reduction in carbon dioxide emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles and 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the agencies are proposing engine and vehicle standards starting in the 2014 model year which would achieve up to a 10 percent reduction in fuel consumption and carbon dioxide emissions by 2018 model year.

Issued by the National Highway Traffic Safety Administration (NHTSA) and EPA in March 2020 (published on April 30, 2020, and effective after June 29, 2020), the Safer Affordable Fuel-Efficient Vehicles Rule would maintain the Corporate Average Fuel Economy (CAFÉ) and CO₂ standards applicable in model year 2020 for model years 2021 through 2026. The estimated CAFÉ and CO₂ standards for model year 2020 are 43.7 mpg and 204 grams of CO₂ per mile for passenger cars and 31.3 mpg and 284 grams of CO₂ per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012. This Rule also excludes CO₂-equivalent emission improvements associated with air conditioning refrigerants and leakage (and, optionally, offsets for nitrous oxide and methane emissions) after model year 2020.¹

Mandatory Reporting of Greenhouse Gases. On January 1, 2010, the EPA started requiring large emitters of heat-trapping emissions to begin collecting GHG data under a new reporting system. Under the rule, suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of greenhouse gas emissions are required to submit annual reports to the EPA.

Climate Adaption Plan. The EPA Plan identifies priority actions the Agency will take to incorporate considerations of climate change into its programs, policies, rules and operations to ensure they are

¹ National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA), 2018. Federal Register / Vol. 83, No. 165 / Friday, August 24, 2018 / Proposed Rules, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks 2018. Available at: <https://www.gpo.gov/fdsys/pkg/FR-2018-08-24/pdf/2018-16820.pdf>.

effective under future climatic conditions. The following link provides more information on the EPA Plan: <https://www.epa.gov/arc-x/planning-climate-change-adaptation>

2.2.3 California

California Code of Regulations (CCR) Title 24, Part 6. CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

The Energy Commission adopted 2008 Standards on April 23, 2008, and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. 2013, 2016, and 2019 standards have been approved and became effective July 1, 2014, January 1, 2016, and January 1, 2020, respectively.

California Code of Regulations (CCR) Title 24, Part 11.

All buildings for which an application for a building permit is submitted on or after January 1, 2023 must follow the 2022 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions. The following links provide more information on Title 24, Part 11:

<https://www.dgs.ca.gov/BSC/Codes>

<https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>

California Green Building Standards.

On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. The Housing and Community Development (HCD) updated CALGreen through the 2015 Triennial Code Adoption Cycle, during the 2016 to 2017 fiscal year. During the 2022-2023 fiscal year, the Department of Housing and Community Development (HCD) updated CALGreen through the 2023 Triennial Code Adoption Cycle.

The Code is a comprehensive and uniform regulatory code for all residential, commercial and school buildings. CCR Title 24, Part 11: California Green Building Standards (Title 24) became effective in 2001 in response to continued efforts to reduce GHG emissions associated with energy consumption. CCR Title 24, Part 11 now require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. One focus of CCR Title 24, Part 11 is water conservation measures, which reduce GHG emissions by reducing electrical consumption associated with pumping and treating water. CCR Title 24, Part 11 has approximately 52 nonresidential mandatory measures and an additional 130 provisions for optional use. Some key mandatory measures for commercial

occupancies include specified parking for clean air vehicles, a 20 percent reduction of potable water use within buildings, a 50 percent construction waste diversion from landfills, use of building finish materials that emit low levels of volatile organic compounds, and commissioning for new, nonresidential buildings over 10,000 square feet.

The CEC estimates that over 30 years the 2022 Energy Code will provide \$1.5 billion in consumer benefits and reduce 10 million metric tons of GHG. Changes compared to the 2019 Energy Code include increases to on-site renewable energy generation from solar, increases to electric load flexibility to support grid reliability, reduction of emissions from newly constructed buildings, reduction of air pollution for improved public health, and increased adoption of environmentally beneficial efficient electric technologies.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided, they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official. The following link provides more on CalGreen Building Standards:

<http://www.bsc.ca.gov/Home/CALGreen.aspx>

Executive Order S-3-05. California Governor issued Executive Order S-3-05, GHG Emission, in June 2005, which established the following targets:

- By 2010, California shall reduce greenhouse gas emissions to 2000 levels;
- By 2020, California shall reduce greenhouse gas emissions to 1990 levels; and
- By 2050, California shall reduce greenhouse gas emissions to 80 percent below 1990 levels.

The executive order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. To comply with the Executive Order, the secretary of CalEPA created the California Climate Action Team (CAT), made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of businesses, local governments, and communities and through State incentive and regulatory programs.

Executive Order S-01-07. Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009 CARB approved the proposed regulation to implement the low carbon fuel standard and began implementation on January 1, 2011. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. CARB approved some amendments to the LCFS in December 2011, which were implemented on January 1, 2013. In September 2015, the Board approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted. In 2018, the Board approved amendments to the regulation, which included strengthening and smoothing the carbon intensity benchmarks through 2030 in-line with California's 2030 GHG emission reduction target enacted through SB 32, adding new crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector.

The LCFS is designed to encourage the use of cleaner low-carbon transportation fuels in California, encourage the production of those fuels, and therefore, reduce GHG emissions and decrease petroleum dependence in the transportation sector. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are "back-loaded", with more reductions required in the last five years, than the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today's fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the low carbon fuel standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at ten percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also may be low carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles are also considered as low carbon fuels for the low carbon fuel standard.

SB 97. Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. SB 97 directed the Governor's Office of Planning and Research (OPR), which is part of the State Resource Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Resources Agency was required to certify and adopt those guidelines by January 1, 2010.

Pursuant to the requirements of SB 97 as stated above, on December 30, 2009, the Natural Resources Agency adopted amendments to the state CEQA guidelines that address GHG emissions. The CEQA Guidelines Amendments changed 14 sections of the CEQA Guidelines and incorporate GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance are provided and no specific mitigation measures are identified. The GHG emission reduction amendments went into effect on March 18, 2010, and are summarized below:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given Project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that “to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the Project; general compliance with a plan, by itself, is not mitigation.”
- OPR’s emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports (EIRs) must specifically consider a project’s energy use and energy efficiency potential.

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that greenhouse gases emitted in California be reduced to 1990 levels by the year 2020. “Greenhouse gases” as defined under AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. CARB is the state agency charged with monitoring and regulating sources of greenhouse gases. AB 32 states the following:

Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The CARB Board approved the 1990 greenhouse gas emissions level of 427 million metric tons of carbon dioxide equivalent (MMTCO₂e) on December 6, 2007 (California Air Resources Board 2007). Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 MMTCO₂e. Emissions in 2020 in a “business as usual” scenario are estimated to be 596 MMTCO₂e.

Under AB 32, CARB published its Final Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California. Discrete early action measures are currently underway or are enforceable

by January 1, 2010. CARB has 44 early action measures that apply to the transportation, commercial, forestry, agriculture, cement, oil and gas, fire suppression, fuels, education, energy efficiency, electricity, and waste sectors. Of these early action measures, nine are considered discrete early action measures, as they are regulatory and enforceable by January 1, 2010. CARB estimates that the 44 recommendations are expected to result in reductions of at least 42 MMTCO₂e by 2020, representing approximately 25 percent of the 2020 target.

CARB's Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 (California Air Resources Board 2008). The Scoping Plan identifies recommended measures for multiple greenhouse gas emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 greenhouse gas target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related greenhouse gas emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. "Capped" strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the cap-and-trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. "Uncapped" strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional greenhouse gas emission reductions.⁴

The 2022 Scoping Plan was adopted by CARB in November 2022 and expands upon earlier plans with a target of reducing GHG emissions to 85% below 1990 levels by 2045.

Senate Bill 100. Senate Bill 100 (SB 100) requires 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. SB 100 was adopted September 2018.

The interim thresholds from prior Senate Bills and Executive Orders would also remain in effect. These include Senate Bill 1078 (SB 1078), which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) which changed the target date to 2010. Executive Order S-14-08, which was signed on November 2008 and expanded the State's Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

SB 375. Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's sustainable communities strategy or alternate planning strategy for consistency with its assigned targets.

The proposed Project is located within the Southern California Association of Governments (SCAG), which has authority to develop the SCS or APS. For the SCAG region, the targets set by CARB are at eight percent below 2005 per capita GHG emissions levels by 2020 and 13 percent below 2005 per capita GHG emissions levels by 2035. On April 4, 2012, SCAG adopted the 2012-2035 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), which meets the CARB emission reduction requirements.

On September 3, 2020, SCAG's Regional Council approved and fully adopted the Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy), and the addendum to the Connect SoCal Program Environmental Impact Report. Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. Connect SoCal outlines more than \$638 billion in transportation system investments through 2045. Connect SoCal is supported by a combination of transportation and land use strategies that help the region achieve state greenhouse gas emission reduction goals and federal Clean Air Act requirements, preserve open space areas, improve public health and roadway safety, support our vital goods movement industry and utilize resources more efficiently. By integrating the Forecasted Development Pattern with a suite of financially constrained transportation investments, Connect SoCal can reach the regional target of reducing greenhouse gases, or GHGs, from autos and light-duty trucks by 8 percent per capita by 2020, and 19 percent by 2035 (compared to 2005 levels).

City and County land use policies, including General Plans, are not required to be consistent with the RTP and associated SCS or APS. However, new provisions of CEQA would incentivize, through streamlining and other provisions, qualified projects that are consistent with an approved SCS or APS and categorized as “transit priority projects.”

Assembly Bill 939, Assembly Bill, and Senate Bill 1374. Assembly Bill 939 (AB 939) requires that each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling or other means. AB 341 requires at least 75 percent of generated waste be source reduced, recycled, or composted by the year 2020. Senate Bill 1374 (SB 1374) requires the California Integrated Waste Management Board to adopt a model ordinance by March 1, 2004 suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills.

Executive Order S-13-08. Executive Order S-13-08 indicates that “climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California’s economy, to the health and welfare of its population and to its natural resources.” Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resource Agency 2009) was adopted, which is the “... first statewide, multi-sector, region-specific, and information-based climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order B-30-15. Executive Order B-30-15, establishing a new interim statewide greenhouse gas emission reduction target to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030, was signed by Governor Brown in April 2015.

Executive Order B-29-15. Executive Order B-29-15, mandates a statewide 25% reduction in potable water usage and was signed into law on April 1, 2015.

Executive Order B-37-16. Executive Order B-37-16, continuing the State’s adopted water reduction, was signed into law on May 9, 2016. The water reduction builds off the mandatory 25% reduction called for in EO B-29-15.

Executive Order N-79-20. Executive Order N-79-20 was signed into law on September 23, 2020 and mandates 100 percent of in-state sales of new passenger cars and trucks be zero-emission by 2035; 100 percent of medium- and heavy-duty vehicles in the state be zero-emission vehicles by 2045 for all operations where feasible and by 2035 for drayage trucks; and to transition to 100 percent zero-emission off-road vehicles and equipment by 2035 where feasible.

2.2.4 South Coast Air Quality Management District

The Project is within the South Coast Air Basin, which is under the jurisdiction of SCAQMD. SCAQMD Regulation XXVII currently includes three rules:

- The purpose of Rule 2700 is to define terms and post global warming potentials.
- The purpose of Rule 2701, SoCal Climate Solutions Exchange, is to establish a voluntary program to encourage, quantify, and certify voluntary, high quality certified greenhouse gas emission reductions in the SCAQMD.
- Rule 2702, Greenhouse Gas Reduction Program, was adopted on February 6, 2009. The purpose of this rule is to create a Greenhouse Gas Reduction Program for greenhouse gas emission reductions in the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

SCAQMD Threshold Development

The SCAQMD has established recommended significance thresholds for greenhouse gases for local lead agency consideration (“SCAQMD draft local agency threshold”). SCAQMD has published a five-tiered draft GHG threshold which includes a 10,000 metric ton of CO₂e per year for stationary/industrial sources and 3,000 metric tons of CO₂e per year significance threshold for residential/commercial projects (South Coast Air Quality Management District 2010c). Tier 3 is anticipated to be the primary tier by which the SCAQMD will determine significance for projects. The Tier 3 screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects. A 90-percent emission capture rate means that 90 percent of total emissions from all new or modified stationary source projects would be subject to CEQA analysis. The 90-percent capture rate GHG significance screening level in Tier 3 for stationary sources was derived using the SCAQMD’s annual Emissions Reporting Program.

The current draft thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the Project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether or not the Project is consistent with a greenhouse gas reduction plan. If a project is consistent with a qualifying local greenhouse gas reduction plan, it does not have significant greenhouse gas emissions.
- Tier 3 consists of screening values, which the lead agency can choose but must be consistent. A project’s construction emissions are averaged over 30 years and are added to a project’s operational emissions. If a project’s emissions are under one of the following screening thresholds, then the project is less than significant:
 - All land use types: 3,000 MTCO₂e per year; and
 - Based on land use types: residential is 3,500 MTCO₂e per year; commercial is 1,400 MTCO₂e per year; and mixed use is 3,000 MTCO₂e per year
- Tier 4 has the following options:
 - Option 1: Reduce emissions from business as usual by a certain percentage; this percentage is currently undefined;
 - Option 2: Early implementation of applicable AB 32 Scoping Plan measures;
 - Option 3: Year 2020 target for service populations (SP), which includes residents and employees: 4.8 MTCO₂e/SP/year for projects and 6.6 MTCO₂e/SP/year for plans; or

- Option 3, 2035 target: 3.0 MTCO₂e/SP/year for projects and 4.1 MTCO₂e/SP/year for plans
- Tier 5 involves mitigation offsets to achieve target significance threshold.

2.2.5 County of San Bernardino

County of San Bernardino Climate Action Plan

The County of San Bernardino adopted its “Greenhouse Gas Emissions Reduction Plan” in December in 2011. An update to the GHG Emissions Development Review Process was made in 2015 and the current Regional Greenhouse Gas Reduction Plan was adopted in March 2021. The purpose of the GHG Plan is to reduce the County’s internal and external GHG emissions by 46 percent below 2008 levels by year 2030. The GHG Plan includes a two-tiered development review procedure to determine if a project could result in a significant impact related greenhouse gas emissions or otherwise comply with the Plan pursuant to Section 15183.5 of the state CEQA Guidelines.

The initial screening procedure is to determine if a project will emit 3,000 metric tons of carbon dioxide equivalent (MTCO₂e) per year or more. Projects that do not exceed this threshold require no further climate change analysis. Projects exceeding this threshold must meet a minimum 31 percent emissions reduction in order to garner a less than significant determination. This can be met by either (1) achieving 100 points from a menu of mitigation options provided in the GHG Plan or (2) quantifying proposed reduction measures. Projects failing to meet the 31 percent reduction threshold would have a potentially significant impact related to climate change and greenhouse gas emissions. An update to the GHG Emissions Development Review Process was made in March 2015 to both improve upon the menu of options available in the screening tables and to bring performance standards up to current code.

Therefore, to determine whether the Project’s GHG emissions are significant, this analysis uses the County of San Bernardino and SCAQMD draft local agency tier 3 threshold screening threshold of 3,000 MTCO₂e per year for all land use types.

The Project will be subject to the latest requirements of the California Green Building and Title 24 Energy Efficiency Standards (currently 2022) which would reduce Project-related greenhouse gas emissions.

2.2.5 City of Redlands

City of Redlands Climate Action Plan

City of Redlands Climate Action Plan The City approved and adopted the City of Redlands Climate Action Plan (Redlands CAP or CAP) on December 5, 2017. It is a long-range plan to reduce local GHG emissions while providing Redlands with a strategy to grow in a sustainable way to keep the city vibrant and livable by allowing public and private development and redevelopment. The Redlands CAP implements strategies and measures related to transportation and land use, energy, solid waste, and community education and outreach to achieve GHG emissions targets. The CAP identifies how the GHG reduction measures will be implemented and monitored by the City to ensure that progress is being made toward the GHG reduction target.

2.3 Energy Regulatory Setting

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. On the state level, the PUC and the California Energy Commissions (CEC) are two agencies with authority over different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below.

2.3.1 Federal Regulations

Corporate Average Fuel Economy (CAFÉ) Standards

First established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFÉ) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA) jointly administer the CAFÉ standards. The U.S. Congress has specified that CAFÉ standards must be set at the “maximum feasible level” with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.²

Issued by NHTSA and EPA in March 2020 (published on April 30, 2020 and effective after June 29, 2020), the Safer Affordable Fuel-Efficient Vehicles Rule would maintain the CAFÉ and CO₂ standards applicable in model year 2020 for model years 2021 through 2026. The estimated CAFÉ and CO₂ standards for model year 2020 are 43.7 mpg and 204 grams of CO₂ per mile for passenger cars and 31.3 mpg and 284 grams of CO₂ per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012.³

² <https://www.nhtsa.gov/lawsregulations/corporate-average-fuel-economy>.

³ National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA), 2018. Federal Register / Vol. 83, No. 165 / Friday, August 24, 2018 / Proposed Rules, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks 2018. Available at: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/safer-affordable-fuel-efficient-safe-vehicles-final-rule>.

Intermodal Surface transportation Efficiency Act of 1991 (ISTEA)

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions.

The Transportation Equity Act of the 21st Century (TEA-21)

The Transportation Equity Act for the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

2.3.2 State Regulations

Integrated Energy Policy Report (IEPR)

Senate Bill 1389 requires the California Energy Commission (CEC) to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the State's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety. The Energy Commission prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2019 Integrated Energy Policy Report (2019 IEPR) was adopted February 20, 2020, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2019 IEPR focuses on a variety of topics such as decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast.⁴

⁴ California Energy Commission. Final 2019 Integrated Energy Policy Report. February 20, 2020. <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2019-integrated-energy-policy-report>

The 2020 IEPR was adopted March 23, 2021 and identifies actions the state and others can take to ensure a clean, affordable, and reliable energy system. In 2020, the IEPR focuses on California's transportation future and the transition to zero-emission vehicles, examines microgrids, lessons learned from a decade of state-supported research, and stakeholder feedback on the potential of microgrids to contribute to a lean and resilient energy system; and reports on California's energy demand outlook, updated to reflect the global pandemic and help plan for a growth in zero-emission plug in electric vehicles.⁵

The 2021 IEPR was adopted February 16, 2022, and covers topics including building decarbonization, energy efficiency, challenges with decarbonizing California's gas system, quantifying the benefits of the Clean Transportation Program, and the California Energy Demand Forecast.⁶

The 2022 IEPR was adopted February 28, 2023, and focused on embedding equity and environmental justice at the CEC, the California Energy Planning Library, the California energy demand forecast, energy reliability, western electricity integration, gasoline cost factors and price spikes, the role of hydrogen in California's clean energy future, fossil gas transition, and distributed energy resources.

The 2023 IEPR, the most recent approved IEPR, was adopted February 14, 2024, and covers topics including accelerated connection of clean energy, California energy demand forecast, potential growth of hydrogen in California, and updates on key issues including: gas system decarbonization, benefits of the clean transportation, and program energy efficiency.

The 2024 and 2025 editions of the IEPR are currently in progress.

State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access.

California Building Standards Code (Title 24)

California Building Energy Efficiency Standards (Title 24, Part 6)

The California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) were adopted to ensure that building construction and

⁵ California Energy Commission. Final 2020 Integrated Energy Policy Report. March 23, 2020. <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2020-integrated-energy-policy-report-update>

⁶ California Energy Commission. Final 2021 Integrated Energy Policy Report. February 16, 2022. <https://www.energy.ca.gov/publications/2021/2021-integrated-energy-policy-report#:~:text=In%20addition%20to%20these%20events,the%20California%20Energy%20Demand%20Forecast.>

system design and installation achieve energy efficiency and preserve outdoor and indoor environmental quality. The current California Building Energy Efficiency Standards (Title 24 standards) are the 2019 Title 24 standards, which became effective on January 1, 2020. The 2019 Title 24 standards include efficiency improvements to the lighting and efficiency improvements to the non-residential standards include alignment with the American Society of Heating and Air-Conditioning Engineers.

All buildings for which an application for a building permit is submitted on or after January 1, 2020 must follow the 2019 standards. The 2016 residential standards were estimated to be approximately 28 percent more efficient than the 2013 standards, whereas the 2019 residential standards are estimated to be approximately 7 percent more efficient than the 2016 standards. Furthermore, once rooftop solar electricity generation is factored in, 2019 residential standards are estimated to be approximately 53 percent more efficient than the 2016 standards. Under the 2019 standards, nonresidential buildings are estimated to be approximately 30 percent more efficient than the 2016 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

California Building Energy Efficiency Standards (Title 24, Part 11)

The 2022 California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, went into effect on January 1, 2023. The 2023 CALGreen Code includes mandatory measures for non-residential development related to site development; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality.

The CEC estimates that over 30 years the 2022 Energy Code will provide \$1.5 billion in consumer benefits and reduce 10 million metric tons of GHG. Changes compared to the 2019 Energy Code include increases to on-site renewable energy generation from solar, increases to electric load flexibility to support grid reliability, reduction of emissions from newly constructed buildings, reduction of air pollution for improved public health, and increased adoption of environmentally beneficial efficient electric technologies.

Senate Bill 100

Senate Bill 100 (SB 100) requires 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. SB 100 was adopted September 2018.

The interim thresholds from prior Senate Bills and Executive Orders would also remain in effect. These include Senate Bill 1078 (SB 1078), which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) which changed the target date to 2010. Executive Order S-14-08, which was signed on November 2008 and expanded the State's Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed the CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

Senate Bill 350

Senate Bill 350 (SB 350) was signed into law October 7, 2015, SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This will increase the use of Renewables Portfolio Standard (RPS) eligible resources, including solar, wind, biomass, geothermal, and others. In addition, SB 350 requires the state to double statewide energy efficiency savings in electricity and natural gas end uses by 2030. To help ensure these goals are met and the greenhouse gas emission reductions are realized, large utilities will be required to develop and submit Integrated Resource Plans (IRPs). These IRPs will detail how each entity will meet their customers resource needs, reduce greenhouse gas emissions and ramp up the deployment of clean energy resources.

Assembly Bill 32

In 2006 the California State Legislature adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006. AB 32 requires CARB, to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020 through an enforceable statewide emission cap which will be phased in starting in 2012. Emission reductions shall include carbon sequestration projects that would remove carbon from the atmosphere and best management practices that are technologically feasible and cost effective.

Assembly Bill 1493/Pavley Regulations

California Assembly Bill 1493 enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. In 2005, the CARB submitted a "waiver" request to the EPA from a portion of the federal Clean Air Act in order to allow the State to set more stringent tailpipe emission standards for CO₂ and other GHG emissions from passenger vehicles and light duty trucks. On December 19, 2007 the EPA announced that it denied the "waiver" request. On January 21, 2009, CARB submitted a letter to the EPA administrator regarding the State's request to reconsider the waiver denial. The EPA approved the waiver on June 30, 2009.

Executive Order S-1-07/Low Carbon Fuel Standard

Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009 CARB approved the proposed regulation to implement the low carbon fuel standard and began implementation on January 1, 2011. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. CARB approved some amendments to the LCFS in December 2011, which were implemented on January 1, 2013. In September 2015, the Board approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted. In 2018, the Board approved amendments

to the regulation, which included strengthening and smoothing the carbon intensity benchmarks through 2030 in-line with California’s 2030 GHG emission reduction target enacted through SB 32, adding new crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector.

The LCFS is designed to encourage the use of cleaner low-carbon transportation fuels in California, encourage the production of those fuels, and therefore, reduce GHG emissions and decrease petroleum dependence in the transportation sector. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are “back-loaded”, with more reductions required in the last five years, than during the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today’s fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the low carbon fuel standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at ten percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also may be low carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles are also considered as low carbon fuels for the low carbon fuel standard.

Executive Order N-79-20.

Executive Order N-79-20 was signed into law on September 23, 2020 and mandates 100 percent of in-state sales of new passenger cars and trucks be zero-emission by 2035; 100 percent of medium- and heavy-duty vehicles in the state be zero-emission vehicles by 2045 for all operations where feasible and by 2035 for drayage trucks; and to transition to 100 percent zero-emission off-road vehicles and equipment by 2035 where feasible.

California Air Resources Board

CARB’s Advanced Clean Cars Program

Closely associated with the Pavley regulations, the Advanced Clean Cars emissions control program was approved by CARB in 2012. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles for model years 2015–2025. The components of the Advanced Clean Cars program include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of

pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years.⁷

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

The Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling (Title 13, California Code of Regulations, Division 3, Chapter 10, Section 2435) was adopted to reduce public exposure to diesel particulate matter and other air contaminants by limiting the idling of diesel-fueled commercial motor vehicles. This section applies to diesel-fueled commercial motor vehicles with gross vehicular weight ratings of greater than 10,000 pounds that are or must be licensed for operation on highways. Reducing idling of diesel-fueled commercial motor vehicles reduces the amount of petroleum-based fuel used by the vehicle.

Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen, and other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles

The Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles (Title 13, California Code of Regulations, Division 3, Chapter 1, Section 2025) was adopted to reduce emissions of diesel particulate matter, oxides of nitrogen (NO_x) and other criteria pollutants from in-use diesel-fueled vehicles. This regulation is phased, with full implementation by 2023. The regulation aims to reduce emissions by requiring the installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models. The newer emission controlled models would use petroleum-based fuel in a more efficient manner.

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or Senate Bill 375 (SB 375), coordinates land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction mandates established in AB 32.

Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB

⁷ California Air Resources Board, California's Advanced Clean Cars Program, January 18, 2017. www.arb.ca.gov/msprog/acc/acc.htm.

is also charged with reviewing each MPO's sustainable communities strategy or alternate planning strategy for consistency with its assigned targets.

3.0 Setting

3.1 Existing Physical Setting

The Project site is located in the City of Redlands within the southwestern portion of County of San Bernardino, which is part of the South Coast Air Basin (SCAB) that includes all of Orange County as well as the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The South Coast Air Basin is located on a coastal plain with connecting broad valleys and low hills to the east. Regionally, the South Coast Air Basin is bounded by the Pacific Ocean to the southwest and high mountains to the east forming the inland perimeter.

3.1.1 Local Climate and Meteorology

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the region form natural horizontal barriers to the dispersion of air contaminants. Air pollution created in the coastal areas and around the Greater Los Angeles area is transported inland until it reaches the mountains where the combination of mountains and inversion layers generally prevent further dispersion. This poor ventilation results in a gradual degradation of air quality from the coastal areas to inland areas. Air stagnation may occur during the early evening and early morning periods of transition between day and nighttime flows. The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. If the Santa Ana winds are strong, they can surpass the sea breeze, which blows from the ocean to the land, and carry the suspended dust and pollutants out to the ocean. If the winds are weak, they are opposed by the sea breeze and cause stagnation, resulting in high pollution events.

The annual average temperature varies little throughout much of the basin, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas where the Project site is located. The majority of the annual rainfall in the basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thunderstorms in the coastal regions and slightly heavier showers in the eastern portion of the basin along the coastal side of the mountains. Year-to-year patterns in rainfall are unpredictable because of fluctuations in the weather.

Temperature inversions limit the vertical depth through which pollution can be mixed. Among the most common temperature inversions in the basin are radiation inversions, which form on clear winter nights when cold air off mountains sink to the valley floor while the air aloft over the valley remains warm. These inversions, in conjunction with calm winds, trap pollutants near the source. Other types of temperature inversions that affect the basin include marine, subsidence, and high-pressure inversions.

Summers are often periods of hazy visibility and occasionally unhealthful air. Strong temperature inversions may occur that limit the vertical depth through which air pollution can be dispersed. Air pollutants concentrate because they cannot rise through the inversion layer and disperse. These inversions are more common and persistent during the summer months. Over time, sunlight produces photochemical reactions within this inversion layer that creates ozone, a particularly harmful air

pollutant. Occasionally, strong thermal convections occur which allows the air pollutants to rise high enough to pass over the mountains and ultimately dilute the smog cloudtrap pollutants such as automobile exhaust near their source. While these inversions may lead to air pollution “hot spots” in heavily developed coastal areas of the basin, there is not enough traffic in inland valleys to cause any winter air pollution problems. Despite light wind conditions, especially at night and in the early morning, winter is generally a period of good air quality in the Project vicinity.

In the winter, light nocturnal winds result mainly from the drainage of cool air off of the mountains toward the valley floor while the air aloft over the valley remains warm. This forms a type of inversion known as a radiation inversion. Such winds are characterized by stagnation and poor local mixing and trap pollutants such as automobile exhaust near their source. While these inversions may lead to air pollution “hot spots” in heavily developed coastal areas of the basin, there is not enough traffic to cause any winter air pollution problems. Despite light wind conditions, especially at night and in the early morning, winter is generally a period of good air quality in the Project vicinity.

The temperature and precipitation levels for the City of Redlands are in Table 3. Table 3 shows that July is typically the warmest month and January is typically the coolest month. Rainfall in the Project area varies considerably in both time and space. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April, with summers being almost completely dry.

Table 3: Meteorological Summary

Month	Temperature (°F)		Average Precipitation (inches)
	Average High	Average Low	
January	64.8	39.4	2.68
February	66.1	41.3	2.64
March	69.1	43.6	2.28
April	73.8	46.8	1.17
May	78.6	51.2	0.47
June	86.8	55.2	0.10
July	94.5	60.3	0.07
August	94.3	60.7	0.15
September	90.2	57.6	0.28
October	81.0	51.3	0.69
November	72.6	44.0	1.13
December	65.8	39.6	1.89
Annual Average	78.1	49.2	13.6

Notes:

¹ Source: <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7306>

3.1.2 Local Air Quality

The SCAQMD is divided into 38 air-monitoring areas with a designated ambient air monitoring station representative of each area. The Project site is located in the City of Redlands in the East San Bernardino Valley (Area 35). The nearest air monitoring station to the Project site with available air quality data is the San Bernardino – 4th Street Station (San Bernardino Station) located approximately 3.8 miles

northwest of the Project site; however, this location does not provide all ambient air quality data. Therefore, additional data was pulled from the SCAQMD historical data for the Central San Bernardino Valley (Area 34) for both sulfur dioxide and carbon monoxide to provide the existing levels. Table 4 presents the monitored pollutant levels within the vicinity. However, it should be noted that due to the air monitoring station distance from the Project site, recorded air pollution levels at the air monitoring station reflect with varying degrees of accuracy, local air quality conditions at the Project site.

Table 4: Local Area Air Quality Levels from Local Monitoring Stations

Pollutant (Standard) ²	Year		
	2021	2022	2023
Ozone:			
Maximum 1-Hour Concentration (ppm)	0.142	0.128	0.143
Days > CAAQS (0.09 ppm)	66	60	58
Maximum 8-Hour Concentration (ppm)	0.112	0.105	0.118
Days > NAAQS (0.07 ppm)	98	96	84
Days > CAAQS (0.070 ppm)	101	103	87
Carbon Monoxide:			
Maximum 1-Hour Concentration (ppm)	2.0	-	1.5
Days > NAAQS (20 ppm)	0	-	0
Maximum 8-Hour Concentration (ppm)	1.6	-	1.0
Days > NAAQS (9 ppm)	0	-	0
Nitrogen Dioxide:			
Maximum 1-Hour Concentration (ppm)	0.056	0.053	0.056
Days > NAAQS (0.25 ppm)	0	0	0
Sulfur Dioxide:			
Maximum 1-Hour Concentration (ppm) ³	0.005	-	0.003
Days > CAAQS (0.04 ppm) ³	0	-	0
Inhalable Particulates (PM10):			
Maximum 24-Hour Concentration (ug/m ³)	182.4	177.8	-
Days > NAAQS (150 ug/m ³)	1	1	0
Days > CAAQS (50 ug/m ³) ³	4	-	-
Annual Average (ug/m ³)	40.5	38.4	-
Annual > NAAQS (50 ug/m ³)	No	No	-
Annual > CAAQS (20 ug/m ³)	Yes	Yes	-
Ultra-Fine Particulates (PM2.5):			
Maximum 24-Hour Concentration (ug/m ³)	57.9	40.1	52.9
Days > NAAQS (35 ug/m ³) ³	1	2	1
Annual Average (ug/m ³) ³	11.8	11.2	10.5
Annual > NAAQS (15 ug/m ³) ³	No	No	No
Annual > CAAQS (12 ug/m ³) ³	No	No	No

¹ Source: obtained from [https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year-and /or https://www.arb.ca.gov/adam/topfour/topfour1.php](https://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year-and/or-https://www.arb.ca.gov/adam/topfour/topfour1.php)

² CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million

³ No data available.

The monitoring data presented in Table 4 shows that ozone and particulate matter (PM10 and PM2.5) are the air pollutants of primary concern in the Project area, which are detailed below.

Ozone

During the 2021 to 2023 monitoring period, the State 1-hour concentration standard for ozone has been exceeded between 58 and 66 days each year at the San Bernardino Station. The State 8-hour concentration standard for ozone has been exceeded between 87 and 103 days each year over the past three years at the San Bernardino Station. The Federal 8-hour concentration standard for ozone has been exceeded between 84 and 98 days each year over the past three years at the San Bernardino Station.

Ozone is a secondary pollutant as it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO₂, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the oxidant concentrations experienced in the area. Many areas of the SCAQMD contribute to the ozone levels experienced at the monitoring station, with the more significant areas being those directly upwind.

Carbon Monoxide

CO is another important pollutant that is due mainly to motor vehicles. The Central San Bernardino Valley Area did not record an exceedance of the state or federal 1-hour or 8-hour CO standards for the last three years.

Nitrogen Dioxide

The San Bernardino Station did not record an exceedance of the State or Federal NO₂ standards for the last three years.

Sulfur Dioxide

The Central San Bernardino Valley area did not record an exceedance of the State SO₂ standards for the last three years.

Particulate Matter

During the 2021 to 2023 monitoring period, the San Bernardino Station recorded 1 day of exceedance in 2021 and 2022 of the State 24-hour concentration standard for PM₁₀ and the State annual concentration standard for PM₁₀ was exceeded in 2021 and 2022. Over the same time period the Federal 24-hour standard for PM₁₀ was not exceeded at the San Bernardino Station.

During the 2021 to 2023 monitoring period, the Federal 24-hour standard for PM_{2.5} was exceeded between 1 and 2 days annually at the San Bernardino Station and the State annual standard for PM_{2.5} was exceeded in 2020.

According to the EPA, some people are much more sensitive than others to breathing fine particles (PM₁₀ and PM_{2.5}). People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM₁₀ and PM_{2.5}. Other groups considered

sensitive are smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive because many breathe through their mouths during exercise.

3.1.3 Attainment Status

The EPA and CARB designate air basins where ambient air quality standards are exceeded as “nonattainment” areas. If standards are met, the area is designated as an “attainment” area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or ‘form’ of what constitutes attainment, based on specific air quality statistics. For example, the Federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual PM_{2.5} standard is met if the three-year average of the annual average PM_{2.5} concentration is less than or equal to the standard. Table 5 lists the attainment status for the criteria pollutants in the basin.

Table 5: South Coast Air Basin Attainment Status

Pollutant	Standard ¹	Averaging Time	Designation ²	Attainment Date ³
1-Hour Ozone	NAAQS	1979 1-Hour (0.12 ppm)	Nonattainment (Extreme)	2/6/2023 (not attained) ⁴
	CAAQS	1-Hour (0.09 ppm)	Nonattainment	N/A
8-Hour Ozone ⁵	NAAQS	1997 8-Hour (0.08 ppm)	Nonattainment (Extreme)	6/15/2024
	NAAQS	2008 8-Hour (0.075 ppm)	Nonattainment (Extreme)	7/20/2032
	NAAQS	2015 8-Hour (0.070 ppm)	Nonattainment (Extreme)	8/3/2038
	CAAQS	8-Hour (0.070 ppm)	Nonattainment	Beyond 2032
CO	NAAQS	1-Hour (35 ppm)	Attainment (Maintenance)	6/11/2007 (attained)
	CAAQS	8-Hour (9 ppm)	Attainment	6/11/2007 (attained)
NO ₂ ⁶	NAAQS	1-Hour (0.1 ppm)	Unclassifiable/Attainment	N/A (attained)
	NAAQS	Annual (0.053 ppm)	Attainment (Maintenance)	9/22/1998 (attained)
	CAAQS	1-hour (0.18 ppm) Annual (0.030 ppm)	Attainment	-
SO ₂ ⁷	NAAQS	1-Hour (75 ppb)	Designations Pending (expect Uncl./Attainment)	N/A (attained)
	NAAQS	24-Hour (0.14 ppm) Annual (0.03 ppm)	Unclassifiable/Attainment	3/19/1979 (attained)
PM ₁₀	NAAQS	1987 24-Hour (150 µg/m ³)	Attainment (Maintenance) ⁸	7/26/2013 (attained)
	CAAQS	24-Hour (50 µg/m ³) Annual (20 µg/m ³)	Nonattainment	N/A
PM _{2.5} ⁹	NAAQS	2006 24-Hour (35 µg/m ³)	Nonattainment (Serious)	12/31/2019

	NAAQS	1997 Annual (15.0 µg/m ³)	Attainment	8/24/2016
	NAAQS	2021 Annual (12.0 µg/m ³)	Nonattainment (Serious)	12/31/2025
	CAAQS	Annual (12.0 µg/m ³)	Nonattainment	N/A
Lead	NAAQS	3-Months Rolling (0.15 µg/m ³)	Nonattainment (Partial) ¹⁰	12/31/2015

Notes:

Source: <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf>

¹ NAAQS = National Ambient Air Quality Standards, CAAQS = California Ambient Air Quality Standards

² U.S. EPA often only declares Nonattainment areas; everywhere else is listed as Unclassifiable/Attainment or Unclassifiable.

³ A design value below the NAAQS for data through the full year or smog season prior to the attainment date is typically required for attainment demonstration.

⁴ 1-hour O₃ standard (0.12 ppm) was revoked, effective June 15, 2005; however, the Basin has not attained this standard based on 2008-2010 data and is still subject to anti-backsliding requirements.

⁵ 1997 8-hour O₃ standard (0.08 ppm) was reduced (0.075 ppm), effective May 27, 2008; the revoked 1997 O₃ standard is still subject to anti-backsliding requirements.

⁶ New NO₂ 1-hour standard, effective August 2, 2010; attainment designations January 20, 2012; annual NO₂ standard retained.

⁷ The 1971 annual and 24-hour SO₂ standards were revoked, effective August 23, 2010; however, these 1971 standards will remain in effect until one year after U.S. EPA promulgates area designations for the 2010 SO₂ 1-hour standard. Area designations are still pending, with Basin expected to be designated Unclassifiable /Attainment.

⁸ Annual PM₁₀ standard was revoked, effective December 18, 2006; 24-hour PM₁₀ NAAQS deadline was 12/31/2006; SCAQMD request for attainment redesignation and PM₁₀ maintenance plan was approved by U.S. EPA on June 26, 2013, effective July 26, 2013.

⁹ Attainment deadline for the 2006 24-Hour PM_{2.5} NAAQS (designation effective December 14, 2009) is December 31, 2019 (end of the 10th calendar year after effective date of designations for Serious nonattainment areas). Annual PM_{2.5} standard was revised on January 15, 2013, effective March 18, 2013, from 15 to 12 µg/m³. Designations effective April 15, 2015, so Serious area attainment deadline is December 31, 2025.

¹⁰ Partial Nonattainment designation – Los Angeles County portion of Basin only for near-source monitors. Expect redesignation to attainment based on current monitoring data.

3.2 Greenhouse Gases

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHG), play a critical role in the Earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO₂), methane (CH₄), ozone, water vapor, nitrous oxide (N₂O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas emissions, followed by electricity generation. Emissions of CO₂ and nitrous oxide (NO₂) are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO₂, where CO₂ is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. Table 6 provides a description of each of the greenhouse gases and their global warming potential.

Additional information is available: <https://www.arb.ca.gov/cc/inventory/data/data.htm>

Table 6: Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide (N ₂ O), also known as laughing gas is a colorless gas. It has a lifetime of 114 years. Its global warming potential is 298.	Microbial processes in soil and water, fuel combustion, and industrial processes. In addition to agricultural sources, some industrial processes (nylon production, nitric acid production) also emit N ₂ O.
Methane	Methane (CH ₄) is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 25.	A natural source of CH ₄ is from the decay of organic matter. Methane is extracted from geological deposits (natural gas fields). Other sources are from the decay of organic material in landfills, fermentation of manure, and cattle farming.
Carbon dioxide	Carbon dioxide (CO ₂) is an odorless, colorless, natural greenhouse gas. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Chlorofluorocarbons	CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). They are gases formed synthetically by replacing all hydrogen atoms in methane or methane with chlorine and/or fluorine atoms. Global warming potentials range from 3,800 to 8,100.	Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone, therefore their production was stopped as required by the Montreal Protocol.
Hydrofluorocarbons	Hydrofluorocarbons (HFCs) are a group of greenhouse gases containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700.	Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.
Perfluorocarbons	Perfluorocarbons (PFCs) have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above the Earth's surface. They have a lifetime 10,000 to 50,000 years. They have a global warming potential range of 6,200 to 9,500.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride (SF ₆) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential, 23,900.	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Notes:

1. Sources: Intergovernmental Panel on Climate Change 2014a and Intergovernmental Panel on Climate Change 2014b.
https://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch2s2-10-2.html

3.3 Energy

3.3.1 Overview

California's estimated annual energy use as of 2021 included:

- Approximately 277,764 gigawatt hours of electricity;⁸
- Approximately 2,092,612 million cubic feet of natural gas per year⁹;and
- Approximately 15.2 billion gallons of transportation fuel (for the year 2018)¹⁰.

As of 2021, the year of most recent data currently available by the United States Energy Information Administration (EIA), energy use in California by demand sector was:

- Approximately 37.8 percent transportation;
- Approximately 23.2 percent industrial;
- Approximately 20.0 percent residential; and
- Approximately 19.0 percent commercial.¹¹

California's electricity in-state generation system generates approximately 194,127 gigawatt-hours each year. In 2021, California produced approximately 72 percent of the electricity it uses; the rest was imported from the Pacific Northwest (approximately 12 percent) and the U.S. Southwest (approximately 18 percent). Natural gas is the main source for electricity generation at approximately 50.2 percent of the total in-state electric generation system power as shown in Table 7.

<Table 7, next page>

⁸California Energy Commission. Energy Almanac. Total Electric Generation. [Online] 2020.

<https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2019-total-system-electric-generation>.

⁹Natural Gas Consumption by End Use. U.S. Energy Information Administration. [Online] August 31, 2020.

https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_SCA_a.htm.

¹⁰California Energy Commission. Revised Transportation Energy Demand Forecast 2018-2030. [Online] April 19, 2018.

<https://www.energy.ca.gov/assessments/>

¹¹U.S. Energy Information Administration. California Energy Consumption by End-Use Sector.

California State Profile and Energy Estimates. [Online] January 16, 2020 <https://www.eia.gov/state/?sid=CA#tabs-2>

Table 7: Total Electricity System Power (California 2021)

Fuel Type	California In-State Generation (GWh)	Percent of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	Percent of Imports	California Power Mix (GWh)	Percent California Power Mix
Coal	303	0.2%	181	7,788	7,969	9.5%	8,272	3.0%
Natural Gas	12,036	6.2%	12,042	1,578	13,620	16.3%	25,656	9.2%
Nuclear	97,431	50.2%	45	7,880	7,925	9.5%	105,365	37.9%
Oil	16,477	8.5%	524	8,756	9,280	11.1%	25,758	9.3%
Other (Petroleum Coke/Waste Heat)	37	0.0%	-	-	-	0.0%	37	0.0%
Large Hydro	382	0.2%	68	15	83	0.1%	465	0.2%
Unspecified Sources of Power	-	0.0%	8,156	10,731	18,887	22.6%	18,887	6.80%
Renewables	67,461	34.8%	11,555	14,317	25,872	30.9%	93,333	33.6%
Biomass	5,381	2.8%	684	26	710	1.1%	6,271	2.3%
Geothermal	11,116	5.7%	192	1906	2,098	2.5%	13,214	4.8%
Somall Hydro	2,531	1.3%	304	1	305	0.4%	2,835	1.0%
Solar	33,260	17.1%	220	5,979	6,199	7.4%	39,458	14.2%
Wind	15,173	7.8%	9,976	6,405	16,381	19.6%	31,555	11.4%
Total	194,127	100.00%	32,572	51,064	83,636	100.0%	277,764	100.00%

Notes:

¹ Source: California Energy Commission. 2021 Total System electric Generation. <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2021-total-system-electric-generation>

A summary of and context for energy consumption and energy demands within the State is presented in “U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts” excerpted below:

- California was the seventh-largest producer of crude oil among the 50 states in 2018, and, as of January 2019, it ranked third in oil refining capacity.
- California is the largest consumer of jet fuel among the 50 states and accounted for one-fifth of the nation’s jet fuel consumption in 2018.
- California’s total energy consumption is the second-highest in the nation, but, in 2018, the State’s per capita energy consumption ranked the fourth-lowest, due in part to its mild climate and its energy efficiency programs.
- In 2018, California ranked first in the nation as a producer of electricity from solar, geothermal, and biomass resources and fourth in the nation in conventional hydroelectric power generation.

- In 2018, large- and small-scale solar PV and solar thermal installations provided 19% of California’s net electricity generation¹².

As indicated above, California is one of the nation’s leading energy-producing states, and California per capita energy use is among the nation’s most efficient. Given the nature of the proposed project, the remainder of this discussion will focus on the three sources of energy that are most relevant to the project—namely, electricity and natural gas for building uses, and transportation fuel for vehicle trips associated with the proposed project.

3.3.2 Electricity and Natural Gas

Electricity would be provided to the project by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons, within a service area encompassing approximately 50,000 square miles.¹³ SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers.¹⁴ Table 2 identifies SCE’s specific proportional shares of electricity sources in 2022.

Table 8: SCE 2022 Power Content Mix

Energy Resources	2022 SCE Power Mix
Eligible Renewable ¹	33.2%
Biomass & Biowaste	0.1%
Geothermal	5.7%
Eligible Hydroelectric	0.5%
Solar	17.0%
Wind	9.8%
Coal	0.0%
Large Hydroelectric	3.4%
Natural Gas	24.7%
Nuclear	8.3%
Other	0.1%
Unspecified Sources of power ²	30.3%
Total	100.0%

Notes:

¹² State Profile and Energy Estimates. Independent Statistics and Analysis. [Online] [Cited: January 16, 2020.] <http://www.eia.gov/state/?sid=CA#tabs2>.

¹³ <https://www.sce.com/about-us/who-we-are/leadership/our-service-territory>

¹⁴ California Energy Commission. Utility Energy Supply plans from 2015. https://www.energy.ca.gov/almanac/electricity_data/supply_forms.html

Source: https://www.sce.com/sites/default/files/custom-files/PDF_Files/SCE_2022_Power_Content_Label_B%26W.pdf

(1) The eligible renewable percentage above does not reflect RPS compliance, which is determined using a different methodology.

(2) Unspecified sources of power means electricity from transactions that are not traceable to specific generation sources.

Natural gas would be provided to the project by Southern California Gas (SoCalGas). The following summary of natural gas resources and service providers, delivery systems, and associated regulation is excerpted from information provided by the California Public Utilities Commission (CPUC).

The CPUC regulates natural gas utility service for approximately 11 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller investor-owned natural gas utilities. The CPUC also regulates independent storage operators Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.

The vast majority of California's natural gas customers are residential and small commercial customers, referred to as "core" customers. Larger volume gas customers, like electric generators and industrial customers, are called "noncore" customers. Although very small in number relative to core customers, noncore customers consume about 65% of the natural gas delivered by the state's natural gas utilities, while core customers consume about 35%.

The PUC regulates the California utilities' natural gas rates and natural gas services, including in-state transportation over the utilities' transmission and distribution pipeline systems, storage, procurement, metering and billing.

Most of the natural gas used in California comes from out-of-state natural gas basins. In 2017, for example, California utility customers received 38% of their natural gas supply from basins located in the U.S. Southwest, 27% from Canada, 27% from the U.S. Rocky Mountain area, and 8% from production located in California.”¹⁵

3.3.3 Transportation Energy Resources

The project would attract additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. Gasoline (and other vehicle fuels) are commercially-provided commodities and would be available to the project patrons and employees via commercial outlets.

¹⁵California Public Utilities Commission. Natural Gas and California. http://www.cpuc.ca.gov/natural_gas/

The most recent data available shows the transportation sector emits 39 percent of the total greenhouse gases in the state and about 84 percent of smog-forming oxides of nitrogen (NOx).^{16,17} About 28 percent of total United States energy consumption in 2021 was for transporting people and goods from one place to another. In 2021, petroleum comprised about 90 percent of all transportation energy use, excluding fuel consumed for aviation and most marine vessels.¹⁸ In 2022, about 134.55 billion gallons (or about 3.20 billion barrels) of finished motor gasoline were consumed in the United States, an average of about 369 million gallons (or about 8.78 million barrels) per day.¹⁹

¹⁶CARB. California Greenhouse Gas Emissions Inventory 2000-2022 – 2024 Edition. <https://ww2.arb.ca.gov/ghg-inventory-data>

¹⁷CARB. 2016 SIP Emission Projection Data.

https://www.arb.ca.gov/app/emsmv/2017/emseic1_query.php?F_DIV=-4&F_YR=2012&F_SEASON=A&SP=SIP105ADJ&F_AREA=CA

¹⁸ US Energy Information Administration. Use of Energy in the United States Explained: Energy Use for Transportation.

https://www.eia.gov/energyexplained/?page=us_energy_transportation

¹⁹ <https://www.eia.gov/tools/faqs/faq.php?id=23&t=10>

4.0 Modeling Parameters and Assumptions

4.1 Construction

Typical emission rates from construction activities were obtained from CalEEMod Version 2022.1.1.22. CalEEMod is a computer model published by the SCAQMD for estimating air pollutant emissions. The CalEEMod program uses the EMFAC2021 computer program to calculate the emission rates specific for the southwestern portion of San Bernardino County for construction-related employee vehicle trips and the OFFROAD2017 computer program to calculate emission rates for heavy truck operations. EMFAC2021 and OFFROAD2017 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour. Using CalEEMod, the peak daily air pollutant emissions were calculated and presented below. These emissions represent the highest level of emissions for each of the construction phases in terms of air pollutant emissions.

The analysis assesses the emissions associated with the construction of the proposed Project as indicated in Table 1. Construction was estimated to occur over 13 months beginning the fourth quarter of 2024. The phases of the construction activities which have been analyzed below are: 1) site preparation, 2) grading, 3) building construction, 4) paving, and 5) architectural coating. It should be noted that the square footage of the proposed buildings has changed from previous site plans on which the model was based, however the current overall square footage remains below what was modeled (61,553 square feet in the current site plan vs. 65,400 square feet in the model), making for a conservative analysis. For details on construction modeling and construction equipment for each phase, please see Appendix A.

The Project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, such as application of water or chemical stabilizers to disturbed soils, managing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent, stabilizing ground cover on finished sites. In addition, projects that disturb 50 acres or more of soil or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD. Based on the size of the Project area (approximately 5 acres) and the fact that the Project won't export more than 5,000 cubic yards of material a day a Fugitive Dust Control Plan or Large Operation Notification would not be required.

SCAQMD's Rule 403 minimum requirements require that the application of the best available dust control measures are used for all grading operations and include the application of water or other soil stabilizers in sufficient quantity to prevent the generation of visible dust plumes. Compliance with Rule 403 would require the use of water trucks during all phases where earth moving operations would occur. Compliance with Rule 403 is required. Compliance is shown in the CalEEMod model as application of water three times daily, which is included in the model as a mitigation measure.

4.2 Operations

Operational or long-term emissions occur over the life of the Project. Both mobile and area sources generate operational emissions. Area source emissions arise from consumer product usage, heaters that consume natural gas, gasoline-powered landscape equipment, and architectural coatings (painting). Mobile source emissions from motor vehicles are the largest single long-term source of air pollutants from the operation of the Project. Small amounts of emissions would also occur from area sources such as the consumption of natural gas for heating, from landscaping emissions, and consumer product usage. The operational emissions were estimated using the latest version of CalEEMod.

Mobile Sources

Mobile sources include emissions from the additional vehicle miles generated from the proposed Project. The vehicle trips associated with the proposed Project are based upon the trip generation rates given in the Project-specific trip generation analysis (Ganddini, 2024) which uses the ITE Trip Generation Manual 11th Edition. The trip generation analysis shows a net trip generation rate of 1,619 trips per day for the proposed Project.

The program then applies the emission factors for each trip which is provided by the EMFAC2021 model to determine the vehicular traffic pollutant emissions. The CalEEMod default trip lengths were used in this analysis. Please see CalEEMod output in Appendix A for details.

Area Sources

Area sources include emissions from consumer products, landscape equipment and architectural coatings. Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers, as well as air compressors, generators, and pumps. As specifics were not known about the landscaping equipment fleet, CalEEMod defaults were used to estimate emissions from landscaping equipment.

Per SCAQMD Rule 1113 as amended on June 3, 2011, the architectural coatings that would be applied after January 1, 2014 will be limited to an average of 50 grams per liter or less for buildings and 100 grams per liter or less for parking lot striping. No changes were made to the CalEEMod architectural coating default values.

Per AB 341, at least 75 percent of generated waste will be source reduced, recycled, or composted. This is shown in the CalEEMod model as a mitigation measure; however, it is required.

Energy Usage

2022.1.1.22 CalEEMod defaults were utilized.

4.3 Localized Construction Analysis

The SCAQMD has published a “Fact Sheet for Applying CalEEMod to Localized Significance Thresholds” (South Coast Air Quality Management District 2011b). CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each

piece of equipment. In order to compare CalEEMod reported emissions against the localized significance threshold lookup tables, the CEQA document should contain in its project design features or its mitigation measures the following parameters:

1. The off-road equipment list (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions.
2. The maximum number of acres disturbed on the peak day.
3. Any emission control devices added onto off-road equipment.
4. Specific dust suppression techniques used on the day of construction activity with maximum emissions.

The construction equipment showing the equipment associated with the maximum area of disturbance is shown in Table 9.

Table 9: Construction Equipment Assumptions¹

Activity	Equipment	Number	Acres/8hr-day	Total Acres
Site Preparation	Rubber Tired Dozers	3	0.5	1.5
	Tractors/Loaders/Backhoes	4	0.5	2.0
Total Per Phase				3.5
Grading	Graders	1	0.5	0.5
	Rubber Tired Dozers	1	0.5	0.5
	Tractors/Loaders/Backhoes	3	0.5	1.5
Total Per Phase				2.5

Notes:

¹ Source: South Coast AQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2>

As shown in Table 9, the maximum number of acres disturbed in a day would be 3.5 acres during site preparation.

The local air quality emissions from construction were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold Look-up Tables and the methodology described in Localized Significance Threshold Methodology, prepared by SCAQMD, revised July 2008. The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NOx, PM10, and PM2.5 from the proposed Project could result in a significant impact to the local air quality. As the Look-up Tables provide thresholds for 1-, 2-, and 5-acre disturbance areas, with lower thresholds for smaller disturbance areas, the emission thresholds were based on a disturbance of 2 acres per day (the closest conservative threshold) at a distance of 50 meters (164 feet) in the East San Bernardino Valley source receptor area (SRA 35).

4.4 Localized Operational Analysis

For operational emissions, the screening tables for a disturbance area of 5 acres per day, as the project is approximately 5 acres, and a distance of 50 meters were used to determine significance. The tables were compared to the Project's onsite operational emissions.

5.0 Thresholds of Significance

5.1 Air Quality Thresholds of Significance

5.1.1 CEQA Guidelines for Air Quality

The CEQA Guidelines define a significant effect on the environment as “a substantial, or potentially substantial, adverse change in the environment.” To determine if a project would have a significant impact on air quality, the type, level, and impact of emissions generated by the project must be evaluated.

The following air quality significance thresholds are contained in Appendix G of the CEQA Guidelines. A significant impact would occur if the project would:

- a) Conflict with or obstruct implementation of the applicable air quality plan;
- b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable national or state ambient air quality standard;
- c) Expose sensitive receptors to substantial pollutant concentrations; or
- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

While the final determination of whether a project is significant is within the purview of the Lead Agency pursuant to Section 15064(b) of the CEQA Guidelines, SCAQMD recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. If the Lead Agency finds that the project has the potential to exceed these air pollution thresholds, the project should be considered to have significant air quality impacts. There are daily emission thresholds for construction and operation of a proposed project in the basin.

5.1.2 Regional Significance Thresholds for Construction Emissions

The following CEQA significance thresholds for construction emissions are established for the Basin:

- 75 pounds per day (lbs/day) of VOC
- 100 lbs/day of NO_x
- 550 lbs/day of CO
- 150 lbs/day of PM₁₀
- 55 lbs/day of PM_{2.5}
- 150 lbs/day of SO₂

Projects in the basin with construction-related emissions that exceed any of the emission thresholds are considered to be significant under SCAQMD guidelines.

5.1.3 Regional Significance Thresholds for Operational Emissions

The daily operational emissions significance thresholds for the basin are as follows:

- 55 pounds per day (lbs/day) of VOC
- 55 lbs/day of NO_x
- 550 lbs/day of CO
- 150 lbs/day of PM₁₀
- 55 lbs/day of PM_{2.5}
- 150 lbs/day of SO₂

Local Microscale Concentration Standards The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20.0 ppm
- California State 8-hour CO standard of 9.0 ppm

5.1.4 Thresholds for Localized Significance

Project-related construction air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the South Coast Air Basin. In order to assess local air quality impacts the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the project-related air emissions in the project vicinity. The SCAQMD has also provided Final Localized Significant Threshold Methodology (LST Methodology), June 2003, which details the methodology to analyze local air emission impacts. The Localized Significant Threshold Methodology found that the primary emissions of concern are NO₂, CO, PM₁₀, and PM_{2.5}.

The emission thresholds were calculated based on the East San Bernardino Valley source receptor area (SRA 35) and a disturbance of 2 acres per day for construction and 5 acres for operation at a distance of 50 meters (164 feet).

5.2 Greenhouse Gas Thresholds of Significance

5.2.1 CEQA Guidelines for Greenhouse Gas

CEQA Guidelines define a significant effect on the environment as “a substantial, or potentially substantial, adverse change in the environment.” To determine if a project would have a significant impact on greenhouse gases, the type, level, and impact of emissions generated by the project must be evaluated.

The following greenhouse gas significance thresholds are contained in Appendix G of the CEQA Guidelines, which were amendments adopted into the Guidelines on March 18, 2010, pursuant to SB 97. A significant impact would occur if the project would:

- (a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- (b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

However, despite this, currently neither the CEQA statutes, OPR guidelines, nor the draft proposed changes to the CEQA Guidelines prescribe thresholds of significance or a particular methodology for performing an impact analysis; as with most environmental topics, significance criteria are left to the judgment and discretion of the Lead Agency. As previously discussed (Section 2.2.4 of this report), SCAQMD has drafted interim thresholds. The screening threshold of 3,000 MTCO₂e per year for all land uses was used in this analysis.

5.3 Toxic Air Contaminants

The threshold for toxic air contaminants (TACs) has a maximum incremental cancer risk of 10 per million and a non-cancer (acute and chronic) hazard index of 1.0 or greater. An exceedance to these values would be considered a significant impact.

6.0 Air Quality Emissions Impact

6.1 Construction Air Quality Emissions Impact

The latest version of CalEEMod was used to estimate the onsite and offsite construction emissions. The emissions incorporate Rule 402 and 403. Rule 402 and 403 (fugitive dust) are not considered mitigation measures as the Project by default is required to incorporate these rules during construction.

6.1.1 Regional Construction Emissions

The construction emissions for the Project would not exceed the SCAQMD's daily emission thresholds at the regional level as demonstrated in Table 10. Therefore, would be considered less than significant.

Table 10: Regional Significance - Construction Emissions (pounds/day)

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO ₂	PM10	PM2.5
Site Preparation						
On-Site ²	3.65	36.00	32.90	0.05	9.27	5.41
Off-Site ³	0.09	0.10	1.12	0.00	0.23	0.05
Total	3.74	36.10	34.02	0.05	9.50	5.46
Grading						
On-Site ²	1.90	18.20	18.80	0.03	3.62	2.11
Off-Site ³	0.18	7.14	4.76	0.04	1.75	0.52
Total	2.08	25.34	23.56	0.07	5.37	2.63
Building Construction						
On-Site ²	1.20	11.20	13.10	0.02	0.50	0.46
Off-Site ³	0.14	0.56	1.95	0.00	0.46	0.11
Total	1.34	11.76	15.05	0.02	0.96	0.57
Paving						
On-Site ²	0.90	6.52	8.84	0.01	0.29	0.26
Off-Site ³	0.10	0.43	1.75	0.00	0.35	0.09
Total	1.00	6.95	10.59	0.01	0.64	0.35
Architectural Coating						
On-Site ²	34.73	0.88	1.14	0.00	0.03	0.03
Off-Site ³	0.02	0.03	0.32	0.00	0.07	0.02
Total	34.75	0.91	1.46	0.00	0.10	0.05
Total of overlapping phases⁴	37.09	19.62	27.10	0.03	1.70	0.97
SCAQMD Thresholds	75	100	550	150	150	55
Exceeds Thresholds	No	No	No	No	No	No

Notes:

¹ Source: CalEEMod Version 2022.1.1.22

² On-site emissions from equipment operated on-site that is not operated on public roads

³ Off-site emissions from equipment operated on public roads.

⁴ Depending on final construction schedules, building construction, architectural coatings and paving phases may overlap, and this data represents that worst-case scenario.

6.1.2 Localized Construction Emissions

The data provided in Table 11 shows that none of the analyzed criteria pollutants would exceed the local emissions thresholds at the nearest sensitive receptors. Therefore, a less than significant local air quality impact would occur from construction of the proposed Project.

Table 11: Localized Significance – Construction

Phase	On-Site Pollutant Emissions (pounds/day) ¹			
	NOx	CO	PM10	PM2.5
Site Preparation	36.00	32.90	9.27	5.41
Grading	18.20	18.80	3.62	2.11
Building Construction	11.20	13.10	0.50	0.46
Paving	6.52	8.84	0.29	0.26
Architectural Coating	0.88	1.14	0.03	0.03
Peak Daily Emissions Considering Overlapping Phases	36.00	32.90	9.27	5.41
SCAQMD Threshold for 50 meters (164 feet) or less²	200	1,712	21	7
Exceeds Threshold?	No	No	No	No

Notes:

¹ Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for two acres in East San Bernardino Valley Source Receptor Area (SRA 35). This is a conservative threshold as the project will disturb a maximum of 3.5 acres per day (see Table 9).

² The nearest sensitive receptor is located 50 meters southwest; therefore, the 50-meter threshold has been used.

6.1.3 Construction-Related Human Health Impacts

Regarding health effects related to criteria pollutant emissions, the applicable significance thresholds are established for regional compliance with the state and federal ambient air quality standards, which are intended to protect public health from both acute and long-term health impacts, depending on the potential effects of the pollutant. Because regional and local emissions of criteria pollutants during construction of the Project would be below the applicable thresholds, it would not contribute to long-term health impacts related to nonattainment of the ambient air quality standards. Therefore, significant adverse acute health impacts as a result of Project construction are not anticipated.

6.1.4 Construction-Related Toxic Air Contaminant Impact

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed Project. The Office of Environmental Health Hazard Assessment (OEHHA) has issued the Air Toxic Hot Spots Program Risk Assessment Guidelines and Guidance Manual for the Preparation of Health Risk Assessments, February 2015 to provide a description of the algorithms, recommended exposure variates, cancer and noncancer health values, and the air modeling protocols needed to perform a health risk assessment (HRA) under the Air Toxics Hot Spots Information and Assessment Act of 1987. Hazard identification includes identifying all substances that are evaluated for cancer risk and/or non-cancer acute, 8-hour, and chronic health impacts. In addition, identifying any multi-pathway substances that present a cancer risk or chronic non-cancer hazard via non-inhalation routes of exposure.

Diesel particulate matter (DPM) from construction equipment and vehicles is a known carcinogen and has been shown to contribute to premature death, hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma, increased respiratory symptoms, and decreased lung function in children.²⁰

CARB In-Use Off-Road Diesel-Fueled Fleets Regulation limits unnecessary idling to 5 minutes, requires all construction fleets to be labeled and reported to CARB, bans Tier 0 equipment, and phases out Tier 1 and 2 equipment thereby replacing fleets with cleaner equipment, and requires that fleets comply with Best Available Control Technology requirements.

The SCAQMD does not require land use development projects to prepare quantitative construction HRAs and therefore has no guidance on the preparation of construction HRAs. SCAQMD recommends a 30-year health risk analysis period. Given the relatively limited construction schedule (13 months) and number of heavy-duty construction equipment, the proposed Project would not result in a long-term substantial source of toxic air containment emissions and corresponding individual cancer risk. Furthermore, construction-based DPM emissions (including diesel exhaust emissions) do not exceed any local or regional thresholds. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed Project.

6.1.5 Valley Fever

Coccidioidomycosis, more commonly known as “valley fever,” is an infection caused by inhalation of the spores of the *Coccidioides immitis* fungus, which grows in the soils of the southwestern United States. When fungal spores are present, any activity that disturbs the soil, such as digging, grading, or other earth-moving operations, can cause the spores to become airborne and thereby increase the risk of exposure. The ecologic factors that appear to be most conducive to survival and replication of the spores are high summer temperatures, mild winters, sparse rainfall, and alkaline sandy soils. Per the California Department of Public Health (CDPH), in 2018, there were between five and nine cases of coccidioidomycosis per 100,000 people were reported in Riverside County. Statewide incidences in 2018 were 18.8 per 100,000 people (CDPH 2021), occurring largely in Central California north of the project location. The project would be required to comply with SCAQMD Rule 403, which would require fugitive dust mitigation, which would control the release of the *Coccidioides immitis* fungus during construction activities. Therefore, the project would have a less-than-significant impact with respect to valley fever exposure for sensitive receptors.

6.2 Operational Air Quality Emissions Impact

6.2.1 Regional Operational Emissions

The operations-related criteria air quality impacts created by the proposed Project have been analyzed through the use of CalEEMod model. The operating emissions were based on year 2025, which is the

²⁰ CARB. Diesel Exhaust and Health. <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>.

anticipated opening year for the Project. The summer and winter emissions created by the proposed Project's long-term operations were calculated and the highest emissions from either summer or winter are summarized in Table 12.

Table 12: Regional Significance - Unmitigated Operational Emissions (lbs/day)

Activity	Pollutant Emissions (pounds/day) ¹					
	VOC	NOx	CO	SO2	PM10	PM2.5
Area Sources ²	2.04	0.02	2.84	0.00	0.01	0.00
Energy Usage ³	0.03	0.57	0.48	0.00	0.04	0.04
Mobile Sources ⁴	6.60	6.65	58.50	0.14	12.00	3.12
Total Emissions	8.67	7.24	61.82	0.14	12.05	3.16
SCAQMD Thresholds	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Notes:

¹ Source: CalEEMod Version 2022.1.1.22. The summer and winter emissions created by the proposed Project's long-term operations were calculated and the highest emissions from either summer or winter are summarized.

² Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

³ Energy usage consists of emissions from on-site natural gas usage.

⁴ Mobile sources consist of emissions from vehicles and road dust.

Table 12 provides the Project's unmitigated operational emissions. Table 12 shows that the Project does not exceed the SCAQMD daily emission threshold and regional operational emissions are considered to be less than significant.

6.2.2 Localized Operational Emissions

Table 13 shows the calculated emissions for the proposed operational activities compared with appropriate LSTs. The LST analysis only includes on-site sources; however, the CalEEMod software outputs do not separate on-site and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in Table 13 include all on-site Project-related stationary sources and 10% of the Project-related new mobile sources.²¹ This percentage is an estimate of the amount of Project-related new vehicle traffic that will occur on-site.

Table 13: Localized Significance - Unmitigated Operational Emissions

On-Site Emission Source	On-Site Pollutant Emissions (pounds/day) ¹			
	NOx	CO	PM10	PM2.5
Area Sources ²	0.02	2.84	0.01	0.00
Energy Usage ³	0.57	0.48	0.04	0.04
On-Site Vehicle Emissions ⁴	0.67	5.85	1.20	0.31

²¹ The project site is approximately 0.1 miles in length at its longest point; therefore the on-site mobile source emissions represent approximately 1/69th of the shortest CalEEMod default distance of 6.9 miles. Therefore, to be conservative, 1/10th the distance (dividing the mobile source emissions by 10) was used to represent the portion of the overall mobile source emissions that would occur on-site.

Total Emissions	1.26	9.17	1.25	0.35
SCAQMD Threshold for 50 meters (164 feet)⁵	302	2,890	11	3
Exceeds Threshold?	No	No	No	No

Notes:

¹ Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for five acres in East San Bernardino Valley Source Receptor Area (SRA 35). Project covers approximately 5.093 acres.

² Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

³ Energy usage consists of emissions from generation of electricity and on-site natural gas usage.

⁴ On-site vehicular emissions based on 1/10 of the gross vehicular emissions and road dust.

⁵ The nearest sensitive receptor is located 50 meters southwest; therefore, the 50-meter threshold has been used.

6.2.3 Operations-Related Human Health Impacts

As stated previously, regarding health effects related to criteria pollutant emissions, the applicable significance thresholds are established for regional compliance with the state and federal ambient air quality standards, which are intended to protect public health from both acute and long-term health impacts, depending on the potential effects of the pollutant. Because regional and local emissions of criteria pollutants during operation of the Project would be below the applicable thresholds, it would not contribute to long-term health impacts related to nonattainment of the ambient air quality standards. Therefore, significant adverse acute health impacts as a result of Project operation are not anticipated.

6.3 CO Hot Spot Emissions

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with Project CO levels to the State and Federal CO standards which were presented in above in Section 5.0.

To determine if the proposed Project could cause emission levels in excess of the CO standards discussed above in Section 5.0, a sensitivity analysis is typically conducted to determine the potential for CO "hot spots" at a number of intersections in the general Project vicinity. Because of reduced speeds and vehicle queuing, "hot spots" potentially can occur at high traffic volume intersections with a Level of Service E or worse.

Micro-scale air quality emissions have traditionally been analyzed in environmental documents where the air basin was a non-attainment area for CO. However, the SCAQMD has demonstrated in the CO attainment redesignation request to EPA that there are no "hot spots" anywhere in the air basin, even at intersections with much higher volumes, much worse congestion, and much higher background CO levels than anywhere in San Bernardino County. If the worst-case intersections in the air basin have no "hot spot" potential, any local impacts will be below thresholds.

The Project-specific trip generation analysis showed that the Project is only anticipated to generate 1,619 daily vehicle trips, and the maximum daily traffic volume, including project-related trips, at any intersection within the project vicinity would be 24,500 daily trips (Ganddini). The 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan) showed that an intersection which has a daily

traffic volume of approximately 100,000 vehicles per day would not violate the CO standard. The volume of traffic at Project buildout would be well below 100,000 vehicles and below the necessary volume to even get close to causing a violation of the CO standard. Therefore, no CO “hot spot” modeling was performed and no significant long-term air quality impact is anticipated to local air quality with the on-going use of the proposed Project.

6.4 Odors

Potential sources that may emit odors during construction activities include the application of materials such as asphalt pavement. The objectionable odors that may be produced during the construction process are of short-term in nature and the odor emissions are expected cease upon the drying or hardening of the odor producing materials. Diesel exhaust and VOCs would be emitted during construction of the Project, which are objectionable to some; however, emissions would disperse rapidly from the Project site and therefore should not reach an objectionable level at the nearest sensitive receptors. Due to the short-term nature and limited amounts of odor producing materials being utilized, no significant impact related to odors would occur during construction of the proposed Project.

The SCAQMD recommends that odor impacts be addressed in a qualitative manner. Such an analysis shall determine whether the Project would result in excessive nuisance odors, as defined under the California Code of Regulations and Section 41700 of the California Health and Safety Code, and thus would constitute a public nuisance related to air quality.

Potential sources that may emit odors during the on-going operations of the proposed Project would include odor emissions from vehicles and trash storage areas. Due to the distance of the nearest receptors from the Project site and through compliance with SCAQMD’s Rule 402 no significant impact related to odors would occur during the on-going operations of the proposed Project.

6.5 Cumulative Regional Air Quality Impacts

Cumulative projects include local development as well as general growth within the project area. However, as with most development, the greatest source of emissions is from mobile sources, which travel well out of the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and when wind patterns are considered, would cover an even larger area. Accordingly, the cumulative analysis for the Project’s air quality must be generic by nature.

The Project area is out of attainment for both ozone and PM₁₀ particulate matter. Construction and operation of cumulative projects will further degrade the local air quality, as well as the air quality of the South Coast Air Basin. The greatest cumulative impact on the quality of regional air cell will be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with the construction of these projects. Air quality will be temporarily degraded during construction activities that occur separately or simultaneously. However, in accordance with the SCAQMD methodology, projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do

not add to the overall cumulative impact. The Project does not exceed any of the thresholds of significance and therefore is considered less than significant.

6.6 Air Quality Compliance

The California Environmental Quality Act (CEQA) requires a discussion of any inconsistencies between a proposed project and applicable General Plans and Regional Plans (CEQA Guidelines Section 15125). The regional plan that applies to the proposed Project includes the SCAQMD Air Quality Management Plan (AQMP). Therefore, this section discusses any potential inconsistencies of the proposed Project with the AQMP.

The purpose of this discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the proposed Project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-makers determine that the proposed Project is inconsistent, the lead agency may consider Project modifications or inclusion of mitigation to eliminate the inconsistency.

The SCAQMD CEQA Handbook states that "New or amended General Plan Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP." Strict consistency with all aspects of the plan is usually not required. A proposed Project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

- (1) Whether the Project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
- (2) Whether the Project will exceed the assumptions in the AQMP in 2022 or increments based on the year of Project buildout and phase.

Both of these criteria are evaluated in the following sections.

A. Criterion 1 - Increase in the Frequency or Severity of Violations?

Based on the air quality modeling analysis contained in this Air Analysis in Section 6, neither short-term construction impacts, nor long-term operations will result in significant impacts based on the SCAQMD regional and local thresholds of significance.

Therefore, the proposed Project is not projected to contribute to the exceedance of any air pollutant concentration standards and is found to be consistent with the AQMP for the first criterion.

B. Criterion 2 - Exceed Assumptions in the AQMP?

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed Project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the proposed Project are based on the same forecasts as the AQMP. The 2024-2050

Regional Transportation/Sustainable Communities Strategy, prepared by SCAG, 2024, includes sections on mobility, communities, environment, and economy. These sections currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA. For this Project, the City of Redlands General Plan defines the assumptions that are represented in the AQMP.

The City of Redlands Zoning map classifies the land use designation of the site as General Commercial. The proposed project would be mix of commercial uses. Therefore, it is not anticipated that the Project would exceed the AQMP assumptions for the Project site and is found to be consistent with the AQMP for the second criterion.

Based on the above, the proposed Project will not result in an inconsistency with the SCAQMD AQMP. Therefore, a less than significant impact will occur.

7.0 Greenhouse Gas Impact Analysis

7.1 Construction Greenhouse Gas Emissions Impact

The greenhouse gas emissions from Project construction equipment and worker vehicles are shown in Table 14. The emissions are from all phases of construction. The total construction emissions amortized over a period of 30 years are estimated at 12.97 metric tons of CO₂e per year. Annual CalEEMod output calculations are provided in Appendix A.

Table 14: Construction Greenhouse Gas Emissions

Activity	Emissions (MTCO ₂ e) ¹
2024	118.00
2025	271.00
Total	389.00
Averaged over 30 years²	12.97

Notes:

1. MTCO₂e=metric tons of carbon dioxide equivalents (includes carbon dioxide, methane and nitrous oxide).
2. The emissions are averaged over 30 years because the average is added to the operational emissions, pursuant to SCAQMD.

* CalEEMod output (Appendix A)

7.2 Operational Greenhouse Gas Emissions Impact

Operational emissions occur over the life of the Project. The operational emissions for the Project are 2,821.78 metric tons of CO₂e per year (see Table 15). Furthermore, as shown in Table 15, the Project's total emissions (with incorporation of construction related GHG emissions) would be 2,834.75 metric tons of CO₂e per year. These emissions do not exceed the County of San Bernardino CAP and SCAQMD screening threshold of 3,000 metric tons of CO₂e per year. Therefore, the Project's GHG emissions are considered to be less than significant.

Table 15: Opening Year Unmitigated Project-Related Greenhouse Gas Emissions

Category	Greenhouse Gas Emissions (Metric Tons/Year) ¹					
	Bio-CO ₂	NonBio-CO ₂	CO ₂	CH ₄	N ₂ O	CO ₂ e
Area Sources ²	0.00	1.33	1.33	0.00	0.00	1.33
Energy Usage ³	0.00	378.00	378.00	0.03	0.00	380.00
Mobile Sources ⁴	0.00	2,248.00	2,248.00	0.11	0.11	2,288.00
Solid Waste ⁵	6.91	0.00	6.91	0.69	0.00	24.20
Water ⁶	0.95	5.14	6.09	0.10	0.00	9.25
Refrigerants	0.00	0.00	0.00	0.00	0.00	119.00
Construction ⁷	0.00	12.80	12.80	0.00	0.00	12.97
Total Emissions	7.86	2,645.27	2,653.13	0.93	0.11	2,834.75
SCAQMD Draft and San Bernardino County Screening Threshold						3,000
Exceeds Threshold?						No

Notes:

¹ Source: CalEEMod Version 2022.1.1.22

² Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.

³ Energy usage consist of GHG emissions from electricity and natural gas usage.

⁴ Mobile sources consist of GHG emissions from vehicles.

⁵ Solid waste includes the CO₂ and CH₄ emissions created from the solid waste placed in landfills.

⁶ Water includes GHG emissions from electricity used for transport of water and processing of wastewater.

⁷ Construction GHG emissions based on a 30-year amortization rate.

7.3 Greenhouse Gas Plan Consistency

The proposed Project would have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

Redlands Climate Action Plan Consistency (CAP)

As described in the regulatory section, the City approved and adopted the City of Redlands Climate Action Plan (Redlands CAP or CAP) on December 5, 2017. The proposed Project would be consistent with the transportation and water utility goals of the CAP by providing EV charging stations for electric vehicles per City requirements and complying with the City's Water Efficient Landscape requirements. The proposed Project would also be consistent with the CAP's energy efficiency goals by complying with the latest California Building Code (Title 24), including the latest CALGreen Code standards. Project construction would also comply with current local and State standards and CAP goals to increase diversion and reduction of waste by diverting construction waste from landfills to recycling. As such, the proposed project would be consistent with the applicable GHG reduction goals within the Redlands CAP.

Therefore, the proposed Project is consistent with the GHG Plan pursuant to Section 15183.5 of the State CEQA Guidelines. The Project will not result in substantial emissions of greenhouse gases and will not conflict with the County of San Bernardino CAP or the goals of AB-32 or SB-32.

7.4 Cumulative Regional Greenhouse Gas Impacts

Cumulative projects include local development as well as general growth within the project area. Construction and operation of cumulative projects will add to greenhouse gas emissions. The greatest cumulative impact will be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with the construction of these projects. As greenhouse gas emissions impacts are cumulative in nature, no typical single project can result in emissions of such a magnitude that it, in and by itself, would be significant on a project basis.

As project emissions meets the SCAQMD draft screening threshold and would be consistent with the goals of the Redlands CAP, no significant greenhouse gas impact would occur from the project.

8.0 Energy Analysis

Information from the CalEEMod 2022.1.1.22 Daily and Annual Outputs contained in the air quality and greenhouse gas analyses above was utilized for this analysis. The CalEEMod outputs detail Project related construction equipment, transportation energy demands, and facility energy demands.

8.1 Construction Energy Demand

8.1.1 Construction Equipment Electricity Usage Estimates

Electrical service will be provided by Southern California Edison (SCE). Based on the 2017 National Construction Estimator, Richard Pray (2017)²², the typical power cost per 1,000 square feet of building construction per month is estimated to be \$2.32. The Project plans to develop the site with 61,553 square feet of new commercial buildings over the course of approximately 13 months. Based on Table 16, the total power cost of the on-site electricity usage during the construction of the proposed Project is estimated to be approximately \$1,856.44. As shown in Table 16, the total electricity usage from Project construction related activities is estimated to be approximately 33,753 kWh.²³

Table 16: Project Construction Power Cost and Electricity Usage

Power Cost (per 1,000 square foot of building per month of construction)	Total Building Size (1,000 Square Foot) ¹	Construction Duration (months)	Total Project Construction Power Cost
\$2.32	61.553	13	\$1,856.44

Cost per kWh	Total Project Construction Electricity Usage (kWh)
\$0.055	33,753

* Assumes the Project will be under the GS-1 General Service rate under SCE.

8.1.2 Construction Equipment Fuel Estimates

Using the CalEEMod data input, the Project's construction phase would consume electricity and fossil fuels as a single energy demand, that is, once construction is completed their use would cease. CARB's 2017 Emissions Factors Tables show that on average aggregate fuel consumption (gasoline and diesel

²² Pray, Richard. 2017 National Construction Estimator. Carlsbad: Craftsman Book Company, 2017.

²³ LADWP's Small Commercial & Multi-Family Service (A-1) is approximately \$0.06 per kWh of electricity Southern California Edison (SCE). Rates & Pricing Choices: General Service/Industrial Rates. https://library.sce.com/content/dam/sce-doclib/public/regulatory/historical/electric/2020/schedules/general-service-&-industrial-rates/ELECTRIC_SCHEDULES_GS-1_2020.pdf

fuel) would be approximately 18.5 hp-hr-gal.²⁴ As presented in Table 17 below, Project construction activities would consume an estimated 33,550 gallons of diesel fuel.

Table 17: Construction Equipment Fuel Consumption Estimates

Phase	Number of Days	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	HP hrs/day	Total Fuel Consumption (gal diesel fuel) ¹
Site Preparation	5	Rubber Tired Dozers	3	8	367	0.4	3,523	952
	5	Tractors/Loaders/Backhoes	4	8	84	0.37	995	269
Grading	8	Excavators	1	8	36	0.38	109	47
	8	Graders	1	8	148	0.41	485	210
	8	Rubber Tired Dozers	1	8	367	0.4	1,174	508
	8	Tractors/Loaders/Backhoes	3	8	84	0.37	746	323
Building Construction	230	Cranes	1	7	367	0.4	1,028	12,776
	230	Forklifts	3	8	82	0.2	394	4,893
	230	Generator Sets	1	8	14	0.74	83	1,030
	230	Tractors/Loaders/Backhoes	3	8	84	0.37	746	9,274
	230	Welders	1	8	46	0.45	166	2,059
Paving	18	Cement and Mortar Mixers	2	6	10	0.56	67	65
	18	Pavers	1	8	81	0.42	272	265
	18	Paving Equipment	2	6	89	0.36	384	374
	18	Rollers	2	6	36	0.38	164	160
	18	Tractors/Loaders/Backhoes	1	8	84	0.37	249	242
Architectural Coating	18	Air Compressors	1	6	37	0.48	107	104
CONSTRUCTION FUEL DEMAND (gallons of diesel fuel)								33,550

Notes:

¹Using Carl Moyer Guidelines Table D-21 Fuel consumption rate factors (bhp-hr/gal) for engines less than 750 hp.

(Source: https://www.arb.ca.gov/msprog/moyer/guidelines/2017gl/2017_gl_appendix_d.pdf)

8.1.3 Construction Worker Fuel Estimates

It is assumed that all construction worker trips are from light duty autos (LDA) along area roadways. With respect to estimated VMT, the construction worker trips would generate an estimated 128,043 VMT. Vehicle fuel efficiencies for construction workers were estimated in the air quality and greenhouse gas analysis using information generated using CARB's EMFAC model (see Appendix B for details). Table 18 shows that an estimated 4,216 gallons of fuel would be consumed for construction worker trips.

²⁴ Aggregate fuel consumption rate for all equipment was estimated at 18.5 hp-hr/day (from CARB's 2017 Emissions Factors Tables and fuel consumption rate factors as shown in Table D-21 of the Moyer Guidelines: https://www2.arb.ca.gov/sites/default/files/classic/msprog/moyer/guidelines/2017/2017_cmpgl.pdf).

Table 18: Construction Worker Fuel Consumption Estimates

Phase	Number of Days	Worker Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Site Preparation	5	17.5	18.5	1,619	30.37	53
Grading	8	15	18.5	2,220	30.37	73
Building Construction	230	27.2	18.5	115,736	30.37	3,810
Paving	18	20	18.5	6,660	30.37	219
Architectural Coating	18	5.43	18.5	1,808	30.37	60
Total Construction Worker Fuel Consumption						4,216

Notes:

¹ Assumptions for the worker trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.22 defaults.

8.1.4 Construction Vendor/Hauling Fuel Estimates

Tables 19 and 20 show the estimated fuel consumption for vendor and hauling during building construction and architectural coating. With respect to estimated VMT, the vendor and hauling trips would generate an estimated 39,434 VMT. For the architectural coatings it is assumed that the contractors would be responsible for bringing coatings and equipment with them in their light duty vehicles.²⁵ Tables 19 and 20 show that an estimated 5,274 gallons of fuel would be consumed for vendor and hauling trips.

Table 19: Construction Vendor Fuel Consumption Estimates (MHD Trucks)¹

Phase	Number of Days	Vendor Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Site Preparation	5	0	10.2	0	8.38	0
Grading	8	0	10.2	0	8.38	0
Building Construction	230	10.7	10.2	25,102	8.38	2,997
Paving	18	10	10.2	1,836	8.38	219
Architectural Coating	18	0	10.2	0	8.38	0
Total Vendor Fuel Consumption						3,216

Notes:

¹ Assumptions for the vendor trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.22 defaults.

²⁵ Vendors delivering construction material or hauling debris from the site during grading would use medium to heavy duty vehicles with an average fuel consumption of 9.22 mpg for medium heavy-duty trucks and 6.74 mpg for heavy heavy-duty trucks (see Appendix B for details).

Table 20: Construction Hauling Fuel Consumption Estimates (HHD Trucks)¹

Phase	Number of Days	Hauling Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Site Preparation	5	0	20	0	6.07	0
Grading	8	78.1	20	12,496	6.07	2,058
Building Construction	230	0	20	0	6.07	0
Paving	18	0	20	0	6.07	0
Architectural Coating	18	0	20	0	6.07	0
Total Construction Hauling Fuel Consumption						2,058

Notes:

¹Assumptions for the hauling trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.22 defaults.

8.1.5 Construction Energy Efficiency/Conservation Measures

Construction equipment used over the approximately 13-month construction phase would conform to CARB regulations and California emissions standards. In addition, the CARB Airborne Toxic Control Measure limits idling times of construction vehicles to no more than five minutes, thereby minimizing unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment.

Construction of the proposed commercial development would require the typical use of energy resources. There are no unusual Project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the Project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel.

8.2 Operational Energy Demand

Energy consumption in support of or related to Project operations would include transportation energy demands (energy consumed by employee and patron vehicles accessing the Project site) and facilities energy demands (energy consumed by building operations and site maintenance activities).

8.2.1 Transportation Fuel Consumption

The largest source of operational energy use would be vehicle operation of customers. The site is located in an urban area. Using the CalEEMod output, an average trip for all vehicles was assumed to be 10.379 miles. To show a worst-case analysis, it was assumed that vehicles would operate 365 days per year. Table 21 shows the worst-case estimated annual fuel consumption for all classes of vehicles from autos

to heavy-heavy trucks.²⁶ Table 21 shows that an estimated 254,096 gallons of fuel would be consumed per year for the operation of the proposed Project.

Table 21: Estimated Vehicle Operations Fuel Consumption

Vehicle Type	Vehicle Mix	Number of Vehicles	Average Trip (miles) ¹	Daily VMT	Average Fuel Economy (mpg)	Total Gallons per Day	Total Annual Fuel Consumption (gallons)
Light Auto	Automobile	903.8	10.379	9,380	30.37	308.83	112,724
Light Truck	Automobile	93.7	10.379	973	25.00	38.91	14,204
Light Truck	Automobile	288.7	10.379	2,996	24.89	120.41	43,950
Medium Truck	Automobile	228.2	10.379	2,369	20.18	117.38	42,844
Light Heavy Truck	2-Axle Truck	44.0	10.379	456	16.06	28.42	10,371
Light Heavy Truck 10,000 lbs +	2-Axle Truck	11.9	10.379	123	15.14	8.14	2,973
Medium Heavy Truck	3-Axle Truck	19.5	10.379	203	8.38	24.20	8,832
Heavy Heavy Truck	4-Axle Truck	29.2	10.379	303	6.07	49.86	18,197
Total		1,619	--	16,803	--	696.15	--
Total Annual Fuel Consumption							254,096

Notes:

¹ The trip generation assessment, the Project is to generate 1,619 total net new trips. Default CalEEMod vehicle fleet mix utilized.

¹Based on the size of the site and relative location, trips were assumed to be local rather than regional.

Trip generation generated by the proposed Project are consistent with other similar commercial uses of similar scale and configuration as reflected in the trip generation analysis (Ganddini, 2024). That is, the proposed Project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips, nor associated excess and wasteful vehicle energy consumption. Therefore, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

8.2.2 Facility Energy Demands (Electricity and Natural Gas)

The annual natural gas and electricity demands were provided per the CalEEMod output and are provided in Table 22.

<Table 22, next page>

²⁶ Average fuel economy based on aggregate mileage calculated in EMFAC 2021 for opening year (2025). See Appendix B for EMFAC output.

Table 22: Project Unmitigated Annual Operational Energy Demand Summary¹

Natural Gas Demand	kBTU/year
Automobile Care Center	128,444
Hotel	1,820,905
Fast Food Restaurant with Drive Through	165,693
Total	2,115,042
Electricity Demand	kWh/year
Automobile Care Center	28,565
Hotel	972,767
Fast Food Restaurant with Drive Through	50,847
Parking Lot	49,988
Total	1,102,167

Notes:

¹Taken from the CalEEMod 2022.1.1.22 annual output.

As shown in Table 22, the estimated electricity demand for the proposed Project is approximately 1,102,167 kWh per year. In 2022, the non-residential sector of the County of San Bernardino consumed approximately 10,328 million kWh of electricity.²⁷ In addition, the estimated natural gas consumption for the proposed Project is approximately 2,115,042 kBTU per year. In 2022, the non-residential sector of the County of San Bernardino consumed approximately 295 million therms, or 29.5 billion kBTU, of gas.²⁸ Therefore, the increase in both electricity and natural gas demand from the proposed Project is insignificant compared to the County's 2022 demand.

8.3 Renewable Energy and Energy Efficiency Plan Consistency

Regarding federal transportation regulations, the Project site is located in an already developed area. Access to/from the Project site is from existing roads. These roads are already in place so the Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be proposed pursuant to the ISTEPA because SCAG is not planning for intermodal facilities in the Project area.

Regarding the State's Energy Plan and compliance with Title 24 CCR energy efficiency standards, the applicant is required to comply with the California Green Building Standard Code requirements for energy efficient buildings and appliances as well as utility energy efficiency programs implemented by the SCE and Southern California Gas Company.

²⁷ California Energy Commission, Electricity Consumption by County. <https://ecdms.energy.ca.gov/elecbycounty.aspx>

²⁸ California Energy Commission, Gas Consumption by County. <http://ecdms.energy.ca.gov/gasbycounty.aspx>

Regarding the State's Renewable Energy Portfolio Standards, the Project would be required to meet or exceed the energy standards established in the California Green Building Standards Code, Title 24, Part 11 (CALGreen). CalGreen Standards require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials.

Site Conditions for Renewable Energy Usage

On-site renewable energy sources have been considered. Geothermal energy, the use of heat naturally present in shallow soil or in groundwater or rock to provide building heating/cooling and to heat water, requires the installation of a heat exchanger consisting of a network of below-ground pipes to convey heated or cooled air to a building. The presence of natural-occurring methane and hydrogen sulfide gases, in the soil beneath the project site and in the project area, associated with underlying and nearby oil and gas fields, requires the implementation of a Gas Mitigation and Monitoring System to ensure subsurface gases do not pose a significant health or safety risk, and makes the construction and operation of a heat exchanger for project buildings infeasible. Installation of a heat exchanger would also require additional excavation compared to the project, which could increase impacts on paleontological resources.

Although methane is a renewable derived biogas, it is not available on the project site in commercially viable quantities or form (i.e., a form that could be used without further treatment), and its extraction and treatment for energy purposes would result in secondary impacts.

Wind power represents variable-energy, or intermittent, resources that are generally used to augment, but not replace, natural gas-fired energy power generation, since reliability of energy availability and transmission is necessary to meet demand, which is constant.

With respect to other on-site renewable energy sources, because of the Project's location, there are no local sources of energy from the following sources: biodiesel, biomass hydroelectric and small hydro, digester gas, fuel cells, landfill gas, municipal solid waste, ocean thermal, ocean wave, and tidal current technologies, or multi-fuel facilities using renewable fuels.

Future Renewable Energy Usage

The project could potentially implement roof top solar panels, which would reduce the overall external energy demand of the project.

8.4 Cumulative Regional Energy Impacts

Cumulative projects include local development as well as general growth within the project area. The greatest cumulative impact on the regional energy usage will be from increased traffic from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with the construction of these projects. However, as the Project's natural gas and electricity usage will both be under 0.01% of the County of San Bernardino's 2022 usage, the Project is considered less than significant.

9.0 References

The following references were used in the preparing this analysis.

California Air Pollution Control Officers Association

2009 Health Risk Assessments for Proposed Land Use Projects

California Air Resources Board

2008 Resolution 08-43

2008 Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act

2008 ARB Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk – Frequently Asked Questions

2008 Climate Change Scoping Plan, a framework for change.

2011 Supplement to the AB 32 Scoping Plan Functional Equivalent Document

2013 Revised Emission Factors for Gasoline Marketing Operations at California Gasoline Dispensing Facilities

2014 First Update to the Climate Change Scoping Plan, Building on the Framework Pursuant to AB32, the California Global Warming Solutions Act of 2006. May.

2018 Historical Air Quality, Top 4 Summary

County of San Bernardino

2007 County of San Bernardino 2007 General Plan, March 13 (amended April 24, 2014).

2011 County of San Bernardino Greenhouse Gas Emissions Reduction Plan.

Governor's Office of Planning and Research

2008 CEQA and Climate: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review

2009 CEQA Guideline Sections to be Added or Amended

Office of Environmental Health Hazard Assessment

2015 Air Toxics Hot Spots Program Risk Assessment Guidelines

South Coast Air Quality Management District

1993	CEQA Air Quality Handbook
2005	Rule 403 Fugitive Dust
2007	2007 Air Quality Management Plan
2008	Final Localized Significance Threshold Methodology, Revised
2011	Appendix A Calculation Details for CalEEMod
2012	Final 2012 Air Quality Management Plan
2016	Final 2016 Air Quality Management Plan

Appendix A:

CalEEMod Emission Output

913 Redlands Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	913 Redlands
Construction Start Date	9/2/2024
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	24.0
Location	34.06530282312673, -117.22734132495239
County	San Bernardino-South Coast
City	Redlands
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5394
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.22

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Automobile Care Center	3.00	1000sqft	0.07	2,995	0.00	—	—	—
Hotel	90.0	Room	3.00	60,960	0.00	—	—	—
Fast Food Restaurant with Drive Thru	1.45	1000sqft	0.03	1,450	0.00	—	—	—
Parking Lot	1.31	Acre	1.31	0.00	10,000	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.26	10.9	15.4	0.03	0.44	0.45	0.88	0.40	0.11	0.51	—	3,111	3,111	0.14	0.08	2.35	3,142
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	34.7	36.1	34.0	0.06	1.60	7.89	9.49	1.47	3.99	5.47	—	8,658	8,658	0.74	0.92	0.32	8,950
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.38	5.78	7.91	0.01	0.23	0.27	0.47	0.21	0.11	0.27	—	1,620	1,620	0.07	0.04	0.55	1,635
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.43	1.05	1.44	< 0.005	0.04	0.05	0.09	0.04	0.02	0.05	—	268	268	0.01	0.01	0.09	271

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	1.26	10.9	15.4	0.03	0.44	0.45	0.88	0.40	0.11	0.51	—	3,111	3,111	0.14	0.08	2.35	3,142
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	3.73	36.1	34.0	0.06	1.60	7.89	9.49	1.47	3.99	5.47	—	8,658	8,658	0.74	0.92	0.32	8,950
2025	34.7	11.0	14.8	0.03	0.44	0.45	0.88	0.40	0.11	0.51	—	3,080	3,080	0.14	0.08	0.06	3,108
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.29	2.71	3.12	0.01	0.11	0.27	0.38	0.10	0.11	0.21	—	702	702	0.04	0.03	0.28	713
2025	2.38	5.78	7.91	0.01	0.23	0.24	0.47	0.21	0.06	0.27	—	1,620	1,620	0.07	0.04	0.55	1,635
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.05	0.49	0.57	< 0.005	0.02	0.05	0.07	0.02	0.02	0.04	—	116	116	0.01	0.01	0.05	118
2025	0.43	1.05	1.44	< 0.005	0.04	0.04	0.09	0.04	0.01	0.05	—	268	268	0.01	0.01	0.09	271

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	8.67	6.78	61.8	0.14	0.14	11.9	12.1	0.14	3.03	3.16	47.5	16,666	16,713	5.59	0.68	772	17,826
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	7.72	7.22	49.4	0.13	0.14	11.9	12.1	0.13	3.03	3.16	47.5	15,754	15,801	5.61	0.70	720	16,870
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	7.99	7.35	53.2	0.14	0.14	11.7	11.9	0.14	2.98	3.12	47.5	15,902	15,949	5.62	0.70	742	17,041
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.46	1.34	9.70	0.02	0.03	2.14	2.17	0.02	0.54	0.57	7.86	2,633	2,641	0.93	0.12	123	2,821

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.60	6.19	58.5	0.14	0.10	11.9	12.0	0.09	3.03	3.12	—	14,339	14,339	0.67	0.65	53.4	14,602
Area	2.04	0.02	2.84	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	11.7	11.7	< 0.005	< 0.005	—	11.7
Energy	0.03	0.57	0.48	< 0.005	0.04	—	0.04	0.04	—	0.04	—	2,284	2,284	0.16	0.01	—	2,292
Water	—	—	—	—	—	—	—	—	—	—	5.76	31.1	36.8	0.59	0.01	—	55.9
Waste	—	—	—	—	—	—	—	—	—	—	41.7	0.00	41.7	4.17	0.00	—	146
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	718	718
Total	8.67	6.78	61.8	0.14	0.14	11.9	12.1	0.14	3.03	3.16	47.5	16,666	16,713	5.59	0.68	772	17,826
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.12	6.65	48.9	0.13	0.10	11.9	12.0	0.09	3.03	3.12	—	13,438	13,438	0.69	0.67	1.38	13,657
Area	1.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.03	0.57	0.48	< 0.005	0.04	—	0.04	0.04	—	0.04	—	2,284	2,284	0.16	0.01	—	2,292
Water	—	—	—	—	—	—	—	—	—	—	5.76	31.1	36.8	0.59	0.01	—	55.9
Waste	—	—	—	—	—	—	—	—	—	—	41.7	0.00	41.7	4.17	0.00	—	146

Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	718	718
Total	7.72	7.22	49.4	0.13	0.14	11.9	12.1	0.13	3.03	3.16	47.5	15,754	15,801	5.61	0.70	720	16,870
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	6.07	6.77	50.7	0.13	0.10	11.7	11.8	0.09	2.98	3.07	—	13,578	13,578	0.69	0.68	23.0	13,820
Area	1.89	0.02	1.95	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.01	8.01	< 0.005	< 0.005	—	8.04
Energy	0.03	0.57	0.48	< 0.005	0.04	—	0.04	0.04	—	0.04	—	2,284	2,284	0.16	0.01	—	2,292
Water	—	—	—	—	—	—	—	—	—	—	5.76	31.1	36.8	0.59	0.01	—	55.9
Waste	—	—	—	—	—	—	—	—	—	—	41.7	0.00	41.7	4.17	0.00	—	146
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	718	718
Total	7.99	7.35	53.2	0.14	0.14	11.7	11.9	0.14	2.98	3.12	47.5	15,902	15,949	5.62	0.70	742	17,041
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.11	1.23	9.26	0.02	0.02	2.14	2.16	0.02	0.54	0.56	—	2,248	2,248	0.11	0.11	3.81	2,288
Area	0.35	< 0.005	0.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.33
Energy	0.01	0.10	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	378	378	0.03	< 0.005	—	380
Water	—	—	—	—	—	—	—	—	—	—	0.95	5.14	6.09	0.10	< 0.005	—	9.25
Waste	—	—	—	—	—	—	—	—	—	—	6.91	0.00	6.91	0.69	0.00	—	24.2
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	119	119
Total	1.46	1.34	9.70	0.02	0.03	2.14	2.17	0.02	0.54	0.57	7.86	2,633	2,641	0.93	0.12	123	2,821

3. Construction Emissions Details

3.1. Site Preparation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.65	36.0	32.9	0.05	1.60	—	1.60	1.47	—	1.47	—	5,296	5,296	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.49	0.45	< 0.005	0.02	—	0.02	0.02	—	0.02	—	72.5	72.5	< 0.005	< 0.005	—	72.8
Dust From Material Movement	—	—	—	—	—	0.11	0.11	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.09	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.0	12.0	< 0.005	< 0.005	—	12.1
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.10	1.12	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	231	231	0.01	0.01	0.03	234
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.21	3.21	< 0.005	< 0.005	0.01	3.25
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.53	0.53	< 0.005	< 0.005	< 0.005	0.54
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.90	18.2	18.8	0.03	0.84	—	0.84	0.77	—	0.77	—	2,958	2,958	0.12	0.02	—	2,969

Dust From Material Movement	—	—	—	—	—	2.78	2.78	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.40	0.41	< 0.005	0.02	—	0.02	0.02	—	0.02	—	64.8	64.8	< 0.005	< 0.005	—	65.1
Dust From Material Movement	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.8
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.09	0.96	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	198	198	0.01	0.01	0.02	200
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.11	7.05	3.80	0.04	0.10	1.45	1.55	0.07	0.40	0.47	—	5,502	5,502	0.61	0.89	0.30	5,781

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.40	4.40	< 0.005	< 0.005	0.01	4.46
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.16	0.08	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	121	121	0.01	0.02	0.11	127
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.73	0.73	< 0.005	< 0.005	< 0.005	0.74
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.0	20.0	< 0.005	< 0.005	0.02	21.0

3.5. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.58	1.85	< 0.005	0.07	—	0.07	0.06	—	0.06	—	338	338	0.01	< 0.005	—	339
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.29	0.34	< 0.005	0.01	—	0.01	0.01	—	0.01	—	55.9	55.9	< 0.005	< 0.005	—	56.1
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.16	1.74	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	359	359	0.02	0.01	0.04	363
Vendor	0.01	0.40	0.21	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	336	336	0.03	0.05	0.02	352
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.26	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51.2	51.2	< 0.005	< 0.005	0.10	52.0
Vendor	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	47.4	47.4	< 0.005	0.01	0.06	49.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.48	8.48	< 0.005	< 0.005	0.02	8.60
Vendor	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.84	7.84	< 0.005	< 0.005	0.01	8.21
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.55	5.13	6.41	0.01	0.21	—	0.21	0.20	—	0.20	—	1,178	1,178	0.05	0.01	—	1,182
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.94	1.17	< 0.005	0.04	—	0.04	0.04	—	0.04	—	195	195	0.01	< 0.005	—	196
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.12	2.12	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	383	383	0.02	0.01	1.42	389
Vendor	0.01	0.37	0.20	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	331	331	0.03	0.05	0.93	347
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.13	1.60	0.00	0.00	0.36	0.36	0.00	0.08	0.08	—	351	351	0.02	0.01	0.04	355
Vendor	0.01	0.38	0.20	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	331	331	0.03	0.05	0.02	346
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.07	0.83	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	175	175	0.01	0.01	0.30	177
Vendor	< 0.005	0.19	0.10	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	162	162	0.01	0.02	0.20	170
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.9	28.9	< 0.005	< 0.005	0.05	29.4
Vendor	< 0.005	0.03	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	26.9	26.9	< 0.005	< 0.005	0.03	28.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	6.52	8.84	0.01	0.29	—	0.29	0.26	—	0.26	—	1,351	1,351	0.05	0.01	—	1,355
Paving	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.71	6.52	8.84	0.01	0.29	—	0.29	0.26	—	0.26	—	1,351	1,351	0.05	0.01	—	1,355
Paving	0.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.32	0.44	< 0.005	0.01	—	0.01	0.01	—	0.01	—	66.6	66.6	< 0.005	< 0.005	—	66.8
Paving	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.0	11.0	< 0.005	< 0.005	—	11.1
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	1.56	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	282	282	0.01	0.01	1.05	286
Vendor	0.01	0.34	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	308	308	0.02	0.05	0.87	324
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.10	1.17	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	258	258	0.01	0.01	0.03	262

Vendor	0.01	0.36	0.19	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	309	309	0.02	0.05	0.02	323
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.9	12.9	< 0.005	< 0.005	0.02	13.1
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	15.2	15.2	< 0.005	< 0.005	0.02	16.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.14	2.14	< 0.005	< 0.005	< 0.005	2.17
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.52	2.52	< 0.005	< 0.005	< 0.005	2.64
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	34.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.58	6.58	< 0.005	< 0.005	—	6.61
Architectural Coatings	1.71	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.09	1.09	< 0.005	< 0.005	—	1.09
Architectural Coatings	0.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.03	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	70.2	70.2	< 0.005	< 0.005	0.01	71.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.51	3.51	< 0.005	< 0.005	0.01	3.56
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.58	0.58	< 0.005	< 0.005	< 0.005	0.59

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	—	41.6	41.6	< 0.005	< 0.005	—	41.8
Hotel	—	—	—	—	—	—	—	—	—	—	—	1,418	1,418	0.09	0.01	—	1,423
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	74.1	74.1	< 0.005	< 0.005	—	74.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	72.9	72.9	< 0.005	< 0.005	—	73.1
Total	—	—	—	—	—	—	—	—	—	—	—	1,606	1,606	0.10	0.01	—	1,612
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Automobil Care Center	—	—	—	—	—	—	—	—	—	—	—	41.6	41.6	< 0.005	< 0.005	—	41.8
Hotel	—	—	—	—	—	—	—	—	—	—	—	1,418	1,418	0.09	0.01	—	1,423
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	74.1	74.1	< 0.005	< 0.005	—	74.4
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	72.9	72.9	< 0.005	< 0.005	—	73.1
Total	—	—	—	—	—	—	—	—	—	—	—	1,606	1,606	0.10	0.01	—	1,612
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobil e Care Center	—	—	—	—	—	—	—	—	—	—	—	6.89	6.89	< 0.005	< 0.005	—	6.92
Hotel	—	—	—	—	—	—	—	—	—	—	—	235	235	0.01	< 0.005	—	236
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	12.3	12.3	< 0.005	< 0.005	—	12.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	12.1	12.1	< 0.005	< 0.005	—	12.1
Total	—	—	—	—	—	—	—	—	—	—	—	266	266	0.02	< 0.005	—	267

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Automobile Care Center	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	41.2	41.2	< 0.005	< 0.005	—	41.3
Hotel	0.03	0.49	0.41	< 0.005	0.04	—	0.04	0.04	—	0.04	—	584	584	0.05	< 0.005	—	585
Fast Food Restaurant with Drive Thru	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	53.1	53.1	< 0.005	< 0.005	—	53.2
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.57	0.48	< 0.005	0.04	—	0.04	0.04	—	0.04	—	678	678	0.06	< 0.005	—	680
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	< 0.005	0.03	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	41.2	41.2	< 0.005	< 0.005	—	41.3
Hotel	0.03	0.49	0.41	< 0.005	0.04	—	0.04	0.04	—	0.04	—	584	584	0.05	< 0.005	—	585
Fast Food Restaurant with Drive Thru	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	53.1	53.1	< 0.005	< 0.005	—	53.2
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.57	0.48	< 0.005	0.04	—	0.04	0.04	—	0.04	—	678	678	0.06	< 0.005	—	680
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.82	6.82	< 0.005	< 0.005	—	6.83
Hotel	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	96.6	96.6	0.01	< 0.005	—	96.9

Fast Food Restaurant with Drive Thru	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.79	8.79	< 0.005	< 0.005	—	8.82
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.10	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	112	112	0.01	< 0.005	—	113

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.47	0.02	2.84	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	11.7	11.7	< 0.005	< 0.005	—	11.7
Total	2.04	0.02	2.84	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	11.7	11.7	< 0.005	< 0.005	—	11.7
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural	0.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	< 0.005	0.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.33
Total	0.35	< 0.005	0.36	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.33	1.33	< 0.005	< 0.005	—	1.33

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	0.54	2.80	3.34	0.06	< 0.005	—	5.12
Hotel	—	—	—	—	—	—	—	—	—	—	4.37	22.7	27.0	0.45	0.01	—	41.5
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	0.84	4.37	5.21	0.09	< 0.005	—	8.00

Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	1.24	1.24	< 0.005	< 0.005	—	1.25
Total	—	—	—	—	—	—	—	—	—	—	5.76	31.1	36.8	0.59	0.01	—	55.9
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	0.54	2.80	3.34	0.06	< 0.005	—	5.12
Hotel	—	—	—	—	—	—	—	—	—	—	4.37	22.7	27.0	0.45	0.01	—	41.5
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	0.84	4.37	5.21	0.09	< 0.005	—	8.00
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	1.24	1.24	< 0.005	< 0.005	—	1.25
Total	—	—	—	—	—	—	—	—	—	—	5.76	31.1	36.8	0.59	0.01	—	55.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	0.09	0.46	0.55	0.01	< 0.005	—	0.85
Hotel	—	—	—	—	—	—	—	—	—	—	0.72	3.75	4.47	0.07	< 0.005	—	6.87
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	0.14	0.72	0.86	0.01	< 0.005	—	1.32
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.21	0.21	< 0.005	< 0.005	—	0.21
Total	—	—	—	—	—	—	—	—	—	—	0.95	5.14	6.09	0.10	< 0.005	—	9.25

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	6.17	0.00	6.17	0.62	0.00	—	21.6
Hotel	—	—	—	—	—	—	—	—	—	—	26.6	0.00	26.6	2.65	0.00	—	92.9
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	9.00	0.00	9.00	0.90	0.00	—	31.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	41.7	0.00	41.7	4.17	0.00	—	146
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobile Care Center	—	—	—	—	—	—	—	—	—	—	6.17	0.00	6.17	0.62	0.00	—	21.6
Hotel	—	—	—	—	—	—	—	—	—	—	26.6	0.00	26.6	2.65	0.00	—	92.9
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	9.00	0.00	9.00	0.90	0.00	—	31.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	41.7	0.00	41.7	4.17	0.00	—	146
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Automobil Care Center	—	—	—	—	—	—	—	—	—	—	1.02	0.00	1.02	0.10	0.00	—	3.57
Hotel	—	—	—	—	—	—	—	—	—	—	4.40	0.00	4.40	0.44	0.00	—	15.4
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	1.49	0.00	1.49	0.15	0.00	—	5.21
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	6.91	0.00	6.91	0.69	0.00	—	24.2

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobil e Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	621	621
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	95.3	95.3
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.27	2.27
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	718	718
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Automobil Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	621	621
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	95.3	95.3
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.27	2.27
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	718	718
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Automobil e Care Center	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	103	103
Hotel	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	15.8	15.8
Fast Food Restaurant with Drive Thru	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.38	0.38
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	119	119

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipme nt Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequeste red	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequeste red	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	10/1/2024	10/8/2024	5.00	5.00	—
Grading	Grading	10/9/2024	10/20/2024	5.00	8.00	—
Building Construction	Building Construction	10/21/2024	9/8/2025	5.00	230	—

Paving	Paving	9/9/2025	10/4/2025	5.00	18.0	—
Architectural Coating	Architectural Coating	10/5/2025	10/30/2025	5.00	18.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	6.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	78.1	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	27.2	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	10.7	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	10.0	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	5.43	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT

Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	98,108	32,703	3,424

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Site Preparation	—	—	7.50	0.00	—
Grading	—	5,000	8.00	0.00	—
Paving	0.00	0.00	0.00	0.00	1.31

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

Automobile Care Center	0.00	0%
Hotel	0.00	0%
Fast Food Restaurant with Drive Thru	0.00	0%
Parking Lot	1.31	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005
2025	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	1,619	1,619	1,619	590,935	16,803	16,803	16,803	6,133,139

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	98,108	32,703	3,424

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Automobile Care Center	28,565	532	0.0330	0.0040	128,444
Hotel	972,767	532	0.0330	0.0040	1,820,905
Fast Food Restaurant with Drive Thru	50,847	532	0.0330	0.0040	165,693
Parking Lot	49,988	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Automobile Care Center	281,773	0.00
Hotel	2,283,009	0.00
Fast Food Restaurant with Drive Thru	440,124	0.00
Parking Lot	0.00	160,591

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Automobile Care Center	11.4	—
Hotel	49.3	—
Fast Food Restaurant with Drive Thru	16.7	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Automobile Care Center	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Automobile Care Center	Supermarket refrigeration and condensing units	R-404A	3,922	26.5	16.5	16.5	18.0
Hotel	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Hotel	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Hotel	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
Fast Food Restaurant with Drive Thru	Household refrigerators and/or freezers	R-134a	1,430	0.00	0.60	0.00	1.00
Fast Food Restaurant with Drive Thru	Other commercial A/C and heat pumps	R-410A	2,088	1.80	4.00	4.00	18.0
Fast Food Restaurant with Drive Thru	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	26.6	annual days of extreme heat
Extreme Precipitation	4.20	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	6.46	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A

Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	100
AQ-PM	57.4
AQ-DPM	82.8
Drinking Water	96.3
Lead Risk Housing	29.2
Pesticides	74.7
Toxic Releases	44.2
Traffic	81.0
Effect Indicators	—
CleanUp Sites	81.9
Groundwater	47.6
Haz Waste Facilities/Generators	96.8
Impaired Water Bodies	12.5
Solid Waste	0.00
Sensitive Population	—
Asthma	34.7
Cardio-vascular	45.1
Low Birth Weights	75.6
Socioeconomic Factor Indicators	—
Education	39.2
Housing	89.1

Linguistic	17.3
Poverty	55.9
Unemployment	14.4

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	37.76466059
Employed	27.51186963
Median HI	26.53663544
Education	—
Bachelor's or higher	60.5800077
High school enrollment	100
Preschool enrollment	11.52316181
Transportation	—
Auto Access	62.47914795
Active commuting	28.56409598
Social	—
2-parent households	37.02040293
Voting	39.83061722
Neighborhood	—
Alcohol availability	30.07827538
Park access	50.53252919
Retail density	65.94379571
Supermarket access	72.28281791
Tree canopy	43.62889773

Housing	—
Homeownership	9.303220839
Housing habitability	37.12305916
Low-inc homeowner severe housing cost burden	73.38637239
Low-inc renter severe housing cost burden	66.31592455
Uncrowded housing	31.19466188
Health Outcomes	—
Insured adults	48.58206082
Arthritis	92.2
Asthma ER Admissions	65.8
High Blood Pressure	95.2
Cancer (excluding skin)	82.6
Asthma	30.0
Coronary Heart Disease	94.7
Chronic Obstructive Pulmonary Disease	71.2
Diagnosed Diabetes	92.6
Life Expectancy at Birth	79.7
Cognitively Disabled	52.2
Physically Disabled	60.6
Heart Attack ER Admissions	32.7
Mental Health Not Good	41.5
Chronic Kidney Disease	95.6
Obesity	56.2
Pedestrian Injuries	53.3
Physical Health Not Good	67.2
Stroke	91.3
Health Risk Behaviors	—

Binge Drinking	13.6
Current Smoker	36.3
No Leisure Time for Physical Activity	67.1
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	7.3
Elderly	81.9
English Speaking	84.0
Foreign-born	37.0
Outdoor Workers	85.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	69.4
Traffic Density	74.6
Traffic Access	23.0
Other Indices	—
Hardship	54.2
Other Decision Support	—
2016 Voting	58.0

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	72.0
Healthy Places Index Score for Project Location (b)	32.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	No demolition required
Operations: Vehicle Data	Per traffic study
Land Use	Per site plan

Appendix B:

EMFAC2021 Output

Source: EMFAC2021 (v1.0.2) Emissions Inventory

Region Type: Sub-Area

Region: San Bernardino (SC)

Calendar Year: 2025

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Total VMT	Trips	Fuel Consumption	Combined VMT	Combined Fuel Consumption	MPG	Vehicle Category
San Bernardino (SC)	2025	HHDT	Aggregate	Aggregate	Gasoline	177.2217014	77.42629477	0.044579975	1799286.466	296.266338	6.07320588	HHDT
San Bernardino (SC)	2025	HHDT	Aggregate	Aggregate	Diesel	1799109.244	221962.6286	296.221758				
San Bernardino (SC)	2025	LDA	Aggregate	Aggregate	Gasoline	20012363.19	2124445.407	659.2303928	20047185.15	660.0337543	30.37296959	LDA
San Bernardino (SC)	2025	LDA	Aggregate	Aggregate	Diesel	34821.96021	4226.27462	0.803361461				
San Bernardino (SC)	2025	LDT1	Aggregate	Aggregate	Gasoline	1386010.237	172343.7907	55.44488475	1386149.107	55.45059701	24.99791132	LDT1
San Bernardino (SC)	2025	LDT1	Aggregate	Aggregate	Diesel	138.8700264	27.0666175	0.005712258				
San Bernardino (SC)	2025	LDT2	Aggregate	Aggregate	Gasoline	8156000.659	925465.374	328.0141754	8180878.513	328.7471614	24.88501643	LDT2
San Bernardino (SC)	2025	LDT2	Aggregate	Aggregate	Diesel	24877.85405	2707.611895	0.732985994				
San Bernardino (SC)	2025	LHDT1	Aggregate	Aggregate	Gasoline	633447.7463	252725.1192	45.45107153	1067733.969	66.4699942	16.06339795	LHDT1
San Bernardino (SC)	2025	LHDT1	Aggregate	Aggregate	Diesel	434286.2222	143435.7701	21.01892267				
San Bernardino (SC)	2025	LHDT2	Aggregate	Aggregate	Gasoline	99825.11713	42072.64494	8.149183621	287350.1658	18.98407565	15.13637909	LHDT2
San Bernardino (SC)	2025	LHDT2	Aggregate	Aggregate	Diesel	187525.0486	61496.05385	10.83489203				
San Bernardino (SC)	2025	MDV	Aggregate	Aggregate	Gasoline	5833561.643	672637.6073	289.7409456	5909936.122	292.8920116	20.17786723	MDV
San Bernardino (SC)	2025	MDV	Aggregate	Aggregate	Diesel	76374.47974	8796.885424	3.151065928				
San Bernardino (SC)	2025	MHDT	Aggregate	Aggregate	Gasoline	76828.767	28559.88167	14.58515666	735499.3107	87.80936102	8.376092277	MHDT
San Bernardino (SC)	2025	MHDT	Aggregate	Aggregate	Diesel	658670.5437	188328.1928	73.22420436				

ATTACHMENT D

HEALTH RISK ASSESSMENT

HEALTH RISK ASSESSMENT

**913 CALIFORNIA STREET PROJECT
REDLANDS, CALIFORNIA**

LSA

August 2025

HEALTH RISK ASSESSMENT

913 CALIFORNIA STREET PROJECT REDLANDS, CALIFORNIA

Submitted to:

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Project No. 20242064



August 2025

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LIST OF ABBREVIATIONS AND ACRONYMS

AB	Assembly Bill
AERMOD	American Meteorological Society/Environmental Protection Agency Regulatory Model
Basin	South Coast Air Basin
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CARB Handbook	California Air Resources Board <i>Air Quality and Land Use Handbook</i>
CEQA	California Environmental Quality Act
City	City of Redlands
DPM	diesel particulate matter
EMFAC2021	California Emissions Factor Model, Version 2021
EV	electric vehicle
HARP2	Hotspots Analysis and Reporting Program (Version 2)
HI	Hazard Index
HRA	Health Risk Assessment
I-10	Interstate 10
MEI	maximally exposed individual
MICR	maximum individual cancer risk
OEHHA	California Office of Environmental Health Hazard Assessment
PM ₁₀	particulate matter less than 10 microns in diameter
project	913 California Street Project
SCAQMD	South Coast Air Quality Management District

TAC	toxic air contaminant
URF	unit risk factor
USEPA	United States Environmental Protection Agency

INTRODUCTION

LSA has prepared a construction Health Risk Assessment (HRA) for the proposed 913 California Street Project (project) in Redlands, California.

An HRA is a process used to estimate the increased health risk levels for people living and/or working near a project that emits toxic air contaminants (TACs). An HRA combines results of studies on the health effects of various animal and human exposure to TACs with results of studies that estimate the exposure levels at different distances from the source of pollutants. The purpose of the HRA is to document the increased cancer and noncancer health risk levels from project-related emissions of TACs on existing nearby sensitive receptors, including residents and/or workers.

The City of Redlands (City) recommends the preparation of an HRA in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment (OEHHA) and the South Coast Air Quality Management District (SCAQMD). This HRA evaluates all these criteria in compliance with applicable requirements.

PROJECT LOCATION AND DESCRIPTION

The 5.1-acre project site is at 913 California Street in Redlands, San Bernardino County, California. The project site is currently undeveloped and is bounded by a flood control channel, Mission Channel, along the southwestern site boundary, California Street to the east, and a railroad line to the north. Interstate 10 (I-10) facilitates regional access to the project site. Direct access to the project site is provided via the California Street interchange immediately northeast of the project site. Figure 1, Regional Location and Project Vicinity, and Figure 2, Site Plan, depict the location of the project site on a regional and local scale.

The proposed project includes the subdivision of the project site into three parcels to facilitate the development of a four story, 55,186-square-foot business hotel containing 90 rooms (Parcel 1), an approximately 1,450-square-foot drive-through coffee shop (Parcel 2), and a 3,588-square-foot semi-automated car wash (Parcel 3). The proposed hotel would include a lobby, dining area, bar area, business center, meeting room, fitness center, prep areas and market, commercial laundry, utility room, storage rooms, pool equipment and elevator equipment rooms, bedrooms, and associated operational areas. The hotel proposed outdoor amenities would include an outdoor pool with restrooms, an outdoor lounging area near the southeast corner, and a large porte cochere for loading and unloading of hotel guests and their personal belongings.

The proposed coffee shop would consist of a single tenant drive-through building and would include a small outdoor patio on the east side of the building. The proposed coffee shop would be open from 6:00 a.m. to 9:00 p.m. every day. The proposed car wash would consist of a single tenant drive-through building and would include a check-in area for payment, and the drive-through would include space for approximately 15 cars at a time. All mechanical equipment associated with car wash activities would be located within the proposed building. The proposed car wash would be open from 7:00 a.m. to 7:00 p.m. every day.

The proposed project would provide a total of 155 parking spaces, 119 associated with the proposed hotel, 14 associated with the drive-through coffee shop, and 22 associated with the car wash. Of the 155 parking spaces provided by the proposed project, six would be compact spaces, seven would be accessible spaces, one would be an accessible electric vehicle (EV) space, 25 would be EV/EV-capable spaces, two would be motorcycle parking spaces, two would be loading spaces, 17 would be vacuum spaces (associated with the car wash), one would be an accessible vacuum space, and 96 would be standard spaces. In addition, the proposed project would provide a total of 78,897 square feet of landscaped area (35.7 percent of the project site), which meets the City's landscaping requirements as detailed in the East Valley Corridor Specific Plan Section EV4.0260.

According to the City's 2035 General Plan Livable Community Element, the project site is currently designated for Commercial uses. The proposed project would be consistent with the General Plan and zoning designations for the project site. However, the development of the hotel and drive-through coffee shop would require approval of a Conditional Use Permit. The proposed project would generate approximately 1,619 daily vehicle trips.¹ In addition, the proposed project would comply with Title 24 requirements.

Construction of the proposed project would include site preparation, installation of utilities, paving, building construction, landscaping, and architectural coating activities. The proposed project would be constructed over approximately 13 months, with construction anticipated to begin in late 2025. Grading of the project site would result in approximately 5,000 cubic yards of cut and require approximately 35,000 cubic yards of fill, requiring the import of approximately 30,000 cubic yards of soil.

¹ Ganddini. 2025. 913 California Street Mixed-Use Center Traffic Impact Analysis. February 27.

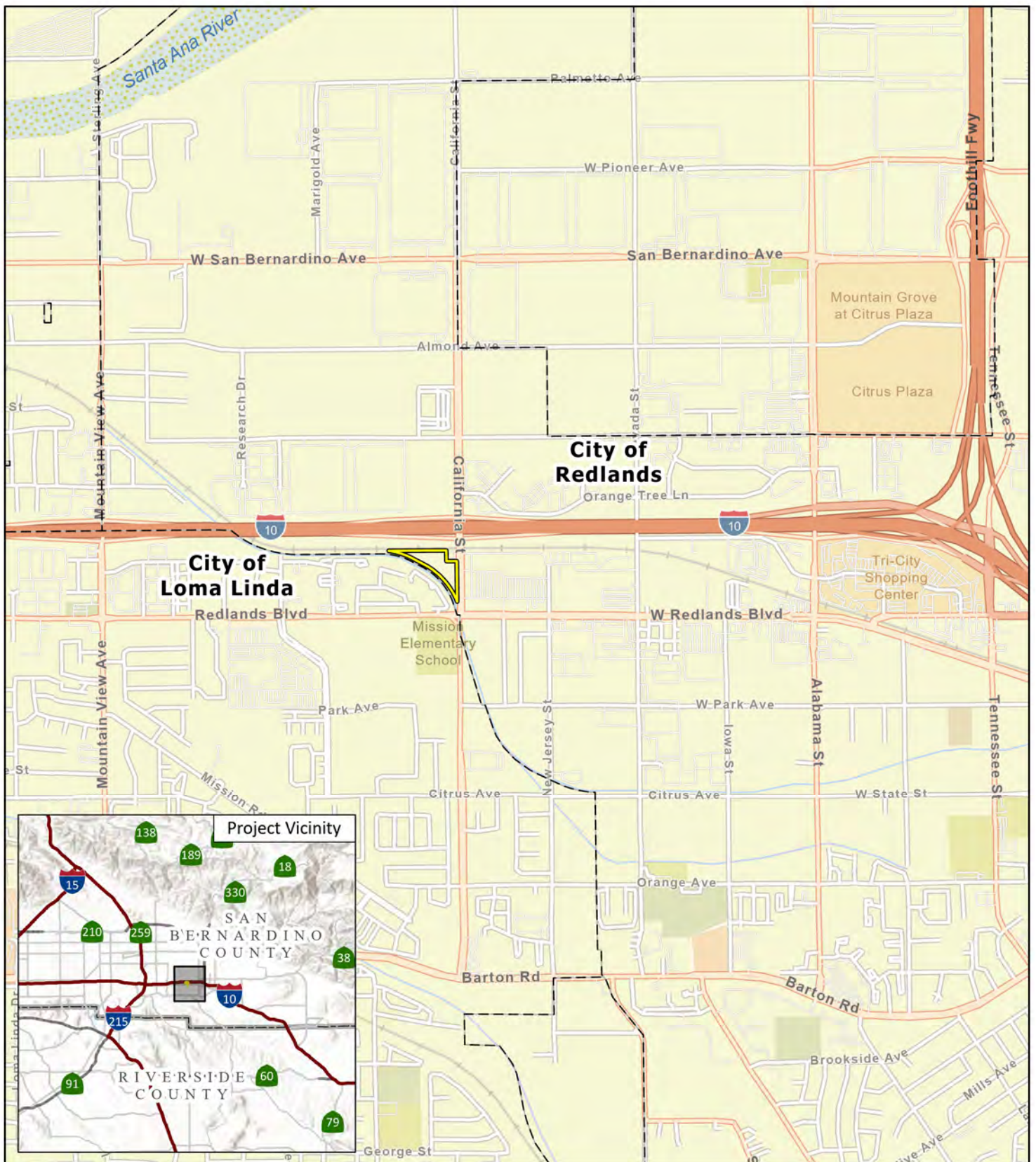


FIGURE 1

LSA

LEGEND

- Project Site
- City Boundary



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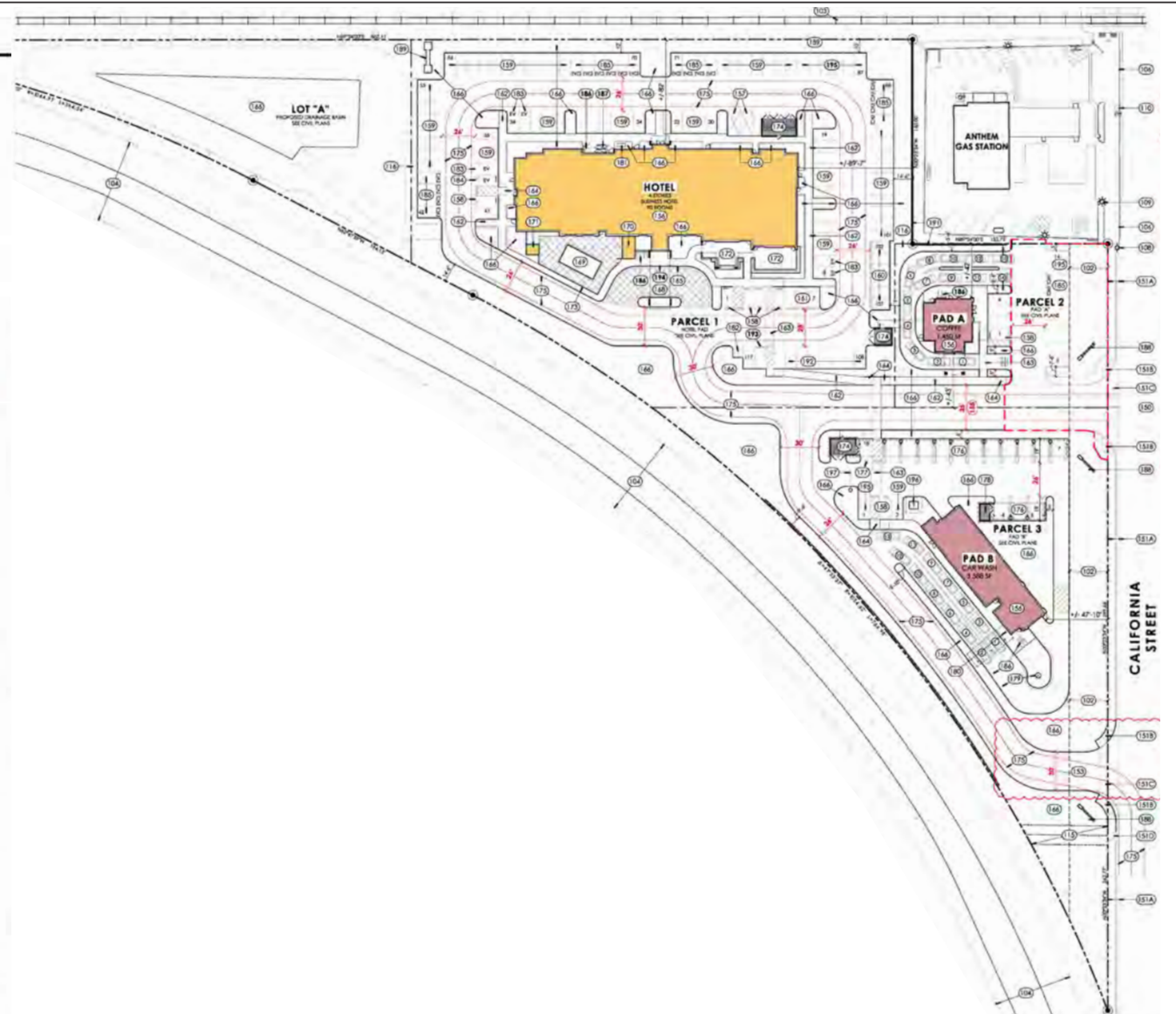
SOURCE: Esri World Street Map (2025)

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913 California Street Project
Regional Location and Project Vicinity

REFERENCE NOTES

101. NOT USED
102. 30' WIDE LANDSCAPE EASEMENT
103. RAILROAD TRACKS
104. EXISTING DRAINAGE CHANNEL
105. EXISTING DIRT ROAD
106. EXISTING CURB GUTTER AND SIDEWALK, TO BE IMPROVED AS PART OF ON-GOING CITY IMPROVEMENT PROJECT.
107. EXISTING DRAINAGE INLET, TO BE MODIFIED.
108. EXISTING UTILITY POLE TO BE RELOCATED
109. EXISTING STREET LIGHT TO REMAIN.
110. EXISTING FIRE HYDRANT, TO REMAIN.
111. EXISTING MEDIAN TO REMAIN
112. ORCHARD
114. EXISTING FENCE TO REMAIN
115. EXISTING 15' WIDE DRAINAGE EASEMENT
116. PROPOSED PARCEL LINE, REFER TO PARCEL MAP
150. FUTURE SIGNALIZED INTERSECTION
151. CITY ROAD IMPROVEMENTS, NOT A PART
 - 151.A. CURB GUTTER AND SIDEWALK
 - 151.B. CURB RAMP
 - 151.C. PEDESTRIAN CROSSING
 - 151.D. MODIFIED DRAIN INLET, SEE CIVIL PLANS
152. MAIN SITE ENTRANCE
153. SECONDARY SITE ENTRANCE (RIGHT IN RIGHT OUT)
156. PROPOSED BUILDING, SEE FLOOR PLAN
157. LOADING AREA
158. ACCESSIBLE PARKING SPACE (9'x19')
159. STANDARD PARKING (9'x19')
160. COMPACT PARKING (9'x16')
161. HOTEL CHECK IN SPACE (9'x19')
162. CONCRETE WALK, REFER TO CIVIL AND LANDSCAPE PLANS.
163. PEDESTRIAN CROSSING, SEE CIVIL AND LANDSCAPE PLANS.
164. CONCRETE CURB RAMP, REFER TO CIVIL PLANS
165. ZERO CURB AT PORTE COCHERE, SEE CIVIL PLANS
166. LANDSCAPE AREA, REFER TO LANDSCAPE PLANS
167. DRAINAGE BASIN, SEE CIVIL PLANS
168. HOTEL PORTE COCHERE WITH DECORATIVE PAVING
169. HOTEL POOL
170. POOL RESTROOMS, SEE FLOOR PLAN
171. POOL EQUIPMENT ROOM
172. HOTEL OUTDOOR SPACE.
173. 6' TALL FENCE WITH PRIVACY SCREEN AT POOL
174. TRASH ENCLOSURE, SEE PLAN
175. FIRE LANE, TO CONFORM WITH FIRE CODE AND LOCAL REQ'S INCLUDING:
 - PATH SHALL BE 20' CLEAR
 - 20' INSIDE TURNING RADIUS
 - 40' OUTSIDE RADIUS
176. VACUUM SPACES (9'x19' SPACE WITH 4' WIDE VACUUM SPACE)
177. ACCESSIBLE VACUUM SPACE (9'x19' WITH 8' WIDE ACCESS SPACE)
178. CARWASH EQUIPMENT ENCLOSURE.
179. FLAGPOLE
180. CARWASH CHECK-IN KIOSK
181. EMERGENCY GENERATOR
182. MOTORCYCLE PARKING (4'x8')
183. EV SPACE (9'x19'), PER CGBC TABLE 5.106.5.3.1
184. VAN ACCESSIBLE EV SPACE (9'x19'), PER CGBC TABLE 5.106.5.3.1
185. EV CAPABLE SPACE (9'x19'), PER CGBC TABLE 5.106.5.3.1
186. SHORT TERM BICYCLE PARKING
187. LONG TERM BICYCLE PARKING
188. MONUMENT SIGN, UNDER SEPARATE COVER.
189. FREEWAY ORIENTED SIGN, UNDER SEPARATE COVER.
191. COMBINATION WALL AT GAS STATION, TUBULAR STEEL OVER CMU. HEIGHT TO BE DETERMINED.
192. OVERFLOW PARKING
193. VAN POOL SPACE PER RMC 18.224.010 (E).
194. PASSENGER LOADING AREA (110' LINEAR SPACE), PER RMC 18.224.010 (D).
195. EMPLOYEE PARKING, HALF OF THESE SPACES WILL BE UTILIZED AS RIDESHARE SPACES PER RMC 18.224.010 (I).
196. PROPOSED ELECTRICAL TRANSFORMER
197. CAR WASH DIRECTIONAL SIGNAGE



LSA



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SOURCE: Steve Rigor Design

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FIGURE 2

913 California Street Project
Site Plan

EXISTING LAND USES IN THE PROJECT AREA

For the purposes of this analysis, sensitive receptors are considered areas of the population that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include residences, schools, daycare centers, hospitals, parks, and similar uses that are sensitive to air quality. Impacts on sensitive receptors are of particular concern because those receptors are the population most vulnerable to the effects of air pollution. The project site is surrounded primarily by commercial and residential uses. The areas adjacent to the project site include the following:

- **North:** Railroad line, followed by I-10 and commercial uses
- **East:** Existing commercial center
- **South:** Existing residential uses and Mission Elementary School
- **West:** Existing residential uses

The closest sensitive receptors are single-family residences located approximately 165 feet southwest of the project site. In addition, the Mission Elementary School is located south of the project site within 200 feet.

BACKGROUND

This section provides a discussion of regulatory guidance from the California Air Resources Board (CARB), the OEHHA, the California Air Pollution Control Officers Association (CAPCOA), and the SCAQMD.

CALIFORNIA AIR RESOURCES BOARD HANDBOOK AND TECHNICAL ADVISORY

CARB has developed the *Air Quality and Land Use Handbook* (CARB Handbook)² and a supplement, *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways: Technical Advisory*,³ which are intended to serve as general reference guides for evaluating and reducing air pollution impacts associated with new projects that are part of the land use decision-making process. According to the CARB Handbook, recent air pollution studies have shown an association between both respiratory and other noncancer health effects and proximity to high-traffic roadways and other land uses associated with high-volume truck traffic. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California.

OFFICE OF ENVIRONMENTAL HEALTH AND HAZARD ASSESSMENT GUIDELINES

The OEHHA developed the *Air Toxics Hot Spots Program Guidance Manual*⁴ in conjunction with the CARB for use in implementing the Air Toxics Hot Spots Program (Health and Safety Code Section 44360). The manual describes health effect values, exposure pathway variates (e.g., breathing rates), and a tiered approach for performing HRAs based on current science and policy assessment. The intent of the guidance manual is to incorporate children's health concerns, update risk assessment practices, and provide consistent risk assessment procedures.

CALIFORNIA AIR POLLUTION CONTROL OFFICERS ASSOCIATION

In 2009, the CAPCOA published guidance⁵ on assessing the health risk impacts from and to proposed land use projects, focusing on the acute, chronic, and cancer impacts of sources affected by the California Environmental Quality Act (CEQA). The document recommends procedures to identify when a project should undergo further risk evaluation, procedures for conducting an HRA, guidelines

² California Air Resources Board (CARB). 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April. Website: <https://www.aqmd.gov/docs/default-source/ceqa/handbook/california-air-resources-board-air-quality-and-land-use-handbook-a-community-health-perspective.pdf> (accessed August 2025).

³ CARB. 2017. *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways: Technical Advisory*. April. Website: www.arb.ca.gov/ch/rd_technical_analysis_fact_sheet.pdf (accessed August 2025).

⁴ California Office of Environmental Health Hazard Assessment (OEHHA). 2015. *Air Toxics Hot Spots Program Guidance Manual*. March. Website: oehha.ca.gov/air/crn/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0 (accessed August 2025).

⁵ California Air Pollution Control Officers Association (CAPCOA). 2009. *Health Risk Assessments for Proposed Land Use Projects*. July. Website: https://ww2.valleyair.org/media/glsdzpx3/capcoa_hra_lu_guidelines_8-6-09.pdf (accessed August 2025).

to engage the public, presentation guidelines for results from the HRA, and mitigation measures that may be appropriate for various land use projects.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

The SCAQMD has risk assessment guidelines, *AB 2588 and Rule 1402 Supplemental Guidelines*.⁶ These guidelines incorporate the OEHHA guidance and the options to be used when using the CARB's Hotspots Analysis and Reporting Program Version 2 (HARP2) program for risk assessment calculations.⁷

⁶ South Coast Air Quality Management District (SCAQMD). 2018. *AB 2588 and Rule 1402 Supplemental Guidelines*. July. Website: <https://www.aqmd.gov/docs/default-source/planning/risk-assessment/forms-and-guidelines/ab-2588-supplemental-guidelines-2024.pdf?sfvrsn=6> (accessed August 2025).

⁷ CARB. n.d. Hot Spots Analysis & Reporting Program. Website: www.arb.ca.gov/toxics/harp/harp.htm (accessed August 2025).

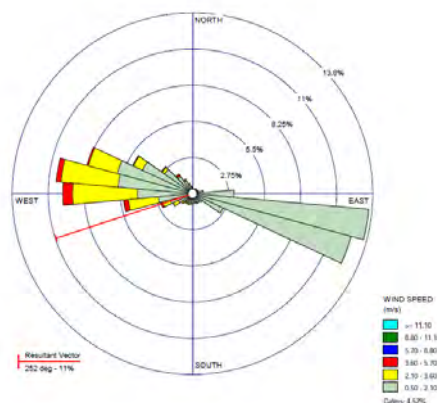
SETTING

REGIONAL AIR QUALITY

The project site is in Redlands, California, which is part of the South Coast Air Basin (Basin) and is under the jurisdiction of the SCAQMD.

Climate/Meteorology

Air quality in the planning area is not only affected by various emission sources (e.g., mobile and industry), but also by atmospheric conditions (e.g., wind speed, wind direction, temperature, and rainfall). The nearest representative meteorological station that provides the American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD) ready meteorological data is the Redlands Meteorological Station. Figure 3, Project Area Wind Patterns, shows the windrose⁸ from data measured at this station and the wind patterns for the project area.



Source: SCAQMD Meteorological Data for AERMOD. Website: www.aqmd.gov/home/air-quality/air-quality-data-studies/meteorological-data/data-for-aermod (accessed August 2025).

Figure 3: Project Area Wind Patterns

Toxic Air Contaminants

The public's exposure to TACs is a significant environmental health issue in the State of California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Federal Act (42 United States Code Section 7412) is a TAC. Under State law, the California Environmental Protection Agency, acting through CARB, is authorized to identify a substance as a TAC if it

⁸ A windrose provides a succinct view of how wind speed and direction are typically distributed at a particular location. Presented in a circular format, the windrose shows the frequency of winds blowing from particular directions.

determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act), AB 2588 (Air Toxics “Hot Spot” Information and Assessment Act of 1987), and Senate Bill 25, the Children’s Environmental Health Protection Act. The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an “airborne toxics control measure” for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions.

Air toxics from stationary sources are also regulated in California under AB 2588. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the designated air quality management district or air pollution control district. High-priority facilities are required to perform an HRA and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

To date, CARB has designated nearly 200 compounds as TACs. Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines (diesel particulate matter [DPM]).

THRESHOLDS OF SIGNIFICANCE

Both the State and federal governments have established health-based ambient air quality standards for seven air pollutants. For other air pollutants without defined significance standards, the definition of substantial pollutant concentrations varies. For TACs, “substantial” is taken to mean that the individual health risk exceeds a threshold considered to be a prudent risk management level.

The following limits for maximum individual cancer risk (MICR) and noncancer acute and chronic Hazard Index (HI) from project emissions of TACs are considered appropriate for use in determining the health risk for projects in the Basin:

- **MICR:** MICR is the estimated probability of a maximally exposed individual (MEI) contracting cancer as a result of exposure to TACs over a period of 30 years for adults and 9 years for children in residential locations and over a period of 25 years for workers. The MICR calculations include multipathway consideration, when applicable.

The cumulative increase in MICR that is the sum of the calculated MICR values for all TACs would be considered significant if it would result in an increased MICR greater than 10 in 1 million (1×10^{-5}) at any receptor location.

- **Chronic HI:** Chronic HI is the ratio of the estimated long-term level of exposure to a TAC for a potential MEI to its chronic reference exposure level. The chronic HI calculations include multipathway consideration, when applicable.

The project would be considered significant if the cumulative increase in total chronic HI for any target organ system would exceed 1.0 at any receptor location.

- **Acute HI:** Acute HI is the ratio of the estimated maximum 1-hour concentration of a TAC for a potential MEI to its acute reference exposure level.

The project would be considered significant if the cumulative increase in total acute HI for any target organ system would exceed 1.0 at any receptor location.

The SCAQMD *CEQA Air Quality Handbook*⁹ states that emissions of TACs are considered significant if an HRA shows an increased risk of greater than 10 in 1 million. Based on guidance from SCAQMD in the document *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*,¹⁰ for the purposes of this analysis, the threshold of 10 in 1 million was used as the cancer risk threshold for the proposed project.

⁹ SCAQMD. 1993. *CEQA Air Quality Handbook* (currently under revision).

¹⁰ SCAQMD. 2003. *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*. August.

METHODOLOGY

A construction HRA, which evaluates construction-period health risk to off-site receptors, was performed for the proposed project. To estimate the potential cancer risk associated with construction of the proposed project from equipment exhaust (including DPM), a dispersion model was used to translate an emission rate from the source location to a concentration at the receptor location of interest (i.e., nearby residences and worksites). Dispersion modeling varies from a simpler, more conservative screening-level analysis to a more complex and refined detailed analysis. This refined assessment was conducted using the CARB exposure methodology with the air dispersion modeling performed using the United States Environmental Protection Agency's (USEPA) AERMOD air dispersion model. The model provides a detailed estimate of exhaust concentrations based on site and source geometry, source emissions strength, distance from the source to the receptor, and meteorological data.

EMISSION SOURCES

Emissions were calculated by MD Acoustics, LLC and are included in the technical report titled: *913 California Street Air Quality, Greenhouse Gas, and Energy Impact Study, City of Redlands, CA*¹¹. As discussed in Section 4.0, Modeling Parameters and Assumptions of the Air Quality, Greenhouse Gas, and Energy Impact Study, construction emissions were calculated using the California Emissions Estimator Model version 2022.1.1.1.22 (CalEEMod) computer program. Construction of the proposed project would begin in late 2025 and occur for approximately 13 months, ending in 2026, which was included in CalEEMod. Grading of the project site would result in approximately 5,000 cubic yards of cut and require approximately 35,000 cubic yards of fill, requiring the import of approximately 30,000 cubic yards of soil, which was also included in CalEEMod. All other construction details used default assumptions (e.g., construction worker and truck trips and fleet activity, construction equipment and idling engine) from CalEEMod. This analysis used the emission rates from the CalEEMod construction output results to estimate the potential health risk impacts to sensitive receptors. The construction PM emission rates are presented in Table A and were included in AERMOD. CalEEMod output files are included as an attachment to the Air Quality, Greenhouse Gas, and Energy Impact Study¹² prepared for the proposed project.

Table A: Particulate Matter Construction Emissions (tons per year)

Construction Year	Exhaust PM ₁₀	Fugitive Dust PM ₁₀	Exhaust PM _{2.5}	Fugitive Dust PM _{2.5}
2024	0.02	0.05	0.02	0.02
2025	0.04	0.09	0.04	0.01

Source: MD Acoustics, LLC. 2025. 913 California Street Air Quality, Greenhouse Gas, and Energy Impact Study, City of Redlands, CA, Appendix A, CalEEMod Emission Output.

¹¹ MD Acoustics, LLC. 2025. 913 California Street Air Quality, Greenhouse Gas, and Energy Impact Study, City of Redlands, CA. February 17.

¹² MD Acoustics, LLC. 2025. 913 California Street Air Quality, Greenhouse Gas, and Energy Impact Study, City of Redlands, CA. February 17.

GENERAL INFORMATION

To determine the potential health risk associated with exhaust from diesel-powered construction equipment to people living and working near the project site, a construction HRA was conducted for the proposed project.

For the purposes of an HRA, emissions are analyzed for acute health impacts, chronic health impacts, and carcinogenic health impacts. A multipathway assessment has been conducted to evaluate the project's emissions during construction following the modeling techniques recommended in the OEHHA *Air Toxic Hot Spots Program Risk Assessment Guidelines*.¹³ The analysis herein has been conducted in accordance with SCAQMD requirements for HRAs.

This HRA has been conducted using two models: (1) the USEPA AERMOD dispersion model to determine how the TACs would move through the atmosphere after release from sources on site during the construction period; and (2) the CARB's HARP2 model to translate the pollutant concentrations from AERMOD into individual health risks at the nearby sensitive receptor locations.

The OEHHA has determined that long-term exposure to diesel exhaust particulates poses the highest cancer risk of any TAC it has evaluated. Exposure to diesel exhaust can also have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles (also known as DPM) made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to DPM also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks. For risk assessment procedures, the OEHHA specifies that the surrogate for whole diesel exhaust is DPM. The HRA analyses used particulate matter less than 10 microns in diameter (PM₁₀) emissions to represent DPM emissions, consistent with OEHHA guidance.

The conservative nature of this analysis is due primarily to the following three factors:

- The CARB-adopted diesel exhaust unit risk factor (URF) of 300 in 1 million per microgram per cubic meter is based on the upper 95th percentile of estimated risk for each of the epidemiological studies used to develop the URF. Therefore, the risk factor is already representative of the conservative risk posed by DPM.
- The risk estimates assume sensitive residence receptors would be subject to DPM for 24 hours per day, 350 days per year, and worker receptors for 8 hours per day, 350 days per year. As a conservative measure, SCAQMD does not recognize indoor adjustments for residents or workers. However, people typically spend the majority of their time indoors versus remaining outdoors for 24 hours per day, 350 days per year.¹⁴ Therefore, the actual exposure any person would

¹³ OEHHA. 2015. *Air Toxic Hot Spots Program Risk Assessment Guidelines*.

¹⁴ In May 1991, the CARB Research Division, in association with the University of California, Berkeley, published research findings titled *Activity Patterns of California Residents*. The findings of that study indicate that, on average, adults and adolescents in California spent almost 15 hours per day inside their homes and 6 hours in other indoor locations, for a total of 21 hours (87 percent of the day). About 2 hours per day were spent in transit, and just over 1 hour per day was spent in outdoor locations.

experience would be less than considered in this analysis. This results in much lower actual health risk levels than presented in this analysis.

- The exposure to DPM is assumed to be constant for the given period analyzed (i.e., 30 years for the residential receptors and 25 years for the worker receptors). However, emissions from DPM are expected to substantially decrease in the future with the implementation of standard regulatory requirements and technological advancements to reduce DPM, such as CARB's offroad vehicle and equipment regulations¹⁵. Therefore, the health risk levels would be less than presented in this analysis.

Improvements over the last 40 years to diesel fuel and diesel engines have resulted in lower emissions of some of these TACs.¹⁶ These improvements resulted in a 75 percent reduction in particulate emissions from diesel-powered trucks and other equipment in 2010 and an 85 percent reduction in 2020 compared to 2000 levels.¹⁷ These improvements are anticipated to continue into the foreseeable future.

AMERICAN METEOROLOGICAL SOCIETY/ENVIRONMENTAL PROTECTION AGENCY REGULATORY MODEL DISPERSION MODELING

In order to assess the dispersion of emissions associated with the project, air dispersion modeling was performed using AERMOD. The model is approved by the USEPA when estimating the air quality impacts associated with point and fugitive sources in simple and complex terrain. The model was used to calculate the annual average pollutant concentrations associated with each emitting source. Inputs for each emitting source were based on the characterizations described above. Details of these inputs are included in Appendix A.

The model requires additional input parameters, including local meteorology. Due to the model's sensitivity to individual parameters (e.g., wind speed, temperature, and direction), the USEPA recommends meteorological data used as input into dispersion models be selected on the basis of relative spatial and temporal conditions that exist in the area of concern. As such, 5 years of meteorological data from SCAQMD's Redlands Meteorological Station (the nearest available station) was used to represent local weather conditions and prevailing winds. Figure 3 above shows the graphical representation of the wind patterns. Receptors were placed at the nearest sensitive receptor locations, as shown in Figure 4, Sensitive Receptor Grid.

¹⁵ CARB. n.d. *Guide to Off-Road Vehicle and Equipment Regulations*. Website: https://ww2.arb.ca.gov/sites/default/files/offroadzone/pdfs/offroad_booklet.pdf (accessed August 2025)

¹⁶ United States Environmental Protection Agency (USEPA). n.d. *Learn About Impacts of Diesel Exhaust and the Diesel Emissions Reduction Act (DERA)*. Website: www.epa.gov/dera/learn-about-impacts-diesel-exhaust-and-diesel-emissions-reduction-act-dera (accessed August 2025).

¹⁷ OEHHA. 2001. *Health Effects of Diesel Exhaust*. May 21, 2001. Website: oehha.ca.gov/air/health-effects-diesel-exhaust (accessed August 2025).

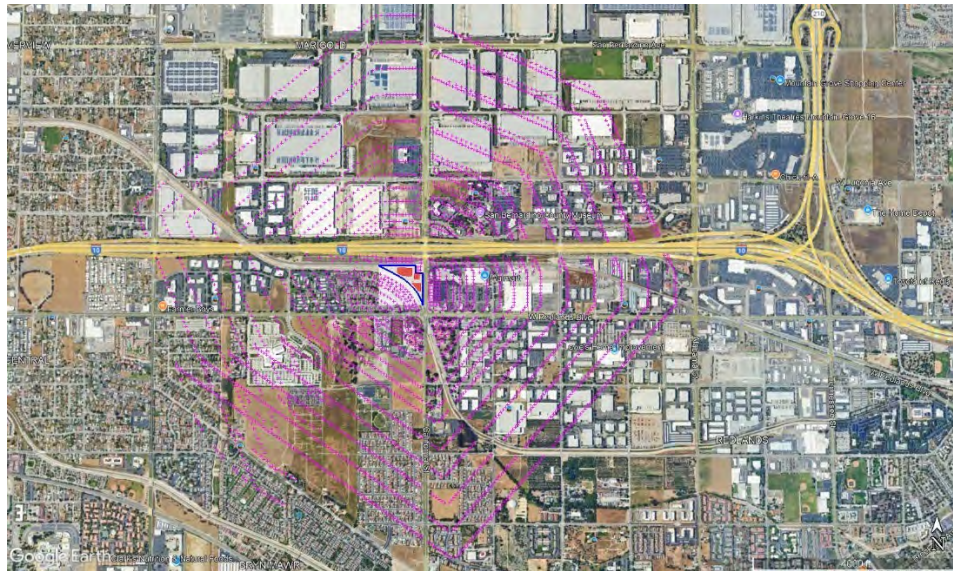


Figure 4: Sensitive Receptor Grid

HOTSPOTS ANALYSIS AND REPORTING PROGRAM MODELING

CARB's HARP2 model is a tool that assists with the programmatic requirements of the Air Toxics "Hot Spots" Program (AB 2588). HARP2 was used to translate the TAC concentrations from AERMOD into long-term carcinogenic and chronic health risk levels and short-term acute health risk levels following the guidance in the SCAQMD and OEHHA risk assessment guidelines. These guidelines specify a minimum set of TAC pathways and HARP2 modeling options for the carcinogenic assessment. To estimate chronic noncancer risks at residential receptors, the "RMP-Derived Method" risk-calculation option was used. Following the OEHHA guidance, an 8-hour chronic noncancer risk was calculated for residential receptors because the project would operate more than 8 hours per day and 5 days per week.

The dose-response relationship for a specific pollutant describes the association between exposure and the observed response (health effect). In other words, the relationship estimates how different levels of exposure to a pollutant change the likelihood and severity of health effects. The dose-response relationship (the response occurring with increasing doses) varies with each pollutant, individual sensitivity, and type of health effect. Combining the results of the emission characterization and dispersion modeling described above with the dose-response assessment gives an estimate of the increased health risk for an individual exposed to the maximum predicted long-term concentrations of TACs.

Discrete variants for daily breathing rates, exposure frequency, and exposure duration were default rates as presented in the OEHHA guidance document titled *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*¹⁸ and guidance from SCAQMD.

¹⁸ OEHHA. 2015. *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments*.

HEALTH RISK IMPACTS

The following section describes the potential impacts on sensitive and worker receptors from construction of the proposed project.

A construction HRA, which evaluates construction-period health risk to off-site receptors, was performed for the proposed project, using the methodology described above. Table A, below, identifies the results of the analysis at the MEI locations. Model snapshots of the sources are included in Appendix A.

As identified above, the nearest sensitive receptors that have the potential to be affected by TACs taking into account the existing environment (e.g., pollutant dispersion and meteorological data) would be the single-family residences located approximately 165 feet to the southwest of the project site. In addition, the worker MEI closest to the proposed project is located immediately northeast of the project site at approximately 38 feet. The closest school receptor is located within 200 feet of the project site. The HRA analysis and results are presented below; data outputs are included in Appendix A.

Table B: Health Risks from Project Construction to Off-Site Receptors

Location	Carcinogenic Inhalation Health Risk in 1 Million	Chronic Inhalation Hazard Index	Acute Inhalation Hazard Index
Residential Receptor Risk	6.85	0.006	0.000
Worker Receptor Risk	0.78	0.040	0.000
School Receptor Risk	0.10	<0.001	0.00
SCAQMD Significance Threshold	10 in 1 million	1.0	1.0
Significant?	No	No	No

Source: Compiled by LSA (August 2025).

SCAQMD = South Coast Air Quality Management District

As shown in Table B, the maximum cancer risk for the residential MEI would be 6.85 in 1 million, which would not exceed the SCAQMD cancer risk threshold of 10 in 1 million. The worker receptor risk would be 0.78 in 1 million and the school MEI risk would be 0.10 in one million, which would not exceed the SCAQMD cancer risk threshold of 10 in 1 million. The total chronic HI would be 0.006 for the residential MEI, 0.040 for the worker MEI, and less than 0.001 for the school receptor MEI, which is below the threshold of 1.0. In addition, the total acute HI would be nominal (0.000), which would also not exceed the threshold of 1.0. Therefore, construction of the proposed project would not exceed SCAQMD thresholds and would not expose nearby sensitive receptors to substantial pollutant concentrations.

CONCLUSION

Based on the results of the analysis, all health risk levels to nearby sensitive receptors from construction-related emissions of TACs would be well below the SCAQMD's HRA thresholds. As such,

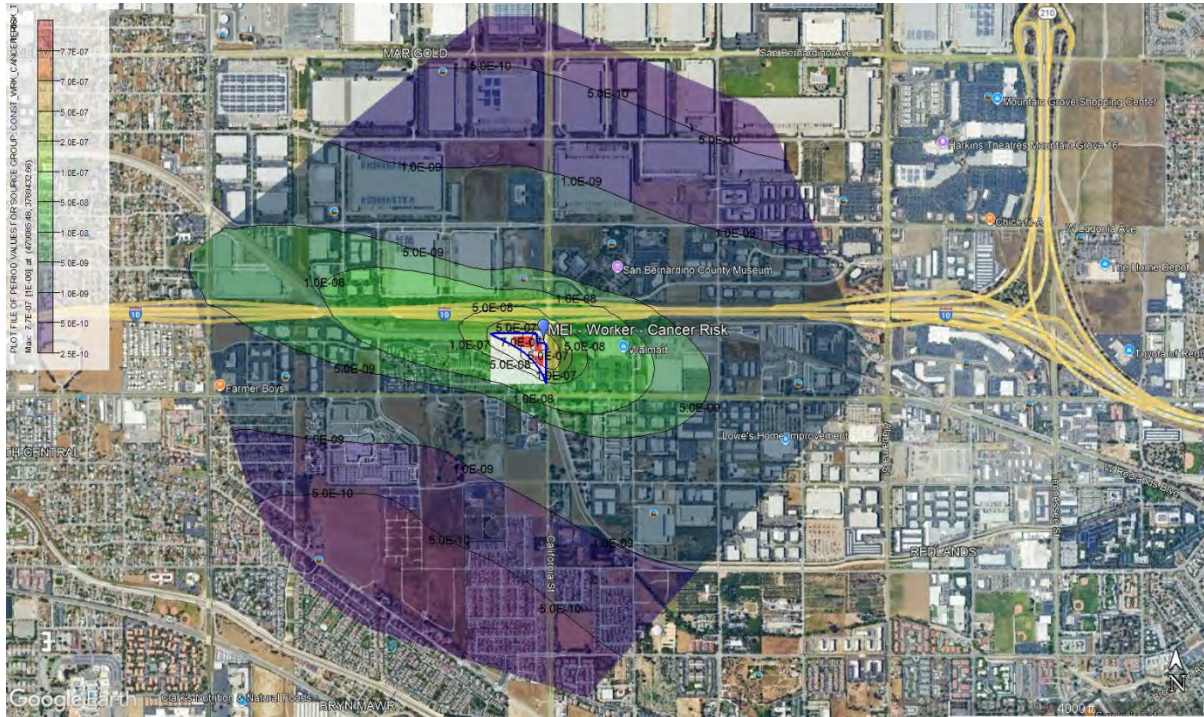
no significant health risk would occur from construction of the project. The HARP2 modeling reports and AERMOD information are included in Appendix A.

APPENDIX A

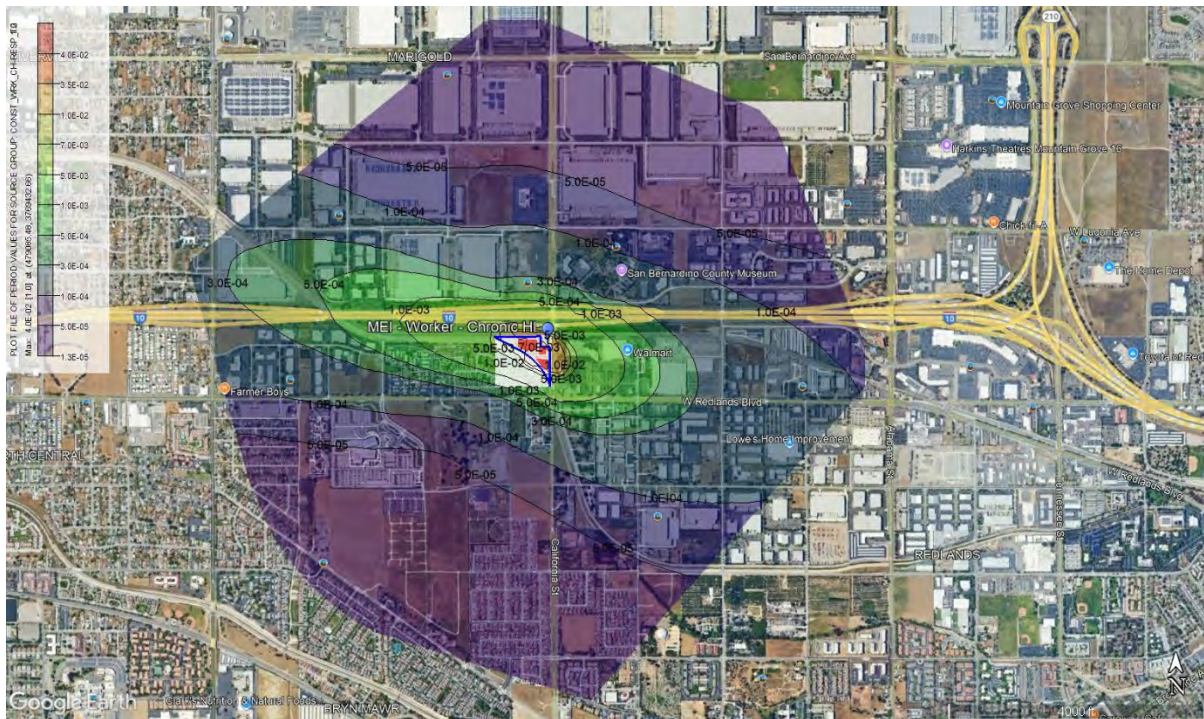
HRA MODEL INPUTS AND OUTPUTS

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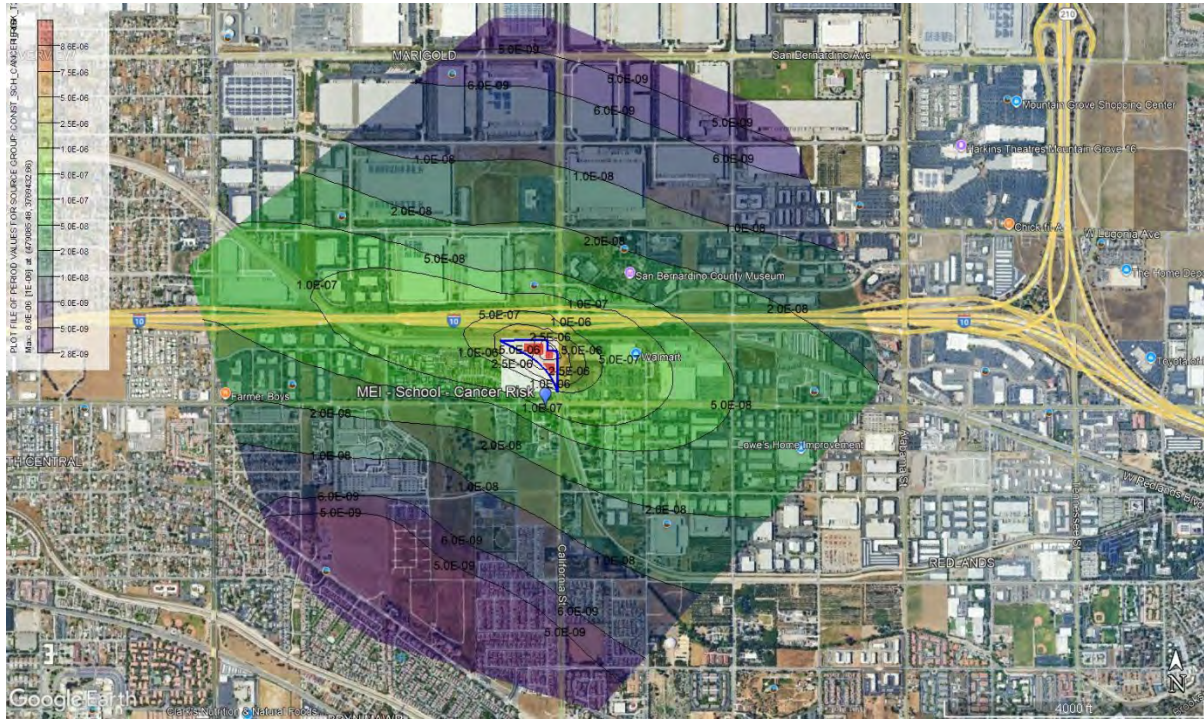
Construction Cancer Risk – Worker Receptor



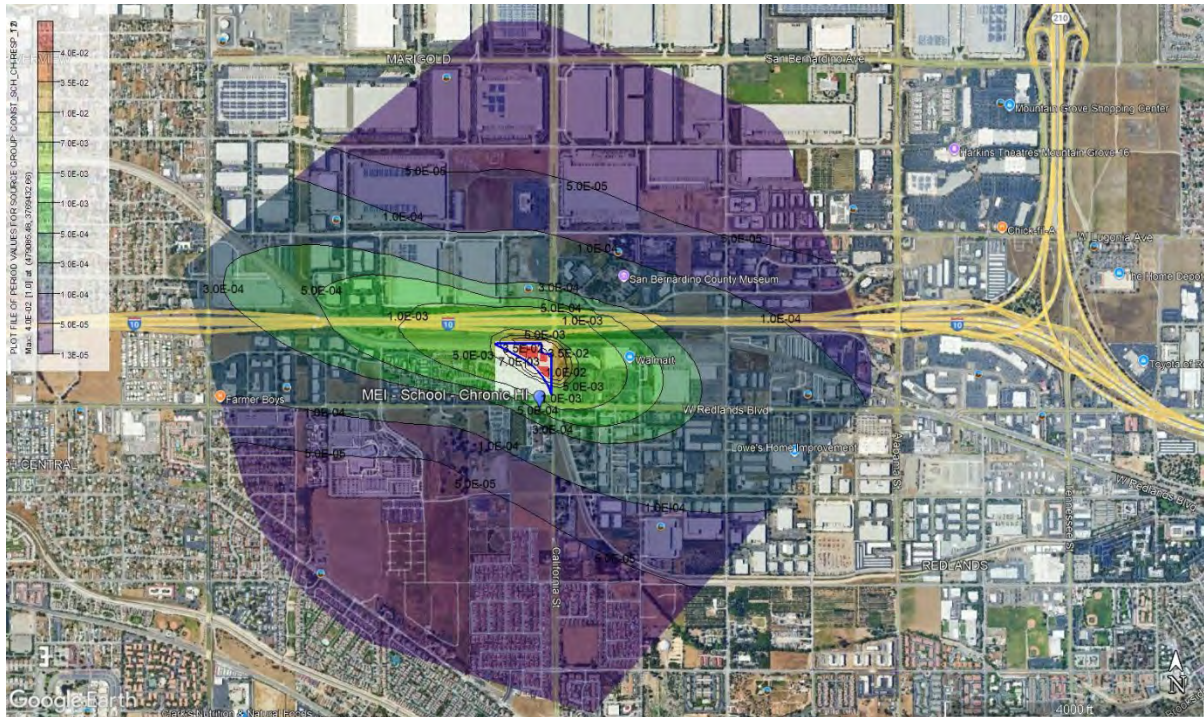
Construction Chronic Health Risk – Worker Receptor



Construction Cancer Risk – School Receptor



Construction Chronic Health Risk – School Receptor



Construction MEI (Sensitive) - Cancer Risk (in a Million) HARP Rec #: 2229 X: 478909.85 Y: 3769387.63			
T2	T3	T4i	0
6.85	0.00	0.00	0.00
MEI (Sensitive) - Chronic Hazard Index HARP Rec #: 2229 X: 478909.85 Y: 3769387.63			
T2	T3	T4i	0
6.37E-03	0.00E+00	0.00E+00	0.00E+00
MEI (Sensitive) - Acute Hazard Index HARP Rec #: NA X: NA Y: NA			
T2	T3	T4i	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00
MEI (Sensitive) - PM 2.5 HARP Rec #: 2229 X: 478909.85 Y: 3769387.63			
T2	T3	T4i	0
0.032	0.000	0.000	0.000

Construction MEI (Worker) - Cancer Risk (in a Million) HARP Rec #: 1 X: 479085.48 Y: 3769432.66			
T2	T3	T4i	0
0.78	0.00	0.00	0.00
MEI (Worker) - Chronic Hazard Index HARP Rec #: 1 X: 479085.48 Y: 3769432.66			
T2	T3	T4i	0
4.00E-02	0.00E+00	0.00E+00	0.00E+00
MEI (Worker) - Acute Hazard Index HARP Rec #: NA X: NA Y: NA			
T2	T3	T4i	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00
MEI (Worker) - PM 2.5 HARP Rec #: 1 X: 479085.48 Y: 3769432.66			
T2	T3	T4i	0
0.200	0.000	0.000	0.000

Construction MEI (School) - Cancer Risk (in a Million) HARP Rec #: 872 X: 479041.64 Y: 3769149.65			
T2	T3	T4i	0
0.10	0.00	0.00	0.00
MEI (School) - Chronic Hazard Index HARP Rec #: 872 X: 479041.64 Y: 3769149.65			
T2	T3	T4i	0
4.55E-04	0.00E+00	0.00E+00	0.00E+00
MEI (School) - Acute Hazard Index HARP Rec #: NA X: NA Y: NA			
T2	T3	T4i	0
0.00E+00	0.00E+00	0.00E+00	0.00E+00
MEI (School) - PM 2.5 HARP Rec #: 872 X: 479041.64 Y: 3769149.65			
T2	T3	T4i	0
0.0023	0.0000	0.0000	0.0000

Description	Receptor Type	Model Type	UTM X	UTM Y	Latitude	Longitude
Construction	Sensitive	Cancer Risk	478909.85	3769387.63	34.06500885	-117.2285513
Construction	Sensitive	Chronic HI	478909.85	3769387.63	34.06500885	-117.2285513
Construction	Sensitive	Acute HI	0	0		
Construction	Sensitive	PM 2.5	478909.85	3769387.63	34.06500885	-117.2285513
Construction	School	Cancer Risk	479041.64	3769149.65	34.06286522	-117.2271174
Construction	School	Chronic HI	479041.64	3769149.65	34.06286522	-117.2271174
Construction	School	Acute HI	0	0		
Construction	School	PM 2.5	479041.64	3769149.65	34.06286522	-117.2271174
Construction	Worker	Cancer Risk	479085.48	3769432.66	34.06541849	-117.2266492
Construction	Worker	Chronic HI	479085.48	3769432.66	34.06541849	-117.2266492
Construction	Worker	Acute HI	0	0		
Construction	Worker	PM 2.5	479085.48	3769432.66	34.06541849	-117.2266492

General AERMOD Input Parameters

Project Boundary

Based on site plan

Project Elevation Data

	Source	Lakes Environmental
	Link	http://www.webgis.com/terraindata.html
	Evel Data Descr.	7.5 min DEM

Project Receptor Grid

	Telescoping Grid	Spacing (m)	Distance (m)
	Grid 1	20	200
	Grid 2	40	400
	Grid 3	80	800
	Grid 4		
	Comments	Receptors on roads or paring lot areas have been removed.	

Meteorological Dataset

	Location	KONT
	Provided By	South Coast AQMD
	Years	2018, 2019, 2021- 2023
	Elevation (m)	475
	Link	https://www.aqmd.gov/docs/default-source/air-quality/meteorological-data/aermod-ready-meteorological-data/2023/rdld_sfc_pfl.zip

Construction Modeling Specific Inputs

AERMOD Input Options

	Regulatory Options	Default
	Pollutant Type	Other
	Averaging Period	Period & Hourly
	Dispersion Coefficient	Urban
	County	San Bernardino
	Urban Grouping / Pop	Y 2,035,210
	# of Worker Receptors	6,308
	# of Sensitive Receptors	4,339
	# of School Receptors	

Construction Area Parameters

	Source Type	Polygon Area
	Project Area (m ²)	12617.7
	Ht. of Source (m)	3.048

General HARP Input Parameters		
Construction		
Sensitive Receptors		
Sensitive Scenario Parameters		
	Starting Age	3 rd Trimester
	Age Range	3 rd Trimester - 1 Year
	Receptor Type	Individual Resident
	Assessment Type	Cancer / Chronic / Acute
	Exposure Duration	1
	Intake Rate	RMP using the Derived Method
	Comments	Each year of construction is modeled separately and the impact to each receptor is summed to estimate the total exposure from construction emissions. Additionally, the starting age is increased for each year of construction.
Sensitive Pathway Parameters		
	Pathways	SCAQMD Mandatory minimum Pathways
	Deposition Rate	0.02
	TAH < 16 yrs	Y
	TAH ≥ 16 yrs	Y
Worker Receptors		
Worker Scenario Parameters		
	Starting Age	16
	Age Range	16 - 17
	Receptor Type	Worker
	Assessment Type	Cancer / Chronic / Acute
	Exposure Duration	1
	Intake Rate	OEHHA Derived Method
	Comments	Each year of construction is modeled separately and the impact to each receptor is summed to estimate the total exposure from construction emissions. Additionally, the starting age is increased for each year of construction.
Worker Pathway Parameters		
	Pathways	OEHHA minimum Pathways
	Deposition Rate	0.02
	TAH < 16 yrs	N
	TAH ≥ 16 yrs	N

			Yr 1	Yr 2	Total
1	479085.48	3769432.66	1.51E-05	2.79E-05	4.31E-05
2	479102.33	3769437.04	9.10E-06	1.68E-05	2.59E-05
3	479086.14	3769452.65	8.49E-06	1.57E-05	2.42E-05
4	479103	3769457.02	5.38E-06	9.93E-06	1.53E-05
5	479103.66	3769477.01	3.05E-06	5.64E-06	8.69E-06
6	479075.06	3769497.98	2.09E-06	3.85E-06	5.94E-06
7	479104.33	3769497	1.79E-06	3.30E-06	5.09E-06
8	479079.71	3769637.9	2.47E-07	4.56E-07	7.03E-07
9	479081.04	3769677.88	1.77E-07	3.26E-07	5.03E-07
10	479082.37	3769717.85	1.31E-07	2.43E-07	3.74E-07
11	479085.03	3769797.81	8.10E-08	1.50E-07	2.31E-07
12	479087.69	3769877.77	5.53E-08	1.02E-07	1.57E-07
13	479090.35	3769957.72	4.05E-08	7.48E-08	1.15E-07
14	479093.01	3770037.68	3.12E-08	5.77E-08	8.89E-08
15	479095.67	3770117.63	2.51E-08	4.63E-08	7.14E-08
16	479100.99	3770277.54	1.76E-08	3.26E-08	5.02E-08
17	479156.3	3769397.46	5.60E-06	1.04E-05	1.60E-05
18	479156.3	3769378.36	6.10E-06	1.13E-05	1.74E-05
19	479156.3	3769359.27	6.47E-06	1.19E-05	1.84E-05
20	479156.3	3769340.17	6.59E-06	1.22E-05	1.88E-05
21	479156.3	3769321.07	5.94E-06	1.10E-05	1.69E-05
22	479156.3	3769301.97	4.57E-06	8.45E-06	1.30E-05
23	479156.3	3769282.87	3.13E-06	5.78E-06	8.92E-06
24	479156.3	3769263.78	2.05E-06	3.79E-06	5.83E-06
25	479156.3	3769244.68	1.36E-06	2.50E-06	3.86E-06
26	479156.3	3769225.58	9.28E-07	1.71E-06	2.64E-06
27	479170.68	3769430.47	3.15E-06	5.81E-06	8.96E-06
28	479176.3	3769397.46	3.92E-06	7.24E-06	1.12E-05
29	479176.3	3769378.36	4.28E-06	7.90E-06	1.22E-05
30	479176.3	3769359.27	4.48E-06	8.27E-06	1.28E-05
31	479176.3	3769340.17	4.47E-06	8.25E-06	1.27E-05
32	479176.3	3769321.07	4.07E-06	7.51E-06	1.16E-05
33	479176.3	3769301.97	3.36E-06	6.20E-06	9.56E-06
34	479176.3	3769282.87	2.55E-06	4.71E-06	7.27E-06
35	479176.3	3769263.78	1.85E-06	3.41E-06	5.26E-06
36	479176.3	3769244.68	1.32E-06	2.43E-06	3.74E-06
37	479176.3	3769225.58	9.45E-07	1.74E-06	2.69E-06
38	479190.68	3769430.47	2.39E-06	4.41E-06	6.80E-06
39	479179.43	3769458.28	1.89E-06	3.50E-06	5.39E-06
40	479160.09	3769478.26	1.65E-06	3.04E-06	4.69E-06
41	479196.3	3769397.46	2.93E-06	5.41E-06	8.34E-06
42	479196.3	3769378.36	3.18E-06	5.88E-06	9.07E-06
43	479196.3	3769359.27	3.30E-06	6.10E-06	9.40E-06
44	479196.3	3769340.17	3.25E-06	6.00E-06	9.25E-06
45	479196.3	3769321.07	3.00E-06	5.54E-06	8.54E-06
46	479196.3	3769301.97	2.58E-06	4.77E-06	7.34E-06
47	479196.3	3769282.87	2.09E-06	3.85E-06	5.94E-06
48	479196.3	3769263.78	1.61E-06	2.98E-06	4.59E-06

49	479196.3	3769244.68	1.22E-06	2.25E-06	3.47E-06
50	479196.3	3769225.58	9.14E-07	1.69E-06	2.60E-06
51	479209.27	3769433.94	1.85E-06	3.41E-06	5.26E-06
52	479202.24	3769451.32	1.64E-06	3.02E-06	4.66E-06
53	479195.21	3769468.7	1.39E-06	2.57E-06	3.96E-06
54	479171.04	3769493.69	1.14E-06	2.10E-06	3.24E-06
55	479153.9	3769501.3	1.14E-06	2.10E-06	3.24E-06
56	479216.3	3769416.56	1.99E-06	3.68E-06	5.68E-06
57	479216.3	3769397.46	2.26E-06	4.17E-06	6.42E-06
58	479216.3	3769378.36	2.44E-06	4.50E-06	6.93E-06
59	479216.3	3769359.27	2.52E-06	4.65E-06	7.16E-06
60	479216.3	3769340.17	2.48E-06	4.58E-06	7.05E-06
61	479216.3	3769321.07	2.32E-06	4.29E-06	6.62E-06
62	479216.3	3769301.97	2.07E-06	3.82E-06	5.88E-06
63	479216.3	3769282.87	1.74E-06	3.22E-06	4.96E-06
64	479216.3	3769263.78	1.41E-06	2.61E-06	4.02E-06
65	479216.3	3769244.68	1.12E-06	2.06E-06	3.18E-06
66	479216.3	3769225.58	8.72E-07	1.61E-06	2.48E-06
67	479249.74	3769432.78	1.24E-06	2.30E-06	3.54E-06
68	479236.61	3769465.23	1.03E-06	1.90E-06	2.93E-06
69	479223.49	3769497.67	7.63E-07	1.41E-06	2.17E-06
70	479256.3	3769397.46	1.46E-06	2.70E-06	4.16E-06
71	479256.3	3769378.36	1.56E-06	2.88E-06	4.44E-06
72	479256.3	3769359.27	1.61E-06	2.97E-06	4.57E-06
73	479256.3	3769340.17	1.59E-06	2.94E-06	4.54E-06
74	479256.3	3769321.07	1.52E-06	2.82E-06	4.34E-06
75	479256.3	3769301.97	1.40E-06	2.59E-06	4.00E-06
76	479256.3	3769282.87	1.25E-06	2.30E-06	3.55E-06
77	479256.3	3769263.78	1.08E-06	1.99E-06	3.06E-06
78	479256.3	3769244.68	9.08E-07	1.68E-06	2.58E-06
79	479256.3	3769225.58	7.59E-07	1.40E-06	2.16E-06
80	479289.97	3769432.2	8.88E-07	1.64E-06	2.53E-06
81	479277.32	3769463.49	7.69E-07	1.42E-06	2.19E-06
82	479264.66	3769494.78	6.16E-07	1.14E-06	1.75E-06
83	479296.3	3769397.46	1.01E-06	1.86E-06	2.87E-06
84	479296.3	3769378.36	1.08E-06	1.99E-06	3.06E-06
85	479296.3	3769359.27	1.11E-06	2.05E-06	3.16E-06
86	479296.3	3769340.17	1.11E-06	2.05E-06	3.16E-06
87	479296.3	3769321.07	1.08E-06	2.00E-06	3.08E-06
88	479296.3	3769301.97	1.02E-06	1.89E-06	2.91E-06
89	479296.3	3769282.87	9.38E-07	1.73E-06	2.67E-06
90	479296.3	3769263.78	8.42E-07	1.55E-06	2.40E-06
91	479296.3	3769244.68	7.40E-07	1.37E-06	2.11E-06
92	479296.3	3769225.58	6.41E-07	1.18E-06	1.82E-06
93	479329.43	3769433.56	6.61E-07	1.22E-06	1.88E-06
94	479322.55	3769450.55	6.22E-07	1.15E-06	1.77E-06
95	479315.68	3769467.55	5.76E-07	1.06E-06	1.64E-06
96	479308.8	3769484.54	5.26E-07	9.71E-07	1.50E-06
97	479301.93	3769501.54	4.69E-07	8.66E-07	1.33E-06
98	479336.3	3769416.56	6.87E-07	1.27E-06	1.96E-06
99	479336.3	3769397.46	7.43E-07	1.37E-06	2.11E-06
100	479336.3	3769378.36	7.83E-07	1.45E-06	2.23E-06

101	479336.3	3769359.27	8.07E-07	1.49E-06	2.30E-06
102	479336.3	3769340.17	8.12E-07	1.50E-06	2.31E-06
103	479336.3	3769321.07	7.99E-07	1.48E-06	2.28E-06
104	479336.3	3769301.97	7.70E-07	1.42E-06	2.19E-06
105	479336.3	3769282.87	7.23E-07	1.34E-06	2.06E-06
106	479336.3	3769263.78	6.68E-07	1.23E-06	1.90E-06
107	479336.3	3769244.68	6.07E-07	1.12E-06	1.73E-06
108	479336.3	3769225.58	5.42E-07	1.00E-06	1.54E-06
109	479369.65	3769432.99	5.11E-07	9.43E-07	1.45E-06
110	479356.36	3769465.86	4.58E-07	8.46E-07	1.30E-06
111	479343.06	3769498.73	3.88E-07	7.17E-07	1.10E-06
112	479222.16	3769633.28	1.75E-07	3.24E-07	4.99E-07
113	479189.76	3769647.66	1.70E-07	3.14E-07	4.85E-07
114	479157.35	3769662.04	1.69E-07	3.12E-07	4.81E-07
115	479376.3	3769397.46	5.64E-07	1.04E-06	1.60E-06
116	479376.3	3769378.36	5.95E-07	1.10E-06	1.69E-06
117	479376.3	3769359.27	6.15E-07	1.14E-06	1.75E-06
118	479376.3	3769340.17	6.21E-07	1.15E-06	1.77E-06
119	479376.3	3769321.07	6.16E-07	1.14E-06	1.75E-06
120	479376.3	3769301.97	5.99E-07	1.11E-06	1.71E-06
121	479376.3	3769282.87	5.72E-07	1.06E-06	1.63E-06
122	479376.3	3769263.78	5.38E-07	9.94E-07	1.53E-06
123	479376.3	3769244.68	4.99E-07	9.21E-07	1.42E-06
124	479376.3	3769225.58	4.56E-07	8.41E-07	1.30E-06
125	479409.27	3769433.94	4.06E-07	7.50E-07	1.16E-06
126	479402.24	3769451.32	3.89E-07	7.19E-07	1.11E-06
127	479395.21	3769468.7	3.67E-07	6.77E-07	1.04E-06
128	479388.18	3769486.09	3.40E-07	6.28E-07	9.69E-07
129	479381.15	3769503.47	3.14E-07	5.79E-07	8.93E-07
130	479314.79	3769632.74	1.42E-07	2.63E-07	4.05E-07
131	479297.65	3769640.35	1.40E-07	2.58E-07	3.98E-07
132	479280.51	3769647.95	1.37E-07	2.53E-07	3.91E-07
133	479263.38	3769655.56	1.35E-07	2.50E-07	3.86E-07
134	479246.24	3769663.16	1.34E-07	2.47E-07	3.80E-07
135	479229.1	3769670.77	1.32E-07	2.44E-07	3.75E-07
136	479211.96	3769678.37	1.30E-07	2.40E-07	3.71E-07
137	479194.82	3769685.98	1.29E-07	2.39E-07	3.68E-07
138	479177.69	3769693.58	1.28E-07	2.37E-07	3.65E-07
139	479160.55	3769701.18	1.27E-07	2.35E-07	3.63E-07
140	479416.3	3769416.56	4.18E-07	7.73E-07	1.19E-06
141	479416.3	3769397.46	4.44E-07	8.21E-07	1.27E-06
142	479416.3	3769378.36	4.65E-07	8.59E-07	1.32E-06
143	479416.3	3769359.27	4.80E-07	8.86E-07	1.37E-06
144	479416.3	3769340.17	4.89E-07	9.03E-07	1.39E-06
145	479416.3	3769321.07	4.88E-07	9.01E-07	1.39E-06
146	479416.3	3769301.97	4.79E-07	8.85E-07	1.36E-06
147	479416.3	3769282.87	4.64E-07	8.56E-07	1.32E-06
148	479416.3	3769263.78	4.42E-07	8.17E-07	1.26E-06
149	479416.3	3769244.68	4.16E-07	7.69E-07	1.19E-06
150	479416.3	3769225.58	3.88E-07	7.16E-07	1.10E-06
151	479489.18	3769434.17	2.74E-07	5.05E-07	7.79E-07
152	479482.05	3769451.79	2.64E-07	4.88E-07	7.52E-07

153	479474.93	3769469.4	2.52E-07	4.66E-07	7.18E-07
154	479467.8	3769487.01	2.39E-07	4.41E-07	6.80E-07
155	479460.68	3769504.63	2.24E-07	4.14E-07	6.39E-07
156	479403.68	3769645.53	1.08E-07	2.00E-07	3.09E-07
157	479396.55	3769663.14	9.83E-08	1.82E-07	2.80E-07
158	479372.06	3769688.46	8.83E-08	1.63E-07	2.51E-07
159	479354.7	3769696.17	8.76E-08	1.62E-07	2.49E-07
160	479337.33	3769703.88	8.65E-08	1.60E-07	2.46E-07
161	479319.96	3769711.58	8.54E-08	1.58E-07	2.43E-07
162	479302.6	3769719.29	8.47E-08	1.56E-07	2.41E-07
163	479285.23	3769726.99	8.46E-08	1.56E-07	2.41E-07
164	479267.86	3769734.7	8.38E-08	1.55E-07	2.39E-07
165	479250.5	3769742.41	8.32E-08	1.54E-07	2.37E-07
166	479233.13	3769750.11	8.25E-08	1.52E-07	2.35E-07
167	479215.76	3769757.82	8.18E-08	1.51E-07	2.33E-07
168	479198.4	3769765.53	8.11E-08	1.50E-07	2.31E-07
169	479181.03	3769773.23	8.04E-08	1.49E-07	2.29E-07
170	479163.66	3769780.94	7.95E-08	1.47E-07	2.26E-07
171	479496.3	3769416.56	2.81E-07	5.19E-07	8.00E-07
172	479496.3	3769397.46	2.97E-07	5.48E-07	8.45E-07
173	479496.3	3769378.36	3.09E-07	5.71E-07	8.80E-07
174	479496.3	3769359.27	3.18E-07	5.88E-07	9.06E-07
175	479496.3	3769340.17	3.24E-07	5.99E-07	9.23E-07
176	479496.3	3769321.07	3.26E-07	6.03E-07	9.29E-07
177	479496.3	3769301.97	3.25E-07	5.99E-07	9.24E-07
178	479496.3	3769282.87	3.19E-07	5.90E-07	9.09E-07
179	479496.3	3769263.78	3.11E-07	5.74E-07	8.85E-07
180	479496.3	3769244.68	2.99E-07	5.53E-07	8.52E-07
181	479496.3	3769225.58	2.86E-07	5.28E-07	8.14E-07
182	479569.49	3769433.39	1.98E-07	3.65E-07	5.63E-07
183	479562.68	3769450.23	1.93E-07	3.56E-07	5.48E-07
184	479555.87	3769467.06	1.86E-07	3.43E-07	5.29E-07
185	479549.06	3769483.89	1.78E-07	3.29E-07	5.07E-07
186	479542.26	3769500.72	1.70E-07	3.15E-07	4.85E-07
187	479480.98	3769652.22	9.00E-08	1.66E-07	2.56E-07
188	479474.17	3769669.05	8.30E-08	1.53E-07	2.36E-07
189	479467.36	3769685.88	7.65E-08	1.41E-07	2.18E-07
190	479460.55	3769702.71	7.08E-08	1.31E-07	2.01E-07
191	479453.74	3769719.55	6.59E-08	1.22E-07	1.87E-07
192	479430.33	3769743.74	6.08E-08	1.12E-07	1.73E-07
193	479413.74	3769751.11	6.01E-08	1.11E-07	1.71E-07
194	479397.14	3769758.47	5.95E-08	1.10E-07	1.69E-07
195	479380.54	3769765.84	5.90E-08	1.09E-07	1.68E-07
196	479363.95	3769773.2	5.87E-08	1.08E-07	1.67E-07
197	479347.35	3769780.57	5.86E-08	1.08E-07	1.67E-07
198	479330.75	3769787.93	5.82E-08	1.08E-07	1.66E-07
199	479314.16	3769795.29	5.79E-08	1.07E-07	1.65E-07
200	479297.56	3769802.66	5.77E-08	1.07E-07	1.64E-07
201	479280.96	3769810.02	5.74E-08	1.06E-07	1.64E-07
202	479264.37	3769817.39	5.70E-08	1.05E-07	1.62E-07
203	479247.77	3769824.75	5.67E-08	1.05E-07	1.61E-07
204	479231.17	3769832.12	5.64E-08	1.04E-07	1.61E-07

205	479214.57	3769839.48	5.61E-08	1.04E-07	1.60E-07
206	479197.98	3769846.85	5.56E-08	1.03E-07	1.58E-07
207	479181.38	3769854.21	5.52E-08	1.02E-07	1.57E-07
208	479164.78	3769861.58	5.47E-08	1.01E-07	1.56E-07
209	479576.3	3769416.56	2.02E-07	3.73E-07	5.75E-07
210	479576.3	3769397.46	2.11E-07	3.91E-07	6.02E-07
211	479576.3	3769378.36	2.19E-07	4.05E-07	6.25E-07
212	479576.3	3769359.27	2.26E-07	4.17E-07	6.43E-07
213	479576.3	3769340.17	2.30E-07	4.25E-07	6.56E-07
214	479576.3	3769321.07	2.33E-07	4.30E-07	6.63E-07
215	479576.3	3769301.97	2.34E-07	4.32E-07	6.65E-07
216	479576.3	3769282.87	2.32E-07	4.29E-07	6.62E-07
217	479576.3	3769263.78	2.29E-07	4.23E-07	6.52E-07
218	479576.3	3769244.68	2.24E-07	4.14E-07	6.38E-07
219	479576.3	3769225.58	2.18E-07	4.02E-07	6.19E-07
220	479649.4	3769433.63	1.49E-07	2.76E-07	4.25E-07
221	479642.49	3769450.69	1.46E-07	2.69E-07	4.14E-07
222	479635.59	3769467.76	1.41E-07	2.60E-07	4.01E-07
223	479628.69	3769484.82	1.36E-07	2.51E-07	3.87E-07
224	479621.78	3769501.89	1.31E-07	2.41E-07	3.72E-07
225	479566.56	3769638.41	8.26E-08	1.53E-07	2.35E-07
226	479559.66	3769655.48	7.70E-08	1.42E-07	2.19E-07
227	479552.75	3769672.54	7.16E-08	1.32E-07	2.04E-07
228	479545.85	3769689.61	6.66E-08	1.23E-07	1.90E-07
229	479538.95	3769706.67	6.20E-08	1.14E-07	1.76E-07
230	479532.04	3769723.74	5.77E-08	1.07E-07	1.64E-07
231	479525.14	3769740.8	5.39E-08	9.95E-08	1.53E-07
232	479518.24	3769757.87	5.04E-08	9.31E-08	1.43E-07
233	479511.33	3769774.93	4.75E-08	8.76E-08	1.35E-07
234	479487.61	3769799.46	4.44E-08	8.20E-08	1.26E-07
235	479470.78	3769806.93	4.40E-08	8.13E-08	1.25E-07
236	479453.95	3769814.4	4.36E-08	8.06E-08	1.24E-07
237	479437.13	3769821.86	4.33E-08	8.00E-08	1.23E-07
238	479420.3	3769829.33	4.31E-08	7.95E-08	1.23E-07
239	479403.47	3769836.8	4.29E-08	7.93E-08	1.22E-07
240	479386.65	3769844.26	4.30E-08	7.94E-08	1.22E-07
241	479369.82	3769851.73	4.28E-08	7.90E-08	1.22E-07
242	479352.99	3769859.2	4.25E-08	7.86E-08	1.21E-07
243	479336.17	3769866.66	4.25E-08	7.84E-08	1.21E-07
244	479319.34	3769874.13	4.24E-08	7.83E-08	1.21E-07
245	479302.51	3769881.6	4.22E-08	7.79E-08	1.20E-07
246	479285.69	3769889.06	4.20E-08	7.75E-08	1.20E-07
247	479268.86	3769896.53	4.19E-08	7.73E-08	1.19E-07
248	479252.03	3769904	4.17E-08	7.70E-08	1.19E-07
249	479235.21	3769911.46	4.14E-08	7.65E-08	1.18E-07
250	479218.38	3769918.93	4.12E-08	7.61E-08	1.17E-07
251	479201.56	3769926.4	4.09E-08	7.56E-08	1.17E-07
252	479184.73	3769933.86	4.05E-08	7.49E-08	1.15E-07
253	479656.3	3769416.56	1.52E-07	2.82E-07	4.34E-07
254	479656.3	3769397.46	1.59E-07	2.93E-07	4.52E-07
255	479656.3	3769378.36	1.64E-07	3.04E-07	4.68E-07
256	479656.3	3769359.27	1.69E-07	3.12E-07	4.81E-07

257	479656.3	3769340.17	1.73E-07	3.19E-07	4.92E-07
258	479656.3	3769321.07	1.75E-07	3.24E-07	4.99E-07
259	479656.3	3769301.97	1.77E-07	3.26E-07	5.03E-07
260	479656.3	3769282.87	1.77E-07	3.27E-07	5.03E-07
261	479656.3	3769263.78	1.76E-07	3.25E-07	5.01E-07
262	479656.3	3769244.68	1.74E-07	3.21E-07	4.95E-07
263	479656.3	3769225.58	1.71E-07	3.15E-07	4.86E-07
264	479729.33	3769433.8	1.17E-07	2.16E-07	3.32E-07
265	479722.35	3769451.04	1.14E-07	2.10E-07	3.24E-07
266	479715.38	3769468.29	1.11E-07	2.04E-07	3.15E-07
267	479708.4	3769485.53	1.07E-07	1.97E-07	3.04E-07
268	479701.43	3769502.77	1.03E-07	1.90E-07	2.93E-07
269	479652.6	3769623.47	7.41E-08	1.37E-07	2.11E-07
270	479645.63	3769640.71	7.02E-08	1.30E-07	2.00E-07
271	479638.65	3769657.95	6.60E-08	1.22E-07	1.88E-07
272	479631.68	3769675.2	6.21E-08	1.15E-07	1.77E-07
273	479624.7	3769692.44	5.82E-08	1.08E-07	1.66E-07
274	479617.73	3769709.68	5.46E-08	1.01E-07	1.56E-07
275	479610.76	3769726.92	5.12E-08	9.46E-08	1.46E-07
276	479603.78	3769744.16	4.80E-08	8.87E-08	1.37E-07
277	479596.81	3769761.41	4.51E-08	8.34E-08	1.29E-07
278	479589.83	3769778.65	4.26E-08	7.87E-08	1.21E-07
279	479582.86	3769795.89	4.02E-08	7.43E-08	1.15E-07
280	479575.88	3769813.13	3.80E-08	7.02E-08	1.08E-07
281	479568.91	3769830.38	3.60E-08	6.64E-08	1.02E-07
282	479544.93	3769855.16	3.38E-08	6.25E-08	9.63E-08
283	479527.93	3769862.71	3.36E-08	6.20E-08	9.56E-08
284	479510.93	3769870.25	3.35E-08	6.19E-08	9.54E-08
285	479493.93	3769877.79	3.34E-08	6.17E-08	9.52E-08
286	479476.93	3769885.34	3.32E-08	6.14E-08	9.46E-08
287	479459.93	3769892.88	3.31E-08	6.11E-08	9.42E-08
288	479442.93	3769900.43	3.29E-08	6.09E-08	9.38E-08
289	479425.92	3769907.97	3.29E-08	6.08E-08	9.37E-08
290	479408.92	3769915.51	3.30E-08	6.10E-08	9.40E-08
291	479391.92	3769923.06	3.29E-08	6.08E-08	9.37E-08
292	479374.92	3769930.6	3.28E-08	6.06E-08	9.35E-08
293	479357.92	3769938.15	3.28E-08	6.06E-08	9.34E-08
294	479340.92	3769945.69	3.27E-08	6.04E-08	9.32E-08
295	479323.92	3769953.23	3.26E-08	6.02E-08	9.28E-08
296	479306.92	3769960.78	3.25E-08	6.00E-08	9.25E-08
297	479289.92	3769968.32	3.24E-08	5.99E-08	9.23E-08
298	479272.92	3769975.87	3.22E-08	5.96E-08	9.18E-08
299	479255.92	3769983.41	3.21E-08	5.92E-08	9.13E-08
300	479238.91	3769990.95	3.19E-08	5.90E-08	9.10E-08
301	479221.91	3769998.5	3.18E-08	5.87E-08	9.04E-08
302	479204.91	3770006.04	3.15E-08	5.82E-08	8.97E-08
303	479187.91	3770013.59	3.12E-08	5.77E-08	8.90E-08
304	479736.3	3769416.56	1.19E-07	2.20E-07	3.39E-07
305	479736.3	3769397.46	1.24E-07	2.29E-07	3.53E-07
306	479736.3	3769378.36	1.28E-07	2.37E-07	3.65E-07
307	479736.3	3769359.27	1.32E-07	2.44E-07	3.76E-07
308	479736.3	3769340.17	1.35E-07	2.49E-07	3.84E-07

309	479736.3	3769321.07	1.37E-07	2.54E-07	3.91E-07
310	479736.3	3769301.97	1.39E-07	2.56E-07	3.95E-07
311	479736.3	3769282.87	1.40E-07	2.58E-07	3.98E-07
312	479736.3	3769263.78	1.40E-07	2.58E-07	3.98E-07
313	479736.3	3769244.68	1.39E-07	2.57E-07	3.96E-07
314	479736.3	3769225.58	1.38E-07	2.54E-07	3.92E-07
315	479809.27	3769433.94	9.49E-08	1.75E-07	2.70E-07
316	479802.24	3769451.32	9.29E-08	1.72E-07	2.65E-07
317	479795.21	3769468.7	9.05E-08	1.67E-07	2.58E-07
318	479788.18	3769486.09	8.78E-08	1.62E-07	2.50E-07
319	479781.15	3769503.47	8.49E-08	1.57E-07	2.42E-07
320	479731.93	3769625.14	6.32E-08	1.17E-07	1.80E-07
321	479724.9	3769642.52	6.00E-08	1.11E-07	1.71E-07
322	479717.87	3769659.9	5.69E-08	1.05E-07	1.62E-07
323	479710.84	3769677.28	5.40E-08	9.97E-08	1.54E-07
324	479703.8	3769694.66	5.12E-08	9.45E-08	1.46E-07
325	479696.77	3769712.04	4.84E-08	8.95E-08	1.38E-07
326	479689.74	3769729.43	4.58E-08	8.47E-08	1.31E-07
327	479682.71	3769746.81	4.33E-08	7.99E-08	1.23E-07
328	479675.68	3769764.19	4.09E-08	7.55E-08	1.16E-07
329	479668.65	3769781.57	3.86E-08	7.14E-08	1.10E-07
330	479661.62	3769798.95	3.66E-08	6.75E-08	1.04E-07
331	479654.59	3769816.33	3.47E-08	6.40E-08	9.87E-08
332	479647.56	3769833.71	3.29E-08	6.07E-08	9.36E-08
333	479640.53	3769851.09	3.12E-08	5.77E-08	8.89E-08
334	479633.5	3769868.48	2.97E-08	5.49E-08	8.47E-08
335	479626.46	3769885.86	2.84E-08	5.24E-08	8.08E-08
336	479602.3	3769910.84	2.70E-08	4.99E-08	7.69E-08
337	479585.16	3769918.45	2.69E-08	4.97E-08	7.66E-08
338	479568.02	3769926.05	2.67E-08	4.94E-08	7.61E-08
339	479550.88	3769933.66	2.66E-08	4.92E-08	7.58E-08
340	479533.74	3769941.26	2.65E-08	4.90E-08	7.55E-08
341	479516.61	3769948.87	2.65E-08	4.90E-08	7.55E-08
342	479499.47	3769956.47	2.65E-08	4.89E-08	7.54E-08
343	479482.33	3769964.08	2.64E-08	4.88E-08	7.52E-08
344	479465.19	3769971.68	2.64E-08	4.87E-08	7.51E-08
345	479448.05	3769979.29	2.64E-08	4.87E-08	7.51E-08
346	479430.91	3769986.89	2.64E-08	4.88E-08	7.53E-08
347	479413.78	3769994.5	2.64E-08	4.87E-08	7.51E-08
348	479396.64	3770002.1	2.63E-08	4.86E-08	7.49E-08
349	479379.5	3770009.71	2.63E-08	4.85E-08	7.48E-08
350	479362.36	3770017.31	2.62E-08	4.85E-08	7.47E-08
351	479345.22	3770024.92	2.62E-08	4.83E-08	7.45E-08
352	479328.09	3770032.52	2.60E-08	4.81E-08	7.42E-08
353	479310.95	3770040.13	2.60E-08	4.80E-08	7.39E-08
354	479293.81	3770047.73	2.59E-08	4.78E-08	7.37E-08
355	479276.67	3770055.33	2.58E-08	4.76E-08	7.34E-08
356	479259.53	3770062.94	2.56E-08	4.73E-08	7.30E-08
357	479242.4	3770070.54	2.55E-08	4.72E-08	7.27E-08
358	479225.26	3770078.15	2.54E-08	4.69E-08	7.24E-08
359	479208.12	3770085.75	2.52E-08	4.66E-08	7.19E-08
360	479190.98	3770093.36	2.51E-08	4.63E-08	7.14E-08

361	479173.84	3770100.96	2.49E-08	4.59E-08	7.08E-08
362	479816.3	3769416.56	9.68E-08	1.79E-07	2.75E-07
363	479816.3	3769397.46	1.00E-07	1.85E-07	2.86E-07
364	479816.3	3769378.36	1.04E-07	1.91E-07	2.95E-07
365	479816.3	3769359.27	1.06E-07	1.97E-07	3.03E-07
366	479816.3	3769340.17	1.09E-07	2.01E-07	3.10E-07
367	479816.3	3769321.07	1.11E-07	2.05E-07	3.15E-07
368	479816.3	3769301.97	1.12E-07	2.07E-07	3.20E-07
369	479816.3	3769282.87	1.14E-07	2.10E-07	3.23E-07
370	479816.3	3769263.78	1.14E-07	2.11E-07	3.25E-07
371	479816.3	3769244.68	1.14E-07	2.11E-07	3.25E-07
372	479816.3	3769225.58	1.14E-07	2.10E-07	3.24E-07
373	479969.19	3769434.15	6.79E-08	1.25E-07	1.93E-07
374	479962.07	3769451.73	6.66E-08	1.23E-07	1.90E-07
375	479954.96	3769469.32	6.52E-08	1.20E-07	1.86E-07
376	479947.85	3769486.9	6.36E-08	1.18E-07	1.81E-07
377	479940.73	3769504.49	6.20E-08	1.15E-07	1.77E-07
378	479898.05	3769610	5.08E-08	9.39E-08	1.45E-07
379	479890.94	3769627.59	4.89E-08	9.04E-08	1.39E-07
380	479883.82	3769645.18	4.70E-08	8.68E-08	1.34E-07
381	479876.71	3769662.76	4.51E-08	8.32E-08	1.28E-07
382	479869.6	3769680.35	4.32E-08	7.98E-08	1.23E-07
383	479862.48	3769697.93	4.14E-08	7.64E-08	1.18E-07
384	479855.37	3769715.52	3.95E-08	7.30E-08	1.12E-07
385	479848.25	3769733.11	3.77E-08	6.96E-08	1.07E-07
386	479841.14	3769750.69	3.60E-08	6.65E-08	1.02E-07
387	479834.03	3769768.28	3.43E-08	6.34E-08	9.77E-08
388	479826.91	3769785.86	3.27E-08	6.04E-08	9.31E-08
389	479819.8	3769803.45	3.11E-08	5.75E-08	8.86E-08
390	479812.69	3769821.04	2.97E-08	5.48E-08	8.45E-08
391	479805.57	3769838.62	2.83E-08	5.23E-08	8.06E-08
392	479798.46	3769856.21	2.71E-08	5.00E-08	7.70E-08
393	479791.34	3769873.79	2.58E-08	4.77E-08	7.35E-08
394	479784.23	3769891.38	2.47E-08	4.56E-08	7.02E-08
395	479777.12	3769908.96	2.36E-08	4.36E-08	6.72E-08
396	479770	3769926.55	2.26E-08	4.18E-08	6.44E-08
397	479762.89	3769944.14	2.17E-08	4.02E-08	6.19E-08
398	479755.78	3769961.72	2.09E-08	3.87E-08	5.96E-08
399	479748.66	3769979.31	2.02E-08	3.73E-08	5.75E-08
400	479741.55	3769996.89	1.95E-08	3.60E-08	5.55E-08
401	479717.1	3770022.17	1.87E-08	3.46E-08	5.34E-08
402	479699.76	3770029.87	1.87E-08	3.45E-08	5.32E-08
403	479682.42	3770037.56	1.87E-08	3.45E-08	5.31E-08
404	479665.08	3770045.26	1.86E-08	3.44E-08	5.29E-08
405	479647.74	3770052.95	1.85E-08	3.43E-08	5.28E-08
406	479630.4	3770060.65	1.85E-08	3.42E-08	5.28E-08
407	479613.06	3770068.34	1.85E-08	3.42E-08	5.27E-08
408	479595.72	3770076.03	1.85E-08	3.41E-08	5.26E-08
409	479578.38	3770083.73	1.84E-08	3.41E-08	5.25E-08
410	479561.04	3770091.42	1.84E-08	3.40E-08	5.24E-08
411	479543.7	3770099.12	1.85E-08	3.41E-08	5.25E-08
412	479526.36	3770106.81	1.85E-08	3.41E-08	5.26E-08

413	479509.02	3770114.51	1.84E-08	3.40E-08	5.25E-08
414	479491.68	3770122.2	1.84E-08	3.40E-08	5.24E-08
415	479474.34	3770129.89	1.84E-08	3.39E-08	5.23E-08
416	479457	3770137.59	1.84E-08	3.39E-08	5.23E-08
417	479439.66	3770145.28	1.84E-08	3.40E-08	5.24E-08
418	479422.32	3770152.98	1.84E-08	3.39E-08	5.23E-08
419	479404.98	3770160.67	1.83E-08	3.39E-08	5.22E-08
420	479387.64	3770168.37	1.83E-08	3.38E-08	5.22E-08
421	479370.3	3770176.06	1.83E-08	3.38E-08	5.20E-08
422	479352.96	3770183.75	1.82E-08	3.36E-08	5.19E-08
423	479335.62	3770191.45	1.81E-08	3.35E-08	5.17E-08
424	479318.28	3770199.14	1.81E-08	3.34E-08	5.15E-08
425	479300.94	3770206.84	1.80E-08	3.33E-08	5.13E-08
426	479283.6	3770214.53	1.80E-08	3.32E-08	5.12E-08
427	479266.26	3770222.22	1.79E-08	3.30E-08	5.09E-08
428	479248.92	3770229.92	1.78E-08	3.29E-08	5.08E-08
429	479231.58	3770237.61	1.78E-08	3.28E-08	5.06E-08
430	479214.24	3770245.31	1.77E-08	3.27E-08	5.03E-08
431	479196.9	3770253	1.76E-08	3.25E-08	5.01E-08
432	479179.56	3770260.7	1.75E-08	3.23E-08	4.98E-08
433	479976.3	3769416.56	6.91E-08	1.28E-07	1.97E-07
434	479976.3	3769397.46	7.12E-08	1.32E-07	2.03E-07
435	479976.3	3769378.36	7.32E-08	1.35E-07	2.08E-07
436	479976.3	3769359.27	7.50E-08	1.39E-07	2.14E-07
437	479976.3	3769340.17	7.67E-08	1.42E-07	2.18E-07
438	479976.3	3769321.07	7.82E-08	1.45E-07	2.23E-07
439	479976.3	3769301.97	7.96E-08	1.47E-07	2.27E-07
440	479976.3	3769282.87	8.06E-08	1.49E-07	2.30E-07
441	479976.3	3769263.78	8.14E-08	1.50E-07	2.32E-07
442	479976.3	3769244.68	8.19E-08	1.51E-07	2.33E-07
443	479976.3	3769225.58	8.22E-08	1.52E-07	2.34E-07
444	480129.3	3769433.86	5.20E-08	9.61E-08	1.48E-07
445	480122.31	3769451.15	5.11E-08	9.44E-08	1.45E-07
446	480115.31	3769468.45	5.01E-08	9.26E-08	1.43E-07
447	480108.31	3769485.75	4.91E-08	9.07E-08	1.40E-07
448	480101.32	3769503.04	4.80E-08	8.87E-08	1.37E-07
449	480059.34	3769606.82	4.11E-08	7.58E-08	1.17E-07
450	480052.34	3769624.12	3.98E-08	7.35E-08	1.13E-07
451	480045.34	3769641.42	3.86E-08	7.12E-08	1.10E-07
452	480038.35	3769658.71	3.73E-08	6.89E-08	1.06E-07
453	480031.35	3769676.01	3.61E-08	6.66E-08	1.03E-07
454	480024.35	3769693.31	3.48E-08	6.43E-08	9.91E-08
455	480017.36	3769710.6	3.36E-08	6.21E-08	9.57E-08
456	480010.36	3769727.9	3.25E-08	5.99E-08	9.24E-08
457	480003.36	3769745.2	3.13E-08	5.77E-08	8.90E-08
458	479996.37	3769762.49	3.01E-08	5.55E-08	8.56E-08
459	479989.37	3769779.79	2.89E-08	5.34E-08	8.23E-08
460	479982.37	3769797.09	2.78E-08	5.13E-08	7.91E-08
461	479975.38	3769814.38	2.67E-08	4.93E-08	7.60E-08
462	479968.38	3769831.68	2.57E-08	4.74E-08	7.30E-08
463	479961.38	3769848.98	2.46E-08	4.55E-08	7.02E-08
464	479954.39	3769866.27	2.37E-08	4.37E-08	6.74E-08

465	479947.39	3769883.57	2.27E-08	4.20E-08	6.47E-08
466	479940.39	3769900.86	2.18E-08	4.03E-08	6.22E-08
467	479933.4	3769918.16	2.10E-08	3.88E-08	5.97E-08
468	479926.4	3769935.46	2.02E-08	3.73E-08	5.75E-08
469	479919.4	3769952.75	1.94E-08	3.59E-08	5.53E-08
470	479912.41	3769970.05	1.87E-08	3.46E-08	5.33E-08
471	479905.41	3769987.35	1.81E-08	3.34E-08	5.15E-08
472	479898.41	3770004.64	1.75E-08	3.23E-08	4.98E-08
473	479891.42	3770021.94	1.69E-08	3.12E-08	4.81E-08
474	479884.42	3770039.24	1.64E-08	3.02E-08	4.66E-08
475	479877.42	3770056.53	1.59E-08	2.93E-08	4.52E-08
476	479870.43	3770073.83	1.54E-08	2.85E-08	4.39E-08
477	479863.43	3770091.13	1.50E-08	2.77E-08	4.26E-08
478	479856.43	3770108.42	1.46E-08	2.69E-08	4.15E-08
479	479832.38	3770133.29	1.42E-08	2.62E-08	4.04E-08
480	479815.33	3770140.86	1.41E-08	2.61E-08	4.02E-08
481	479798.27	3770148.42	1.41E-08	2.60E-08	4.01E-08
482	479781.22	3770155.99	1.41E-08	2.60E-08	4.01E-08
483	479764.17	3770163.56	1.41E-08	2.60E-08	4.01E-08
484	479747.11	3770171.13	1.41E-08	2.60E-08	4.00E-08
485	479730.06	3770178.69	1.41E-08	2.60E-08	4.00E-08
486	479713	3770186.26	1.40E-08	2.59E-08	4.00E-08
487	479695.95	3770193.83	1.40E-08	2.59E-08	3.99E-08
488	479678.89	3770201.4	1.40E-08	2.59E-08	3.99E-08
489	479661.84	3770208.97	1.40E-08	2.59E-08	3.99E-08
490	479644.78	3770216.53	1.40E-08	2.59E-08	3.99E-08
491	479627.73	3770224.1	1.40E-08	2.58E-08	3.98E-08
492	479610.67	3770231.67	1.40E-08	2.58E-08	3.98E-08
493	479593.62	3770239.24	1.40E-08	2.58E-08	3.97E-08
494	479576.57	3770246.8	1.40E-08	2.58E-08	3.98E-08
495	479559.51	3770254.37	1.40E-08	2.58E-08	3.98E-08
496	479542.46	3770261.94	1.40E-08	2.58E-08	3.98E-08
497	479525.4	3770269.51	1.40E-08	2.58E-08	3.97E-08
498	479508.35	3770277.07	1.39E-08	2.57E-08	3.97E-08
499	479491.29	3770284.64	1.39E-08	2.57E-08	3.96E-08
500	479474.24	3770292.21	1.39E-08	2.57E-08	3.96E-08
501	479457.18	3770299.78	1.39E-08	2.57E-08	3.97E-08
502	479440.13	3770307.35	1.39E-08	2.57E-08	3.96E-08
503	479423.08	3770314.91	1.39E-08	2.56E-08	3.95E-08
504	479406.02	3770322.48	1.38E-08	2.56E-08	3.94E-08
505	479388.97	3770330.05	1.38E-08	2.55E-08	3.94E-08
506	479371.91	3770337.62	1.38E-08	2.55E-08	3.93E-08
507	479354.86	3770345.18	1.38E-08	2.54E-08	3.92E-08
508	479337.8	3770352.75	1.37E-08	2.53E-08	3.90E-08
509	479320.75	3770360.32	1.37E-08	2.52E-08	3.89E-08
510	479303.69	3770367.89	1.36E-08	2.52E-08	3.88E-08
511	479286.64	3770375.45	1.36E-08	2.51E-08	3.87E-08
512	479269.59	3770383.02	1.35E-08	2.50E-08	3.86E-08
513	479252.53	3770390.59	1.35E-08	2.50E-08	3.85E-08
514	479235.48	3770398.16	1.35E-08	2.49E-08	3.83E-08
515	479218.42	3770405.73	1.34E-08	2.48E-08	3.82E-08
516	479201.37	3770413.29	1.34E-08	2.47E-08	3.80E-08

517	479184.31	3770420.86	1.33E-08	2.46E-08	3.79E-08
518	479167.26	3770428.43	1.33E-08	2.45E-08	3.78E-08
519	480136.3	3769416.56	5.28E-08	9.76E-08	1.50E-07
520	480136.3	3769397.46	5.43E-08	1.00E-07	1.55E-07
521	480136.3	3769378.36	5.58E-08	1.03E-07	1.59E-07
522	480136.3	3769359.27	5.71E-08	1.05E-07	1.63E-07
523	480136.3	3769340.17	5.83E-08	1.08E-07	1.66E-07
524	480136.3	3769321.07	5.94E-08	1.10E-07	1.69E-07
525	480136.3	3769301.97	6.05E-08	1.12E-07	1.72E-07
526	480136.3	3769282.87	6.14E-08	1.13E-07	1.75E-07
527	480136.3	3769263.78	6.21E-08	1.15E-07	1.77E-07
528	480136.3	3769244.68	6.27E-08	1.16E-07	1.79E-07
529	480136.3	3769225.58	6.32E-08	1.17E-07	1.80E-07
530	480289.24	3769434.02	4.18E-08	7.72E-08	1.19E-07
531	480282.18	3769451.47	4.11E-08	7.59E-08	1.17E-07
532	480275.12	3769468.93	4.04E-08	7.46E-08	1.15E-07
533	480268.06	3769486.38	3.96E-08	7.32E-08	1.13E-07
534	480261	3769503.84	3.89E-08	7.18E-08	1.11E-07
535	480218.63	3769608.57	3.38E-08	6.25E-08	9.63E-08
536	480211.57	3769626.02	3.30E-08	6.10E-08	9.40E-08
537	480204.51	3769643.48	3.21E-08	5.94E-08	9.15E-08
538	480197.45	3769660.93	3.12E-08	5.77E-08	8.89E-08
539	480190.39	3769678.39	3.04E-08	5.61E-08	8.64E-08
540	480183.33	3769695.85	2.95E-08	5.45E-08	8.40E-08
541	480176.27	3769713.3	2.86E-08	5.29E-08	8.15E-08
542	480169.2	3769730.76	2.78E-08	5.13E-08	7.91E-08
543	480162.14	3769748.21	2.69E-08	4.97E-08	7.67E-08
544	480155.08	3769765.67	2.61E-08	4.82E-08	7.43E-08
545	480148.02	3769783.12	2.52E-08	4.66E-08	7.19E-08
546	480140.96	3769800.58	2.44E-08	4.51E-08	6.95E-08
547	480133.9	3769818.03	2.36E-08	4.36E-08	6.72E-08
548	480126.84	3769835.49	2.28E-08	4.21E-08	6.49E-08
549	480119.78	3769852.94	2.20E-08	4.07E-08	6.27E-08
550	480112.72	3769870.4	2.13E-08	3.93E-08	6.06E-08
551	480105.66	3769887.85	2.06E-08	3.80E-08	5.85E-08
552	480098.6	3769905.31	1.98E-08	3.67E-08	5.65E-08
553	480091.54	3769922.77	1.91E-08	3.54E-08	5.45E-08
554	480084.47	3769940.22	1.85E-08	3.41E-08	5.26E-08
555	480077.41	3769957.68	1.78E-08	3.29E-08	5.08E-08
556	480070.35	3769975.13	1.72E-08	3.18E-08	4.90E-08
557	480063.29	3769992.59	1.66E-08	3.07E-08	4.74E-08
558	480056.23	3770010.04	1.61E-08	2.97E-08	4.58E-08
559	480049.17	3770027.5	1.56E-08	2.87E-08	4.43E-08
560	480042.11	3770044.95	1.51E-08	2.78E-08	4.29E-08
561	480035.05	3770062.41	1.46E-08	2.70E-08	4.16E-08
562	480027.99	3770079.86	1.42E-08	2.62E-08	4.04E-08
563	480020.93	3770097.32	1.38E-08	2.54E-08	3.92E-08
564	480013.87	3770114.77	1.34E-08	2.48E-08	3.82E-08
565	480006.8	3770132.23	1.31E-08	2.41E-08	3.72E-08
566	479999.74	3770149.68	1.27E-08	2.35E-08	3.62E-08
567	479992.68	3770167.14	1.24E-08	2.29E-08	3.53E-08
568	479985.62	3770184.6	1.21E-08	2.24E-08	3.45E-08

569	479978.56	3770202.05	1.19E-08	2.19E-08	3.38E-08
570	479971.5	3770219.51	1.16E-08	2.14E-08	3.30E-08
571	479947.23	3770244.6	1.13E-08	2.09E-08	3.22E-08
572	479930.02	3770252.24	1.13E-08	2.09E-08	3.22E-08
573	479912.81	3770259.87	1.13E-08	2.08E-08	3.21E-08
574	479895.6	3770267.51	1.13E-08	2.08E-08	3.21E-08
575	479878.38	3770275.15	1.13E-08	2.08E-08	3.21E-08
576	479861.17	3770282.78	1.13E-08	2.08E-08	3.21E-08
577	479843.96	3770290.42	1.12E-08	2.08E-08	3.20E-08
578	479826.75	3770298.06	1.12E-08	2.08E-08	3.20E-08
579	479809.54	3770305.7	1.12E-08	2.08E-08	3.20E-08
580	479792.33	3770313.33	1.12E-08	2.07E-08	3.20E-08
581	479775.12	3770320.97	1.12E-08	2.07E-08	3.19E-08
582	479757.91	3770328.61	1.12E-08	2.07E-08	3.19E-08
583	479740.7	3770336.24	1.12E-08	2.07E-08	3.19E-08
584	479723.49	3770343.88	1.12E-08	2.07E-08	3.19E-08
585	479706.27	3770351.52	1.12E-08	2.07E-08	3.19E-08
586	479689.06	3770359.16	1.12E-08	2.07E-08	3.19E-08
587	479671.85	3770366.79	1.12E-08	2.07E-08	3.18E-08
588	479654.64	3770374.43	1.12E-08	2.07E-08	3.18E-08
589	479637.43	3770382.07	1.12E-08	2.07E-08	3.18E-08
590	479620.22	3770389.7	1.12E-08	2.06E-08	3.18E-08
591	479603.01	3770397.34	1.12E-08	2.06E-08	3.18E-08
592	479585.8	3770404.98	1.12E-08	2.06E-08	3.18E-08
593	479568.59	3770412.62	1.12E-08	2.06E-08	3.18E-08
594	479551.38	3770420.25	1.12E-08	2.06E-08	3.18E-08
595	479534.16	3770427.89	1.12E-08	2.06E-08	3.18E-08
596	479516.95	3770435.53	1.11E-08	2.06E-08	3.17E-08
597	479499.74	3770443.16	1.11E-08	2.05E-08	3.17E-08
598	479482.53	3770450.8	1.11E-08	2.05E-08	3.16E-08
599	479465.32	3770458.44	1.11E-08	2.06E-08	3.17E-08
600	479448.11	3770466.08	1.11E-08	2.05E-08	3.16E-08
601	479430.9	3770473.71	1.11E-08	2.05E-08	3.16E-08
602	479413.69	3770481.35	1.11E-08	2.04E-08	3.15E-08
603	479396.48	3770488.99	1.10E-08	2.04E-08	3.15E-08
604	479379.27	3770496.62	1.10E-08	2.04E-08	3.14E-08
605	479362.05	3770504.26	1.10E-08	2.03E-08	3.13E-08
606	479344.84	3770511.9	1.10E-08	2.03E-08	3.12E-08
607	479327.63	3770519.54	1.09E-08	2.02E-08	3.12E-08
608	479310.42	3770527.17	1.09E-08	2.02E-08	3.11E-08
609	479293.21	3770534.81	1.09E-08	2.01E-08	3.10E-08
610	479276	3770542.45	1.09E-08	2.01E-08	3.10E-08
611	479258.79	3770550.09	1.08E-08	2.00E-08	3.09E-08
612	479241.58	3770557.72	1.08E-08	2.00E-08	3.08E-08
613	479224.37	3770565.36	1.08E-08	1.99E-08	3.07E-08
614	479207.16	3770573	1.08E-08	1.99E-08	3.07E-08
615	479189.94	3770580.63	1.07E-08	1.98E-08	3.06E-08
616	479172.73	3770588.27	1.07E-08	1.98E-08	3.05E-08
617	480296.3	3769416.56	4.25E-08	7.85E-08	1.21E-07
618	480296.3	3769397.46	4.35E-08	8.04E-08	1.24E-07
619	480296.3	3769378.36	4.46E-08	8.24E-08	1.27E-07
620	480296.3	3769359.27	4.56E-08	8.42E-08	1.30E-07

621	480296.3	3769340.17	4.65E-08	8.60E-08	1.32E-07
622	480296.3	3769321.07	4.74E-08	8.76E-08	1.35E-07
623	480296.3	3769301.97	4.83E-08	8.91E-08	1.37E-07
624	480296.3	3769282.87	4.90E-08	9.06E-08	1.40E-07
625	480296.3	3769263.78	4.97E-08	9.18E-08	1.42E-07
626	480296.3	3769244.68	5.03E-08	9.29E-08	1.43E-07
627	480296.3	3769225.58	5.08E-08	9.39E-08	1.45E-07
628	480449.19	3769434.14	3.49E-08	6.45E-08	9.94E-08
629	480442.08	3769451.72	3.43E-08	6.34E-08	9.78E-08
630	480434.97	3769469.29	3.38E-08	6.24E-08	9.62E-08
631	480427.86	3769486.87	3.32E-08	6.13E-08	9.45E-08
632	480420.75	3769504.45	3.26E-08	6.02E-08	9.28E-08
633	480378.08	3769609.92	2.87E-08	5.31E-08	8.18E-08
634	480370.97	3769627.5	2.81E-08	5.19E-08	7.99E-08
635	480363.86	3769645.08	2.74E-08	5.07E-08	7.81E-08
636	480356.75	3769662.65	2.68E-08	4.95E-08	7.63E-08
637	480349.64	3769680.23	2.62E-08	4.83E-08	7.45E-08
638	480342.53	3769697.81	2.55E-08	4.71E-08	7.26E-08
639	480335.42	3769715.39	2.49E-08	4.59E-08	7.08E-08
640	480328.31	3769732.97	2.42E-08	4.47E-08	6.90E-08
641	480321.2	3769750.55	2.36E-08	4.36E-08	6.72E-08
642	480314.09	3769768.12	2.30E-08	4.24E-08	6.54E-08
643	480306.98	3769785.7	2.23E-08	4.13E-08	6.36E-08
644	480299.87	3769803.28	2.17E-08	4.01E-08	6.18E-08
645	480292.76	3769820.86	2.11E-08	3.90E-08	6.00E-08
646	480285.65	3769838.44	2.05E-08	3.78E-08	5.83E-08
647	480278.54	3769856.01	1.99E-08	3.67E-08	5.66E-08
648	480271.43	3769873.59	1.93E-08	3.57E-08	5.50E-08
649	480264.32	3769891.17	1.87E-08	3.46E-08	5.33E-08
650	480257.21	3769908.75	1.82E-08	3.36E-08	5.17E-08
651	480250.09	3769926.33	1.76E-08	3.25E-08	5.02E-08
652	480242.98	3769943.9	1.71E-08	3.15E-08	4.86E-08
653	480235.87	3769961.48	1.65E-08	3.05E-08	4.71E-08
654	480228.76	3769979.06	1.60E-08	2.96E-08	4.56E-08
655	480221.65	3769996.64	1.55E-08	2.87E-08	4.42E-08
656	480214.54	3770014.22	1.50E-08	2.78E-08	4.28E-08
657	480207.43	3770031.8	1.46E-08	2.69E-08	4.15E-08
658	480200.32	3770049.37	1.41E-08	2.61E-08	4.03E-08
659	480193.21	3770066.95	1.37E-08	2.54E-08	3.91E-08
660	480186.1	3770084.53	1.33E-08	2.46E-08	3.80E-08
661	480178.99	3770102.11	1.30E-08	2.39E-08	3.69E-08
662	480171.88	3770119.69	1.26E-08	2.33E-08	3.59E-08
663	480164.77	3770137.26	1.23E-08	2.27E-08	3.49E-08
664	480157.66	3770154.84	1.19E-08	2.21E-08	3.40E-08
665	480150.55	3770172.42	1.16E-08	2.15E-08	3.31E-08
666	480143.44	3770190	1.14E-08	2.10E-08	3.23E-08
667	480136.33	3770207.58	1.11E-08	2.05E-08	3.16E-08
668	480129.22	3770225.16	1.08E-08	2.00E-08	3.09E-08
669	480122.1	3770242.73	1.06E-08	1.96E-08	3.02E-08
670	480114.99	3770260.31	1.04E-08	1.92E-08	2.95E-08
671	480107.88	3770277.89	1.02E-08	1.88E-08	2.89E-08
672	480100.77	3770295.47	9.95E-09	1.84E-08	2.83E-08

673	480093.66	3770313.05	9.78E-09	1.81E-08	2.78E-08
674	480086.55	3770330.62	9.60E-09	1.77E-08	2.73E-08
675	480062.11	3770355.89	9.41E-09	1.74E-08	2.68E-08
676	480044.78	3770363.58	9.41E-09	1.74E-08	2.68E-08
677	480027.45	3770371.28	9.39E-09	1.74E-08	2.67E-08
678	480010.11	3770378.97	9.38E-09	1.73E-08	2.67E-08
679	479992.78	3770386.66	9.37E-09	1.73E-08	2.67E-08
680	479975.45	3770394.35	9.36E-09	1.73E-08	2.67E-08
681	479958.12	3770402.04	9.36E-09	1.73E-08	2.67E-08
682	479940.78	3770409.73	9.36E-09	1.73E-08	2.67E-08
683	479923.45	3770417.42	9.36E-09	1.73E-08	2.66E-08
684	479906.12	3770425.11	9.36E-09	1.73E-08	2.66E-08
685	479888.79	3770432.8	9.36E-09	1.73E-08	2.66E-08
686	479871.46	3770440.49	9.35E-09	1.73E-08	2.66E-08
687	479854.12	3770448.18	9.34E-09	1.73E-08	2.66E-08
688	479836.79	3770455.88	9.34E-09	1.72E-08	2.66E-08
689	479819.46	3770463.57	9.33E-09	1.72E-08	2.66E-08
690	479802.13	3770471.26	9.33E-09	1.72E-08	2.66E-08
691	479784.8	3770478.95	9.33E-09	1.72E-08	2.66E-08
692	479767.46	3770486.64	9.32E-09	1.72E-08	2.65E-08
693	479750.13	3770494.33	9.31E-09	1.72E-08	2.65E-08
694	479732.8	3770502.02	9.31E-09	1.72E-08	2.65E-08
695	479715.47	3770509.71	9.31E-09	1.72E-08	2.65E-08
696	479698.14	3770517.4	9.30E-09	1.72E-08	2.65E-08
697	479680.8	3770525.09	9.30E-09	1.72E-08	2.65E-08
698	479663.47	3770532.78	9.29E-09	1.72E-08	2.64E-08
699	479646.14	3770540.47	9.28E-09	1.71E-08	2.64E-08
700	479628.81	3770548.17	9.28E-09	1.71E-08	2.64E-08
701	479611.47	3770555.86	9.28E-09	1.71E-08	2.64E-08
702	479594.14	3770563.55	9.27E-09	1.71E-08	2.64E-08
703	479576.81	3770571.24	9.28E-09	1.71E-08	2.64E-08
704	479559.48	3770578.93	9.28E-09	1.71E-08	2.64E-08
705	479542.15	3770586.62	9.27E-09	1.71E-08	2.64E-08
706	479524.81	3770594.31	9.26E-09	1.71E-08	2.64E-08
707	479507.48	3770602	9.24E-09	1.71E-08	2.63E-08
708	479490.15	3770609.69	9.23E-09	1.71E-08	2.63E-08
709	479472.82	3770617.38	9.25E-09	1.71E-08	2.63E-08
710	479455.49	3770625.07	9.24E-09	1.71E-08	2.63E-08
711	479438.15	3770632.77	9.22E-09	1.70E-08	2.62E-08
712	479420.82	3770640.46	9.21E-09	1.70E-08	2.62E-08
713	479403.49	3770648.15	9.20E-09	1.70E-08	2.62E-08
714	479386.16	3770655.84	9.18E-09	1.69E-08	2.61E-08
715	479368.83	3770663.53	9.15E-09	1.69E-08	2.61E-08
716	479351.49	3770671.22	9.13E-09	1.69E-08	2.60E-08
717	479334.16	3770678.91	9.12E-09	1.68E-08	2.60E-08
718	479316.83	3770686.6	9.11E-09	1.68E-08	2.59E-08
719	479299.5	3770694.29	9.09E-09	1.68E-08	2.59E-08
720	479282.17	3770701.98	9.07E-09	1.67E-08	2.58E-08
721	479264.83	3770709.67	9.04E-09	1.67E-08	2.57E-08
722	479247.5	3770717.37	9.03E-09	1.67E-08	2.57E-08
723	479230.17	3770725.06	9.02E-09	1.67E-08	2.57E-08
724	479212.84	3770732.75	9.00E-09	1.66E-08	2.56E-08

725	479195.5	3770740.44	8.97E-09	1.66E-08	2.55E-08
726	479178.17	3770748.13	8.96E-09	1.66E-08	2.55E-08
727	480456.3	3769416.56	3.54E-08	6.54E-08	1.01E-07
728	480456.3	3769397.46	3.63E-08	6.70E-08	1.03E-07
729	480456.3	3769378.36	3.71E-08	6.85E-08	1.06E-07
730	480456.3	3769359.27	3.79E-08	6.99E-08	1.08E-07
731	480456.3	3769340.17	3.86E-08	7.13E-08	1.10E-07
732	480456.3	3769321.07	3.93E-08	7.27E-08	1.12E-07
733	480456.3	3769301.97	4.00E-08	7.39E-08	1.14E-07
734	480456.3	3769282.87	4.07E-08	7.51E-08	1.16E-07
735	480456.3	3769263.78	4.13E-08	7.62E-08	1.17E-07
736	480456.3	3769244.68	4.18E-08	7.72E-08	1.19E-07
737	480456.3	3769225.58	4.23E-08	7.81E-08	1.20E-07
738	480609.15	3769434.24	2.99E-08	5.52E-08	8.50E-08
739	480602	3769451.91	2.94E-08	5.43E-08	8.38E-08
740	480594.85	3769469.59	2.90E-08	5.35E-08	8.25E-08
741	480587.7	3769487.26	2.85E-08	5.27E-08	8.12E-08
742	480580.55	3769504.94	2.80E-08	5.18E-08	7.98E-08
743	480573.4	3769522.62	2.76E-08	5.09E-08	7.85E-08
744	480523.35	3769646.35	2.41E-08	4.45E-08	6.86E-08
745	480516.2	3769664.02	2.36E-08	4.35E-08	6.71E-08
746	480509.05	3769681.7	2.30E-08	4.26E-08	6.56E-08
747	480501.9	3769699.38	2.25E-08	4.16E-08	6.42E-08
748	480494.75	3769717.05	2.20E-08	4.07E-08	6.27E-08
749	480487.6	3769734.73	2.15E-08	3.97E-08	6.12E-08
750	480480.45	3769752.4	2.10E-08	3.88E-08	5.98E-08
751	480473.3	3769770.08	2.05E-08	3.79E-08	5.84E-08
752	480466.15	3769787.76	2.00E-08	3.69E-08	5.69E-08
753	480459	3769805.43	1.95E-08	3.60E-08	5.56E-08
754	480451.85	3769823.11	1.90E-08	3.52E-08	5.42E-08
755	480444.7	3769840.78	1.86E-08	3.43E-08	5.29E-08
756	480437.55	3769858.46	1.81E-08	3.34E-08	5.15E-08
757	480430.4	3769876.14	1.76E-08	3.26E-08	5.02E-08
758	480423.25	3769893.81	1.72E-08	3.18E-08	4.89E-08
759	480416.1	3769911.49	1.67E-08	3.09E-08	4.77E-08
760	480408.95	3769929.16	1.63E-08	3.01E-08	4.64E-08
761	480401.8	3769946.84	1.59E-08	2.93E-08	4.51E-08
762	480394.65	3769964.52	1.54E-08	2.85E-08	4.39E-08
763	480387.5	3769982.19	1.50E-08	2.77E-08	4.27E-08
764	480380.35	3769999.87	1.46E-08	2.69E-08	4.15E-08
765	480373.2	3770017.54	1.42E-08	2.62E-08	4.03E-08
766	480366.05	3770035.22	1.38E-08	2.54E-08	3.92E-08
767	480358.9	3770052.9	1.34E-08	2.47E-08	3.81E-08
768	480351.75	3770070.57	1.30E-08	2.40E-08	3.70E-08
769	480344.6	3770088.25	1.27E-08	2.34E-08	3.60E-08
770	480337.45	3770105.92	1.23E-08	2.27E-08	3.51E-08
771	480330.3	3770123.6	1.20E-08	2.21E-08	3.41E-08
772	480323.15	3770141.28	1.17E-08	2.15E-08	3.32E-08
773	480316	3770158.95	1.14E-08	2.10E-08	3.23E-08
774	480308.85	3770176.63	1.11E-08	2.05E-08	3.15E-08
775	480301.7	3770194.3	1.08E-08	2.00E-08	3.08E-08
776	480294.55	3770211.98	1.06E-08	1.95E-08	3.01E-08

777	480287.4	3770229.66	1.03E-08	1.91E-08	2.94E-08
778	480280.25	3770247.33	1.01E-08	1.86E-08	2.87E-08
779	480273.09	3770265.01	9.86E-09	1.82E-08	2.81E-08
780	480265.94	3770282.68	9.65E-09	1.78E-08	2.75E-08
781	480258.79	3770300.36	9.45E-09	1.75E-08	2.69E-08
782	480251.64	3770318.04	9.26E-09	1.71E-08	2.64E-08
783	480244.49	3770335.71	9.08E-09	1.68E-08	2.59E-08
784	480237.34	3770353.39	8.92E-09	1.65E-08	2.54E-08
785	480230.19	3770371.06	8.75E-09	1.62E-08	2.49E-08
786	480223.04	3770388.74	8.60E-09	1.59E-08	2.45E-08
787	480215.89	3770406.42	8.45E-09	1.56E-08	2.41E-08
788	480208.74	3770424.09	8.32E-09	1.54E-08	2.37E-08
789	480201.59	3770441.77	8.19E-09	1.51E-08	2.33E-08
790	480177.02	3770467.18	8.05E-09	1.49E-08	2.29E-08
791	480159.59	3770474.91	8.04E-09	1.48E-08	2.29E-08
792	480142.16	3770482.64	8.03E-09	1.48E-08	2.29E-08
793	480124.73	3770490.38	8.03E-09	1.48E-08	2.29E-08
794	480107.3	3770498.11	8.02E-09	1.48E-08	2.28E-08
795	480089.87	3770505.85	8.02E-09	1.48E-08	2.28E-08
796	480072.44	3770513.58	8.01E-09	1.48E-08	2.28E-08
797	480055.02	3770521.31	8.02E-09	1.48E-08	2.28E-08
798	480037.59	3770529.05	8.02E-09	1.48E-08	2.28E-08
799	480020.16	3770536.78	8.02E-09	1.48E-08	2.28E-08
800	480002.73	3770544.51	8.01E-09	1.48E-08	2.28E-08
801	479985.3	3770552.25	8.01E-09	1.48E-08	2.28E-08
802	479967.87	3770559.98	8.01E-09	1.48E-08	2.28E-08
803	479950.44	3770567.72	8.01E-09	1.48E-08	2.28E-08
804	479933.02	3770575.45	8.01E-09	1.48E-08	2.28E-08
805	479915.59	3770583.18	8.00E-09	1.48E-08	2.28E-08
806	479898.16	3770590.92	8.00E-09	1.48E-08	2.28E-08
807	479880.73	3770598.65	7.99E-09	1.48E-08	2.28E-08
808	479863.3	3770606.38	7.99E-09	1.48E-08	2.27E-08
809	479845.87	3770614.12	7.98E-09	1.47E-08	2.27E-08
810	479828.44	3770621.85	7.98E-09	1.47E-08	2.27E-08
811	479811.02	3770629.58	7.97E-09	1.47E-08	2.27E-08
812	479793.59	3770637.32	7.97E-09	1.47E-08	2.27E-08
813	479776.16	3770645.05	7.97E-09	1.47E-08	2.27E-08
814	479758.73	3770652.79	7.96E-09	1.47E-08	2.27E-08
815	479741.3	3770660.52	7.96E-09	1.47E-08	2.27E-08
816	479723.87	3770668.25	7.96E-09	1.47E-08	2.27E-08
817	479706.44	3770675.99	7.96E-09	1.47E-08	2.27E-08
818	479689.02	3770683.72	7.95E-09	1.47E-08	2.26E-08
819	479671.59	3770691.45	7.95E-09	1.47E-08	2.26E-08
820	479654.16	3770699.19	7.95E-09	1.47E-08	2.26E-08
821	479636.73	3770706.92	7.95E-09	1.47E-08	2.26E-08
822	479619.3	3770714.66	7.94E-09	1.47E-08	2.26E-08
823	479601.87	3770722.39	7.93E-09	1.46E-08	2.26E-08
824	479584.44	3770730.12	7.93E-09	1.46E-08	2.26E-08
825	479567.02	3770737.86	7.93E-09	1.46E-08	2.26E-08
826	479549.59	3770745.59	7.93E-09	1.46E-08	2.26E-08
827	479532.16	3770753.32	7.92E-09	1.46E-08	2.25E-08
828	479514.73	3770761.06	7.91E-09	1.46E-08	2.25E-08

829	479497.3	3770768.79	7.90E-09	1.46E-08	2.25E-08
830	479479.87	3770776.52	7.91E-09	1.46E-08	2.25E-08
831	479462.44	3770784.26	7.90E-09	1.46E-08	2.25E-08
832	479445.02	3770791.99	7.89E-09	1.46E-08	2.25E-08
833	479427.59	3770799.73	7.88E-09	1.45E-08	2.24E-08
834	479410.16	3770807.46	7.87E-09	1.45E-08	2.24E-08
835	479392.73	3770815.19	7.85E-09	1.45E-08	2.24E-08
836	479375.3	3770822.93	7.84E-09	1.45E-08	2.23E-08
837	479357.87	3770830.66	7.83E-09	1.45E-08	2.23E-08
838	479340.44	3770838.39	7.82E-09	1.44E-08	2.23E-08
839	479323.02	3770846.13	7.80E-09	1.44E-08	2.22E-08
840	479305.59	3770853.86	7.79E-09	1.44E-08	2.22E-08
841	479288.16	3770861.6	7.77E-09	1.44E-08	2.21E-08
842	479270.73	3770869.33	7.76E-09	1.43E-08	2.21E-08
843	479253.3	3770877.06	7.75E-09	1.43E-08	2.21E-08
844	479235.87	3770884.8	7.74E-09	1.43E-08	2.20E-08
845	479218.44	3770892.53	7.72E-09	1.43E-08	2.20E-08
846	479201.02	3770900.26	7.71E-09	1.42E-08	2.20E-08
847	479183.59	3770908	7.70E-09	1.42E-08	2.19E-08
848	480616.3	3769416.56	3.03E-08	5.60E-08	8.63E-08
849	480616.3	3769397.46	3.10E-08	5.72E-08	8.82E-08
850	480616.3	3769378.36	3.17E-08	5.85E-08	9.01E-08
851	480616.3	3769359.27	3.23E-08	5.97E-08	9.20E-08
852	480616.3	3769340.17	3.29E-08	6.08E-08	9.38E-08
853	480616.3	3769321.07	3.35E-08	6.20E-08	9.55E-08
854	480616.3	3769301.97	3.41E-08	6.30E-08	9.72E-08
855	480616.3	3769282.87	3.47E-08	6.40E-08	9.87E-08
856	480616.3	3769263.78	3.52E-08	6.50E-08	1.00E-07
857	480616.3	3769244.68	3.57E-08	6.59E-08	1.02E-07
858	480616.3	3769225.58	3.61E-08	6.67E-08	1.03E-07
859	479077.49	3769215.89	4.67E-07	8.62E-07	1.33E-06
860	479072.74	3769234.91	6.07E-07	1.12E-06	1.73E-06
861	479084.3	3769193.04	3.55E-07	6.56E-07	1.01E-06
862	479155.23	3769201.76	6.11E-07	1.13E-06	1.74E-06
863	479058.09	3769211.04	3.74E-07	6.91E-07	1.07E-06
864	479053.34	3769230.06	4.71E-07	8.70E-07	1.34E-06
865	479038.68	3769206.2	3.07E-07	5.68E-07	8.75E-07
866	479033.93	3769225.22	3.78E-07	6.98E-07	1.08E-06
867	479081.69	3769158.48	2.31E-07	4.26E-07	6.57E-07
868	479191.22	3769197.22	6.12E-07	1.13E-06	1.74E-06
869	479019.28	3769201.35	2.55E-07	4.72E-07	7.27E-07
870	479014.53	3769220.37	3.09E-07	5.70E-07	8.79E-07
871	479026.35	3769160.15	1.76E-07	3.24E-07	5.00E-07
872	479041.64	3769149.65	1.72E-07	3.17E-07	4.89E-07
873	479056.93	3769139.14	1.68E-07	3.10E-07	4.77E-07
874	479072.22	3769128.64	1.63E-07	3.02E-07	4.65E-07
875	479087.51	3769118.14	1.58E-07	2.93E-07	4.51E-07
876	479102.81	3769107.63	1.53E-07	2.82E-07	4.35E-07
877	479170.26	3769128.31	2.44E-07	4.51E-07	6.95E-07
878	479182.55	3769142.21	2.96E-07	5.47E-07	8.43E-07
879	479194.84	3769156.1	3.60E-07	6.64E-07	1.02E-06
880	479231.72	3769197.79	5.98E-07	1.10E-06	1.70E-06

881	479244.01	3769211.68	6.84E-07	1.26E-06	1.95E-06
882	478980.47	3769191.66	1.85E-07	3.42E-07	5.28E-07
883	478975.72	3769210.68	2.19E-07	4.04E-07	6.23E-07
884	478987.03	3769150.8	1.34E-07	2.47E-07	3.81E-07
885	479002.16	3769140.42	1.32E-07	2.44E-07	3.76E-07
886	479017.28	3769130.03	1.30E-07	2.39E-07	3.69E-07
887	479032.41	3769119.64	1.27E-07	2.35E-07	3.62E-07
888	479047.53	3769109.25	1.24E-07	2.30E-07	3.54E-07
889	479062.65	3769098.86	1.22E-07	2.25E-07	3.46E-07
890	479077.78	3769088.48	1.19E-07	2.19E-07	3.38E-07
891	479092.9	3769078.09	1.15E-07	2.13E-07	3.29E-07
892	479108.02	3769067.7	1.12E-07	2.07E-07	3.18E-07
893	479174.74	3769088.15	1.66E-07	3.07E-07	4.73E-07
894	479186.9	3769101.9	1.96E-07	3.62E-07	5.58E-07
895	479199.05	3769115.64	2.32E-07	4.29E-07	6.61E-07
896	479211.21	3769129.38	2.74E-07	5.06E-07	7.79E-07
897	479223.36	3769143.12	3.21E-07	5.93E-07	9.14E-07
898	479235.52	3769156.87	3.75E-07	6.92E-07	1.07E-06
899	479271.99	3769198.09	5.50E-07	1.02E-06	1.57E-06
900	479284.14	3769211.84	5.99E-07	1.11E-06	1.71E-06
901	478936.91	3769200.99	1.65E-07	3.05E-07	4.71E-07
902	478934.9	3769150.27	1.07E-07	1.98E-07	3.06E-07
903	478950.92	3769139.26	1.05E-07	1.95E-07	3.00E-07
904	478966.93	3769128.26	1.04E-07	1.92E-07	2.96E-07
905	478982.95	3769117.26	1.02E-07	1.89E-07	2.92E-07
906	478998.97	3769106.25	1.01E-07	1.86E-07	2.87E-07
907	479014.99	3769095.25	9.89E-08	1.83E-07	2.82E-07
908	479031.01	3769084.25	9.69E-08	1.79E-07	2.76E-07
909	479047.03	3769073.24	9.50E-08	1.75E-07	2.70E-07
910	479063.05	3769062.24	9.29E-08	1.72E-07	2.65E-07
911	479079.07	3769051.24	9.08E-08	1.68E-07	2.59E-07
912	479095.09	3769040.24	8.84E-08	1.63E-07	2.52E-07
913	479111.11	3769029.23	8.60E-08	1.59E-07	2.45E-07
914	479181.78	3769050.9	1.24E-07	2.29E-07	3.53E-07
915	479194.66	3769065.45	1.44E-07	2.67E-07	4.11E-07
916	479207.54	3769080.01	1.69E-07	3.12E-07	4.81E-07
917	479220.41	3769094.57	1.98E-07	3.66E-07	5.65E-07
918	479233.29	3769109.12	2.31E-07	4.27E-07	6.59E-07
919	479246.16	3769123.68	2.69E-07	4.96E-07	7.65E-07
920	479259.04	3769138.24	3.11E-07	5.75E-07	8.86E-07
921	479271.92	3769152.8	3.55E-07	6.56E-07	1.01E-06
922	479310.55	3769196.47	4.83E-07	8.93E-07	1.38E-06
923	479323.42	3769211.02	5.17E-07	9.55E-07	1.47E-06
924	478898.11	3769191.29	1.30E-07	2.41E-07	3.71E-07
925	478879.82	3769151.75	8.98E-08	1.66E-07	2.56E-07
926	478895.6	3769140.91	8.76E-08	1.62E-07	2.49E-07
927	478911.38	3769130.07	8.59E-08	1.59E-07	2.44E-07
928	478927.16	3769119.24	8.45E-08	1.56E-07	2.41E-07
929	478942.93	3769108.4	8.33E-08	1.54E-07	2.37E-07
930	478958.71	3769097.56	8.23E-08	1.52E-07	2.34E-07
931	478974.49	3769086.73	8.12E-08	1.50E-07	2.31E-07
932	478990.26	3769075.89	8.00E-08	1.48E-07	2.28E-07

933	479006.04	3769065.05	7.87E-08	1.45E-07	2.24E-07
934	479021.82	3769054.22	7.72E-08	1.43E-07	2.20E-07
935	479037.6	3769043.38	7.58E-08	1.40E-07	2.16E-07
936	479053.37	3769032.54	7.44E-08	1.37E-07	2.12E-07
937	479069.15	3769021.71	7.28E-08	1.35E-07	2.07E-07
938	479084.93	3769010.87	7.11E-08	1.31E-07	2.03E-07
939	479100.7	3769000.03	6.97E-08	1.29E-07	1.98E-07
940	479198.76	3769024.87	1.07E-07	1.97E-07	3.04E-07
941	479211.44	3769039.21	1.22E-07	2.26E-07	3.48E-07
942	479224.12	3769053.54	1.41E-07	2.60E-07	4.00E-07
943	479236.81	3769067.88	1.62E-07	2.99E-07	4.60E-07
944	479249.49	3769082.22	1.85E-07	3.42E-07	5.28E-07
945	479262.17	3769096.55	2.12E-07	3.92E-07	6.04E-07
946	479274.85	3769110.89	2.42E-07	4.47E-07	6.89E-07
947	479287.53	3769125.22	2.73E-07	5.04E-07	7.76E-07
948	479300.21	3769139.56	3.06E-07	5.65E-07	8.72E-07
949	479312.89	3769153.9	3.40E-07	6.28E-07	9.68E-07
950	479350.94	3769196.91	4.27E-07	7.89E-07	1.22E-06
951	479363.62	3769211.24	4.45E-07	8.21E-07	1.27E-06
952	478840.84	3769142.17	7.53E-08	1.39E-07	2.14E-07
953	478856.45	3769131.46	7.32E-08	1.35E-07	2.08E-07
954	478872.05	3769120.74	7.16E-08	1.32E-07	2.04E-07
955	478887.65	3769110.02	7.04E-08	1.30E-07	2.00E-07
956	478903.26	3769099.3	6.93E-08	1.28E-07	1.97E-07
957	478918.86	3769088.59	6.85E-08	1.26E-07	1.95E-07
958	478934.47	3769077.87	6.77E-08	1.25E-07	1.93E-07
959	478950.07	3769067.15	6.69E-08	1.24E-07	1.90E-07
960	478965.67	3769056.43	6.61E-08	1.22E-07	1.88E-07
961	478981.28	3769045.72	6.52E-08	1.20E-07	1.86E-07
962	478996.88	3769035	6.41E-08	1.18E-07	1.82E-07
963	479012.48	3769024.28	6.31E-08	1.17E-07	1.80E-07
964	479028.09	3769013.56	6.21E-08	1.15E-07	1.77E-07
965	479043.69	3769002.85	6.11E-08	1.13E-07	1.74E-07
966	479059.3	3768992.13	6.00E-08	1.11E-07	1.71E-07
967	479074.9	3768981.41	5.88E-08	1.09E-07	1.67E-07
968	479090.5	3768970.69	5.77E-08	1.07E-07	1.64E-07
969	479106.11	3768959.98	5.68E-08	1.05E-07	1.62E-07
970	479137.31	3768938.54	5.48E-08	1.01E-07	1.56E-07
971	479165.46	3768942	5.94E-08	1.10E-07	1.69E-07
972	479203.09	3768984.54	8.24E-08	1.52E-07	2.35E-07
973	479215.63	3768998.72	9.27E-08	1.71E-07	2.64E-07
974	479228.17	3769012.9	1.05E-07	1.94E-07	2.98E-07
975	479240.71	3769027.08	1.19E-07	2.19E-07	3.37E-07
976	479253.25	3769041.25	1.34E-07	2.47E-07	3.81E-07
977	479265.8	3769055.43	1.52E-07	2.80E-07	4.32E-07
978	479278.34	3769069.61	1.72E-07	3.18E-07	4.91E-07
979	479290.88	3769083.79	1.95E-07	3.60E-07	5.55E-07
980	479303.42	3769097.97	2.18E-07	4.03E-07	6.21E-07
981	479315.96	3769112.15	2.42E-07	4.47E-07	6.90E-07
982	479328.51	3769126.33	2.68E-07	4.95E-07	7.63E-07
983	479341.05	3769140.51	2.94E-07	5.43E-07	8.37E-07
984	479353.59	3769154.69	3.18E-07	5.87E-07	9.05E-07

985	479391.22	3769197.22	3.71E-07	6.86E-07	1.06E-06
986	479403.76	3769211.4	3.82E-07	7.06E-07	1.09E-06
987	478825.24	3769152.89	7.79E-08	1.44E-07	2.22E-07
988	478763.59	3769122.54	5.63E-08	1.04E-07	1.60E-07
989	478779.55	3769111.58	5.43E-08	1.00E-07	1.55E-07
990	478795.51	3769100.61	5.27E-08	9.74E-08	1.50E-07
991	478811.48	3769089.65	5.15E-08	9.52E-08	1.47E-07
992	478827.44	3769078.68	5.06E-08	9.34E-08	1.44E-07
993	478843.41	3769067.72	4.99E-08	9.21E-08	1.42E-07
994	478859.37	3769056.75	4.93E-08	9.10E-08	1.40E-07
995	478875.33	3769045.79	4.88E-08	9.01E-08	1.39E-07
996	478891.3	3769034.82	4.83E-08	8.93E-08	1.38E-07
997	478907.26	3769023.86	4.79E-08	8.84E-08	1.36E-07
998	478923.23	3769012.89	4.74E-08	8.76E-08	1.35E-07
999	478939.19	3769001.93	4.69E-08	8.66E-08	1.34E-07
1000	478955.15	3768990.96	4.63E-08	8.56E-08	1.32E-07
1001	478971.12	3768980	4.58E-08	8.45E-08	1.30E-07
1002	478987.08	3768969.03	4.51E-08	8.33E-08	1.28E-07
1003	479003.04	3768958.07	4.45E-08	8.21E-08	1.27E-07
1004	479019.01	3768947.11	4.39E-08	8.11E-08	1.25E-07
1005	479034.97	3768936.14	4.33E-08	7.99E-08	1.23E-07
1006	479050.94	3768925.18	4.26E-08	7.87E-08	1.21E-07
1007	479066.9	3768914.21	4.20E-08	7.76E-08	1.20E-07
1008	479082.86	3768903.25	4.15E-08	7.67E-08	1.18E-07
1009	479098.83	3768892.28	4.10E-08	7.57E-08	1.17E-07
1010	479146.72	37688859.39	3.94E-08	7.29E-08	1.12E-07
1011	479175.51	3768862.93	4.21E-08	7.77E-08	1.20E-07
1012	479226.84	3768920.95	6.06E-08	1.12E-07	1.73E-07
1013	479239.67	3768935.46	6.69E-08	1.24E-07	1.90E-07
1014	479252.5	3768949.96	7.38E-08	1.36E-07	2.10E-07
1015	479265.33	3768964.47	8.19E-08	1.51E-07	2.33E-07
1016	479278.17	3768978.98	9.13E-08	1.69E-07	2.60E-07
1017	479291	3768993.48	1.02E-07	1.88E-07	2.90E-07
1018	479303.83	3769007.99	1.13E-07	2.09E-07	3.22E-07
1019	479316.66	3769022.49	1.26E-07	2.32E-07	3.58E-07
1020	479329.49	3769037	1.40E-07	2.58E-07	3.98E-07
1021	479342.32	3769051.51	1.55E-07	2.86E-07	4.41E-07
1022	479355.15	3769066.01	1.71E-07	3.16E-07	4.86E-07
1023	479367.99	3769080.52	1.87E-07	3.45E-07	5.32E-07
1024	479380.82	3769095.03	2.03E-07	3.75E-07	5.77E-07
1025	479393.65	3769109.53	2.19E-07	4.05E-07	6.24E-07
1026	479406.48	3769124.04	2.35E-07	4.34E-07	6.69E-07
1027	479419.31	3769138.54	2.49E-07	4.60E-07	7.09E-07
1028	479432.14	3769153.05	2.62E-07	4.84E-07	7.46E-07
1029	479470.64	3769196.57	2.84E-07	5.24E-07	8.08E-07
1030	479483.47	3769211.07	2.86E-07	5.29E-07	8.15E-07
1031	478747.62	3769133.51	5.89E-08	1.09E-07	1.68E-07
1032	478742.87	3769152.53	6.66E-08	1.23E-07	1.90E-07
1033	478685.71	3769103.34	4.54E-08	8.39E-08	1.29E-07
1034	478701.41	3769092.56	4.34E-08	8.02E-08	1.24E-07
1035	478717.11	3769081.77	4.18E-08	7.72E-08	1.19E-07
1036	478732.81	3769070.99	4.04E-08	7.47E-08	1.15E-07

1037	478748.51	3769060.2	3.94E-08	7.28E-08	1.12E-07
1038	478764.21	3769049.42	3.86E-08	7.13E-08	1.10E-07
1039	478779.92	3769038.63	3.80E-08	7.02E-08	1.08E-07
1040	478795.62	3769027.85	3.75E-08	6.93E-08	1.07E-07
1041	478811.32	3769017.06	3.72E-08	6.87E-08	1.06E-07
1042	478827.02	3769006.28	3.69E-08	6.82E-08	1.05E-07
1043	478842.72	3768995.49	3.67E-08	6.77E-08	1.04E-07
1044	478858.42	3768984.71	3.64E-08	6.73E-08	1.04E-07
1045	478874.12	3768973.93	3.62E-08	6.68E-08	1.03E-07
1046	478889.82	3768963.14	3.59E-08	6.63E-08	1.02E-07
1047	478905.53	3768952.36	3.56E-08	6.57E-08	1.01E-07
1048	478921.23	3768941.57	3.52E-08	6.51E-08	1.00E-07
1049	478936.93	3768930.79	3.49E-08	6.44E-08	9.93E-08
1050	478952.63	3768920	3.45E-08	6.37E-08	9.81E-08
1051	478968.33	3768909.22	3.41E-08	6.29E-08	9.69E-08
1052	478984.03	3768898.43	3.37E-08	6.22E-08	9.59E-08
1053	478999.73	3768887.65	3.33E-08	6.16E-08	9.49E-08
1054	479015.44	3768876.86	3.30E-08	6.09E-08	9.38E-08
1055	479031.14	3768866.08	3.26E-08	6.02E-08	9.27E-08
1056	479046.84	3768855.3	3.22E-08	5.96E-08	9.18E-08
1057	479062.54	3768844.51	3.20E-08	5.90E-08	9.10E-08
1058	479078.24	3768833.73	3.17E-08	5.85E-08	9.02E-08
1059	479093.94	3768822.94	3.14E-08	5.80E-08	8.94E-08
1060	479109.64	3768812.16	3.11E-08	5.74E-08	8.85E-08
1061	479141.05	3768790.59	3.05E-08	5.63E-08	8.68E-08
1062	479156.75	3768779.8	3.02E-08	5.57E-08	8.59E-08
1063	479185.07	3768783.29	3.19E-08	5.89E-08	9.07E-08
1064	479197.69	3768797.55	3.41E-08	6.29E-08	9.70E-08
1065	479248.17	3768854.62	4.60E-08	8.49E-08	1.31E-07
1066	479260.79	3768868.89	4.99E-08	9.21E-08	1.42E-07
1067	479273.41	3768883.16	5.43E-08	1.00E-07	1.55E-07
1068	479286.03	3768897.43	5.90E-08	1.09E-07	1.68E-07
1069	479298.65	3768911.69	6.45E-08	1.19E-07	1.84E-07
1070	479311.27	3768925.96	7.06E-08	1.30E-07	2.01E-07
1071	479323.89	3768940.23	7.73E-08	1.43E-07	2.20E-07
1072	479336.51	3768954.5	8.48E-08	1.57E-07	2.42E-07
1073	479349.13	3768968.76	9.31E-08	1.72E-07	2.65E-07
1074	479361.75	3768983.03	1.02E-07	1.88E-07	2.89E-07
1075	479374.37	3768997.3	1.11E-07	2.05E-07	3.16E-07
1076	479386.99	3769011.57	1.21E-07	2.23E-07	3.44E-07
1077	479399.61	3769025.83	1.31E-07	2.43E-07	3.74E-07
1078	479412.24	3769040.1	1.42E-07	2.63E-07	4.05E-07
1079	479424.86	3769054.37	1.53E-07	2.82E-07	4.35E-07
1080	479437.48	3769068.64	1.63E-07	3.01E-07	4.65E-07
1081	479450.1	3769082.9	1.74E-07	3.21E-07	4.95E-07
1082	479462.72	3769097.17	1.84E-07	3.40E-07	5.24E-07
1083	479475.34	3769111.44	1.94E-07	3.58E-07	5.51E-07
1084	479487.96	3769125.71	2.02E-07	3.73E-07	5.75E-07
1085	479500.58	3769139.97	2.09E-07	3.86E-07	5.96E-07
1086	479538.44	3769182.78	2.21E-07	4.08E-07	6.29E-07
1087	479551.06	3769197.04	2.21E-07	4.09E-07	6.30E-07
1088	479563.68	3769211.31	2.20E-07	4.06E-07	6.26E-07

1089	478670.01	3769114.12	4.77E-08	8.81E-08	1.36E-07
1090	478665.26	3769133.14	5.35E-08	9.89E-08	1.52E-07
1091	478608.33	3769083.79	3.83E-08	7.08E-08	1.09E-07
1092	478624.27	3769072.84	3.65E-08	6.74E-08	1.04E-07
1093	478640.21	3769061.89	3.49E-08	6.45E-08	9.94E-08
1094	478656.16	3769050.94	3.36E-08	6.20E-08	9.55E-08
1095	478672.1	3769039.99	3.24E-08	5.98E-08	9.22E-08
1096	478688.04	3769029.04	3.15E-08	5.81E-08	8.96E-08
1097	478703.98	3769018.1	3.07E-08	5.67E-08	8.74E-08
1098	478719.92	3769007.15	3.01E-08	5.57E-08	8.58E-08
1099	478735.86	3768996.2	2.97E-08	5.49E-08	8.47E-08
1100	478751.8	3768985.25	2.95E-08	5.44E-08	8.39E-08
1101	478767.74	3768974.3	2.92E-08	5.40E-08	8.32E-08
1102	478783.68	3768963.35	2.91E-08	5.37E-08	8.28E-08
1103	478799.63	3768952.4	2.90E-08	5.35E-08	8.25E-08
1104	478815.57	3768941.45	2.88E-08	5.33E-08	8.21E-08
1105	478831.51	3768930.5	2.87E-08	5.30E-08	8.17E-08
1106	478847.45	3768919.55	2.85E-08	5.27E-08	8.13E-08
1107	478863.39	3768908.6	2.83E-08	5.24E-08	8.07E-08
1108	478879.33	3768897.65	2.81E-08	5.20E-08	8.01E-08
1109	478895.27	3768886.7	2.79E-08	5.15E-08	7.94E-08
1110	478911.21	3768875.76	2.76E-08	5.10E-08	7.86E-08
1111	478927.15	3768864.81	2.73E-08	5.05E-08	7.78E-08
1112	478943.1	3768853.86	2.71E-08	5.00E-08	7.70E-08
1113	478959.04	3768842.91	2.68E-08	4.95E-08	7.63E-08
1114	478974.98	3768831.96	2.65E-08	4.90E-08	7.56E-08
1115	478990.92	3768821.01	2.63E-08	4.86E-08	7.49E-08
1116	479006.86	3768810.06	2.60E-08	4.81E-08	7.42E-08
1117	479022.8	3768799.11	2.58E-08	4.77E-08	7.36E-08
1118	479038.74	3768788.16	2.57E-08	4.74E-08	7.31E-08
1119	479054.68	3768777.21	2.55E-08	4.71E-08	7.26E-08
1120	479070.62	3768766.26	2.53E-08	4.67E-08	7.20E-08
1121	479086.57	3768755.31	2.51E-08	4.63E-08	7.14E-08
1122	479102.51	3768744.36	2.49E-08	4.61E-08	7.10E-08
1123	479150.33	3768711.52	2.44E-08	4.51E-08	6.95E-08
1124	479166.27	3768700.57	2.43E-08	4.49E-08	6.91E-08
1125	479195.03	3768704.1	2.55E-08	4.72E-08	7.27E-08
1126	479207.84	3768718.59	2.71E-08	5.00E-08	7.70E-08
1127	479220.65	3768733.07	2.87E-08	5.31E-08	8.18E-08
1128	479259.09	3768776.53	3.47E-08	6.42E-08	9.89E-08
1129	479271.9	3768791.02	3.72E-08	6.87E-08	1.06E-07
1130	479284.72	3768805.5	3.99E-08	7.37E-08	1.14E-07
1131	479297.53	3768819.99	4.30E-08	7.94E-08	1.22E-07
1132	479310.34	3768834.47	4.62E-08	8.54E-08	1.32E-07
1133	479323.16	3768848.96	4.98E-08	9.20E-08	1.42E-07
1134	479335.97	3768863.44	5.39E-08	9.96E-08	1.54E-07
1135	479348.78	3768877.93	5.84E-08	1.08E-07	1.66E-07
1136	479361.6	3768892.41	6.33E-08	1.17E-07	1.80E-07
1137	479374.41	3768906.9	6.86E-08	1.27E-07	1.95E-07
1138	479387.22	3768921.39	7.43E-08	1.37E-07	2.11E-07
1139	479400.04	3768935.87	8.05E-08	1.49E-07	2.29E-07
1140	479412.85	3768950.36	8.74E-08	1.61E-07	2.49E-07

1141	479425.66	3768964.84	9.41E-08	1.74E-07	2.68E-07
1142	479438.48	3768979.33	1.01E-07	1.87E-07	2.88E-07
1143	479451.29	3768993.81	1.09E-07	2.01E-07	3.10E-07
1144	479464.1	3769008.3	1.17E-07	2.16E-07	3.33E-07
1145	479476.92	3769022.78	1.25E-07	2.31E-07	3.55E-07
1146	479489.73	3769037.27	1.33E-07	2.45E-07	3.78E-07
1147	479502.54	3769051.75	1.40E-07	2.59E-07	4.00E-07
1148	479515.36	3769066.24	1.47E-07	2.72E-07	4.20E-07
1149	479528.17	3769080.73	1.54E-07	2.84E-07	4.38E-07
1150	479540.98	3769095.21	1.60E-07	2.96E-07	4.56E-07
1151	479553.79	3769109.7	1.66E-07	3.06E-07	4.72E-07
1152	479566.61	3769124.18	1.70E-07	3.14E-07	4.84E-07
1153	479579.42	3769138.67	1.74E-07	3.21E-07	4.94E-07
1154	479592.23	3769153.15	1.76E-07	3.25E-07	5.01E-07
1155	479617.86	3769182.12	1.77E-07	3.28E-07	5.05E-07
1156	479630.67	3769196.61	1.76E-07	3.25E-07	5.02E-07
1157	479643.49	3769211.09	1.74E-07	3.21E-07	4.95E-07
1158	478592.39	3769094.74	4.03E-08	7.45E-08	1.15E-07
1159	478587.64	3769113.76	4.49E-08	8.29E-08	1.28E-07
1160	478530.9	3769064.28	3.33E-08	6.16E-08	9.49E-08
1161	478547.02	3769053.21	3.18E-08	5.87E-08	9.05E-08
1162	478563.15	3769042.13	3.03E-08	5.60E-08	8.64E-08
1163	478579.27	3769031.06	2.90E-08	5.36E-08	8.26E-08
1164	478595.39	3769019.98	2.79E-08	5.15E-08	7.93E-08
1165	478611.52	3769008.91	2.69E-08	4.96E-08	7.65E-08
1166	478627.64	3768997.83	2.60E-08	4.81E-08	7.41E-08
1167	478643.77	3768986.76	2.53E-08	4.68E-08	7.21E-08
1168	478659.89	3768975.68	2.48E-08	4.58E-08	7.06E-08
1169	478676.01	3768964.61	2.44E-08	4.50E-08	6.94E-08
1170	478692.14	3768953.53	2.41E-08	4.45E-08	6.86E-08
1171	478708.26	3768942.46	2.39E-08	4.41E-08	6.80E-08
1172	478724.38	3768931.38	2.38E-08	4.39E-08	6.77E-08
1173	478740.51	3768920.31	2.37E-08	4.37E-08	6.74E-08
1174	478756.63	3768909.24	2.36E-08	4.36E-08	6.73E-08
1175	478772.76	3768898.16	2.36E-08	4.35E-08	6.71E-08
1176	478788.88	3768887.09	2.35E-08	4.34E-08	6.69E-08
1177	478805	3768876.01	2.34E-08	4.33E-08	6.67E-08
1178	478821.13	3768864.94	2.33E-08	4.31E-08	6.64E-08
1179	478837.25	3768853.86	2.32E-08	4.28E-08	6.60E-08
1180	478853.38	3768842.79	2.30E-08	4.25E-08	6.56E-08
1181	478869.5	3768831.71	2.28E-08	4.22E-08	6.50E-08
1182	478885.62	3768820.64	2.27E-08	4.18E-08	6.45E-08
1183	478901.75	3768809.56	2.24E-08	4.14E-08	6.39E-08
1184	478917.87	3768798.49	2.22E-08	4.11E-08	6.33E-08
1185	478934	3768787.41	2.20E-08	4.07E-08	6.27E-08
1186	478950.12	3768776.34	2.18E-08	4.03E-08	6.22E-08
1187	478966.24	3768765.26	2.16E-08	3.99E-08	6.16E-08
1188	478982.37	3768754.19	2.15E-08	3.97E-08	6.12E-08
1189	478998.49	3768743.11	2.14E-08	3.94E-08	6.08E-08
1190	479014.61	3768732.04	2.12E-08	3.92E-08	6.05E-08
1191	479030.74	3768720.96	2.11E-08	3.90E-08	6.01E-08
1192	479046.86	3768709.89	2.10E-08	3.87E-08	5.97E-08

1193	479062.99	3768698.81	2.09E-08	3.86E-08	5.94E-08
1194	479079.11	3768687.74	2.08E-08	3.84E-08	5.92E-08
1195	479095.23	3768676.66	2.07E-08	3.82E-08	5.89E-08
1196	479111.36	3768665.59	2.06E-08	3.80E-08	5.86E-08
1197	479143.61	3768643.44	2.04E-08	3.78E-08	5.82E-08
1198	479159.73	3768632.37	2.04E-08	3.76E-08	5.80E-08
1199	479175.85	3768621.29	2.03E-08	3.75E-08	5.77E-08
1200	479204.94	3768624.87	2.12E-08	3.91E-08	6.03E-08
1201	479217.9	3768639.52	2.23E-08	4.12E-08	6.35E-08
1202	479230.86	3768654.17	2.35E-08	4.34E-08	6.68E-08
1203	479243.82	3768668.82	2.48E-08	4.58E-08	7.05E-08
1204	479282.7	3768712.78	2.94E-08	5.42E-08	8.36E-08
1205	479295.66	3768727.43	3.12E-08	5.77E-08	8.89E-08
1206	479308.62	3768742.08	3.32E-08	6.13E-08	9.44E-08
1207	479321.58	3768756.73	3.53E-08	6.53E-08	1.01E-07
1208	479334.54	3768771.38	3.77E-08	6.96E-08	1.07E-07
1209	479347.5	3768786.03	4.02E-08	7.43E-08	1.14E-07
1210	479360.46	3768800.69	4.30E-08	7.95E-08	1.23E-07
1211	479373.42	3768815.34	4.61E-08	8.52E-08	1.31E-07
1212	479386.38	3768829.99	4.95E-08	9.14E-08	1.41E-07
1213	479399.34	3768844.64	5.31E-08	9.81E-08	1.51E-07
1214	479412.3	3768859.29	5.71E-08	1.05E-07	1.62E-07
1215	479425.26	3768873.94	6.13E-08	1.13E-07	1.75E-07
1216	479438.22	3768888.59	6.59E-08	1.22E-07	1.88E-07
1217	479451.18	3768903.25	7.08E-08	1.31E-07	2.02E-07
1218	479464.14	3768917.9	7.60E-08	1.40E-07	2.16E-07
1219	479477.1	3768932.55	8.14E-08	1.50E-07	2.32E-07
1220	479490.06	3768947.2	8.71E-08	1.61E-07	2.48E-07
1221	479503.02	3768961.85	9.28E-08	1.71E-07	2.64E-07
1222	479515.98	3768976.5	9.85E-08	1.82E-07	2.81E-07
1223	479528.94	3768991.16	1.04E-07	1.92E-07	2.97E-07
1224	479541.9	3769005.81	1.10E-07	2.03E-07	3.14E-07
1225	479554.86	3769020.46	1.16E-07	2.14E-07	3.30E-07
1226	479567.82	3769035.11	1.22E-07	2.24E-07	3.46E-07
1227	479580.78	3769049.76	1.27E-07	2.34E-07	3.61E-07
1228	479593.74	3769064.41	1.31E-07	2.43E-07	3.74E-07
1229	479606.7	3769079.06	1.35E-07	2.50E-07	3.86E-07
1230	479619.66	3769093.72	1.39E-07	2.56E-07	3.95E-07
1231	479632.62	3769108.37	1.42E-07	2.62E-07	4.04E-07
1232	479645.58	3769123.02	1.44E-07	2.66E-07	4.10E-07
1233	479658.54	3769137.67	1.45E-07	2.69E-07	4.14E-07
1234	479671.5	3769152.32	1.46E-07	2.70E-07	4.16E-07
1235	479697.42	3769181.63	1.45E-07	2.68E-07	4.13E-07
1236	479710.38	3769196.28	1.43E-07	2.65E-07	4.08E-07
1237	479723.34	3769210.93	1.41E-07	2.60E-07	4.01E-07
1238	478514.77	3769075.36	3.51E-08	6.47E-08	9.98E-08
1239	478510.02	3769094.38	3.86E-08	7.14E-08	1.10E-07
1240	478453.09	3769045.03	2.96E-08	5.47E-08	8.44E-08
1241	478469.02	3769034.09	2.83E-08	5.23E-08	8.06E-08
1242	478484.94	3769023.15	2.71E-08	5.00E-08	7.71E-08
1243	478500.87	3769012.21	2.59E-08	4.79E-08	7.38E-08
1244	478516.8	3769001.27	2.49E-08	4.59E-08	7.08E-08

1245	478532.73	3768990.33	2.39E-08	4.41E-08	6.80E-08
1246	478548.66	3768979.39	2.30E-08	4.25E-08	6.55E-08
1247	478564.59	3768968.45	2.22E-08	4.11E-08	6.33E-08
1248	478580.52	3768957.51	2.16E-08	3.99E-08	6.15E-08
1249	478596.45	3768946.56	2.11E-08	3.89E-08	6.00E-08
1250	478612.38	3768935.62	2.07E-08	3.82E-08	5.88E-08
1251	478628.3	3768924.68	2.03E-08	3.76E-08	5.79E-08
1252	478644.23	3768913.74	2.01E-08	3.71E-08	5.72E-08
1253	478660.16	3768902.8	1.99E-08	3.68E-08	5.68E-08
1254	478676.09	3768891.86	1.98E-08	3.67E-08	5.65E-08
1255	478692.02	3768880.92	1.98E-08	3.66E-08	5.64E-08
1256	478707.95	3768869.98	1.98E-08	3.65E-08	5.63E-08
1257	478723.88	3768859.04	1.98E-08	3.65E-08	5.62E-08
1258	478739.81	3768848.1	1.97E-08	3.65E-08	5.62E-08
1259	478755.73	3768837.16	1.97E-08	3.64E-08	5.61E-08
1260	478771.66	3768826.22	1.97E-08	3.64E-08	5.60E-08
1261	478787.59	3768815.28	1.96E-08	3.62E-08	5.58E-08
1262	478803.52	3768804.33	1.95E-08	3.61E-08	5.56E-08
1263	478819.45	3768793.39	1.94E-08	3.59E-08	5.53E-08
1264	478835.38	3768782.45	1.93E-08	3.56E-08	5.49E-08
1265	478851.31	3768771.51	1.91E-08	3.54E-08	5.45E-08
1266	478867.24	3768760.57	1.90E-08	3.51E-08	5.41E-08
1267	478883.17	3768749.63	1.88E-08	3.48E-08	5.36E-08
1268	478899.09	3768738.69	1.87E-08	3.45E-08	5.32E-08
1269	478915.02	3768727.75	1.85E-08	3.43E-08	5.28E-08
1270	478930.95	3768716.81	1.84E-08	3.40E-08	5.24E-08
1271	478946.88	3768705.87	1.82E-08	3.37E-08	5.20E-08
1272	478962.81	3768694.93	1.81E-08	3.35E-08	5.17E-08
1273	478978.74	3768683.99	1.81E-08	3.33E-08	5.14E-08
1274	478994.67	3768673.04	1.80E-08	3.32E-08	5.11E-08
1275	479010.6	3768662.1	1.79E-08	3.30E-08	5.08E-08
1276	479026.53	3768651.16	1.78E-08	3.29E-08	5.06E-08
1277	479042.45	3768640.22	1.77E-08	3.27E-08	5.05E-08
1278	479058.38	3768629.28	1.77E-08	3.26E-08	5.03E-08
1279	479074.31	3768618.34	1.76E-08	3.25E-08	5.01E-08
1280	479090.24	3768607.4	1.76E-08	3.25E-08	5.00E-08
1281	479106.17	3768596.46	1.75E-08	3.24E-08	5.00E-08
1282	479138.03	3768574.58	1.75E-08	3.23E-08	4.97E-08
1283	479153.96	3768563.64	1.74E-08	3.22E-08	4.96E-08
1284	479169.88	3768552.7	1.74E-08	3.21E-08	4.95E-08
1285	479185.81	3768541.75	1.73E-08	3.20E-08	4.94E-08
1286	479214.55	3768545.29	1.81E-08	3.35E-08	5.16E-08
1287	479227.35	3768559.76	1.89E-08	3.49E-08	5.38E-08
1288	479240.15	3768574.24	1.98E-08	3.66E-08	5.64E-08
1289	479252.96	3768588.71	2.08E-08	3.83E-08	5.91E-08
1290	479265.76	3768603.19	2.18E-08	4.02E-08	6.19E-08
1291	479316.97	3768661.08	2.65E-08	4.90E-08	7.55E-08
1292	479329.78	3768675.56	2.80E-08	5.17E-08	7.96E-08
1293	479342.58	3768690.03	2.95E-08	5.45E-08	8.41E-08
1294	479355.38	3768704.51	3.12E-08	5.77E-08	8.89E-08
1295	479368.19	3768718.98	3.30E-08	6.10E-08	9.41E-08
1296	479380.99	3768733.45	3.50E-08	6.47E-08	9.98E-08

1297	479393.79	3768747.93	3.72E-08	6.86E-08	1.06E-07
1298	479406.59	3768762.4	3.95E-08	7.29E-08	1.12E-07
1299	479419.4	3768776.88	4.20E-08	7.75E-08	1.19E-07
1300	479432.2	3768791.35	4.46E-08	8.23E-08	1.27E-07
1301	479445	3768805.83	4.74E-08	8.75E-08	1.35E-07
1302	479457.81	3768820.3	5.04E-08	9.32E-08	1.44E-07
1303	479470.61	3768834.77	5.37E-08	9.92E-08	1.53E-07
1304	479483.41	3768849.25	5.72E-08	1.06E-07	1.63E-07
1305	479496.22	3768863.72	6.09E-08	1.13E-07	1.73E-07
1306	479509.02	3768878.2	6.48E-08	1.20E-07	1.85E-07
1307	479521.82	3768892.67	6.89E-08	1.27E-07	1.96E-07
1308	479534.63	3768907.15	7.32E-08	1.35E-07	2.08E-07
1309	479547.43	3768921.62	7.75E-08	1.43E-07	2.21E-07
1310	479560.23	3768936.09	8.20E-08	1.51E-07	2.34E-07
1311	479573.04	3768950.57	8.66E-08	1.60E-07	2.46E-07
1312	479585.84	3768965.04	9.11E-08	1.68E-07	2.59E-07
1313	479598.64	3768979.52	9.54E-08	1.76E-07	2.72E-07
1314	479611.45	3768993.99	9.95E-08	1.84E-07	2.83E-07
1315	479624.25	3769008.47	1.04E-07	1.91E-07	2.95E-07
1316	479637.05	3769022.94	1.07E-07	1.99E-07	3.06E-07
1317	479649.86	3769037.41	1.11E-07	2.05E-07	3.16E-07
1318	479662.66	3769051.89	1.14E-07	2.11E-07	3.25E-07
1319	479675.46	3769066.36	1.17E-07	2.16E-07	3.34E-07
1320	479688.27	3769080.84	1.19E-07	2.20E-07	3.40E-07
1321	479701.07	3769095.31	1.21E-07	2.23E-07	3.44E-07
1322	479713.87	3769109.79	1.22E-07	2.26E-07	3.48E-07
1323	479726.68	3769124.26	1.23E-07	2.27E-07	3.50E-07
1324	479739.48	3769138.73	1.23E-07	2.27E-07	3.51E-07
1325	479790.69	3769196.63	1.18E-07	2.19E-07	3.37E-07
1326	479803.5	3769211.11	1.16E-07	2.15E-07	3.31E-07
1327	478437.16	3769055.97	3.10E-08	5.73E-08	8.83E-08
1328	478432.41	3769074.99	3.39E-08	6.26E-08	9.65E-08
1329	478297.85	3769006.27	2.41E-08	4.46E-08	6.87E-08
1330	478313.77	3768995.33	2.32E-08	4.29E-08	6.61E-08
1331	478329.69	3768984.4	2.23E-08	4.13E-08	6.36E-08
1332	478345.61	3768973.46	2.15E-08	3.97E-08	6.12E-08
1333	478361.53	3768962.53	2.07E-08	3.82E-08	5.89E-08
1334	478377.45	3768951.59	1.99E-08	3.68E-08	5.67E-08
1335	478393.37	3768940.66	1.91E-08	3.54E-08	5.45E-08
1336	478409.29	3768929.72	1.84E-08	3.41E-08	5.25E-08
1337	478425.22	3768918.79	1.78E-08	3.29E-08	5.06E-08
1338	478441.14	3768907.85	1.72E-08	3.18E-08	4.89E-08
1339	478457.06	3768896.92	1.67E-08	3.08E-08	4.74E-08
1340	478472.98	3768885.98	1.62E-08	2.99E-08	4.61E-08
1341	478488.9	3768875.04	1.58E-08	2.91E-08	4.49E-08
1342	478504.82	3768864.11	1.54E-08	2.85E-08	4.40E-08
1343	478520.74	3768853.17	1.52E-08	2.80E-08	4.32E-08
1344	478536.66	3768842.24	1.50E-08	2.77E-08	4.26E-08
1345	478552.58	3768831.3	1.48E-08	2.74E-08	4.22E-08
1346	478568.51	3768820.37	1.47E-08	2.72E-08	4.19E-08
1347	478584.43	3768809.43	1.47E-08	2.71E-08	4.18E-08
1348	478600.35	3768798.5	1.46E-08	2.70E-08	4.17E-08

1349	478616.27	3768787.56	1.46E-08	2.70E-08	4.17E-08
1350	478632.19	3768776.62	1.47E-08	2.71E-08	4.17E-08
1351	478648.11	3768765.69	1.47E-08	2.71E-08	4.18E-08
1352	478664.03	3768754.75	1.47E-08	2.71E-08	4.18E-08
1353	478679.95	3768743.82	1.47E-08	2.72E-08	4.19E-08
1354	478695.88	3768732.88	1.47E-08	2.72E-08	4.19E-08
1355	478711.8	3768721.95	1.47E-08	2.72E-08	4.19E-08
1356	478727.72	3768711.01	1.47E-08	2.71E-08	4.18E-08
1357	478743.64	3768700.08	1.46E-08	2.70E-08	4.17E-08
1358	478759.56	3768689.14	1.46E-08	2.69E-08	4.15E-08
1359	478775.48	3768678.2	1.45E-08	2.68E-08	4.13E-08
1360	478791.4	3768667.27	1.44E-08	2.66E-08	4.11E-08
1361	478807.32	3768656.33	1.43E-08	2.65E-08	4.08E-08
1362	478823.24	3768645.4	1.42E-08	2.63E-08	4.05E-08
1363	478839.17	3768634.46	1.41E-08	2.61E-08	4.02E-08
1364	478855.09	3768623.53	1.40E-08	2.59E-08	3.99E-08
1365	478871.01	3768612.59	1.39E-08	2.57E-08	3.97E-08
1366	478886.93	3768601.66	1.39E-08	2.56E-08	3.94E-08
1367	478902.85	3768590.72	1.38E-08	2.54E-08	3.92E-08
1368	478918.77	3768579.79	1.37E-08	2.53E-08	3.90E-08
1369	478934.69	3768568.85	1.36E-08	2.51E-08	3.88E-08
1370	478950.61	3768557.91	1.36E-08	2.51E-08	3.86E-08
1371	478966.53	3768546.98	1.35E-08	2.50E-08	3.85E-08
1372	478982.46	3768536.04	1.35E-08	2.49E-08	3.84E-08
1373	478998.38	3768525.11	1.34E-08	2.48E-08	3.83E-08
1374	479014.3	3768514.17	1.34E-08	2.48E-08	3.82E-08
1375	479030.22	3768503.24	1.34E-08	2.48E-08	3.82E-08
1376	479046.14	3768492.3	1.34E-08	2.48E-08	3.82E-08
1377	479062.06	3768481.37	1.34E-08	2.48E-08	3.82E-08
1378	479077.98	3768470.43	1.34E-08	2.48E-08	3.82E-08
1379	479093.9	3768459.49	1.34E-08	2.48E-08	3.82E-08
1380	479109.82	3768448.56	1.34E-08	2.48E-08	3.82E-08
1381	479157.59	3768415.75	1.34E-08	2.48E-08	3.82E-08
1382	479173.51	3768404.82	1.34E-08	2.48E-08	3.83E-08
1383	479189.43	3768393.88	1.35E-08	2.49E-08	3.83E-08
1384	479205.35	3768382.95	1.35E-08	2.49E-08	3.83E-08
1385	479234.07	3768386.48	1.40E-08	2.58E-08	3.98E-08
1386	479246.87	3768400.95	1.45E-08	2.68E-08	4.13E-08
1387	479259.66	3768415.41	1.50E-08	2.78E-08	4.28E-08
1388	479272.46	3768429.88	1.56E-08	2.89E-08	4.45E-08
1389	479285.26	3768444.35	1.62E-08	3.00E-08	4.62E-08
1390	479298.05	3768458.81	1.69E-08	3.12E-08	4.80E-08
1391	479310.85	3768473.28	1.75E-08	3.24E-08	4.99E-08
1392	479323.65	3768487.75	1.82E-08	3.37E-08	5.19E-08
1393	479336.45	3768502.22	1.90E-08	3.50E-08	5.40E-08
1394	479349.24	3768516.68	1.97E-08	3.65E-08	5.62E-08
1395	479387.63	3768560.09	2.24E-08	4.14E-08	6.38E-08
1396	479400.43	3768574.55	2.34E-08	4.32E-08	6.66E-08
1397	479413.23	3768589.02	2.45E-08	4.52E-08	6.96E-08
1398	479426.03	3768603.49	2.56E-08	4.73E-08	7.29E-08
1399	479438.82	3768617.95	2.68E-08	4.95E-08	7.63E-08
1400	479451.62	3768632.42	2.81E-08	5.19E-08	8.00E-08

1401	479464.42	3768646.89	2.94E-08	5.44E-08	8.38E-08
1402	479477.21	3768661.36	3.09E-08	5.70E-08	8.79E-08
1403	479490.01	3768675.82	3.24E-08	5.99E-08	9.24E-08
1404	479502.81	3768690.29	3.41E-08	6.30E-08	9.71E-08
1405	479515.6	3768704.76	3.59E-08	6.62E-08	1.02E-07
1406	479528.4	3768719.23	3.77E-08	6.97E-08	1.07E-07
1407	479541.2	3768733.69	3.97E-08	7.33E-08	1.13E-07
1408	479554	3768748.16	4.18E-08	7.72E-08	1.19E-07
1409	479566.79	3768762.63	4.40E-08	8.12E-08	1.25E-07
1410	479579.59	3768777.09	4.63E-08	8.55E-08	1.32E-07
1411	479592.39	3768791.56	4.87E-08	9.00E-08	1.39E-07
1412	479605.18	3768806.03	5.12E-08	9.45E-08	1.46E-07
1413	479617.98	3768820.5	5.38E-08	9.94E-08	1.53E-07
1414	479630.78	3768834.96	5.65E-08	1.04E-07	1.61E-07
1415	479643.58	3768849.43	5.93E-08	1.10E-07	1.69E-07
1416	479656.37	3768863.9	6.22E-08	1.15E-07	1.77E-07
1417	479669.17	3768878.37	6.50E-08	1.20E-07	1.85E-07
1418	479681.97	3768892.83	6.79E-08	1.25E-07	1.93E-07
1419	479694.76	3768907.3	7.07E-08	1.31E-07	2.01E-07
1420	479707.56	3768921.77	7.34E-08	1.36E-07	2.09E-07
1421	479720.36	3768936.23	7.60E-08	1.40E-07	2.16E-07
1422	479733.16	3768950.7	7.84E-08	1.45E-07	2.23E-07
1423	479745.95	3768965.17	8.09E-08	1.49E-07	2.30E-07
1424	479758.75	3768979.64	8.32E-08	1.54E-07	2.37E-07
1425	479771.55	3768994.1	8.53E-08	1.58E-07	2.43E-07
1426	479784.34	3769008.57	8.72E-08	1.61E-07	2.48E-07
1427	479797.14	3769023.04	8.88E-08	1.64E-07	2.53E-07
1428	479809.94	3769037.51	9.01E-08	1.66E-07	2.57E-07
1429	479822.73	3769051.97	9.11E-08	1.68E-07	2.59E-07
1430	479835.53	3769066.44	9.18E-08	1.70E-07	2.61E-07
1431	479848.33	3769080.91	9.24E-08	1.71E-07	2.63E-07
1432	479861.13	3769095.37	9.25E-08	1.71E-07	2.63E-07
1433	479873.92	3769109.84	9.24E-08	1.71E-07	2.63E-07
1434	479886.72	3769124.31	9.20E-08	1.70E-07	2.62E-07
1435	479899.52	3769138.78	9.13E-08	1.69E-07	2.60E-07
1436	479937.91	3769182.18	8.76E-08	1.62E-07	2.49E-07
1437	479950.71	3769196.65	8.60E-08	1.59E-07	2.45E-07
1438	479963.5	3769211.11	8.42E-08	1.55E-07	2.40E-07
1439	478281.93	3769017.21	2.51E-08	4.63E-08	7.13E-08
1440	478277.18	3769036.23	2.69E-08	4.98E-08	7.67E-08
1441	478142.84	3768967.35	2.02E-08	3.73E-08	5.74E-08
1442	478158.99	3768956.26	1.95E-08	3.61E-08	5.56E-08
1443	478175.13	3768945.17	1.89E-08	3.49E-08	5.39E-08
1444	478191.28	3768934.08	1.83E-08	3.38E-08	5.21E-08
1445	478207.43	3768922.99	1.77E-08	3.27E-08	5.04E-08
1446	478223.57	3768911.9	1.71E-08	3.16E-08	4.87E-08
1447	478239.72	3768900.81	1.65E-08	3.05E-08	4.71E-08
1448	478255.87	3768889.72	1.60E-08	2.95E-08	4.55E-08
1449	478272.01	3768878.63	1.54E-08	2.85E-08	4.39E-08
1450	478288.16	3768867.54	1.49E-08	2.75E-08	4.24E-08
1451	478304.3	3768856.45	1.44E-08	2.66E-08	4.10E-08
1452	478320.45	3768845.35	1.39E-08	2.57E-08	3.96E-08

1453	478336.6	3768834.26	1.35E-08	2.49E-08	3.84E-08
1454	478352.74	3768823.17	1.31E-08	2.42E-08	3.73E-08
1455	478368.89	3768812.08	1.27E-08	2.35E-08	3.63E-08
1456	478385.04	3768800.99	1.24E-08	2.30E-08	3.54E-08
1457	478401.18	3768789.9	1.22E-08	2.25E-08	3.47E-08
1458	478417.33	3768778.81	1.20E-08	2.21E-08	3.40E-08
1459	478433.48	3768767.72	1.18E-08	2.18E-08	3.35E-08
1460	478449.62	3768756.63	1.16E-08	2.15E-08	3.32E-08
1461	478465.77	3768745.54	1.16E-08	2.13E-08	3.29E-08
1462	478481.92	3768734.45	1.15E-08	2.12E-08	3.27E-08
1463	478498.06	3768723.36	1.15E-08	2.12E-08	3.26E-08
1464	478514.21	3768712.27	1.15E-08	2.11E-08	3.26E-08
1465	478530.36	3768701.18	1.15E-08	2.12E-08	3.26E-08
1466	478546.5	3768690.09	1.15E-08	2.12E-08	3.27E-08
1467	478562.65	3768679	1.15E-08	2.13E-08	3.28E-08
1468	478578.8	3768667.91	1.15E-08	2.13E-08	3.29E-08
1469	478594.94	3768656.82	1.16E-08	2.14E-08	3.29E-08
1470	478611.09	3768645.73	1.16E-08	2.14E-08	3.30E-08
1471	478627.23	3768634.64	1.16E-08	2.14E-08	3.30E-08
1472	478643.38	3768623.55	1.16E-08	2.15E-08	3.31E-08
1473	478659.53	3768612.46	1.16E-08	2.14E-08	3.31E-08
1474	478675.67	3768601.37	1.16E-08	2.14E-08	3.30E-08
1475	478691.82	3768590.28	1.16E-08	2.14E-08	3.29E-08
1476	478707.97	3768579.19	1.15E-08	2.13E-08	3.28E-08
1477	478724.11	3768568.1	1.15E-08	2.12E-08	3.27E-08
1478	478740.26	3768557.01	1.14E-08	2.11E-08	3.26E-08
1479	478756.41	3768545.92	1.14E-08	2.10E-08	3.24E-08
1480	478772.55	3768534.83	1.13E-08	2.09E-08	3.22E-08
1481	478788.7	3768523.74	1.12E-08	2.08E-08	3.20E-08
1482	478804.85	3768512.65	1.12E-08	2.06E-08	3.18E-08
1483	478820.99	3768501.56	1.11E-08	2.05E-08	3.16E-08
1484	478837.14	3768490.46	1.10E-08	2.04E-08	3.14E-08
1485	478853.29	3768479.37	1.10E-08	2.03E-08	3.12E-08
1486	478869.43	3768468.28	1.09E-08	2.02E-08	3.11E-08
1487	478885.58	3768457.19	1.09E-08	2.01E-08	3.09E-08
1488	478901.73	3768446.1	1.08E-08	2.00E-08	3.08E-08
1489	478917.87	3768435.01	1.08E-08	1.99E-08	3.07E-08
1490	478934.02	3768423.92	1.07E-08	1.99E-08	3.06E-08
1491	478950.16	3768412.83	1.07E-08	1.98E-08	3.06E-08
1492	478966.31	3768401.74	1.07E-08	1.98E-08	3.05E-08
1493	478982.46	3768390.65	1.07E-08	1.98E-08	3.05E-08
1494	478998.6	3768379.56	1.07E-08	1.98E-08	3.05E-08
1495	479014.75	3768368.47	1.07E-08	1.98E-08	3.05E-08
1496	479030.9	3768357.38	1.07E-08	1.98E-08	3.05E-08
1497	479047.04	3768346.29	1.07E-08	1.98E-08	3.06E-08
1498	479063.19	3768335.2	1.07E-08	1.97E-08	3.04E-08
1499	479079.34	3768324.11	1.07E-08	1.98E-08	3.05E-08
1500	479095.48	3768313.02	1.07E-08	1.98E-08	3.05E-08
1501	479111.63	3768301.93	1.08E-08	1.99E-08	3.06E-08
1502	479160.07	3768268.66	1.08E-08	2.00E-08	3.09E-08
1503	479176.22	3768257.57	1.09E-08	2.00E-08	3.09E-08
1504	479192.36	3768246.48	1.09E-08	2.01E-08	3.10E-08

1505	479208.51	3768235.39	1.09E-08	2.02E-08	3.11E-08
1506	479224.66	3768224.3	1.10E-08	2.03E-08	3.12E-08
1507	479253.78	3768227.88	1.14E-08	2.10E-08	3.23E-08
1508	479266.76	3768242.55	1.17E-08	2.17E-08	3.34E-08
1509	479279.74	3768257.22	1.21E-08	2.24E-08	3.45E-08
1510	479292.71	3768271.9	1.25E-08	2.32E-08	3.57E-08
1511	479305.69	3768286.57	1.30E-08	2.39E-08	3.69E-08
1512	479318.67	3768301.24	1.34E-08	2.47E-08	3.81E-08
1513	479331.65	3768315.91	1.38E-08	2.56E-08	3.94E-08
1514	479344.63	3768330.58	1.43E-08	2.64E-08	4.07E-08
1515	479357.61	3768345.26	1.48E-08	2.73E-08	4.21E-08
1516	479370.58	3768359.93	1.53E-08	2.82E-08	4.35E-08
1517	479383.56	3768374.6	1.58E-08	2.92E-08	4.50E-08
1518	479396.54	3768389.27	1.64E-08	3.02E-08	4.66E-08
1519	479409.52	3768403.94	1.69E-08	3.13E-08	4.82E-08
1520	479422.5	3768418.62	1.75E-08	3.24E-08	5.00E-08
1521	479487.39	3768491.98	2.11E-08	3.90E-08	6.00E-08
1522	479500.37	3768506.65	2.19E-08	4.05E-08	6.24E-08
1523	479513.34	3768521.32	2.28E-08	4.22E-08	6.50E-08
1524	479526.32	3768535.99	2.38E-08	4.39E-08	6.77E-08
1525	479539.3	3768550.66	2.48E-08	4.57E-08	7.05E-08
1526	479552.28	3768565.34	2.58E-08	4.77E-08	7.35E-08
1527	479565.26	3768580.01	2.69E-08	4.96E-08	7.65E-08
1528	479578.24	3768594.68	2.80E-08	5.17E-08	7.98E-08
1529	479591.21	3768609.35	2.92E-08	5.40E-08	8.32E-08
1530	479604.19	3768624.02	3.05E-08	5.64E-08	8.69E-08
1531	479617.17	3768638.7	3.19E-08	5.88E-08	9.07E-08
1532	479630.15	3768653.37	3.32E-08	6.14E-08	9.46E-08
1533	479643.13	3768668.04	3.47E-08	6.40E-08	9.87E-08
1534	479656.11	3768682.71	3.62E-08	6.69E-08	1.03E-07
1535	479669.08	3768697.39	3.78E-08	6.99E-08	1.08E-07
1536	479682.06	3768712.06	3.95E-08	7.29E-08	1.12E-07
1537	479695.04	3768726.73	4.12E-08	7.62E-08	1.17E-07
1538	479708.02	3768741.4	4.31E-08	7.95E-08	1.23E-07
1539	479721	3768756.07	4.49E-08	8.30E-08	1.28E-07
1540	479733.97	3768770.75	4.69E-08	8.66E-08	1.33E-07
1541	479746.95	3768785.42	4.88E-08	9.02E-08	1.39E-07
1542	479759.93	3768800.09	5.08E-08	9.39E-08	1.45E-07
1543	479772.91	3768814.76	5.28E-08	9.75E-08	1.50E-07
1544	479785.89	3768829.43	5.47E-08	1.01E-07	1.56E-07
1545	479798.87	3768844.11	5.66E-08	1.05E-07	1.61E-07
1546	479811.84	3768858.78	5.86E-08	1.08E-07	1.67E-07
1547	479824.82	3768873.45	6.04E-08	1.12E-07	1.72E-07
1548	479837.8	3768888.12	6.23E-08	1.15E-07	1.77E-07
1549	479850.78	3768902.79	6.40E-08	1.18E-07	1.82E-07
1550	479863.76	3768917.47	6.56E-08	1.21E-07	1.87E-07
1551	479876.74	3768932.14	6.71E-08	1.24E-07	1.91E-07
1552	479889.71	3768946.81	6.84E-08	1.26E-07	1.95E-07
1553	479902.69	3768961.48	6.97E-08	1.29E-07	1.98E-07
1554	479915.67	3768976.15	7.08E-08	1.31E-07	2.02E-07
1555	479928.65	3768990.83	7.18E-08	1.33E-07	2.04E-07
1556	479941.63	3769005.5	7.26E-08	1.34E-07	2.07E-07

1557	479954.6	3769020.17	7.32E-08	1.35E-07	2.08E-07
1558	479967.58	3769034.84	7.36E-08	1.36E-07	2.09E-07
1559	479980.56	3769049.52	7.38E-08	1.36E-07	2.10E-07
1560	479993.54	3769064.19	7.37E-08	1.36E-07	2.10E-07
1561	480006.52	3769078.86	7.34E-08	1.36E-07	2.09E-07
1562	480019.5	3769093.53	7.31E-08	1.35E-07	2.08E-07
1563	480032.47	3769108.2	7.25E-08	1.34E-07	2.07E-07
1564	480045.45	3769122.88	7.18E-08	1.33E-07	2.05E-07
1565	480058.43	3769137.55	7.10E-08	1.31E-07	2.02E-07
1566	480071.41	3769152.22	7.00E-08	1.29E-07	1.99E-07
1567	480084.39	3769166.89	6.88E-08	1.27E-07	1.96E-07
1568	480097.37	3769181.56	6.75E-08	1.25E-07	1.92E-07
1569	480110.34	3769196.24	6.61E-08	1.22E-07	1.88E-07
1570	480123.32	3769210.91	6.47E-08	1.20E-07	1.84E-07
1571	478126.69	3768978.44	2.08E-08	3.85E-08	5.93E-08
1572	478121.94	3768997.46	2.21E-08	4.09E-08	6.30E-08
1573	477987.57	3768928.61	1.72E-08	3.18E-08	4.89E-08
1574	478003.68	3768917.54	1.67E-08	3.09E-08	4.77E-08
1575	478019.79	3768906.47	1.63E-08	3.01E-08	4.64E-08
1576	478035.9	3768895.41	1.59E-08	2.93E-08	4.52E-08
1577	478052.02	3768884.34	1.54E-08	2.85E-08	4.39E-08
1578	478068.13	3768873.28	1.50E-08	2.77E-08	4.27E-08
1579	478084.24	3768862.21	1.46E-08	2.69E-08	4.15E-08
1580	478100.35	3768851.14	1.41E-08	2.61E-08	4.02E-08
1581	478116.46	3768840.08	1.37E-08	2.53E-08	3.90E-08
1582	478132.57	3768829.01	1.33E-08	2.45E-08	3.78E-08
1583	478148.68	3768817.95	1.29E-08	2.38E-08	3.67E-08
1584	478164.79	3768806.88	1.25E-08	2.31E-08	3.55E-08
1585	478180.9	3768795.82	1.21E-08	2.23E-08	3.44E-08
1586	478197.01	3768784.75	1.17E-08	2.17E-08	3.34E-08
1587	478213.12	3768773.68	1.14E-08	2.10E-08	3.24E-08
1588	478229.24	3768762.62	1.11E-08	2.04E-08	3.15E-08
1589	478245.35	3768751.55	1.08E-08	1.99E-08	3.06E-08
1590	478261.46	3768740.49	1.05E-08	1.94E-08	2.98E-08
1591	478277.57	3768729.42	1.02E-08	1.89E-08	2.91E-08
1592	478293.68	3768718.35	1.00E-08	1.85E-08	2.85E-08
1593	478309.79	3768707.29	9.84E-09	1.82E-08	2.80E-08
1594	478325.9	3768696.22	9.68E-09	1.79E-08	2.76E-08
1595	478342.01	3768685.16	9.56E-09	1.77E-08	2.72E-08
1596	478358.12	3768674.09	9.47E-09	1.75E-08	2.69E-08
1597	478374.23	3768663.02	9.40E-09	1.74E-08	2.68E-08
1598	478390.34	3768651.96	9.36E-09	1.73E-08	2.66E-08
1599	478406.45	3768640.89	9.33E-09	1.72E-08	2.66E-08
1600	478422.57	3768629.83	9.32E-09	1.72E-08	2.65E-08
1601	478438.68	3768618.76	9.33E-09	1.72E-08	2.66E-08
1602	478454.79	3768607.7	9.35E-09	1.73E-08	2.66E-08
1603	478470.9	3768596.63	9.38E-09	1.73E-08	2.67E-08
1604	478487.01	3768585.56	9.41E-09	1.74E-08	2.68E-08
1605	478503.12	3768574.5	9.44E-09	1.74E-08	2.69E-08
1606	478519.23	3768563.43	9.47E-09	1.75E-08	2.69E-08
1607	478535.34	3768552.37	9.49E-09	1.75E-08	2.70E-08
1608	478551.45	3768541.3	9.51E-09	1.76E-08	2.71E-08

1609	478567.56	3768530.23	9.53E-09	1.76E-08	2.71E-08
1610	478583.67	3768519.17	9.54E-09	1.76E-08	2.72E-08
1611	478599.79	3768508.1	9.54E-09	1.76E-08	2.72E-08
1612	478615.9	3768497.04	9.53E-09	1.76E-08	2.71E-08
1613	478632.01	3768485.97	9.51E-09	1.76E-08	2.71E-08
1614	478648.12	3768474.91	9.49E-09	1.75E-08	2.70E-08
1615	478664.23	3768463.84	9.47E-09	1.75E-08	2.69E-08
1616	478680.34	3768452.77	9.43E-09	1.74E-08	2.68E-08
1617	478696.45	3768441.71	9.39E-09	1.73E-08	2.67E-08
1618	478712.56	3768430.64	9.35E-09	1.73E-08	2.66E-08
1619	478728.67	3768419.58	9.31E-09	1.72E-08	2.65E-08
1620	478744.78	3768408.51	9.26E-09	1.71E-08	2.64E-08
1621	478760.89	3768397.44	9.21E-09	1.70E-08	2.62E-08
1622	478777.01	3768386.38	9.15E-09	1.69E-08	2.61E-08
1623	478793.12	3768375.31	9.11E-09	1.68E-08	2.59E-08
1624	478809.23	3768364.25	9.06E-09	1.67E-08	2.58E-08
1625	478825.34	3768353.18	9.02E-09	1.67E-08	2.57E-08
1626	478841.45	3768342.12	8.97E-09	1.66E-08	2.55E-08
1627	478857.56	3768331.05	8.94E-09	1.65E-08	2.55E-08
1628	478873.67	3768319.98	8.92E-09	1.65E-08	2.54E-08
1629	478889.78	3768308.92	8.90E-09	1.64E-08	2.53E-08
1630	478905.89	3768297.85	8.88E-09	1.64E-08	2.53E-08
1631	478922	3768286.79	8.85E-09	1.64E-08	2.52E-08
1632	478938.11	3768275.72	8.84E-09	1.63E-08	2.52E-08
1633	478954.22	3768264.65	8.85E-09	1.63E-08	2.52E-08
1634	478970.34	3768253.59	8.85E-09	1.64E-08	2.52E-08
1635	478986.45	3768242.52	8.78E-09	1.62E-08	2.50E-08
1636	479002.56	3768231.46	8.78E-09	1.62E-08	2.50E-08
1637	479018.67	3768220.39	8.80E-09	1.62E-08	2.50E-08
1638	479034.78	3768209.33	8.82E-09	1.63E-08	2.51E-08
1639	479050.89	3768198.26	8.85E-09	1.63E-08	2.52E-08
1640	479067	3768187.19	8.88E-09	1.64E-08	2.53E-08
1641	479083.11	3768176.13	8.90E-09	1.64E-08	2.53E-08
1642	479099.22	3768165.06	8.92E-09	1.65E-08	2.54E-08
1643	479163.67	3768120.8	9.04E-09	1.67E-08	2.57E-08
1644	479179.78	3768109.73	9.08E-09	1.68E-08	2.58E-08
1645	479195.89	3768098.67	9.12E-09	1.69E-08	2.60E-08
1646	479212	3768087.6	9.17E-09	1.69E-08	2.61E-08
1647	479228.11	3768076.53	9.21E-09	1.70E-08	2.62E-08
1648	479244.22	3768065.47	9.25E-09	1.71E-08	2.63E-08
1649	479273.28	3768069.04	9.56E-09	1.77E-08	2.72E-08
1650	479286.23	3768083.68	9.85E-09	1.82E-08	2.80E-08
1651	479299.18	3768098.32	1.01E-08	1.87E-08	2.89E-08
1652	479312.13	3768112.96	1.04E-08	1.93E-08	2.97E-08
1653	479325.08	3768127.6	1.07E-08	1.98E-08	3.06E-08
1654	479338.03	3768142.24	1.11E-08	2.04E-08	3.15E-08
1655	479350.98	3768156.88	1.14E-08	2.10E-08	3.24E-08
1656	479363.93	3768171.52	1.17E-08	2.16E-08	3.33E-08
1657	479376.88	3768186.16	1.20E-08	2.23E-08	3.43E-08
1658	479389.83	3768200.8	1.24E-08	2.29E-08	3.53E-08
1659	479402.78	3768215.44	1.28E-08	2.36E-08	3.63E-08
1660	479415.73	3768230.08	1.31E-08	2.42E-08	3.74E-08

1661	479428.68	3768244.72	1.35E-08	2.49E-08	3.84E-08
1662	479441.63	3768259.36	1.39E-08	2.57E-08	3.96E-08
1663	479454.58	3768274	1.43E-08	2.64E-08	4.07E-08
1664	479467.53	3768288.64	1.48E-08	2.72E-08	4.20E-08
1665	479480.47	3768303.28	1.52E-08	2.81E-08	4.33E-08
1666	479493.42	3768317.92	1.57E-08	2.89E-08	4.46E-08
1667	479506.37	3768332.56	1.62E-08	2.99E-08	4.60E-08
1668	479519.32	3768347.2	1.67E-08	3.08E-08	4.75E-08
1669	479597.02	3768435.04	2.04E-08	3.77E-08	5.82E-08
1670	479609.97	3768449.68	2.12E-08	3.91E-08	6.02E-08
1671	479622.92	3768464.32	2.19E-08	4.05E-08	6.24E-08
1672	479635.87	3768478.95	2.27E-08	4.19E-08	6.46E-08
1673	479648.82	3768493.59	2.35E-08	4.34E-08	6.70E-08
1674	479661.77	3768508.23	2.44E-08	4.50E-08	6.94E-08
1675	479674.72	3768522.87	2.52E-08	4.66E-08	7.19E-08
1676	479687.67	3768537.51	2.62E-08	4.83E-08	7.45E-08
1677	479700.62	3768552.15	2.72E-08	5.02E-08	7.73E-08
1678	479713.57	3768566.79	2.82E-08	5.20E-08	8.02E-08
1679	479726.52	3768581.43	2.92E-08	5.39E-08	8.31E-08
1680	479739.47	3768596.07	3.03E-08	5.59E-08	8.62E-08
1681	479752.42	3768610.71	3.14E-08	5.81E-08	8.95E-08
1682	479765.37	3768625.35	3.27E-08	6.03E-08	9.30E-08
1683	479778.32	3768639.99	3.39E-08	6.26E-08	9.65E-08
1684	479791.27	3768654.63	3.52E-08	6.50E-08	1.00E-07
1685	479804.21	3768669.27	3.66E-08	6.75E-08	1.04E-07
1686	479817.16	3768683.91	3.79E-08	7.01E-08	1.08E-07
1687	479830.11	3768698.55	3.93E-08	7.27E-08	1.12E-07
1688	479843.06	3768713.19	4.07E-08	7.52E-08	1.16E-07
1689	479856.01	3768727.83	4.21E-08	7.78E-08	1.20E-07
1690	479868.96	3768742.47	4.36E-08	8.05E-08	1.24E-07
1691	479881.91	3768757.11	4.50E-08	8.31E-08	1.28E-07
1692	479894.86	3768771.75	4.65E-08	8.58E-08	1.32E-07
1693	479907.81	3768786.39	4.79E-08	8.84E-08	1.36E-07
1694	479920.76	3768801.03	4.93E-08	9.10E-08	1.40E-07
1695	479933.71	3768815.67	5.06E-08	9.34E-08	1.44E-07
1696	479946.66	3768830.31	5.19E-08	9.58E-08	1.48E-07
1697	479959.61	3768844.95	5.32E-08	9.82E-08	1.51E-07
1698	479972.56	3768859.59	5.43E-08	1.00E-07	1.55E-07
1699	479985.51	3768874.23	5.54E-08	1.02E-07	1.58E-07
1700	479998.46	3768888.87	5.65E-08	1.04E-07	1.61E-07
1701	480011.41	3768903.51	5.75E-08	1.06E-07	1.64E-07
1702	480024.36	3768918.15	5.83E-08	1.08E-07	1.66E-07
1703	480037.31	3768932.79	5.91E-08	1.09E-07	1.68E-07
1704	480050.26	3768947.43	5.97E-08	1.10E-07	1.70E-07
1705	480063.21	3768962.07	6.02E-08	1.11E-07	1.71E-07
1706	480076.16	3768976.7	6.06E-08	1.12E-07	1.73E-07
1707	480089.11	3768991.34	6.09E-08	1.13E-07	1.73E-07
1708	480102.06	3769005.98	6.11E-08	1.13E-07	1.74E-07
1709	480115.01	3769020.62	6.11E-08	1.13E-07	1.74E-07
1710	480127.96	3769035.26	6.10E-08	1.13E-07	1.74E-07
1711	480140.9	3769049.9	6.08E-08	1.12E-07	1.73E-07
1712	480153.85	3769064.54	6.05E-08	1.12E-07	1.72E-07

1713	480166.8	3769079.18	6.00E-08	1.11E-07	1.71E-07
1714	480179.75	3769093.82	5.94E-08	1.10E-07	1.69E-07
1715	480192.7	3769108.46	5.87E-08	1.08E-07	1.67E-07
1716	480205.65	3769123.1	5.80E-08	1.07E-07	1.65E-07
1717	480218.6	3769137.74	5.71E-08	1.05E-07	1.63E-07
1718	480231.55	3769152.38	5.62E-08	1.04E-07	1.60E-07
1719	480244.5	3769167.02	5.52E-08	1.02E-07	1.57E-07
1720	480257.45	3769181.66	5.42E-08	1.00E-07	1.54E-07
1721	480270.4	3769196.3	5.31E-08	9.81E-08	1.51E-07
1722	480283.35	3769210.94	5.20E-08	9.60E-08	1.48E-07
1723	477971.46	3768939.67	1.76E-08	3.26E-08	5.02E-08
1724	477966.71	3768958.69	1.86E-08	3.43E-08	5.29E-08
1725	477832.31	3768889.86	1.49E-08	2.75E-08	4.23E-08
1726	477848.4	3768878.81	1.45E-08	2.68E-08	4.14E-08
1727	477864.48	3768867.76	1.42E-08	2.63E-08	4.05E-08
1728	477880.56	3768856.71	1.39E-08	2.57E-08	3.96E-08
1729	477896.65	3768845.67	1.36E-08	2.51E-08	3.87E-08
1730	477912.73	3768834.62	1.33E-08	2.45E-08	3.77E-08
1731	477928.82	3768823.57	1.29E-08	2.39E-08	3.68E-08
1732	477944.9	3768812.53	1.26E-08	2.33E-08	3.59E-08
1733	477960.98	3768801.48	1.23E-08	2.27E-08	3.50E-08
1734	477977.07	3768790.43	1.20E-08	2.21E-08	3.41E-08
1735	477993.15	3768779.38	1.17E-08	2.15E-08	3.32E-08
1736	478009.24	3768768.34	1.13E-08	2.09E-08	3.23E-08
1737	478025.32	3768757.29	1.10E-08	2.03E-08	3.14E-08
1738	478041.4	3768746.24	1.07E-08	1.98E-08	3.05E-08
1739	478057.49	3768735.19	1.04E-08	1.92E-08	2.96E-08
1740	478073.57	3768724.15	1.01E-08	1.87E-08	2.88E-08
1741	478089.65	3768713.1	9.83E-09	1.82E-08	2.80E-08
1742	478105.74	3768702.05	9.57E-09	1.77E-08	2.72E-08
1743	478121.82	3768691.01	9.31E-09	1.72E-08	2.65E-08
1744	478137.91	3768679.96	9.07E-09	1.68E-08	2.58E-08
1745	478153.99	3768668.91	8.86E-09	1.64E-08	2.52E-08
1746	478170.07	3768657.86	8.66E-09	1.60E-08	2.47E-08
1747	478186.16	3768646.82	8.48E-09	1.57E-08	2.42E-08
1748	478202.24	3768635.77	8.32E-09	1.54E-08	2.37E-08
1749	478218.33	3768624.72	8.19E-09	1.51E-08	2.33E-08
1750	478234.41	3768613.67	8.08E-09	1.49E-08	2.30E-08
1751	478250.49	3768602.63	7.99E-09	1.48E-08	2.28E-08
1752	478266.58	3768591.58	7.92E-09	1.46E-08	2.26E-08
1753	478282.66	3768580.53	7.87E-09	1.45E-08	2.24E-08
1754	478298.74	3768569.48	7.84E-09	1.45E-08	2.23E-08
1755	478314.83	3768558.44	7.82E-09	1.44E-08	2.23E-08
1756	478330.91	3768547.39	7.82E-09	1.44E-08	2.23E-08
1757	478347	3768536.34	7.82E-09	1.44E-08	2.23E-08
1758	478363.08	3768525.3	7.84E-09	1.45E-08	2.23E-08
1759	478379.16	3768514.25	7.86E-09	1.45E-08	2.24E-08
1760	478395.25	3768503.2	7.89E-09	1.46E-08	2.25E-08
1761	478411.33	3768492.15	7.91E-09	1.46E-08	2.25E-08
1762	478427.42	3768481.11	7.94E-09	1.47E-08	2.26E-08
1763	478443.5	3768470.06	7.97E-09	1.47E-08	2.27E-08
1764	478459.58	3768459.01	7.99E-09	1.48E-08	2.28E-08

1765	478475.67	3768447.96	8.01E-09	1.48E-08	2.28E-08
1766	478491.75	3768436.92	8.03E-09	1.48E-08	2.29E-08
1767	478507.84	3768425.87	8.04E-09	1.49E-08	2.29E-08
1768	478523.92	3768414.82	8.05E-09	1.49E-08	2.29E-08
1769	478540	3768403.78	8.05E-09	1.49E-08	2.29E-08
1770	478556.09	3768392.73	8.05E-09	1.49E-08	2.29E-08
1771	478572.17	3768381.68	8.04E-09	1.49E-08	2.29E-08
1772	478588.25	3768370.63	8.03E-09	1.48E-08	2.29E-08
1773	478604.34	3768359.59	8.01E-09	1.48E-08	2.28E-08
1774	478620.42	3768348.54	7.98E-09	1.47E-08	2.27E-08
1775	478636.51	3768337.49	7.96E-09	1.47E-08	2.27E-08
1776	478652.59	3768326.44	7.93E-09	1.47E-08	2.26E-08
1777	478668.67	3768315.4	7.90E-09	1.46E-08	2.25E-08
1778	478684.76	3768304.35	7.87E-09	1.45E-08	2.24E-08
1779	478700.84	3768293.3	7.83E-09	1.45E-08	2.23E-08
1780	478716.93	3768282.26	7.80E-09	1.44E-08	2.22E-08
1781	478733.01	3768271.21	7.76E-09	1.43E-08	2.21E-08
1782	478749.09	3768260.16	7.73E-09	1.43E-08	2.20E-08
1783	478765.18	3768249.11	7.69E-09	1.42E-08	2.19E-08
1784	478781.26	3768238.07	7.66E-09	1.41E-08	2.18E-08
1785	478797.34	3768227.02	7.63E-09	1.41E-08	2.17E-08
1786	478813.43	3768215.97	7.60E-09	1.40E-08	2.16E-08
1787	478829.51	3768204.92	7.58E-09	1.40E-08	2.16E-08
1788	478845.6	3768193.88	7.56E-09	1.40E-08	2.15E-08
1789	478861.68	3768182.83	7.54E-09	1.39E-08	2.15E-08
1790	478877.76	3768171.78	7.52E-09	1.39E-08	2.14E-08
1791	478893.85	3768160.73	7.47E-09	1.38E-08	2.13E-08
1792	478909.93	3768149.69	7.45E-09	1.38E-08	2.12E-08
1793	478926.02	3768138.64	7.44E-09	1.37E-08	2.12E-08
1794	478942.1	3768127.59	7.44E-09	1.37E-08	2.12E-08
1795	478958.18	3768116.55	7.44E-09	1.38E-08	2.12E-08
1796	478974.27	3768105.5	7.44E-09	1.37E-08	2.12E-08
1797	478990.35	3768094.45	7.44E-09	1.37E-08	2.12E-08
1798	479006.44	3768083.4	7.42E-09	1.37E-08	2.11E-08
1799	479022.52	3768072.36	7.44E-09	1.38E-08	2.12E-08
1800	479038.6	3768061.31	7.47E-09	1.38E-08	2.13E-08
1801	479054.69	3768050.26	7.49E-09	1.38E-08	2.13E-08
1802	479070.77	3768039.21	7.51E-09	1.39E-08	2.14E-08
1803	479086.85	3768028.17	7.54E-09	1.39E-08	2.15E-08
1804	479102.94	3768017.12	7.58E-09	1.40E-08	2.16E-08
1805	479151.19	3767983.98	7.69E-09	1.42E-08	2.19E-08
1806	479167.27	3767972.93	7.73E-09	1.43E-08	2.20E-08
1807	479183.36	3767961.88	7.77E-09	1.44E-08	2.21E-08
1808	479199.44	3767950.84	7.82E-09	1.44E-08	2.23E-08
1809	479215.53	3767939.79	7.86E-09	1.45E-08	2.24E-08
1810	479231.61	3767928.74	7.90E-09	1.46E-08	2.25E-08
1811	479247.69	3767917.69	7.94E-09	1.47E-08	2.26E-08
1812	479263.78	3767906.65	7.99E-09	1.48E-08	2.27E-08
1813	479292.79	3767910.21	8.24E-09	1.52E-08	2.35E-08
1814	479305.72	3767924.83	8.47E-09	1.56E-08	2.41E-08
1815	479318.64	3767939.45	8.69E-09	1.61E-08	2.47E-08
1816	479331.57	3767954.06	8.93E-09	1.65E-08	2.54E-08

1817	479344.5	3767968.68	9.17E-09	1.69E-08	2.61E-08
1818	479357.43	3767983.29	9.41E-09	1.74E-08	2.68E-08
1819	479370.36	3767997.91	9.65E-09	1.78E-08	2.75E-08
1820	479383.28	3768012.52	9.90E-09	1.83E-08	2.82E-08
1821	479396.21	3768027.14	1.02E-08	1.88E-08	2.89E-08
1822	479409.14	3768041.75	1.04E-08	1.92E-08	2.97E-08
1823	479422.07	3768056.37	1.07E-08	1.97E-08	3.04E-08
1824	479435	3768070.98	1.10E-08	2.02E-08	3.12E-08
1825	479447.92	3768085.6	1.12E-08	2.07E-08	3.20E-08
1826	479460.85	3768100.21	1.15E-08	2.13E-08	3.28E-08
1827	479473.78	3768114.83	1.18E-08	2.18E-08	3.36E-08
1828	479486.71	3768129.44	1.21E-08	2.23E-08	3.44E-08
1829	479499.64	3768144.06	1.24E-08	2.29E-08	3.53E-08
1830	479512.56	3768158.67	1.27E-08	2.35E-08	3.62E-08
1831	479525.49	3768173.29	1.31E-08	2.41E-08	3.72E-08
1832	479538.42	3768187.9	1.34E-08	2.48E-08	3.82E-08
1833	479551.35	3768202.52	1.38E-08	2.54E-08	3.92E-08
1834	479564.27	3768217.13	1.41E-08	2.61E-08	4.03E-08
1835	479577.2	3768231.75	1.46E-08	2.69E-08	4.14E-08
1836	479590.13	3768246.36	1.50E-08	2.77E-08	4.26E-08
1837	479603.06	3768260.98	1.54E-08	2.85E-08	4.39E-08
1838	479615.99	3768275.59	1.59E-08	2.93E-08	4.52E-08
1839	479628.91	3768290.21	1.63E-08	3.02E-08	4.65E-08
1840	479641.84	3768304.82	1.68E-08	3.11E-08	4.80E-08
1841	479654.77	3768319.44	1.74E-08	3.21E-08	4.94E-08
1842	479667.7	3768334.05	1.79E-08	3.31E-08	5.10E-08
1843	479719.41	3768392.52	2.03E-08	3.75E-08	5.78E-08
1844	479732.34	3768407.13	2.09E-08	3.87E-08	5.96E-08
1845	479745.27	3768421.75	2.16E-08	3.99E-08	6.14E-08
1846	479758.19	3768436.36	2.23E-08	4.11E-08	6.34E-08
1847	479771.12	3768450.98	2.30E-08	4.24E-08	6.54E-08
1848	479784.05	3768465.59	2.37E-08	4.37E-08	6.74E-08
1849	479796.98	3768480.21	2.45E-08	4.52E-08	6.96E-08
1850	479809.9	3768494.82	2.53E-08	4.66E-08	7.19E-08
1851	479822.83	3768509.44	2.61E-08	4.82E-08	7.42E-08
1852	479835.76	3768524.05	2.69E-08	4.98E-08	7.67E-08
1853	479848.69	3768538.67	2.78E-08	5.14E-08	7.93E-08
1854	479861.62	3768553.28	2.88E-08	5.32E-08	8.20E-08
1855	479874.54	3768567.9	2.98E-08	5.50E-08	8.47E-08
1856	479887.47	3768582.51	3.08E-08	5.68E-08	8.76E-08
1857	479900.4	3768597.13	3.18E-08	5.87E-08	9.06E-08
1858	479913.33	3768611.74	3.29E-08	6.07E-08	9.36E-08
1859	479926.26	3768626.36	3.39E-08	6.27E-08	9.66E-08
1860	479939.18	3768640.97	3.50E-08	6.46E-08	9.96E-08
1861	479952.11	3768655.59	3.61E-08	6.66E-08	1.03E-07
1862	479965.04	3768670.2	3.72E-08	6.86E-08	1.06E-07
1863	479977.97	3768684.82	3.83E-08	7.07E-08	1.09E-07
1864	479990.9	3768699.43	3.93E-08	7.27E-08	1.12E-07
1865	480003.82	3768714.05	4.04E-08	7.46E-08	1.15E-07
1866	480016.75	3768728.66	4.15E-08	7.66E-08	1.18E-07
1867	480029.68	3768743.28	4.25E-08	7.85E-08	1.21E-07
1868	480042.61	3768757.89	4.35E-08	8.04E-08	1.24E-07

1869	480055.54	3768772.51	4.45E-08	8.23E-08	1.27E-07
1870	480068.46	3768787.12	4.55E-08	8.40E-08	1.30E-07
1871	480081.39	3768801.74	4.64E-08	8.57E-08	1.32E-07
1872	480094.32	3768816.36	4.73E-08	8.73E-08	1.35E-07
1873	480107.25	3768830.97	4.81E-08	8.88E-08	1.37E-07
1874	480120.17	3768845.59	4.88E-08	9.02E-08	1.39E-07
1875	480133.1	3768860.2	4.96E-08	9.15E-08	1.41E-07
1876	480146.03	3768874.82	5.02E-08	9.26E-08	1.43E-07
1877	480158.96	3768889.43	5.07E-08	9.36E-08	1.44E-07
1878	480171.89	3768904.05	5.11E-08	9.44E-08	1.46E-07
1879	480184.81	3768918.66	5.15E-08	9.51E-08	1.47E-07
1880	480197.74	3768933.28	5.18E-08	9.56E-08	1.47E-07
1881	480210.67	3768947.89	5.20E-08	9.61E-08	1.48E-07
1882	480223.6	3768962.51	5.21E-08	9.63E-08	1.48E-07
1883	480236.53	3768977.12	5.22E-08	9.64E-08	1.49E-07
1884	480249.45	3768991.74	5.22E-08	9.63E-08	1.48E-07
1885	480262.38	3769006.35	5.20E-08	9.60E-08	1.48E-07
1886	480275.31	3769020.97	5.17E-08	9.56E-08	1.47E-07
1887	480288.24	3769035.58	5.14E-08	9.50E-08	1.46E-07
1888	480301.17	3769050.2	5.11E-08	9.43E-08	1.45E-07
1889	480314.09	3769064.81	5.06E-08	9.35E-08	1.44E-07
1890	480327.02	3769079.43	5.01E-08	9.25E-08	1.43E-07
1891	480339.95	3769094.04	4.95E-08	9.14E-08	1.41E-07
1892	480352.88	3769108.66	4.88E-08	9.02E-08	1.39E-07
1893	480365.8	3769123.27	4.82E-08	8.90E-08	1.37E-07
1894	480378.73	3769137.89	4.74E-08	8.76E-08	1.35E-07
1895	480391.66	3769152.5	4.66E-08	8.61E-08	1.33E-07
1896	480404.59	3769167.12	4.58E-08	8.46E-08	1.30E-07
1897	480417.52	3769181.73	4.50E-08	8.31E-08	1.28E-07
1898	480430.44	3769196.35	4.41E-08	8.15E-08	1.26E-07
1899	480443.37	3769210.96	4.32E-08	7.98E-08	1.23E-07
1900	477816.23	3768900.9	1.52E-08	2.81E-08	4.33E-08
1901	477811.48	3768919.92	1.59E-08	2.93E-08	4.52E-08
1902	477677.06	3768851.1	1.30E-08	2.40E-08	3.70E-08
1903	477693.12	3768840.07	1.28E-08	2.36E-08	3.63E-08
1904	477709.18	3768829.04	1.25E-08	2.31E-08	3.56E-08
1905	477725.25	3768818.01	1.23E-08	2.27E-08	3.50E-08
1906	477741.31	3768806.97	1.20E-08	2.23E-08	3.43E-08
1907	477757.37	3768795.94	1.18E-08	2.18E-08	3.36E-08
1908	477773.44	3768784.91	1.16E-08	2.13E-08	3.29E-08
1909	477789.5	3768773.87	1.13E-08	2.09E-08	3.22E-08
1910	477805.56	3768762.84	1.11E-08	2.05E-08	3.15E-08
1911	477821.62	3768751.81	1.08E-08	2.00E-08	3.08E-08
1912	477837.69	3768740.78	1.06E-08	1.95E-08	3.01E-08
1913	477853.75	3768729.74	1.03E-08	1.91E-08	2.94E-08
1914	477869.81	3768718.71	1.01E-08	1.86E-08	2.87E-08
1915	477885.87	3768707.68	9.84E-09	1.82E-08	2.80E-08
1916	477901.94	3768696.65	9.59E-09	1.77E-08	2.73E-08
1917	477918	3768685.61	9.35E-09	1.73E-08	2.66E-08
1918	477934.06	3768674.58	9.11E-09	1.68E-08	2.59E-08
1919	477950.12	3768663.55	8.87E-09	1.64E-08	2.53E-08
1920	477966.19	3768652.51	8.64E-09	1.60E-08	2.46E-08

1921	477982.25	3768641.48	8.42E-09	1.56E-08	2.40E-08
1922	477998.31	3768630.45	8.21E-09	1.52E-08	2.34E-08
1923	478014.38	3768619.42	8.01E-09	1.48E-08	2.28E-08
1924	478030.44	3768608.38	7.82E-09	1.44E-08	2.23E-08
1925	478046.5	3768597.35	7.64E-09	1.41E-08	2.18E-08
1926	478062.56	3768586.32	7.48E-09	1.38E-08	2.13E-08
1927	478078.63	3768575.29	7.34E-09	1.36E-08	2.09E-08
1928	478094.69	3768564.25	7.20E-09	1.33E-08	2.05E-08
1929	478110.75	3768553.22	7.09E-09	1.31E-08	2.02E-08
1930	478126.81	3768542.19	6.99E-09	1.29E-08	1.99E-08
1931	478142.88	3768531.15	6.90E-09	1.27E-08	1.96E-08
1932	478158.94	3768520.12	6.84E-09	1.26E-08	1.95E-08
1933	478175	3768509.09	6.79E-09	1.25E-08	1.93E-08
1934	478191.07	3768498.06	6.75E-09	1.25E-08	1.92E-08
1935	478207.13	3768487.02	6.72E-09	1.24E-08	1.91E-08
1936	478223.19	3768475.99	6.71E-09	1.24E-08	1.91E-08
1937	478239.25	3768464.96	6.71E-09	1.24E-08	1.91E-08
1938	478255.32	3768453.92	6.71E-09	1.24E-08	1.91E-08
1939	478271.38	3768442.89	6.72E-09	1.24E-08	1.91E-08
1940	478287.44	3768431.86	6.74E-09	1.24E-08	1.92E-08
1941	478303.5	3768420.83	6.76E-09	1.25E-08	1.92E-08
1942	478319.57	3768409.79	6.78E-09	1.25E-08	1.93E-08
1943	478335.63	3768398.76	6.81E-09	1.26E-08	1.94E-08
1944	478351.69	3768387.73	6.83E-09	1.26E-08	1.94E-08
1945	478367.75	3768376.7	6.86E-09	1.27E-08	1.95E-08
1946	478383.82	3768365.66	6.88E-09	1.27E-08	1.96E-08
1947	478399.88	3768354.63	6.90E-09	1.27E-08	1.96E-08
1948	478415.94	3768343.6	6.91E-09	1.28E-08	1.97E-08
1949	478432.01	3768332.56	6.93E-09	1.28E-08	1.97E-08
1950	478448.07	3768321.53	6.94E-09	1.28E-08	1.98E-08
1951	478464.13	3768310.5	6.94E-09	1.28E-08	1.98E-08
1952	478480.19	3768299.47	6.94E-09	1.28E-08	1.98E-08
1953	478496.26	3768288.43	6.94E-09	1.28E-08	1.98E-08
1954	478512.32	3768277.4	6.94E-09	1.28E-08	1.98E-08
1955	478528.38	3768266.37	6.93E-09	1.28E-08	1.97E-08
1956	478544.44	3768255.34	6.92E-09	1.28E-08	1.97E-08
1957	478560.51	3768244.3	6.90E-09	1.28E-08	1.97E-08
1958	478576.57	3768233.27	6.89E-09	1.27E-08	1.96E-08
1959	478592.63	3768222.24	6.87E-09	1.27E-08	1.96E-08
1960	478608.7	3768211.2	6.85E-09	1.27E-08	1.95E-08
1961	478624.76	3768200.17	6.82E-09	1.26E-08	1.94E-08
1962	478640.82	3768189.14	6.80E-09	1.26E-08	1.93E-08
1963	478656.88	3768178.11	6.77E-09	1.25E-08	1.93E-08
1964	478672.95	3768167.07	6.75E-09	1.25E-08	1.92E-08
1965	478689.01	3768156.04	6.72E-09	1.24E-08	1.91E-08
1966	478705.07	3768145.01	6.69E-09	1.24E-08	1.90E-08
1967	478721.13	3768133.98	6.66E-09	1.23E-08	1.90E-08
1968	478737.2	3768122.94	6.64E-09	1.23E-08	1.89E-08
1969	478753.26	3768111.91	6.62E-09	1.22E-08	1.88E-08
1970	478769.32	3768100.88	6.59E-09	1.22E-08	1.88E-08
1971	478785.38	3768089.84	6.57E-09	1.21E-08	1.87E-08
1972	478801.45	3768078.81	6.55E-09	1.21E-08	1.86E-08

1973	478817.51	3768067.78	6.54E-09	1.21E-08	1.86E-08
1974	478833.57	3768056.75	6.50E-09	1.20E-08	1.85E-08
1975	478849.64	3768045.71	6.48E-09	1.20E-08	1.84E-08
1976	478865.7	3768034.68	6.46E-09	1.19E-08	1.84E-08
1977	478881.76	3768023.65	6.46E-09	1.19E-08	1.84E-08
1978	478897.82	3768012.61	6.44E-09	1.19E-08	1.83E-08
1979	478913.89	3768001.58	6.43E-09	1.19E-08	1.83E-08
1980	478929.95	3767990.55	6.41E-09	1.18E-08	1.83E-08
1981	478946.01	3767979.52	6.41E-09	1.18E-08	1.83E-08
1982	478962.07	3767968.48	6.40E-09	1.18E-08	1.82E-08
1983	478978.14	3767957.45	6.41E-09	1.18E-08	1.82E-08
1984	478994.2	3767946.42	6.42E-09	1.19E-08	1.83E-08
1985	479010.26	3767935.39	6.44E-09	1.19E-08	1.83E-08
1986	479026.32	3767924.35	6.46E-09	1.19E-08	1.84E-08
1987	479042.39	3767913.32	6.48E-09	1.20E-08	1.84E-08
1988	479058.45	3767902.29	6.49E-09	1.20E-08	1.85E-08
1989	479074.51	3767891.25	6.52E-09	1.20E-08	1.86E-08
1990	479090.58	3767880.22	6.55E-09	1.21E-08	1.87E-08
1991	479106.64	3767869.19	6.58E-09	1.21E-08	1.87E-08
1992	479154.83	3767836.09	6.70E-09	1.24E-08	1.91E-08
1993	479170.89	3767825.06	6.74E-09	1.25E-08	1.92E-08
1994	479186.95	3767814.03	6.78E-09	1.25E-08	1.93E-08
1995	479203.01	3767802.99	6.82E-09	1.26E-08	1.94E-08
1996	479219.08	3767791.96	6.86E-09	1.27E-08	1.95E-08
1997	479235.14	3767780.93	6.90E-09	1.28E-08	1.97E-08
1998	479251.2	3767769.89	6.94E-09	1.28E-08	1.98E-08
1999	479267.27	3767758.86	6.98E-09	1.29E-08	1.99E-08
2000	479283.33	3767747.83	7.02E-09	1.30E-08	2.00E-08
2001	479312.3	3767751.39	7.24E-09	1.34E-08	2.06E-08
2002	479325.21	3767765.99	7.42E-09	1.37E-08	2.11E-08
2003	479338.12	3767780.58	7.60E-09	1.40E-08	2.16E-08
2004	479351.03	3767795.18	7.79E-09	1.44E-08	2.22E-08
2005	479363.95	3767809.78	7.98E-09	1.47E-08	2.27E-08
2006	479376.86	3767824.37	8.18E-09	1.51E-08	2.33E-08
2007	479389.77	3767838.97	8.37E-09	1.55E-08	2.38E-08
2008	479402.68	3767853.56	8.57E-09	1.58E-08	2.44E-08
2009	479415.59	3767868.16	8.77E-09	1.62E-08	2.50E-08
2010	479428.5	3767882.76	8.98E-09	1.66E-08	2.56E-08
2011	479441.41	3767897.35	9.19E-09	1.70E-08	2.62E-08
2012	479454.32	3767911.95	9.39E-09	1.74E-08	2.67E-08
2013	479467.23	3767926.54	9.60E-09	1.77E-08	2.73E-08
2014	479480.14	3767941.14	9.82E-09	1.81E-08	2.80E-08
2015	479493.05	3767955.73	1.00E-08	1.85E-08	2.86E-08
2016	479505.96	3767970.33	1.03E-08	1.89E-08	2.92E-08
2017	479518.88	3767984.93	1.05E-08	1.94E-08	2.99E-08
2018	479531.79	3767999.52	1.07E-08	1.98E-08	3.05E-08
2019	479544.7	3768014.12	1.10E-08	2.02E-08	3.12E-08
2020	479557.61	3768028.71	1.12E-08	2.07E-08	3.19E-08
2021	479570.52	3768043.31	1.15E-08	2.12E-08	3.26E-08
2022	479583.43	3768057.91	1.17E-08	2.17E-08	3.34E-08
2023	479596.34	3768072.5	1.20E-08	2.22E-08	3.42E-08
2024	479609.25	3768087.1	1.23E-08	2.27E-08	3.50E-08

2025	479622.16	3768101.69	1.26E-08	2.32E-08	3.58E-08
2026	479635.07	3768116.29	1.29E-08	2.38E-08	3.67E-08
2027	479647.98	3768130.89	1.32E-08	2.44E-08	3.77E-08
2028	479660.9	3768145.48	1.36E-08	2.51E-08	3.86E-08
2029	479673.81	3768160.08	1.39E-08	2.57E-08	3.97E-08
2030	479686.72	3768174.67	1.43E-08	2.64E-08	4.07E-08
2031	479699.63	3768189.27	1.47E-08	2.71E-08	4.18E-08
2032	479712.54	3768203.87	1.51E-08	2.79E-08	4.30E-08
2033	479725.45	3768218.46	1.55E-08	2.86E-08	4.41E-08
2034	479738.36	3768233.06	1.59E-08	2.94E-08	4.53E-08
2035	479751.27	3768247.65	1.64E-08	3.02E-08	4.66E-08
2036	479764.18	3768262.25	1.68E-08	3.11E-08	4.79E-08
2037	479777.09	3768276.85	1.73E-08	3.20E-08	4.93E-08
2038	479790	3768291.44	1.78E-08	3.28E-08	5.06E-08
2039	479802.91	3768306.04	1.83E-08	3.38E-08	5.20E-08
2040	479815.83	3768320.63	1.88E-08	3.47E-08	5.35E-08
2041	479828.74	3768335.23	1.93E-08	3.57E-08	5.50E-08
2042	479880.38	3768393.61	2.16E-08	3.99E-08	6.15E-08
2043	479893.29	3768408.21	2.22E-08	4.11E-08	6.33E-08
2044	479906.2	3768422.8	2.29E-08	4.23E-08	6.52E-08
2045	479919.11	3768437.4	2.36E-08	4.36E-08	6.71E-08
2046	479932.02	3768452	2.43E-08	4.49E-08	6.92E-08
2047	479944.93	3768466.59	2.50E-08	4.62E-08	7.13E-08
2048	479957.85	3768481.19	2.58E-08	4.76E-08	7.34E-08
2049	479970.76	3768495.78	2.66E-08	4.91E-08	7.56E-08
2050	479983.67	3768510.38	2.74E-08	5.06E-08	7.79E-08
2051	479996.58	3768524.98	2.82E-08	5.21E-08	8.03E-08
2052	480009.49	3768539.57	2.90E-08	5.36E-08	8.27E-08
2053	480022.4	3768554.17	2.99E-08	5.52E-08	8.50E-08
2054	480035.31	3768568.76	3.07E-08	5.67E-08	8.74E-08
2055	480048.22	3768583.36	3.16E-08	5.83E-08	8.99E-08
2056	480061.13	3768597.96	3.24E-08	5.99E-08	9.23E-08
2057	480074.04	3768612.55	3.33E-08	6.15E-08	9.48E-08
2058	480086.95	3768627.15	3.42E-08	6.31E-08	9.73E-08
2059	480099.86	3768641.74	3.50E-08	6.46E-08	9.96E-08
2060	480112.78	3768656.34	3.58E-08	6.62E-08	1.02E-07
2061	480125.69	3768670.93	3.67E-08	6.78E-08	1.04E-07
2062	480138.6	3768685.53	3.75E-08	6.93E-08	1.07E-07
2063	480151.51	3768700.13	3.83E-08	7.08E-08	1.09E-07
2064	480164.42	3768714.72	3.91E-08	7.22E-08	1.11E-07
2065	480177.33	3768729.32	3.98E-08	7.35E-08	1.13E-07
2066	480190.24	3768743.91	4.05E-08	7.48E-08	1.15E-07
2067	480203.15	3768758.51	4.12E-08	7.61E-08	1.17E-07
2068	480216.06	3768773.11	4.19E-08	7.73E-08	1.19E-07
2069	480228.97	3768787.7	4.25E-08	7.85E-08	1.21E-07
2070	480241.88	3768802.3	4.31E-08	7.95E-08	1.23E-07
2071	480254.8	3768816.89	4.36E-08	8.05E-08	1.24E-07
2072	480267.71	3768831.49	4.40E-08	8.13E-08	1.25E-07
2073	480280.62	3768846.09	4.44E-08	8.20E-08	1.26E-07
2074	480293.53	3768860.68	4.48E-08	8.27E-08	1.27E-07
2075	480306.44	3768875.28	4.51E-08	8.33E-08	1.28E-07
2076	480319.35	3768889.87	4.53E-08	8.37E-08	1.29E-07

2077	480332.26	3768904.47	4.55E-08	8.40E-08	1.29E-07
2078	480345.17	3768919.07	4.56E-08	8.42E-08	1.30E-07
2079	480358.08	3768933.66	4.56E-08	8.42E-08	1.30E-07
2080	480370.99	3768948.26	4.56E-08	8.42E-08	1.30E-07
2081	480383.9	3768962.85	4.55E-08	8.41E-08	1.30E-07
2082	480396.82	3768977.45	4.54E-08	8.38E-08	1.29E-07
2083	480409.73	3768992.05	4.51E-08	8.34E-08	1.29E-07
2084	480422.64	3769006.64	4.49E-08	8.29E-08	1.28E-07
2085	480435.55	3769021.24	4.45E-08	8.22E-08	1.27E-07
2086	480448.46	3769035.83	4.42E-08	8.16E-08	1.26E-07
2087	480461.37	3769050.43	4.37E-08	8.08E-08	1.25E-07
2088	480474.28	3769065.02	4.33E-08	7.99E-08	1.23E-07
2089	480487.19	3769079.62	4.27E-08	7.89E-08	1.22E-07
2090	480500.1	3769094.22	4.22E-08	7.79E-08	1.20E-07
2091	480513.01	3769108.81	4.16E-08	7.69E-08	1.18E-07
2092	480525.92	3769123.41	4.10E-08	7.57E-08	1.17E-07
2093	480538.83	3769138	4.04E-08	7.45E-08	1.15E-07
2094	480551.75	3769152.6	3.97E-08	7.33E-08	1.13E-07
2095	480564.66	3769167.2	3.90E-08	7.20E-08	1.11E-07
2096	480577.57	3769181.79	3.83E-08	7.07E-08	1.09E-07
2097	480590.48	3769196.39	3.76E-08	6.94E-08	1.07E-07
2098	480603.39	3769210.98	3.69E-08	6.81E-08	1.05E-07
2099	477661	3768862.14	1.32E-08	2.45E-08	3.77E-08
2100	477656.25	3768881.16	1.38E-08	2.54E-08	3.92E-08
2101	478291.65	3768985.06	2.22E-08	4.11E-08	6.33E-08
2102	478139.11	3768936.78	1.83E-08	3.38E-08	5.21E-08
2103	477986.57	3768888.49	1.54E-08	2.85E-08	4.39E-08
2104	477834.03	3768840.2	1.32E-08	2.44E-08	3.77E-08
2105	477681.49	3768791.92	1.15E-08	2.13E-08	3.28E-08
2106	478850.19	3769100.43	6.00E-08	1.11E-07	1.71E-07
2107	478781.09	3769060.13	4.18E-08	7.73E-08	1.19E-07
2108	478573.76	3768939.23	2.02E-08	3.73E-08	5.76E-08
2109	478504.65	3768898.93	1.71E-08	3.15E-08	4.86E-08
2110	478228.22	3768737.73	1.04E-08	1.92E-08	2.96E-08
2111	478090.01	3768657.13	8.64E-09	1.60E-08	2.46E-08
2112	477951.79	3768576.53	7.38E-09	1.36E-08	2.10E-08
2113	477813.57	3768495.93	6.42E-09	1.18E-08	1.83E-08
2114	479063.97	3769251.6	7.48E-07	1.38E-06	2.13E-06
2115	479038.91	3769256.47	6.35E-07	1.17E-06	1.81E-06
2116	479021.16	3769247.26	4.68E-07	8.65E-07	1.33E-06
2117	479003.41	3769238.04	3.59E-07	6.64E-07	1.02E-06
2118	478840.53	3769117.71	6.45E-08	1.19E-07	1.84E-07
2119	478769.53	3769080.85	4.52E-08	8.34E-08	1.29E-07
2120	478698.53	3769043.99	3.40E-08	6.28E-08	9.68E-08
2121	478683.9	3769072.17	3.83E-08	7.07E-08	1.09E-07
2122	478612.9	3769035.31	3.02E-08	5.57E-08	8.59E-08
2123	478491.05	3768923.37	1.84E-08	3.39E-08	5.23E-08
2124	478478.21	3768947.49	1.99E-08	3.68E-08	5.67E-08
2125	478350.31	3768847.36	1.40E-08	2.59E-08	3.99E-08
2126	478336.21	3768873.77	1.52E-08	2.81E-08	4.33E-08
2127	478186.89	3768814.14	1.27E-08	2.35E-08	3.62E-08
2128	478066.5	3768699.55	9.54E-09	1.76E-08	2.72E-08

2129	478080.46	3768674.2	8.98E-09	1.66E-08	2.56E-08
2130	477923.86	3768626.99	8.21E-09	1.52E-08	2.34E-08
2131	477936.54	3768603.95	7.81E-09	1.44E-08	2.22E-08
2132	477910.2	3768652.6	8.69E-09	1.61E-08	2.47E-08
2133	477782.61	3768551.89	7.15E-09	1.32E-08	2.04E-08
2134	477796.81	3768526.11	6.80E-09	1.26E-08	1.94E-08
2135	477768.19	3768578.88	7.55E-09	1.39E-08	2.15E-08
2136	479051.67	3769273.61	1.03E-06	1.90E-06	2.92E-06
2137	479028.23	3769273.56	8.05E-07	1.49E-06	2.29E-06
2138	479011.19	3769263.09	5.65E-07	1.04E-06	1.61E-06
2139	478960.06	3769231.68	2.57E-07	4.74E-07	7.31E-07
2140	478755.58	3769106.05	5.04E-08	9.32E-08	1.44E-07
2141	479040.44	3769289.72	1.39E-06	2.56E-06	3.95E-06
2142	478985.81	3769262.1	4.63E-07	8.56E-07	1.32E-06
2143	478922.99	3769212.57	1.75E-07	3.24E-07	4.99E-07
2144	478592.43	3768921.16	1.94E-08	3.58E-08	5.52E-08
2145	478529.6	3768871.64	1.60E-08	2.96E-08	4.56E-08
2146	478278.28	3768673.55	9.12E-09	1.68E-08	2.60E-08
2147	478263.28	3768692.58	9.43E-09	1.74E-08	2.68E-08
2148	478152.63	3768574.5	7.40E-09	1.37E-08	2.11E-08
2149	478137.63	3768593.53	7.63E-09	1.41E-08	2.17E-08
2150	478026.97	3768475.45	6.20E-09	1.14E-08	1.76E-08
2151	478011.97	3768494.48	6.36E-09	1.17E-08	1.81E-08
2152	477901.31	3768376.41	5.30E-09	9.79E-09	1.51E-08
2153	477886.31	3768395.44	5.43E-09	1.00E-08	1.55E-08
2154	479026.71	3769306.3	1.96E-06	3.62E-06	5.59E-06
2155	479011.64	3769293.15	1.12E-06	2.06E-06	3.18E-06
2156	478996.57	3769280	7.10E-07	1.31E-06	2.02E-06
2157	478943.86	3769249.14	2.99E-07	5.52E-07	8.51E-07
2158	478416.36	3768758.57	1.14E-08	2.11E-08	3.26E-08
2159	478295.81	3768653.37	8.85E-09	1.63E-08	2.52E-08
2160	478175.25	3768548.17	7.15E-09	1.32E-08	2.04E-08
2161	478054.7	3768442.98	5.97E-09	1.10E-08	1.70E-08
2162	478039.7	3768460.17	6.08E-09	1.12E-08	1.73E-08
2163	477934.14	3768337.78	5.10E-09	9.42E-09	1.45E-08
2164	477919.14	3768354.97	5.18E-09	9.57E-09	1.47E-08
2165	479012.61	3769320.84	2.44E-06	4.50E-06	6.94E-06
2166	478998.9	3769306.28	1.37E-06	2.53E-06	3.90E-06
2167	478975.86	3769300.49	9.36E-07	1.73E-06	2.67E-06
2168	478971.49	3769277.15	5.56E-07	1.03E-06	1.58E-06
2169	478907.33	3769227.67	1.94E-07	3.59E-07	5.53E-07
2170	478879.92	3769198.54	1.31E-07	2.42E-07	3.73E-07
2171	478624.45	3768889.68	1.84E-08	3.40E-08	5.24E-08
2172	478605.79	3768907.24	1.89E-08	3.49E-08	5.38E-08
2173	478459.98	3768714.9	1.09E-08	2.02E-08	3.11E-08
2174	478441.32	3768732.46	1.11E-08	2.05E-08	3.15E-08
2175	478350.33	3768598.38	8.44E-09	1.56E-08	2.40E-08
2176	478331.67	3768615.94	8.52E-09	1.57E-08	2.43E-08
2177	478222.02	3768499.42	6.87E-09	1.27E-08	1.96E-08
2178	478131.03	3768365.34	5.70E-09	1.05E-08	1.62E-08
2179	478112.37	3768382.9	5.73E-09	1.06E-08	1.63E-08
2180	478021.38	3768248.82	4.89E-09	9.03E-09	1.39E-08

2181	478002.72	3768266.38	4.90E-09	9.06E-09	1.40E-08
2182	478995.93	3769335.56	2.62E-06	4.84E-06	7.46E-06
2183	478983.21	3769320.12	1.56E-06	2.88E-06	4.45E-06
2184	478961.17	3769312.37	1.04E-06	1.92E-06	2.96E-06
2185	478957.78	3769289.25	6.40E-07	1.18E-06	1.82E-06
2186	478923.02	3769266.06	3.48E-07	6.42E-07	9.90E-07
2187	478483.92	3768694.94	1.08E-08	2.00E-08	3.08E-08
2188	478382.19	3768571.44	8.38E-09	1.55E-08	2.39E-08
2189	478178.75	3768324.44	5.70E-09	1.05E-08	1.62E-08
2190	478160.09	3768339.81	5.69E-09	1.05E-08	1.62E-08
2191	478077.02	3768200.94	4.89E-09	9.04E-09	1.39E-08
2192	478058.36	3768216.31	4.88E-09	9.02E-09	1.39E-08
2193	478981.09	3769347.07	2.56E-06	4.74E-06	7.30E-06
2194	478651.48	3768869.74	1.82E-08	3.36E-08	5.17E-08
2195	478511.91	3768674.49	1.08E-08	2.00E-08	3.08E-08
2196	478418.86	3768544.33	8.41E-09	1.55E-08	2.39E-08
2197	478232.77	3768284	5.75E-09	1.06E-08	1.64E-08
2198	478139.72	3768153.84	4.95E-09	9.14E-09	1.41E-08
2199	478957.62	3769338.9	1.62E-06	2.99E-06	4.61E-06
2200	478946.31	3769322.4	1.08E-06	2.00E-06	3.08E-06
2201	478935	3769305.91	7.34E-07	1.36E-06	2.09E-06
2202	478889.78	3769239.92	2.11E-07	3.89E-07	6.00E-07
2203	478156.32	3768142.34	4.97E-09	9.17E-09	1.41E-08
2204	478956.96	3769362.34	2.38E-06	4.40E-06	6.78E-06
2205	478906.19	3769276.19	3.75E-07	6.92E-07	1.07E-06
2206	478676.75	3768854.25	1.82E-08	3.36E-08	5.18E-08
2207	478554.89	3768647.49	1.09E-08	2.02E-08	3.11E-08
2208	478473.65	3768509.64	8.53E-09	1.58E-08	2.43E-08
2209	478311.18	3768233.96	5.86E-09	1.08E-08	1.67E-08
2210	478229.94	3768096.12	5.05E-09	9.32E-09	1.44E-08
2211	478932.81	3769353.66	1.58E-06	2.93E-06	4.51E-06
2212	478922.38	3769336.59	1.10E-06	2.04E-06	3.14E-06
2213	478911.95	3769319.53	7.78E-07	1.44E-06	2.22E-06
2214	478870.22	3769251.27	2.27E-07	4.20E-07	6.47E-07
2215	478862.53	3769209.09	1.37E-07	2.53E-07	3.91E-07
2216	478807.64	3769148.88	7.27E-08	1.34E-07	2.07E-07
2217	478528.76	3768663.02	1.08E-08	2.00E-08	3.09E-08
2218	478452.35	3768522.28	8.47E-09	1.57E-08	2.41E-08
2219	478287.67	3768247.92	5.83E-09	1.08E-08	1.66E-08
2220	478265.25	3768261.52	5.79E-09	1.07E-08	1.65E-08
2221	478205.32	3768110.74	5.02E-09	9.27E-09	1.43E-08
2222	478181.81	3768125	5.00E-09	9.23E-09	1.42E-08
2223	478930.83	3769376.77	2.36E-06	4.36E-06	6.72E-06
2224	478886.09	3769287.34	4.04E-07	7.46E-07	1.15E-06
2225	478579.3	3768635.74	1.10E-08	2.04E-08	3.14E-08
2226	478507.7	3768492.65	8.64E-09	1.60E-08	2.46E-08
2227	478364.52	3768206.47	5.95E-09	1.10E-08	1.69E-08
2228	478292.93	3768063.38	5.12E-09	9.45E-09	1.46E-08
2229	478909.85	3769387.63	2.41E-06	4.45E-06	6.85E-06
2230	478910.89	3769364.57	1.58E-06	2.93E-06	4.51E-06
2231	478901.69	3769346.81	1.11E-06	2.05E-06	3.16E-06
2232	478892.49	3769329.05	7.94E-07	1.47E-06	2.26E-06

2233	478863.85	3769298.84	4.32E-07	7.98E-07	1.23E-06
2234	478845.45	3769263.32	2.45E-07	4.53E-07	6.98E-07
2235	478837.29	3769222.5	1.47E-07	2.71E-07	4.18E-07
2236	478808.65	3769192.29	1.02E-07	1.89E-07	2.91E-07
2237	478790.25	3769156.77	7.42E-08	1.37E-07	2.11E-07
2238	478340.74	3768218.45	5.91E-09	1.09E-08	1.68E-08
2239	478268.14	3768075.87	5.09E-09	9.41E-09	1.45E-08
2240	478248.49	3768085.97	5.07E-09	9.37E-09	1.44E-08
2241	478893.59	3769395.94	2.39E-06	4.41E-06	6.80E-06
2242	478884.49	3769378.12	1.63E-06	3.02E-06	4.65E-06
2243	478875.4	3769360.31	1.15E-06	2.13E-06	3.28E-06
2244	478866.3	3769342.5	8.32E-07	1.54E-06	2.37E-06
2245	478811.73	3769235.63	1.59E-07	2.94E-07	4.53E-07
2246	478738.97	3769093.13	4.58E-08	8.45E-08	1.30E-07
2247	478835.38	3769313.06	4.68E-07	8.65E-07	1.33E-06
2248	478817.84	3769277.11	2.69E-07	4.97E-07	7.66E-07
2249	478782.75	3769205.22	1.10E-07	2.02E-07	3.12E-07
2250	478674.95	3768946.26	2.30E-08	4.25E-08	6.54E-08
2251	478862.19	3769412.08	2.18E-06	4.03E-06	6.21E-06
2252	478868.31	3769386.06	1.63E-06	3.01E-06	4.65E-06
2253	478837.09	3769402.89	1.59E-06	2.93E-06	4.51E-06
2254	478858.82	3769368.46	1.17E-06	2.16E-06	3.34E-06
2255	478827.6	3769385.28	1.20E-06	2.22E-06	3.43E-06
2256	478849.34	3769350.85	8.56E-07	1.58E-06	2.44E-06
2257	478818.12	3769367.68	9.09E-07	1.68E-06	2.59E-06
2258	478814.75	3769324.05	5.00E-07	9.23E-07	1.42E-06
2259	478783.53	3769340.88	5.45E-07	1.01E-06	1.55E-06
2260	478795.77	3769288.84	2.93E-07	5.41E-07	8.33E-07
2261	478764.55	3769305.67	3.27E-07	6.05E-07	9.32E-07
2262	478792.4	3769245.22	1.70E-07	3.14E-07	4.84E-07
2263	478761.18	3769262.04	1.92E-07	3.55E-07	5.47E-07
2264	478757.81	3769218.42	1.19E-07	2.20E-07	3.39E-07
2265	478726.59	3769235.25	1.34E-07	2.47E-07	3.81E-07
2266	478707.62	3769200.03	9.31E-08	1.72E-07	2.65E-07
2267	478716.49	3769104.37	4.73E-08	8.73E-08	1.35E-07
2268	478650.27	3768958.55	2.31E-08	4.27E-08	6.59E-08
2269	478624.97	3768971.94	2.36E-08	4.36E-08	6.71E-08
2270	478593.75	3768988.77	2.45E-08	4.52E-08	6.97E-08
2271	478587.01	3768901.52	1.82E-08	3.37E-08	5.19E-08
2272	478555.79	3768918.34	1.87E-08	3.45E-08	5.32E-08
2273	478441.93	3768707.08	1.06E-08	1.96E-08	3.02E-08
2274	478397.23	3768549.4	8.28E-09	1.53E-08	2.36E-08
2275	478245.41	3768267.71	5.73E-09	1.06E-08	1.63E-08
2276	478214.19	3768284.54	5.68E-09	1.05E-08	1.62E-08
2277	478865.47	3769484.48	2.45E-06	4.52E-06	6.96E-06
2278	478897.42	3769485.21	3.02E-06	5.59E-06	8.61E-06
2279	478839.54	3769496.45	1.90E-06	3.52E-06	5.42E-06
2280	478865.01	3769504.48	1.97E-06	3.65E-06	5.62E-06
2281	478896.96	3769505.21	2.17E-06	4.02E-06	6.19E-06
2282	478837.18	3769514.91	1.58E-06	2.93E-06	4.51E-06
2283	478803	3769487.33	1.63E-06	3.01E-06	4.65E-06
2284	478815.56	3769517.83	1.43E-06	2.64E-06	4.07E-06

2285	478783.01	3769491.56	1.44E-06	2.67E-06	4.11E-06
2286	478800.61	3769419.16	1.40E-06	2.59E-06	3.99E-06
2287	478788.32	3769516.21	1.31E-06	2.42E-06	3.73E-06
2288	478764.58	3769497.05	1.30E-06	2.39E-06	3.69E-06
2289	478790.06	3769403.94	1.15E-06	2.12E-06	3.27E-06
2290	478737.99	3769516.32	1.08E-06	1.99E-06	3.07E-06
2291	478720.16	3769482.64	1.06E-06	1.96E-06	3.02E-06
2292	478745.51	3769425.93	1.03E-06	1.91E-06	2.94E-06
2293	478758.18	3769397.58	8.98E-07	1.66E-06	2.56E-06
2294	478770.85	3769369.23	7.21E-07	1.33E-06	2.05E-06
2295	478687.13	3769516	8.87E-07	1.64E-06	2.53E-06
2296	478681.33	3769491.83	8.91E-07	1.65E-06	2.54E-06
2297	478706.93	3769434.55	8.79E-07	1.62E-06	2.50E-06
2298	478719.74	3769405.91	7.85E-07	1.45E-06	2.23E-06
2299	478732.54	3769377.27	6.51E-07	1.20E-06	1.85E-06
2300	478745.34	3769348.63	5.09E-07	9.40E-07	1.45E-06
2301	478861.8	3769644.44	2.58E-07	4.76E-07	7.33E-07
2302	478893.75	3769645.17	2.43E-07	4.48E-07	6.91E-07
2303	478832.62	3769674.15	2.00E-07	3.69E-07	5.69E-07
2304	478808.04	3769654.31	2.66E-07	4.91E-07	7.57E-07
2305	478642.48	3769501.08	7.63E-07	1.41E-06	2.17E-06
2306	478681.14	3769414.6	6.91E-07	1.28E-06	1.97E-06
2307	478694.02	3769385.77	5.91E-07	1.09E-06	1.68E-06
2308	478706.91	3769356.94	4.76E-07	8.79E-07	1.36E-06
2309	478719.8	3769328.11	3.67E-07	6.78E-07	1.05E-06
2310	478732.68	3769299.29	2.75E-07	5.08E-07	7.83E-07
2311	478860.88	3769684.43	1.73E-07	3.19E-07	4.92E-07
2312	478892.83	3769685.16	1.69E-07	3.12E-07	4.81E-07
2313	478831.64	3769714.09	1.39E-07	2.57E-07	3.96E-07
2314	478806.96	3769694.17	1.74E-07	3.21E-07	4.94E-07
2315	478782.27	3769674.25	2.29E-07	4.22E-07	6.51E-07
2316	478757.59	3769654.33	3.07E-07	5.67E-07	8.74E-07
2317	478603.61	3769510.36	6.62E-07	1.22E-06	1.88E-06
2318	478642.45	3769423.48	6.14E-07	1.13E-06	1.75E-06
2319	478655.39	3769394.52	5.37E-07	9.92E-07	1.53E-06
2320	478668.34	3769365.56	4.45E-07	8.22E-07	1.27E-06
2321	478681.28	3769336.6	3.52E-07	6.51E-07	1.00E-06
2322	478694.23	3769307.64	2.71E-07	5.00E-07	7.70E-07
2323	478707.18	3769278.68	2.04E-07	3.77E-07	5.81E-07
2324	478859.96	3769724.42	1.26E-07	2.33E-07	3.59E-07
2325	478891.91	3769725.15	1.26E-07	2.33E-07	3.58E-07
2326	478830.68	3769754.05	1.04E-07	1.92E-07	2.97E-07
2327	478805.92	3769734.06	1.23E-07	2.27E-07	3.50E-07
2328	478781.15	3769714.07	1.53E-07	2.83E-07	4.36E-07
2329	478756.38	3769694.08	1.99E-07	3.68E-07	5.67E-07
2330	478731.61	3769674.09	2.64E-07	4.87E-07	7.51E-07
2331	478706.85	3769654.11	3.43E-07	6.34E-07	9.77E-07
2332	478564.74	3769519.65	5.83E-07	1.08E-06	1.66E-06
2333	478577.73	3769490.59	5.96E-07	1.10E-06	1.70E-06
2334	478603.71	3769432.48	5.49E-07	1.01E-06	1.56E-06
2335	478616.69	3769403.42	4.90E-07	9.04E-07	1.39E-06
2336	478629.68	3769374.37	4.16E-07	7.68E-07	1.18E-06

2337	478642.67	3769345.31	3.38E-07	6.24E-07	9.62E-07
2338	478655.66	3769316.26	2.65E-07	4.90E-07	7.55E-07
2339	478668.65	3769287.2	2.04E-07	3.77E-07	5.81E-07
2340	478681.64	3769258.15	1.56E-07	2.88E-07	4.44E-07
2341	478694.63	3769229.09	1.19E-07	2.21E-07	3.40E-07
2342	478859.04	3769764.41	9.74E-08	1.80E-07	2.77E-07
2343	478891	3769765.14	9.82E-08	1.81E-07	2.80E-07
2344	478829.21	3769834.31	6.71E-08	1.24E-07	1.91E-07
2345	478805.15	3769814.9	7.37E-08	1.36E-07	2.10E-07
2346	478781.1	3769795.49	8.31E-08	1.53E-07	2.37E-07
2347	478757.05	3769776.08	9.72E-08	1.80E-07	2.77E-07
2348	478733	3769756.67	1.19E-07	2.19E-07	3.38E-07
2349	478708.95	3769737.26	1.50E-07	2.76E-07	4.26E-07
2350	478684.9	3769717.85	1.91E-07	3.54E-07	5.45E-07
2351	478660.84	3769698.44	2.43E-07	4.49E-07	6.92E-07
2352	478636.79	3769679.03	3.00E-07	5.55E-07	8.55E-07
2353	478612.74	3769659.62	3.58E-07	6.61E-07	1.02E-06
2354	478588.69	3769640.21	4.09E-07	7.55E-07	1.16E-06
2355	478499.38	3769510.53	4.76E-07	8.79E-07	1.35E-06
2356	478537.22	3769425.88	4.17E-07	7.71E-07	1.19E-06
2357	478549.83	3769397.67	3.72E-07	6.87E-07	1.06E-06
2358	478562.44	3769369.45	3.19E-07	5.89E-07	9.09E-07
2359	478575.06	3769341.23	2.65E-07	4.90E-07	7.55E-07
2360	478587.67	3769313.02	2.15E-07	3.97E-07	6.12E-07
2361	478600.29	3769284.8	1.71E-07	3.16E-07	4.87E-07
2362	478612.9	3769256.59	1.35E-07	2.50E-07	3.85E-07
2363	478625.51	3769228.37	1.07E-07	1.98E-07	3.05E-07
2364	478638.13	3769200.15	8.57E-08	1.58E-07	2.44E-07
2365	478857.21	3769844.39	6.47E-08	1.19E-07	1.84E-07
2366	478889.16	3769845.12	6.54E-08	1.21E-07	1.86E-07
2367	478827.26	3769914.21	4.80E-08	8.87E-08	1.37E-07
2368	478803	3769894.63	5.15E-08	9.50E-08	1.46E-07
2369	478778.74	3769875.05	5.57E-08	1.03E-07	1.58E-07
2370	478754.48	3769855.46	6.12E-08	1.13E-07	1.74E-07
2371	478730.21	3769835.88	6.92E-08	1.28E-07	1.97E-07
2372	478705.95	3769816.3	8.09E-08	1.49E-07	2.30E-07
2373	478681.69	3769796.72	9.78E-08	1.81E-07	2.79E-07
2374	478657.43	3769777.14	1.22E-07	2.24E-07	3.46E-07
2375	478633.16	3769757.56	1.52E-07	2.82E-07	4.34E-07
2376	478608.9	3769737.98	1.90E-07	3.51E-07	5.42E-07
2377	478584.64	3769718.4	2.33E-07	4.29E-07	6.62E-07
2378	478560.38	3769698.82	2.76E-07	5.10E-07	7.86E-07
2379	478536.11	3769679.23	3.17E-07	5.85E-07	9.02E-07
2380	478511.85	3769659.65	3.51E-07	6.49E-07	1.00E-06
2381	478487.59	3769640.07	3.76E-07	6.94E-07	1.07E-06
2382	478421.75	3769528.84	3.92E-07	7.23E-07	1.11E-06
2383	478434.48	3769500.38	3.89E-07	7.19E-07	1.11E-06
2384	478472.65	3769414.99	3.23E-07	5.96E-07	9.18E-07
2385	478485.38	3769386.52	2.85E-07	5.26E-07	8.11E-07
2386	478498.1	3769358.06	2.45E-07	4.52E-07	6.96E-07
2387	478510.82	3769329.6	2.05E-07	3.78E-07	5.82E-07
2388	478523.55	3769301.13	1.68E-07	3.10E-07	4.77E-07

2389	478536.27	3769272.67	1.36E-07	2.51E-07	3.87E-07
2390	478549	3769244.2	1.10E-07	2.03E-07	3.12E-07
2391	478561.72	3769215.74	8.88E-08	1.64E-07	2.53E-07
2392	478574.45	3769187.28	7.24E-08	1.34E-07	2.06E-07
2393	478587.17	3769158.81	5.98E-08	1.11E-07	1.70E-07
2394	478599.89	3769130.35	5.01E-08	9.25E-08	1.43E-07
2395	478612.62	3769101.89	4.25E-08	7.85E-08	1.21E-07
2396	478855.37	3769924.37	4.67E-08	8.63E-08	1.33E-07
2397	478887.33	3769925.1	4.71E-08	8.70E-08	1.34E-07
2398	478825.35	3769994.13	3.66E-08	6.75E-08	1.04E-07
2399	478800.94	3769974.42	3.87E-08	7.15E-08	1.10E-07
2400	478776.53	3769954.72	4.11E-08	7.59E-08	1.17E-07
2401	478752.11	3769935.02	4.40E-08	8.12E-08	1.25E-07
2402	478727.7	3769915.32	4.76E-08	8.79E-08	1.35E-07
2403	478703.29	3769895.61	5.25E-08	9.69E-08	1.49E-07
2404	478678.87	3769875.91	5.93E-08	1.10E-07	1.69E-07
2405	478654.46	3769856.21	6.91E-08	1.28E-07	1.97E-07
2406	478630.05	3769836.5	8.28E-08	1.53E-07	2.36E-07
2407	478605.63	3769816.8	1.01E-07	1.87E-07	2.89E-07
2408	478581.22	3769797.1	1.25E-07	2.31E-07	3.56E-07
2409	478556.81	3769777.4	1.54E-07	2.84E-07	4.37E-07
2410	478532.39	3769757.69	1.86E-07	3.43E-07	5.29E-07
2411	478507.98	3769737.99	2.20E-07	4.06E-07	6.25E-07
2412	478483.57	3769718.29	2.53E-07	4.67E-07	7.19E-07
2413	478459.15	3769698.59	2.82E-07	5.21E-07	8.03E-07
2414	478434.74	3769678.88	3.06E-07	5.65E-07	8.70E-07
2415	478410.33	3769659.18	3.22E-07	5.95E-07	9.17E-07
2416	478385.91	3769639.48	3.31E-07	6.11E-07	9.41E-07
2417	478395.3	3769432.7	2.82E-07	5.21E-07	8.03E-07
2418	478408.1	3769404.06	2.55E-07	4.71E-07	7.25E-07
2419	478420.9	3769375.42	2.24E-07	4.14E-07	6.38E-07
2420	478433.71	3769346.77	1.93E-07	3.56E-07	5.49E-07
2421	478446.51	3769318.13	1.63E-07	3.01E-07	4.63E-07
2422	478459.31	3769289.49	1.35E-07	2.50E-07	3.85E-07
2423	478472.12	3769260.85	1.11E-07	2.05E-07	3.17E-07
2424	478484.92	3769232.21	9.13E-08	1.69E-07	2.60E-07
2425	478497.72	3769203.57	7.53E-08	1.39E-07	2.14E-07
2426	478523.33	3769146.29	5.26E-08	9.71E-08	1.50E-07
2427	478536.13	3769117.65	4.46E-08	8.24E-08	1.27E-07
2428	478548.94	3769089.01	3.82E-08	7.06E-08	1.09E-07
2429	478853.54	3770004.34	3.57E-08	6.59E-08	1.02E-07
2430	478885.49	3770005.08	3.58E-08	6.62E-08	1.02E-07
2431	478823.46	3770074.06	2.90E-08	5.36E-08	8.26E-08
2432	478798.94	3770054.27	3.05E-08	5.63E-08	8.67E-08
2433	478774.41	3770034.47	3.21E-08	5.92E-08	9.13E-08
2434	478749.88	3770014.68	3.39E-08	6.25E-08	9.64E-08
2435	478725.36	3769994.88	3.59E-08	6.63E-08	1.02E-07
2436	478700.83	3769975.09	3.84E-08	7.10E-08	1.09E-07
2437	478676.3	3769955.3	4.16E-08	7.69E-08	1.18E-07
2438	478651.78	3769935.5	4.59E-08	8.48E-08	1.31E-07
2439	478627.25	3769915.71	5.19E-08	9.59E-08	1.48E-07
2440	478602.72	3769895.91	6.02E-08	1.11E-07	1.72E-07

2441	478578.2	3769876.12	7.15E-08	1.32E-07	2.04E-07
2442	478553.67	3769856.33	8.63E-08	1.59E-07	2.46E-07
2443	478529.14	3769836.53	1.05E-07	1.94E-07	2.99E-07
2444	478504.62	3769816.74	1.27E-07	2.35E-07	3.62E-07
2445	478480.09	3769796.94	1.52E-07	2.81E-07	4.33E-07
2446	478455.57	3769777.15	1.79E-07	3.30E-07	5.09E-07
2447	478431.04	3769757.36	2.05E-07	3.79E-07	5.85E-07
2448	478406.51	3769737.56	2.30E-07	4.25E-07	6.55E-07
2449	478381.99	3769717.77	2.52E-07	4.65E-07	7.17E-07
2450	478357.46	3769697.97	2.69E-07	4.96E-07	7.65E-07
2451	478332.93	3769678.18	2.80E-07	5.17E-07	7.97E-07
2452	478308.41	3769658.39	2.85E-07	5.27E-07	8.12E-07
2453	478283.88	3769638.59	2.85E-07	5.26E-07	8.11E-07
2454	478330.7	3769421.88	2.29E-07	4.23E-07	6.52E-07
2455	478343.56	3769393.1	2.06E-07	3.80E-07	5.85E-07
2456	478356.42	3769364.33	1.81E-07	3.34E-07	5.15E-07
2457	478369.29	3769335.56	1.56E-07	2.88E-07	4.44E-07
2458	478382.15	3769306.78	1.33E-07	2.45E-07	3.77E-07
2459	478395.01	3769278.01	1.11E-07	2.06E-07	3.17E-07
2460	478407.87	3769249.24	9.29E-08	1.72E-07	2.65E-07
2461	478420.74	3769220.46	7.77E-08	1.43E-07	2.21E-07
2462	478433.6	3769191.69	6.51E-08	1.20E-07	1.85E-07
2463	478446.46	3769162.92	5.50E-08	1.02E-07	1.56E-07
2464	478459.32	3769134.14	4.68E-08	8.65E-08	1.33E-07
2465	478472.19	3769105.37	4.03E-08	7.44E-08	1.15E-07
2466	478485.05	3769076.6	3.49E-08	6.44E-08	9.93E-08
2467	478497.91	3769047.82	3.04E-08	5.62E-08	8.66E-08
2468	478536.5	3768961.5	2.14E-08	3.95E-08	6.09E-08
2469	478851.7	3770084.32	2.84E-08	5.24E-08	8.07E-08
2470	478883.65	3770085.06	2.84E-08	5.25E-08	8.09E-08
2471	478821.58	3770154	2.38E-08	4.39E-08	6.77E-08
2472	478796.97	3770134.14	2.48E-08	4.59E-08	7.07E-08
2473	478772.35	3770114.27	2.60E-08	4.80E-08	7.39E-08
2474	478747.74	3770094.41	2.72E-08	5.03E-08	7.75E-08
2475	478723.12	3770074.54	2.86E-08	5.28E-08	8.14E-08
2476	478698.51	3770054.68	3.01E-08	5.56E-08	8.57E-08
2477	478673.9	3770034.81	3.19E-08	5.90E-08	9.09E-08
2478	478649.28	3770014.95	3.42E-08	6.31E-08	9.73E-08
2479	478624.67	3769995.08	3.71E-08	6.84E-08	1.06E-07
2480	478600.05	3769975.22	4.09E-08	7.56E-08	1.17E-07
2481	478575.44	3769955.35	4.62E-08	8.53E-08	1.31E-07
2482	478550.82	3769935.49	5.33E-08	9.84E-08	1.52E-07
2483	478526.21	3769915.62	6.27E-08	1.16E-07	1.79E-07
2484	478501.6	3769895.76	7.48E-08	1.38E-07	2.13E-07
2485	478476.98	3769875.89	8.96E-08	1.66E-07	2.55E-07
2486	478452.37	3769856.03	1.07E-07	1.98E-07	3.05E-07
2487	478427.75	3769836.16	1.27E-07	2.35E-07	3.62E-07
2488	478403.14	3769816.3	1.49E-07	2.74E-07	4.23E-07
2489	478378.52	3769796.43	1.70E-07	3.15E-07	4.85E-07
2490	478353.91	3769776.57	1.91E-07	3.53E-07	5.44E-07
2491	478329.3	3769756.71	2.10E-07	3.88E-07	5.98E-07
2492	478304.68	3769736.84	2.26E-07	4.17E-07	6.43E-07

2493	478280.07	3769716.98	2.38E-07	4.40E-07	6.78E-07
2494	478255.45	3769697.11	2.46E-07	4.54E-07	7.00E-07
2495	478230.84	3769677.25	2.49E-07	4.60E-07	7.10E-07
2496	478206.22	3769657.38	2.48E-07	4.58E-07	7.07E-07
2497	478181.61	3769637.52	2.44E-07	4.50E-07	6.94E-07
2498	478253.21	3769439.89	2.06E-07	3.81E-07	5.87E-07
2499	478266.12	3769411.01	1.88E-07	3.48E-07	5.36E-07
2500	478279.03	3769382.13	1.69E-07	3.12E-07	4.80E-07
2501	478291.94	3769353.26	1.48E-07	2.74E-07	4.23E-07
2502	478304.84	3769324.38	1.29E-07	2.38E-07	3.67E-07
2503	478317.75	3769295.5	1.10E-07	2.04E-07	3.14E-07
2504	478330.66	3769266.63	9.37E-08	1.73E-07	2.67E-07
2505	478343.57	3769237.75	7.92E-08	1.46E-07	2.26E-07
2506	478356.48	3769208.88	6.71E-08	1.24E-07	1.91E-07
2507	478382.3	3769151.12	4.89E-08	9.03E-08	1.39E-07
2508	478395.2	3769122.25	4.22E-08	7.79E-08	1.20E-07
2509	478408.11	3769093.37	3.67E-08	6.77E-08	1.04E-07
2510	478433.93	3769035.62	2.83E-08	5.22E-08	8.04E-08
2511	478446.84	3769006.74	2.50E-08	4.62E-08	7.12E-08
2512	478459.75	3768977.86	2.23E-08	4.11E-08	6.34E-08
2513	478849.87	3770164.3	2.33E-08	4.30E-08	6.63E-08
2514	478881.82	3770165.04	2.33E-08	4.31E-08	6.64E-08
2515	478817.85	3770313.91	1.72E-08	3.17E-08	4.88E-08
2516	478793.1	3770293.94	1.78E-08	3.28E-08	5.06E-08
2517	478768.36	3770273.97	1.84E-08	3.40E-08	5.24E-08
2518	478743.62	3770254.01	1.91E-08	3.53E-08	5.44E-08
2519	478718.88	3770234.04	1.99E-08	3.67E-08	5.65E-08
2520	478694.14	3770214.07	2.07E-08	3.82E-08	5.88E-08
2521	478669.39	3770194.1	2.15E-08	3.98E-08	6.13E-08
2522	478644.65	3770174.13	2.25E-08	4.16E-08	6.41E-08
2523	478619.91	3770154.16	2.36E-08	4.35E-08	6.71E-08
2524	478595.17	3770134.2	2.48E-08	4.58E-08	7.06E-08
2525	478570.43	3770114.23	2.63E-08	4.85E-08	7.48E-08
2526	478545.68	3770094.26	2.81E-08	5.20E-08	8.01E-08
2527	478520.94	3770074.29	3.05E-08	5.64E-08	8.69E-08
2528	478496.2	3770054.32	3.37E-08	6.22E-08	9.59E-08
2529	478471.46	3770034.36	3.78E-08	6.98E-08	1.08E-07
2530	478446.71	3770014.39	4.31E-08	7.96E-08	1.23E-07
2531	478421.97	3769994.42	4.99E-08	9.21E-08	1.42E-07
2532	478397.23	3769974.45	5.82E-08	1.07E-07	1.66E-07
2533	478372.49	3769954.48	6.83E-08	1.26E-07	1.94E-07
2534	478347.75	3769934.52	8.00E-08	1.48E-07	2.28E-07
2535	478323	3769914.55	9.32E-08	1.72E-07	2.65E-07
2536	478298.26	3769894.58	1.07E-07	1.99E-07	3.06E-07
2537	478273.52	3769874.61	1.22E-07	2.26E-07	3.48E-07
2538	478248.78	3769854.64	1.37E-07	2.53E-07	3.90E-07
2539	478224.04	3769834.68	1.51E-07	2.80E-07	4.31E-07
2540	478199.29	3769814.71	1.64E-07	3.04E-07	4.68E-07
2541	478174.55	3769794.74	1.76E-07	3.24E-07	5.00E-07
2542	478149.81	3769774.77	1.85E-07	3.41E-07	5.25E-07
2543	478125.07	3769754.8	1.91E-07	3.53E-07	5.44E-07
2544	478100.32	3769734.83	1.95E-07	3.60E-07	5.54E-07

2545	478075.58	3769714.87	1.96E-07	3.62E-07	5.57E-07
2546	478050.84	3769694.9	1.94E-07	3.59E-07	5.53E-07
2547	478026.1	3769674.93	1.91E-07	3.52E-07	5.43E-07
2548	478085.09	3769505.3	1.79E-07	3.31E-07	5.10E-07
2549	478098.07	3769476.27	1.70E-07	3.14E-07	4.83E-07
2550	478111.04	3769447.25	1.59E-07	2.93E-07	4.51E-07
2551	478124.02	3769418.22	1.46E-07	2.70E-07	4.16E-07
2552	478137	3769389.2	1.33E-07	2.45E-07	3.78E-07
2553	478149.97	3769360.17	1.19E-07	2.20E-07	3.39E-07
2554	478162.95	3769331.14	1.05E-07	1.94E-07	2.99E-07
2555	478175.92	3769302.12	9.22E-08	1.70E-07	2.62E-07
2556	478188.9	3769273.09	8.01E-08	1.48E-07	2.28E-07
2557	478201.87	3769244.06	6.93E-08	1.28E-07	1.97E-07
2558	478214.85	3769215.04	5.99E-08	1.11E-07	1.71E-07
2559	478240.8	3769156.98	4.52E-08	8.35E-08	1.29E-07
2560	478253.78	3769127.96	3.96E-08	7.32E-08	1.13E-07
2561	478266.75	3769098.93	3.49E-08	6.45E-08	9.94E-08
2562	478279.73	3769069.91	3.10E-08	5.72E-08	8.81E-08
2563	478299.19	3769026.37	2.61E-08	4.82E-08	7.44E-08
2564	478331.63	3768953.8	2.00E-08	3.69E-08	5.68E-08
2565	478344.61	3768924.77	1.80E-08	3.33E-08	5.13E-08
2566	478357.58	3768895.75	1.63E-08	3.02E-08	4.65E-08
2567	478370.56	3768866.72	1.49E-08	2.75E-08	4.24E-08
2568	478383.53	3768837.69	1.37E-08	2.53E-08	3.90E-08
2569	478846.19	3770324.26	1.69E-08	3.11E-08	4.80E-08
2570	478878.15	3770324.99	1.69E-08	3.11E-08	4.80E-08
2571	478814.13	3770473.83	1.33E-08	2.45E-08	3.78E-08
2572	478789.3	3770453.79	1.36E-08	2.52E-08	3.88E-08
2573	478764.47	3770433.75	1.40E-08	2.59E-08	4.00E-08
2574	478739.64	3770413.71	1.45E-08	2.67E-08	4.12E-08
2575	478714.81	3770393.67	1.49E-08	2.76E-08	4.25E-08
2576	478689.98	3770373.63	1.54E-08	2.85E-08	4.39E-08
2577	478665.15	3770353.59	1.60E-08	2.95E-08	4.55E-08
2578	478640.32	3770333.55	1.65E-08	3.05E-08	4.71E-08
2579	478615.49	3770313.52	1.71E-08	3.17E-08	4.88E-08
2580	478590.66	3770293.48	1.78E-08	3.29E-08	5.06E-08
2581	478565.82	3770273.44	1.85E-08	3.42E-08	5.26E-08
2582	478540.99	3770253.4	1.93E-08	3.56E-08	5.48E-08
2583	478516.16	3770233.36	2.01E-08	3.72E-08	5.73E-08
2584	478491.33	3770213.32	2.12E-08	3.91E-08	6.03E-08
2585	478466.5	3770193.28	2.25E-08	4.15E-08	6.39E-08
2586	478441.67	3770173.24	2.40E-08	4.44E-08	6.84E-08
2587	478416.84	3770153.2	2.60E-08	4.81E-08	7.42E-08
2588	478392.01	3770133.16	2.86E-08	5.29E-08	8.15E-08
2589	478367.18	3770113.12	3.19E-08	5.89E-08	9.08E-08
2590	478342.35	3770093.08	3.60E-08	6.64E-08	1.02E-07
2591	478317.52	3770073.04	4.10E-08	7.57E-08	1.17E-07
2592	478292.69	3770053	4.70E-08	8.69E-08	1.34E-07
2593	478267.86	3770032.96	5.42E-08	1.00E-07	1.54E-07
2594	478243.03	3770012.92	6.24E-08	1.15E-07	1.78E-07
2595	478218.2	3769992.88	7.16E-08	1.32E-07	2.04E-07
2596	478193.36	3769972.84	8.16E-08	1.51E-07	2.32E-07

2597	478168.53	3769952.8	9.22E-08	1.70E-07	2.62E-07
2598	478143.7	3769932.76	1.03E-07	1.90E-07	2.93E-07
2599	478118.87	3769912.72	1.14E-07	2.10E-07	3.24E-07
2600	478094.04	3769892.68	1.24E-07	2.29E-07	3.53E-07
2601	478069.21	3769872.65	1.33E-07	2.46E-07	3.80E-07
2602	478044.38	3769852.61	1.42E-07	2.62E-07	4.03E-07
2603	478019.55	3769832.57	1.48E-07	2.74E-07	4.23E-07
2604	477994.72	3769812.53	1.54E-07	2.84E-07	4.38E-07
2605	477969.89	3769792.49	1.57E-07	2.91E-07	4.48E-07
2606	477945.06	3769772.45	1.59E-07	2.94E-07	4.54E-07
2607	477870.57	3769712.33	1.55E-07	2.87E-07	4.42E-07
2608	477864.66	3769687.74	1.55E-07	2.86E-07	4.41E-07
2609	477877.68	3769658.61	1.57E-07	2.89E-07	4.46E-07
2610	477890.71	3769629.48	1.57E-07	2.90E-07	4.47E-07
2611	477942.79	3769512.96	1.43E-07	2.64E-07	4.08E-07
2612	477955.82	3769483.83	1.36E-07	2.50E-07	3.86E-07
2613	477968.84	3769454.7	1.27E-07	2.35E-07	3.62E-07
2614	477981.86	3769425.57	1.18E-07	2.18E-07	3.36E-07
2615	477994.88	3769396.44	1.08E-07	2.00E-07	3.08E-07
2616	478007.91	3769367.31	9.80E-08	1.81E-07	2.79E-07
2617	478020.93	3769338.18	8.80E-08	1.63E-07	2.51E-07
2618	478033.95	3769309.05	7.84E-08	1.45E-07	2.23E-07
2619	478046.97	3769279.92	6.94E-08	1.28E-07	1.98E-07
2620	478059.99	3769250.79	6.11E-08	1.13E-07	1.74E-07
2621	478073.02	3769221.66	5.37E-08	9.93E-08	1.53E-07
2622	478086.04	3769192.53	4.73E-08	8.73E-08	1.35E-07
2623	478099.06	3769163.4	4.17E-08	7.70E-08	1.19E-07
2624	478112.08	3769134.27	3.70E-08	6.83E-08	1.05E-07
2625	478125.1	3769105.14	3.30E-08	6.09E-08	9.38E-08
2626	478138.13	3769076.01	2.95E-08	5.46E-08	8.41E-08
2627	478151.15	3769046.88	2.66E-08	4.92E-08	7.58E-08
2628	478164.17	3769017.75	2.41E-08	4.45E-08	6.86E-08
2629	478177.19	3768988.62	2.19E-08	4.04E-08	6.23E-08
2630	478190.22	3768959.49	1.99E-08	3.67E-08	5.66E-08
2631	478222.77	3768886.66	1.58E-08	2.92E-08	4.50E-08
2632	478235.79	3768857.53	1.44E-08	2.67E-08	4.11E-08
2633	478248.81	3768828.4	1.32E-08	2.44E-08	3.77E-08
2634	478261.84	3768799.27	1.22E-08	2.25E-08	3.47E-08
2635	478274.86	3768770.14	1.13E-08	2.08E-08	3.21E-08
2636	478313.93	3768682.75	9.39E-09	1.74E-08	2.67E-08
2637	478326.95	3768653.62	8.99E-09	1.66E-08	2.56E-08
2638	478359.5	3768580.8	8.31E-09	1.54E-08	2.37E-08
2639	478842.52	3770484.22	1.31E-08	2.42E-08	3.72E-08
2640	478874.48	3770484.95	1.31E-08	2.41E-08	3.72E-08
2641	478810.56	3770633.87	1.07E-08	1.98E-08	3.06E-08
2642	478785.94	3770614	1.10E-08	2.03E-08	3.13E-08
2643	478761.32	3770594.13	1.13E-08	2.08E-08	3.21E-08
2644	478736.7	3770574.26	1.15E-08	2.13E-08	3.28E-08
2645	478712.08	3770554.39	1.18E-08	2.19E-08	3.37E-08
2646	478687.45	3770534.52	1.22E-08	2.24E-08	3.46E-08
2647	478662.83	3770514.65	1.25E-08	2.31E-08	3.56E-08
2648	478638.21	3770494.78	1.29E-08	2.37E-08	3.66E-08

2649	478613.59	3770474.9	1.33E-08	2.45E-08	3.77E-08
2650	478588.97	3770455.03	1.37E-08	2.52E-08	3.89E-08
2651	478564.34	3770435.16	1.41E-08	2.60E-08	4.02E-08
2652	478539.72	3770415.29	1.46E-08	2.69E-08	4.15E-08
2653	478515.1	3770395.42	1.51E-08	2.78E-08	4.29E-08
2654	478490.48	3770375.55	1.56E-08	2.88E-08	4.43E-08
2655	478465.86	3770355.68	1.61E-08	2.98E-08	4.59E-08
2656	478441.23	3770335.81	1.68E-08	3.10E-08	4.77E-08
2657	478416.61	3770315.94	1.75E-08	3.23E-08	4.98E-08
2658	478391.99	3770296.06	1.84E-08	3.39E-08	5.23E-08
2659	478367.37	3770276.19	1.94E-08	3.59E-08	5.53E-08
2660	478342.75	3770256.32	2.07E-08	3.83E-08	5.90E-08
2661	478318.12	3770236.45	2.23E-08	4.12E-08	6.36E-08
2662	478293.5	3770216.58	2.43E-08	4.49E-08	6.93E-08
2663	478268.88	3770196.71	2.68E-08	4.95E-08	7.63E-08
2664	478244.26	3770176.84	2.98E-08	5.51E-08	8.49E-08
2665	478219.64	3770156.97	3.34E-08	6.18E-08	9.52E-08
2666	478195.01	3770137.1	3.77E-08	6.97E-08	1.07E-07
2667	478170.39	3770117.22	4.28E-08	7.90E-08	1.22E-07
2668	478145.77	3770097.35	4.85E-08	8.96E-08	1.38E-07
2669	478121.15	3770077.48	5.49E-08	1.01E-07	1.56E-07
2670	478096.53	3770057.61	6.19E-08	1.14E-07	1.76E-07
2671	478071.9	3770037.74	6.95E-08	1.28E-07	1.98E-07
2672	478047.28	3770017.87	7.74E-08	1.43E-07	2.20E-07
2673	478022.66	3769998	8.54E-08	1.58E-07	2.43E-07
2674	477998.04	3769978.13	9.34E-08	1.72E-07	2.66E-07
2675	477973.42	3769958.25	1.01E-07	1.87E-07	2.88E-07
2676	477948.79	3769938.38	1.08E-07	2.00E-07	3.08E-07
2677	477924.17	3769918.51	1.15E-07	2.12E-07	3.27E-07
2678	477899.55	3769898.64	1.21E-07	2.23E-07	3.44E-07
2679	477874.93	3769878.77	1.26E-07	2.32E-07	3.57E-07
2680	477850.31	3769858.9	1.29E-07	2.39E-07	3.68E-07
2681	477825.68	3769839.03	1.32E-07	2.44E-07	3.75E-07
2682	477776.44	3769799.29	1.34E-07	2.47E-07	3.80E-07
2683	477751.82	3769779.41	1.33E-07	2.45E-07	3.78E-07
2684	477727.2	3769759.54	1.31E-07	2.42E-07	3.73E-07
2685	477709.03	3769725.23	1.29E-07	2.39E-07	3.69E-07
2686	477721.94	3769696.34	1.31E-07	2.42E-07	3.72E-07
2687	477734.86	3769667.46	1.31E-07	2.42E-07	3.73E-07
2688	477747.77	3769638.57	1.30E-07	2.41E-07	3.71E-07
2689	477812.33	3769494.15	1.12E-07	2.06E-07	3.18E-07
2690	477825.24	3769465.26	1.05E-07	1.94E-07	2.99E-07
2691	477838.16	3769436.38	9.82E-08	1.81E-07	2.80E-07
2692	477851.07	3769407.49	9.10E-08	1.68E-07	2.59E-07
2693	477863.98	3769378.6	8.35E-08	1.54E-07	2.38E-07
2694	477876.9	3769349.72	7.61E-08	1.41E-07	2.17E-07
2695	477889.81	3769320.83	6.88E-08	1.27E-07	1.96E-07
2696	477902.72	3769291.95	6.19E-08	1.14E-07	1.76E-07
2697	477915.63	3769263.06	5.54E-08	1.02E-07	1.58E-07
2698	477928.55	3769234.18	4.95E-08	9.14E-08	1.41E-07
2699	477941.46	3769205.29	4.41E-08	8.15E-08	1.26E-07
2700	477967.28	3769147.52	3.53E-08	6.52E-08	1.01E-07

2701	477980.2	3769118.64	3.18E-08	5.87E-08	9.04E-08
2702	477993.11	3769089.75	2.87E-08	5.30E-08	8.17E-08
2703	478006.02	3769060.86	2.60E-08	4.81E-08	7.42E-08
2704	478018.94	3769031.98	2.38E-08	4.39E-08	6.76E-08
2705	478031.85	3769003.09	2.18E-08	4.02E-08	6.19E-08
2706	478044.76	3768974.21	2.00E-08	3.69E-08	5.69E-08
2707	478057.67	3768945.32	1.84E-08	3.40E-08	5.24E-08
2708	478070.59	3768916.44	1.70E-08	3.13E-08	4.83E-08
2709	478083.5	3768887.55	1.56E-08	2.89E-08	4.45E-08
2710	478115.78	3768815.34	1.28E-08	2.36E-08	3.64E-08
2711	478128.69	3768786.45	1.18E-08	2.18E-08	3.37E-08
2712	478141.61	3768757.57	1.10E-08	2.02E-08	3.12E-08
2713	478154.52	3768728.68	1.02E-08	1.88E-08	2.89E-08
2714	478167.43	3768699.8	9.49E-09	1.75E-08	2.70E-08
2715	478212.63	3768598.7	7.83E-09	1.45E-08	2.23E-08
2716	478225.54	3768569.81	7.53E-09	1.39E-08	2.14E-08
2717	478238.45	3768540.93	7.29E-09	1.35E-08	2.08E-08
2718	478251.36	3768512.04	7.10E-09	1.31E-08	2.02E-08
2719	478264.28	3768483.16	6.95E-09	1.28E-08	1.98E-08
2720	478838.85	3770644.18	1.06E-08	1.96E-08	3.02E-08
2721	478870.81	3770644.91	1.06E-08	1.96E-08	3.02E-08
2722	478806.85	3770793.8	9.01E-09	1.66E-08	2.56E-08
2723	478782.15	3770773.86	9.19E-09	1.70E-08	2.62E-08
2724	478757.45	3770753.93	9.37E-09	1.73E-08	2.67E-08
2725	478732.74	3770733.99	9.56E-09	1.77E-08	2.72E-08
2726	478708.04	3770714.05	9.77E-09	1.80E-08	2.78E-08
2727	478683.34	3770694.12	9.99E-09	1.84E-08	2.84E-08
2728	478658.64	3770674.18	1.02E-08	1.89E-08	2.91E-08
2729	478633.93	3770654.24	1.05E-08	1.93E-08	2.98E-08
2730	478609.23	3770634.31	1.07E-08	1.98E-08	3.06E-08
2731	478584.53	3770614.37	1.10E-08	2.04E-08	3.14E-08
2732	478559.82	3770594.43	1.13E-08	2.09E-08	3.22E-08
2733	478535.12	3770574.5	1.16E-08	2.15E-08	3.32E-08
2734	478510.42	3770554.56	1.20E-08	2.21E-08	3.41E-08
2735	478485.71	3770534.62	1.23E-08	2.28E-08	3.51E-08
2736	478461.01	3770514.69	1.27E-08	2.35E-08	3.62E-08
2737	478436.31	3770494.75	1.31E-08	2.42E-08	3.72E-08
2738	478411.6	3770474.81	1.35E-08	2.49E-08	3.84E-08
2739	478386.9	3770454.88	1.39E-08	2.57E-08	3.96E-08
2740	478362.2	3770434.94	1.44E-08	2.66E-08	4.10E-08
2741	478337.5	3770415	1.49E-08	2.76E-08	4.26E-08
2742	478312.79	3770395.07	1.56E-08	2.88E-08	4.44E-08
2743	478288.09	3770375.13	1.64E-08	3.02E-08	4.66E-08
2744	478263.39	3770355.19	1.73E-08	3.19E-08	4.92E-08
2745	478238.68	3770335.26	1.84E-08	3.40E-08	5.24E-08
2746	478213.98	3770315.32	1.98E-08	3.66E-08	5.64E-08
2747	478189.28	3770295.39	2.15E-08	3.97E-08	6.11E-08
2748	478164.57	3770275.45	2.35E-08	4.34E-08	6.69E-08
2749	478139.87	3770255.51	2.59E-08	4.79E-08	7.38E-08
2750	478115.17	3770235.58	2.88E-08	5.31E-08	8.19E-08
2751	478090.46	3770215.64	3.21E-08	5.93E-08	9.14E-08
2752	478065.76	3770195.7	3.60E-08	6.64E-08	1.02E-07

2753	478041.06	3770175.77	4.03E-08	7.44E-08	1.15E-07
2754	478016.36	3770155.83	4.51E-08	8.33E-08	1.28E-07
2755	477991.65	3770135.89	5.04E-08	9.31E-08	1.43E-07
2756	477966.95	3770115.96	5.61E-08	1.04E-07	1.60E-07
2757	477942.25	3770096.02	6.21E-08	1.15E-07	1.77E-07
2758	477917.54	3770076.08	6.82E-08	1.26E-07	1.94E-07
2759	477892.84	3770056.15	7.45E-08	1.38E-07	2.12E-07
2760	477868.14	3770036.21	8.07E-08	1.49E-07	2.30E-07
2761	477843.43	3770016.27	8.67E-08	1.60E-07	2.47E-07
2762	477818.73	3769996.34	9.23E-08	1.70E-07	2.63E-07
2763	477794.03	3769976.4	9.75E-08	1.80E-07	2.78E-07
2764	477769.33	3769956.46	1.02E-07	1.88E-07	2.90E-07
2765	477744.62	3769936.53	1.06E-07	1.96E-07	3.02E-07
2766	477670.51	3769876.72	1.13E-07	2.09E-07	3.22E-07
2767	477645.81	3769856.78	1.14E-07	2.10E-07	3.24E-07
2768	477621.11	3769836.84	1.14E-07	2.10E-07	3.24E-07
2769	477596.4	3769816.91	1.13E-07	2.09E-07	3.22E-07
2770	477571.7	3769796.97	1.12E-07	2.06E-07	3.18E-07
2771	477553.48	3769762.54	1.10E-07	2.04E-07	3.14E-07
2772	477566.43	3769733.56	1.11E-07	2.06E-07	3.17E-07
2773	477579.39	3769704.58	1.12E-07	2.06E-07	3.18E-07
2774	477592.34	3769675.6	1.11E-07	2.06E-07	3.17E-07
2775	477605.3	3769646.62	1.10E-07	2.04E-07	3.14E-07
2776	477670.07	3769501.72	9.37E-08	1.73E-07	2.67E-07
2777	477683.03	3769472.74	8.86E-08	1.64E-07	2.52E-07
2778	477695.98	3769443.76	8.31E-08	1.54E-07	2.37E-07
2779	477708.94	3769414.78	7.73E-08	1.43E-07	2.20E-07
2780	477721.89	3769385.8	7.15E-08	1.32E-07	2.04E-07
2781	477734.85	3769356.82	6.57E-08	1.21E-07	1.87E-07
2782	477747.8	3769327.84	6.00E-08	1.11E-07	1.71E-07
2783	477760.76	3769298.86	5.45E-08	1.01E-07	1.55E-07
2784	477773.71	3769269.88	4.93E-08	9.12E-08	1.41E-07
2785	477786.67	3769240.9	4.46E-08	8.23E-08	1.27E-07
2786	477799.62	3769211.92	4.02E-08	7.42E-08	1.14E-07
2787	477825.53	3769153.95	3.28E-08	6.05E-08	9.32E-08
2788	477838.49	3769124.97	2.97E-08	5.48E-08	8.45E-08
2789	477851.45	3769095.99	2.70E-08	4.99E-08	7.69E-08
2790	477864.4	3769067.01	2.47E-08	4.55E-08	7.02E-08
2791	477877.36	3769038.03	2.26E-08	4.18E-08	6.44E-08
2792	477890.31	3769009.05	2.08E-08	3.85E-08	5.93E-08
2793	477903.27	3768980.07	1.93E-08	3.56E-08	5.49E-08
2794	477916.22	3768951.09	1.79E-08	3.30E-08	5.09E-08
2795	477929.18	3768922.11	1.66E-08	3.07E-08	4.73E-08
2796	477942.13	3768893.13	1.54E-08	2.85E-08	4.40E-08
2797	477955.09	3768864.15	1.44E-08	2.65E-08	4.09E-08
2798	477968.04	3768835.17	1.34E-08	2.47E-08	3.81E-08
2799	478006.91	3768748.23	1.08E-08	1.99E-08	3.07E-08
2800	478019.86	3768719.25	1.00E-08	1.85E-08	2.86E-08
2801	478032.82	3768690.27	9.36E-09	1.73E-08	2.67E-08
2802	478045.77	3768661.29	8.75E-09	1.62E-08	2.49E-08
2803	478058.73	3768632.31	8.20E-09	1.52E-08	2.34E-08
2804	478071.68	3768603.33	7.73E-09	1.43E-08	2.20E-08

2805	478104.07	3768530.87	6.83E-09	1.26E-08	1.94E-08
2806	478117.03	3768501.89	6.57E-09	1.21E-08	1.87E-08
2807	478129.98	3768472.91	6.36E-09	1.18E-08	1.81E-08
2808	478142.94	3768443.93	6.19E-09	1.14E-08	1.76E-08
2809	478155.89	3768414.95	6.05E-09	1.12E-08	1.72E-08
2810	478168.85	3768385.97	5.95E-09	1.10E-08	1.69E-08
2811	478181.8	3768356.99	5.85E-09	1.08E-08	1.67E-08
2812	478201.24	3768313.52	5.74E-09	1.06E-08	1.63E-08
2813	478835.18	3770804.13	8.92E-09	1.65E-08	2.54E-08
2814	478867.13	3770804.87	8.92E-09	1.65E-08	2.54E-08
2815	478803.15	3770953.73	7.74E-09	1.43E-08	2.20E-08
2816	478778.38	3770933.74	7.88E-09	1.45E-08	2.24E-08
2817	478753.62	3770913.75	8.01E-09	1.48E-08	2.28E-08
2818	478728.85	3770893.77	8.15E-09	1.51E-08	2.32E-08
2819	478704.08	3770873.78	8.29E-09	1.53E-08	2.36E-08
2820	478679.31	3770853.79	8.45E-09	1.56E-08	2.41E-08
2821	478654.55	3770833.8	8.62E-09	1.59E-08	2.45E-08
2822	478629.78	3770813.81	8.79E-09	1.62E-08	2.50E-08
2823	478605.01	3770793.82	8.98E-09	1.66E-08	2.56E-08
2824	478580.25	3770773.84	9.18E-09	1.70E-08	2.61E-08
2825	478555.48	3770753.85	9.39E-09	1.74E-08	2.67E-08
2826	478530.71	3770733.86	9.62E-09	1.78E-08	2.74E-08
2827	478505.94	3770713.87	9.87E-09	1.82E-08	2.81E-08
2828	478481.18	3770693.88	1.01E-08	1.87E-08	2.89E-08
2829	478456.41	3770673.89	1.04E-08	1.92E-08	2.96E-08
2830	478431.64	3770653.91	1.07E-08	1.97E-08	3.04E-08
2831	478406.88	3770633.92	1.10E-08	2.02E-08	3.12E-08
2832	478382.11	3770613.93	1.12E-08	2.08E-08	3.20E-08
2833	478357.34	3770593.94	1.15E-08	2.13E-08	3.29E-08
2834	478332.57	3770573.95	1.19E-08	2.19E-08	3.38E-08
2835	478307.81	3770553.97	1.22E-08	2.25E-08	3.48E-08
2836	478283.04	3770533.98	1.26E-08	2.32E-08	3.58E-08
2837	478258.27	3770513.99	1.30E-08	2.40E-08	3.70E-08
2838	478233.51	3770494	1.35E-08	2.49E-08	3.84E-08
2839	478208.74	3770474.01	1.41E-08	2.60E-08	4.01E-08
2840	478183.97	3770454.02	1.48E-08	2.73E-08	4.20E-08
2841	478159.2	3770434.04	1.56E-08	2.88E-08	4.44E-08
2842	478134.44	3770414.05	1.66E-08	3.06E-08	4.72E-08
2843	478109.67	3770394.06	1.78E-08	3.28E-08	5.06E-08
2844	478084.9	3770374.07	1.92E-08	3.54E-08	5.46E-08
2845	478060.14	3770354.08	2.09E-08	3.85E-08	5.94E-08
2846	478035.37	3770334.09	2.28E-08	4.22E-08	6.50E-08
2847	478010.6	3770314.11	2.51E-08	4.64E-08	7.15E-08
2848	477985.83	3770294.12	2.78E-08	5.13E-08	7.91E-08
2849	477961.07	3770274.13	3.08E-08	5.68E-08	8.76E-08
2850	477936.3	3770254.14	3.41E-08	6.31E-08	9.72E-08
2851	477911.53	3770234.15	3.79E-08	7.00E-08	1.08E-07
2852	477886.76	3770214.16	4.20E-08	7.75E-08	1.19E-07
2853	477862	3770194.18	4.63E-08	8.56E-08	1.32E-07
2854	477837.23	3770174.19	5.10E-08	9.41E-08	1.45E-07
2855	477812.46	3770154.2	5.58E-08	1.03E-07	1.59E-07
2856	477787.7	3770134.21	6.08E-08	1.12E-07	1.73E-07

2857	477762.93	3770114.22	6.57E-08	1.21E-07	1.87E-07
2858	477738.16	3770094.23	7.06E-08	1.30E-07	2.01E-07
2859	477713.39	3770074.25	7.53E-08	1.39E-07	2.14E-07
2860	477688.63	3770054.26	7.98E-08	1.47E-07	2.27E-07
2861	477663.86	3770034.27	8.39E-08	1.55E-07	2.39E-07
2862	477639.09	3770014.28	8.76E-08	1.62E-07	2.49E-07
2863	477564.79	3769954.32	9.58E-08	1.77E-07	2.73E-07
2864	477540.02	3769934.33	9.74E-08	1.80E-07	2.77E-07
2865	477515.26	3769914.34	9.84E-08	1.82E-07	2.80E-07
2866	477490.49	3769894.35	9.88E-08	1.82E-07	2.81E-07
2867	477465.72	3769874.36	9.87E-08	1.82E-07	2.81E-07
2868	477440.96	3769854.37	9.79E-08	1.81E-07	2.79E-07
2869	477416.19	3769834.39	9.67E-08	1.79E-07	2.75E-07
2870	477397.92	3769799.87	9.56E-08	1.77E-07	2.72E-07
2871	477410.9	3769770.81	9.64E-08	1.78E-07	2.75E-07
2872	477423.89	3769741.76	9.67E-08	1.79E-07	2.75E-07
2873	477436.88	3769712.7	9.65E-08	1.78E-07	2.75E-07
2874	477449.87	3769683.65	9.58E-08	1.77E-07	2.73E-07
2875	477462.86	3769654.59	9.45E-08	1.75E-07	2.69E-07
2876	477527.8	3769509.31	8.00E-08	1.48E-07	2.28E-07
2877	477540.79	3769480.26	7.59E-08	1.40E-07	2.16E-07
2878	477553.78	3769451.2	7.14E-08	1.32E-07	2.03E-07
2879	477566.77	3769422.15	6.68E-08	1.23E-07	1.90E-07
2880	477579.76	3769393.09	6.22E-08	1.15E-07	1.77E-07
2881	477592.75	3769364.03	5.75E-08	1.06E-07	1.64E-07
2882	477605.74	3769334.98	5.30E-08	9.78E-08	1.51E-07
2883	477618.73	3769305.92	4.85E-08	8.96E-08	1.38E-07
2884	477631.71	3769276.87	4.43E-08	8.18E-08	1.26E-07
2885	477644.7	3769247.81	4.04E-08	7.46E-08	1.15E-07
2886	477657.69	3769218.76	3.67E-08	6.78E-08	1.05E-07
2887	477683.67	3769160.64	3.04E-08	5.62E-08	8.66E-08
2888	477696.66	3769131.59	2.78E-08	5.13E-08	7.90E-08
2889	477709.65	3769102.53	2.54E-08	4.69E-08	7.23E-08
2890	477722.64	3769073.48	2.33E-08	4.31E-08	6.64E-08
2891	477735.63	3769044.42	2.15E-08	3.97E-08	6.12E-08
2892	477748.61	3769015.37	1.99E-08	3.67E-08	5.66E-08
2893	477761.6	3768986.31	1.85E-08	3.41E-08	5.26E-08
2894	477774.59	3768957.25	1.72E-08	3.18E-08	4.90E-08
2895	477787.58	3768928.2	1.61E-08	2.97E-08	4.58E-08
2896	477807.06	3768884.62	1.46E-08	2.69E-08	4.15E-08
2897	477820.05	3768855.56	1.37E-08	2.52E-08	3.89E-08
2898	477839.54	3768811.98	1.24E-08	2.29E-08	3.53E-08
2899	477852.52	3768782.92	1.16E-08	2.15E-08	3.31E-08
2900	477865.51	3768753.86	1.09E-08	2.02E-08	3.11E-08
2901	477956.44	3768550.47	7.01E-09	1.29E-08	2.00E-08
2902	477969.42	3768521.42	6.64E-09	1.23E-08	1.89E-08
2903	477982.41	3768492.36	6.32E-09	1.17E-08	1.80E-08
2904	477995.4	3768463.31	6.06E-09	1.12E-08	1.72E-08
2905	478008.39	3768434.25	5.83E-09	1.08E-08	1.66E-08
2906	478021.38	3768405.2	5.64E-09	1.04E-08	1.61E-08
2907	478034.37	3768376.14	5.49E-09	1.01E-08	1.56E-08
2908	478047.36	3768347.08	5.37E-09	9.92E-09	1.53E-08

2909	478060.35	3768318.03	5.26E-09	9.72E-09	1.50E-08
2910	478073.33	3768288.97	5.19E-09	9.58E-09	1.48E-08
2911	478086.32	3768259.92	5.12E-09	9.46E-09	1.46E-08
2912	478099.31	3768230.86	5.06E-09	9.34E-09	1.44E-08
2913	478112.3	3768201.81	5.01E-09	9.25E-09	1.43E-08
2914	478125.29	3768172.75	4.96E-09	9.16E-09	1.41E-08
2915	478831.51	3770964.09	7.68E-09	1.42E-08	2.19E-08
2916	478863.46	3770964.83	7.67E-09	1.42E-08	2.18E-08
2917	478917.23	3769485.22	3.43E-06	6.33E-06	9.76E-06
2918	478936.58	3769485.22	3.81E-06	7.04E-06	1.09E-05
2919	478955.93	3769485.22	4.09E-06	7.56E-06	1.16E-05
2920	478975.28	3769485.22	4.25E-06	7.85E-06	1.21E-05
2921	478994.63	3769485.22	4.29E-06	7.92E-06	1.22E-05
2922	479013.98	3769485.22	4.18E-06	7.71E-06	1.19E-05
2923	479033.33	3769485.22	3.89E-06	7.18E-06	1.11E-05
2924	479052.68	3769485.22	3.51E-06	6.49E-06	1.00E-05
2925	478917.23	3769505.22	2.26E-06	4.17E-06	6.43E-06
2926	478936.58	3769505.22	2.28E-06	4.22E-06	6.50E-06
2927	478955.93	3769505.22	2.26E-06	4.18E-06	6.44E-06
2928	478975.28	3769505.22	2.22E-06	4.10E-06	6.33E-06
2929	478994.63	3769505.22	2.17E-06	4.01E-06	6.18E-06
2930	479013.98	3769505.22	2.11E-06	3.89E-06	6.00E-06
2931	479033.33	3769505.22	2.01E-06	3.72E-06	5.73E-06
2932	479052.68	3769505.22	1.88E-06	3.48E-06	5.36E-06
2933	478917.23	3769645.22	2.40E-07	4.43E-07	6.82E-07
2934	478936.58	3769645.22	2.41E-07	4.44E-07	6.85E-07
2935	478955.93	3769645.22	2.43E-07	4.49E-07	6.91E-07
2936	478975.28	3769645.22	2.46E-07	4.53E-07	6.99E-07
2937	478994.63	3769645.22	2.47E-07	4.57E-07	7.04E-07
2938	479013.98	3769645.22	2.47E-07	4.57E-07	7.04E-07
2939	479033.33	3769645.22	2.45E-07	4.52E-07	6.97E-07
2940	479052.68	3769645.22	2.40E-07	4.43E-07	6.83E-07
2941	478917.23	3769685.22	1.70E-07	3.14E-07	4.83E-07
2942	478936.58	3769685.22	1.71E-07	3.16E-07	4.87E-07
2943	478955.93	3769685.22	1.73E-07	3.20E-07	4.93E-07
2944	478975.28	3769685.22	1.75E-07	3.23E-07	4.98E-07
2945	478994.63	3769685.22	1.76E-07	3.25E-07	5.01E-07
2946	479013.98	3769685.22	1.76E-07	3.25E-07	5.01E-07
2947	479033.33	3769685.22	1.75E-07	3.22E-07	4.97E-07
2948	479052.68	3769685.22	1.72E-07	3.18E-07	4.90E-07
2949	478917.23	3769725.22	1.27E-07	2.35E-07	3.63E-07
2950	478936.58	3769725.22	1.29E-07	2.38E-07	3.67E-07
2951	478955.93	3769725.22	1.30E-07	2.41E-07	3.71E-07
2952	478975.28	3769725.22	1.31E-07	2.43E-07	3.74E-07
2953	478994.63	3769725.22	1.31E-07	2.43E-07	3.74E-07
2954	479013.98	3769725.22	1.31E-07	2.42E-07	3.74E-07
2955	479033.33	3769725.22	1.30E-07	2.41E-07	3.71E-07
2956	479052.68	3769725.22	1.29E-07	2.38E-07	3.67E-07
2957	478917.23	3769765.22	9.96E-08	1.84E-07	2.84E-07
2958	478936.58	3769765.22	1.01E-07	1.86E-07	2.87E-07
2959	478955.93	3769765.22	1.02E-07	1.88E-07	2.89E-07
2960	478975.28	3769765.22	1.02E-07	1.89E-07	2.91E-07

2961	478994.63	3769765.22	1.02E-07	1.89E-07	2.91E-07
2962	479013.98	3769765.22	1.02E-07	1.88E-07	2.90E-07
2963	479033.33	3769765.22	1.01E-07	1.87E-07	2.88E-07
2964	479052.68	3769765.22	1.00E-07	1.85E-07	2.85E-07
2965	479072.03	3769765.22	9.85E-08	1.82E-07	2.80E-07
2966	478917.23	3769845.22	6.61E-08	1.22E-07	1.88E-07
2967	478936.58	3769845.22	6.66E-08	1.23E-07	1.90E-07
2968	478955.93	3769845.22	6.69E-08	1.24E-07	1.91E-07
2969	478975.28	3769845.22	6.71E-08	1.24E-07	1.91E-07
2970	478994.63	3769845.22	6.70E-08	1.24E-07	1.91E-07
2971	479013.98	3769845.22	6.67E-08	1.23E-07	1.90E-07
2972	479033.33	3769845.22	6.62E-08	1.22E-07	1.89E-07
2973	479052.68	3769845.22	6.56E-08	1.21E-07	1.87E-07
2974	479072.03	3769845.22	6.48E-08	1.20E-07	1.84E-07
2975	478917.23	3769925.22	4.75E-08	8.77E-08	1.35E-07
2976	478936.58	3769925.22	4.76E-08	8.80E-08	1.36E-07
2977	478955.93	3769925.22	4.77E-08	8.82E-08	1.36E-07
2978	478975.28	3769925.22	4.77E-08	8.82E-08	1.36E-07
2979	478994.63	3769925.22	4.77E-08	8.80E-08	1.36E-07
2980	479013.98	3769925.22	4.75E-08	8.77E-08	1.35E-07
2981	479033.33	3769925.22	4.72E-08	8.71E-08	1.34E-07
2982	479052.68	3769925.22	4.67E-08	8.62E-08	1.33E-07
2983	479072.03	3769925.22	4.62E-08	8.53E-08	1.31E-07
2984	478917.23	3770005.22	3.60E-08	6.65E-08	1.03E-07
2985	478936.58	3770005.22	3.61E-08	6.66E-08	1.03E-07
2986	478955.93	3770005.22	3.61E-08	6.66E-08	1.03E-07
2987	478975.28	3770005.22	3.60E-08	6.66E-08	1.03E-07
2988	478994.63	3770005.22	3.60E-08	6.64E-08	1.02E-07
2989	479013.98	3770005.22	3.58E-08	6.61E-08	1.02E-07
2990	479033.33	3770005.22	3.56E-08	6.57E-08	1.01E-07
2991	479052.68	3770005.22	3.53E-08	6.52E-08	1.01E-07
2992	479072.03	3770005.22	3.50E-08	6.46E-08	9.95E-08
2993	478917.23	3770085.22	2.85E-08	5.26E-08	8.11E-08
2994	478936.58	3770085.22	2.85E-08	5.27E-08	8.12E-08
2995	478955.93	3770085.22	2.85E-08	5.26E-08	8.11E-08
2996	478975.28	3770085.22	2.85E-08	5.26E-08	8.10E-08
2997	478994.63	3770085.22	2.84E-08	5.24E-08	8.08E-08
2998	479013.98	3770085.22	2.82E-08	5.22E-08	8.04E-08
2999	479033.33	3770085.22	2.81E-08	5.19E-08	8.00E-08
3000	479052.68	3770085.22	2.79E-08	5.15E-08	7.94E-08
3001	479072.03	3770085.22	2.76E-08	5.10E-08	7.87E-08
3002	478917.23	3770165.22	2.33E-08	4.31E-08	6.64E-08
3003	478936.58	3770165.22	2.33E-08	4.31E-08	6.64E-08
3004	478955.93	3770165.22	2.33E-08	4.30E-08	6.63E-08
3005	478975.28	3770165.22	2.33E-08	4.29E-08	6.62E-08
3006	478994.63	3770165.22	2.32E-08	4.28E-08	6.60E-08
3007	479013.98	3770165.22	2.31E-08	4.26E-08	6.57E-08
3008	479033.33	3770165.22	2.30E-08	4.24E-08	6.53E-08
3009	479052.68	3770165.22	2.28E-08	4.21E-08	6.49E-08
3010	479072.03	3770165.22	2.26E-08	4.18E-08	6.44E-08
3011	478897.88	3770325.22	1.69E-08	3.11E-08	4.80E-08
3012	478917.23	3770325.22	1.68E-08	3.11E-08	4.80E-08

3013	478936.58	3770325.22	1.68E-08	3.11E-08	4.79E-08
3014	478955.93	3770325.22	1.68E-08	3.10E-08	4.78E-08
3015	478975.28	3770325.22	1.68E-08	3.10E-08	4.77E-08
3016	478994.63	3770325.22	1.67E-08	3.09E-08	4.76E-08
3017	479013.98	3770325.22	1.66E-08	3.07E-08	4.74E-08
3018	479033.33	3770325.22	1.66E-08	3.06E-08	4.71E-08
3019	479052.68	3770325.22	1.65E-08	3.04E-08	4.68E-08
3020	479072.03	3770325.22	1.63E-08	3.02E-08	4.65E-08
3021	478897.88	3770485.22	1.31E-08	2.41E-08	3.72E-08
3022	478917.23	3770485.22	1.30E-08	2.41E-08	3.72E-08
3023	478936.58	3770485.22	1.30E-08	2.41E-08	3.71E-08
3024	478955.93	3770485.22	1.30E-08	2.40E-08	3.70E-08
3025	478975.28	3770485.22	1.30E-08	2.40E-08	3.70E-08
3026	478994.63	3770485.22	1.29E-08	2.39E-08	3.68E-08
3027	479013.98	3770485.22	1.29E-08	2.38E-08	3.67E-08
3028	479033.33	3770485.22	1.28E-08	2.37E-08	3.65E-08
3029	479052.68	3770485.22	1.28E-08	2.36E-08	3.63E-08
3030	479072.03	3770485.22	1.27E-08	2.34E-08	3.61E-08
3031	478897.88	3770645.22	1.06E-08	1.96E-08	3.02E-08
3032	478917.23	3770645.22	1.06E-08	1.96E-08	3.02E-08
3033	478936.58	3770645.22	1.06E-08	1.95E-08	3.01E-08
3034	478955.93	3770645.22	1.06E-08	1.95E-08	3.01E-08
3035	478975.28	3770645.22	1.05E-08	1.95E-08	3.00E-08
3036	478994.63	3770645.22	1.05E-08	1.94E-08	2.99E-08
3037	479013.98	3770645.22	1.05E-08	1.93E-08	2.98E-08
3038	479033.33	3770645.22	1.04E-08	1.93E-08	2.97E-08
3039	479052.68	3770645.22	1.04E-08	1.92E-08	2.96E-08
3040	479072.03	3770645.22	1.03E-08	1.91E-08	2.94E-08
3041	478897.88	3770805.22	8.90E-09	1.64E-08	2.53E-08
3042	478917.23	3770805.22	8.90E-09	1.64E-08	2.53E-08
3043	478936.58	3770805.22	8.88E-09	1.64E-08	2.53E-08
3044	478955.93	3770805.22	8.87E-09	1.64E-08	2.52E-08
3045	478975.28	3770805.22	8.85E-09	1.63E-08	2.52E-08
3046	478994.63	3770805.22	8.83E-09	1.63E-08	2.51E-08
3047	479013.98	3770805.22	8.80E-09	1.63E-08	2.51E-08
3048	479033.33	3770805.22	8.77E-09	1.62E-08	2.50E-08
3049	479052.68	3770805.22	8.74E-09	1.61E-08	2.49E-08
3050	479072.03	3770805.22	8.70E-09	1.61E-08	2.48E-08
3051	478897.88	3770965.22	7.66E-09	1.42E-08	2.18E-08
3052	478917.23	3770965.22	7.66E-09	1.41E-08	2.18E-08
3053	478936.58	3770965.22	7.65E-09	1.41E-08	2.18E-08
3054	478955.93	3770965.22	7.64E-09	1.41E-08	2.17E-08
3055	478975.28	3770965.22	7.62E-09	1.41E-08	2.17E-08
3056	478994.63	3770965.22	7.60E-09	1.40E-08	2.16E-08
3057	479013.98	3770965.22	7.58E-09	1.40E-08	2.16E-08
3058	479033.33	3770965.22	7.56E-09	1.40E-08	2.15E-08
3059	479052.68	3770965.22	7.54E-09	1.39E-08	2.15E-08
3060	479072.03	3770965.22	7.51E-09	1.39E-08	2.14E-08
3061	479200.2	3769494.4	9.25E-07	1.71E-06	2.63E-06
3062	479246.11	3769480.67	8.09E-07	1.49E-06	2.30E-06
3063	479252.15	3769450.9	1.05E-06	1.93E-06	2.98E-06
3064	479286.11	3769480.99	6.20E-07	1.15E-06	1.77E-06

3065	479170.64	3769644.6	1.84E-07	3.40E-07	5.24E-07
3066	479292.15	3769451.21	7.62E-07	1.41E-06	2.17E-06
3067	479366.11	3769481.61	3.91E-07	7.22E-07	1.11E-06
3068	479289.24	3769664.14	1.20E-07	2.22E-07	3.42E-07
3069	479269.24	3769683.98	1.11E-07	2.04E-07	3.15E-07
3070	479241.07	3769695.59	1.10E-07	2.03E-07	3.12E-07
3071	479212.9	3769707.19	1.09E-07	2.01E-07	3.10E-07
3072	479184.72	3769718.8	1.08E-07	2.00E-07	3.08E-07
3073	479156.55	3769730.4	1.07E-07	1.98E-07	3.05E-07
3074	479100.2	3769753.61	1.02E-07	1.88E-07	2.90E-07
3075	479372.14	3769451.84	4.57E-07	8.44E-07	1.30E-06
3076	479446.11	3769482.24	2.68E-07	4.95E-07	7.63E-07
3077	479434.28	3769510.32	2.41E-07	4.44E-07	6.85E-07
3078	479375.15	3769650.73	1.11E-07	2.05E-07	3.15E-07
3079	479345.59	3769720.93	7.76E-08	1.43E-07	2.21E-07
3080	479325.59	3769740.77	7.27E-08	1.34E-07	2.07E-07
3081	479297.42	3769752.38	7.25E-08	1.34E-07	2.06E-07
3082	479269.24	3769763.98	7.22E-08	1.33E-07	2.06E-07
3083	479241.07	3769775.59	7.16E-08	1.32E-07	2.04E-07
3084	479212.9	3769787.19	7.11E-08	1.31E-07	2.03E-07
3085	479184.72	3769798.8	7.04E-08	1.30E-07	2.00E-07
3086	479156.55	3769810.4	6.94E-08	1.28E-07	1.98E-07
3087	479100.2	3769833.61	6.65E-08	1.23E-07	1.89E-07
3088	479452.14	3769452.47	3.02E-07	5.58E-07	8.60E-07
3089	479452.39	3769421	3.42E-07	6.31E-07	9.73E-07
3090	479526.1	3769482.87	1.95E-07	3.60E-07	5.55E-07
3091	479514.28	3769510.95	1.79E-07	3.31E-07	5.10E-07
3092	479455.15	3769651.35	9.49E-08	1.75E-07	2.70E-07
3093	479443.32	3769679.44	8.24E-08	1.52E-07	2.35E-07
3094	479431.5	3769707.52	7.24E-08	1.34E-07	2.06E-07
3095	479401.93	3769777.72	5.43E-08	1.00E-07	1.54E-07
3096	479381.94	3769797.56	5.18E-08	9.57E-08	1.48E-07
3097	479353.76	3769809.17	5.14E-08	9.50E-08	1.46E-07
3098	479325.59	3769820.77	5.11E-08	9.44E-08	1.46E-07
3099	479297.42	3769832.38	5.11E-08	9.43E-08	1.45E-07
3100	479269.24	3769843.98	5.08E-08	9.38E-08	1.45E-07
3101	479241.07	3769855.59	5.06E-08	9.34E-08	1.44E-07
3102	479212.9	3769867.19	5.02E-08	9.26E-08	1.43E-07
3103	479184.72	3769878.8	4.97E-08	9.18E-08	1.41E-07
3104	479100.2	3769913.61	4.74E-08	8.75E-08	1.35E-07
3105	479532.14	3769453.09	2.14E-07	3.95E-07	6.09E-07
3106	479532.39	3769421.63	2.37E-07	4.37E-07	6.74E-07
3107	479606.1	3769483.49	1.47E-07	2.71E-07	4.18E-07
3108	479594.28	3769511.57	1.37E-07	2.54E-07	3.91E-07
3109	479535.15	3769651.98	8.18E-08	1.51E-07	2.33E-07
3110	479523.32	3769680.06	7.23E-08	1.33E-07	2.06E-07
3111	479511.5	3769708.14	6.39E-08	1.18E-07	1.82E-07
3112	479499.67	3769736.23	5.68E-08	1.05E-07	1.62E-07
3113	479487.84	3769764.31	5.11E-08	9.44E-08	1.46E-07
3114	479458.28	3769834.51	4.03E-08	7.44E-08	1.15E-07
3115	479438.28	3769854.35	3.85E-08	7.10E-08	1.10E-07
3116	479410.11	3769865.96	3.87E-08	7.14E-08	1.10E-07

3117	479381.94	3769877.56	3.85E-08	7.11E-08	1.10E-07
3118	479353.76	3769889.17	3.84E-08	7.09E-08	1.09E-07
3119	479325.59	3769900.77	3.84E-08	7.09E-08	1.09E-07
3120	479297.42	3769912.38	3.82E-08	7.06E-08	1.09E-07
3121	479269.24	3769923.98	3.81E-08	7.04E-08	1.09E-07
3122	479241.07	3769935.59	3.80E-08	7.01E-08	1.08E-07
3123	479212.9	3769947.19	3.77E-08	6.96E-08	1.07E-07
3124	479184.72	3769958.8	3.72E-08	6.88E-08	1.06E-07
3125	479100.2	3769993.61	3.56E-08	6.58E-08	1.01E-07
3126	479612.14	3769453.72	1.59E-07	2.95E-07	4.54E-07
3127	479612.38	3769422.25	1.74E-07	3.22E-07	4.96E-07
3128	479686.1	3769484.12	1.14E-07	2.11E-07	3.25E-07
3129	479674.27	3769512.2	1.07E-07	1.98E-07	3.05E-07
3130	479626.97	3769624.53	7.79E-08	1.44E-07	2.22E-07
3131	479615.14	3769652.61	7.05E-08	1.30E-07	2.01E-07
3132	479603.32	3769680.69	6.33E-08	1.17E-07	1.80E-07
3133	479591.49	3769708.77	5.68E-08	1.05E-07	1.62E-07
3134	479579.67	3769736.85	5.11E-08	9.43E-08	1.45E-07
3135	479567.84	3769764.93	4.61E-08	8.52E-08	1.31E-07
3136	479556.02	3769793.02	4.18E-08	7.72E-08	1.19E-07
3137	479544.19	3769821.1	3.81E-08	7.04E-08	1.08E-07
3138	479514.63	3769891.3	3.12E-08	5.77E-08	8.89E-08
3139	479494.63	3769911.14	3.02E-08	5.57E-08	8.59E-08
3140	479466.45	3769922.75	3.01E-08	5.55E-08	8.56E-08
3141	479438.28	3769934.35	3.00E-08	5.54E-08	8.53E-08
3142	479410.11	3769945.96	3.02E-08	5.57E-08	8.59E-08
3143	479381.94	3769957.56	3.01E-08	5.56E-08	8.57E-08
3144	479353.76	3769969.17	3.01E-08	5.56E-08	8.58E-08
3145	479325.59	3769980.77	3.00E-08	5.54E-08	8.55E-08
3146	479297.42	3769992.38	3.00E-08	5.54E-08	8.53E-08
3147	479269.24	3770003.98	2.98E-08	5.50E-08	8.49E-08
3148	479241.07	3770015.59	2.97E-08	5.48E-08	8.45E-08
3149	479212.9	3770027.19	2.94E-08	5.44E-08	8.38E-08
3150	479184.72	3770038.8	2.91E-08	5.38E-08	8.29E-08
3151	479100.2	3770073.61	2.81E-08	5.19E-08	8.00E-08
3152	479692.13	3769454.35	1.23E-07	2.27E-07	3.50E-07
3153	479692.38	3769422.88	1.34E-07	2.47E-07	3.81E-07
3154	479765.92	3769485.16	9.27E-08	1.71E-07	2.64E-07
3155	479753.75	3769514.07	8.76E-08	1.62E-07	2.49E-07
3156	479705.05	3769629.7	6.50E-08	1.20E-07	1.85E-07
3157	479692.88	3769658.6	5.97E-08	1.10E-07	1.70E-07
3158	479680.71	3769687.51	5.45E-08	1.01E-07	1.55E-07
3159	479668.53	3769716.42	4.96E-08	9.16E-08	1.41E-07
3160	479656.36	3769745.33	4.50E-08	8.31E-08	1.28E-07
3161	479644.19	3769774.23	4.08E-08	7.54E-08	1.16E-07
3162	479632.01	3769803.14	3.71E-08	6.85E-08	1.06E-07
3163	479619.84	3769832.05	3.39E-08	6.26E-08	9.65E-08
3164	479607.67	3769860.96	3.12E-08	5.76E-08	8.88E-08
3165	479595.49	3769889.86	2.89E-08	5.34E-08	8.23E-08
3166	479571.15	3769947.68	2.52E-08	4.65E-08	7.17E-08
3167	479550.56	3769968.1	2.44E-08	4.51E-08	6.95E-08
3168	479521.56	3769980.05	2.44E-08	4.51E-08	6.96E-08

3169	479492.56	3769992	2.44E-08	4.50E-08	6.94E-08
3170	479463.55	3770003.94	2.44E-08	4.50E-08	6.94E-08
3171	479434.55	3770015.89	2.45E-08	4.53E-08	6.98E-08
3172	479405.55	3770027.84	2.45E-08	4.52E-08	6.97E-08
3173	479376.55	3770039.78	2.45E-08	4.52E-08	6.97E-08
3174	479347.55	3770051.73	2.44E-08	4.51E-08	6.95E-08
3175	479318.55	3770063.68	2.43E-08	4.49E-08	6.91E-08
3176	479289.54	3770075.62	2.42E-08	4.48E-08	6.90E-08
3177	479260.54	3770087.57	2.41E-08	4.45E-08	6.85E-08
3178	479231.54	3770099.51	2.40E-08	4.43E-08	6.83E-08
3179	479202.54	3770111.46	2.38E-08	4.39E-08	6.77E-08
3180	479173.54	3770123.41	2.35E-08	4.35E-08	6.70E-08
3181	479772.13	3769454.97	9.90E-08	1.83E-07	2.82E-07
3182	479772.38	3769423.51	1.07E-07	1.97E-07	3.03E-07
3183	479925.95	3769486.34	6.63E-08	1.22E-07	1.89E-07
3184	479865.41	3769630.09	5.03E-08	9.29E-08	1.43E-07
3185	479853.31	3769658.84	4.70E-08	8.68E-08	1.34E-07
3186	479841.2	3769687.59	4.38E-08	8.09E-08	1.25E-07
3187	479829.09	3769716.34	4.06E-08	7.49E-08	1.16E-07
3188	479816.99	3769745.09	3.76E-08	6.94E-08	1.07E-07
3189	479804.88	3769773.84	3.46E-08	6.40E-08	9.86E-08
3190	479792.77	3769802.59	3.19E-08	5.90E-08	9.09E-08
3191	479780.66	3769831.34	2.95E-08	5.45E-08	8.40E-08
3192	479768.56	3769860.09	2.73E-08	5.04E-08	7.77E-08
3193	479756.45	3769888.84	2.53E-08	4.67E-08	7.20E-08
3194	479744.34	3769917.59	2.36E-08	4.36E-08	6.71E-08
3195	479732.24	3769946.34	2.21E-08	4.09E-08	6.30E-08
3196	479720.13	3769975.09	2.08E-08	3.84E-08	5.92E-08
3197	479708.02	3770003.84	1.96E-08	3.63E-08	5.59E-08
3198	479683.81	3770061.34	1.78E-08	3.28E-08	5.06E-08
3199	479663.33	3770081.65	1.73E-08	3.20E-08	4.94E-08
3200	479634.49	3770093.53	1.73E-08	3.20E-08	4.94E-08
3201	479605.64	3770105.41	1.73E-08	3.20E-08	4.94E-08
3202	479576.8	3770117.3	1.74E-08	3.21E-08	4.95E-08
3203	479547.96	3770129.18	1.74E-08	3.21E-08	4.95E-08
3204	479519.11	3770141.06	1.74E-08	3.21E-08	4.95E-08
3205	479490.27	3770152.94	1.74E-08	3.21E-08	4.95E-08
3206	479461.42	3770164.82	1.74E-08	3.21E-08	4.95E-08
3207	479432.58	3770176.7	1.74E-08	3.22E-08	4.97E-08
3208	479403.74	3770188.58	1.74E-08	3.22E-08	4.96E-08
3209	479374.89	3770200.47	1.74E-08	3.21E-08	4.95E-08
3210	479346.05	3770212.35	1.73E-08	3.20E-08	4.93E-08
3211	479317.2	3770224.23	1.72E-08	3.18E-08	4.91E-08
3212	479288.36	3770236.11	1.72E-08	3.18E-08	4.90E-08
3213	479259.52	3770247.99	1.71E-08	3.16E-08	4.87E-08
3214	479230.67	3770259.87	1.70E-08	3.14E-08	4.84E-08
3215	479201.83	3770271.75	1.69E-08	3.13E-08	4.82E-08
3216	479172.98	3770283.64	1.68E-08	3.11E-08	4.79E-08
3217	479932.13	3769456.23	6.99E-08	1.29E-07	1.99E-07
3218	479932.37	3769424.76	7.41E-08	1.37E-07	2.11E-07
3219	480085.97	3769487.54	5.06E-08	9.35E-08	1.44E-07
3220	480025.66	3769630.75	4.05E-08	7.48E-08	1.15E-07

3221	480013.6	3769659.39	3.83E-08	7.08E-08	1.09E-07
3222	480001.53	3769688.04	3.62E-08	6.68E-08	1.03E-07
3223	479989.47	3769716.68	3.41E-08	6.30E-08	9.70E-08
3224	479977.41	3769745.32	3.20E-08	5.91E-08	9.11E-08
3225	479965.35	3769773.97	3.00E-08	5.54E-08	8.53E-08
3226	479953.28	3769802.61	2.81E-08	5.18E-08	7.99E-08
3227	479941.22	3769831.25	2.62E-08	4.84E-08	7.46E-08
3228	479929.16	3769859.9	2.45E-08	4.52E-08	6.96E-08
3229	479917.1	3769888.54	2.28E-08	4.22E-08	6.50E-08
3230	479905.04	3769917.18	2.13E-08	3.94E-08	6.08E-08
3231	479892.97	3769945.82	2.00E-08	3.70E-08	5.70E-08
3232	479880.91	3769974.47	1.89E-08	3.49E-08	5.37E-08
3233	479868.85	3770003.11	1.78E-08	3.29E-08	5.07E-08
3234	479856.79	3770031.75	1.69E-08	3.11E-08	4.80E-08
3235	479844.73	3770060.4	1.60E-08	2.96E-08	4.57E-08
3236	479832.66	3770089.04	1.53E-08	2.83E-08	4.36E-08
3237	479820.6	3770117.68	1.47E-08	2.71E-08	4.17E-08
3238	479796.48	3770174.97	1.35E-08	2.50E-08	3.85E-08
3239	479776.08	3770195.21	1.33E-08	2.46E-08	3.79E-08
3240	479747.34	3770207.05	1.33E-08	2.46E-08	3.79E-08
3241	479718.6	3770218.88	1.33E-08	2.46E-08	3.79E-08
3242	479689.87	3770230.72	1.33E-08	2.46E-08	3.79E-08
3243	479661.13	3770242.56	1.33E-08	2.46E-08	3.79E-08
3244	479632.39	3770254.39	1.33E-08	2.46E-08	3.79E-08
3245	479603.66	3770266.23	1.33E-08	2.46E-08	3.79E-08
3246	479574.92	3770278.07	1.33E-08	2.47E-08	3.80E-08
3247	479546.18	3770289.91	1.34E-08	2.47E-08	3.81E-08
3248	479517.45	3770301.74	1.34E-08	2.47E-08	3.80E-08
3249	479488.71	3770313.58	1.33E-08	2.47E-08	3.80E-08
3250	479459.97	3770325.42	1.34E-08	2.47E-08	3.81E-08
3251	479431.24	3770337.26	1.34E-08	2.47E-08	3.80E-08
3252	479402.5	3770349.09	1.33E-08	2.46E-08	3.79E-08
3253	479373.76	3770360.93	1.33E-08	2.46E-08	3.79E-08
3254	479345.03	3770372.77	1.33E-08	2.45E-08	3.77E-08
3255	479316.29	3770384.6	1.32E-08	2.44E-08	3.76E-08
3256	479287.55	3770396.44	1.31E-08	2.43E-08	3.74E-08
3257	479258.82	3770408.28	1.31E-08	2.42E-08	3.74E-08
3258	479230.08	3770420.12	1.31E-08	2.41E-08	3.72E-08
3259	479201.34	3770431.95	1.30E-08	2.40E-08	3.70E-08
3260	479100.77	3770473.38	1.28E-08	2.36E-08	3.64E-08
3261	480092.12	3769457.48	5.29E-08	9.77E-08	1.51E-07
3262	480092.37	3769426.02	5.58E-08	1.03E-07	1.59E-07
3263	480245.98	3769488.75	4.06E-08	7.50E-08	1.16E-07
3264	480185.83	3769631.58	3.35E-08	6.19E-08	9.55E-08
3265	480173.8	3769660.15	3.20E-08	5.92E-08	9.12E-08
3266	480161.77	3769688.71	3.06E-08	5.65E-08	8.70E-08
3267	480149.74	3769717.28	2.91E-08	5.37E-08	8.28E-08
3268	480137.71	3769745.84	2.76E-08	5.10E-08	7.86E-08
3269	480125.68	3769774.41	2.62E-08	4.84E-08	7.45E-08
3270	480113.65	3769802.97	2.48E-08	4.58E-08	7.06E-08
3271	480101.63	3769831.54	2.34E-08	4.33E-08	6.67E-08
3272	480089.6	3769860.1	2.21E-08	4.08E-08	6.29E-08

3273	480077.57	3769888.67	2.08E-08	3.85E-08	5.93E-08
3274	480065.54	3769917.24	1.96E-08	3.62E-08	5.59E-08
3275	480053.51	3769945.8	1.85E-08	3.42E-08	5.26E-08
3276	480041.48	3769974.37	1.74E-08	3.22E-08	4.97E-08
3277	480029.45	3770002.93	1.65E-08	3.05E-08	4.70E-08
3278	480017.42	3770031.5	1.56E-08	2.89E-08	4.45E-08
3279	480005.39	3770060.06	1.49E-08	2.75E-08	4.23E-08
3280	479993.36	3770088.63	1.41E-08	2.61E-08	4.03E-08
3281	479981.33	3770117.19	1.35E-08	2.50E-08	3.85E-08
3282	479969.3	3770145.76	1.30E-08	2.40E-08	3.70E-08
3283	479957.27	3770174.33	1.25E-08	2.30E-08	3.55E-08
3284	479945.24	3770202.89	1.20E-08	2.22E-08	3.42E-08
3285	479933.21	3770231.46	1.16E-08	2.14E-08	3.30E-08
3286	479909.15	3770288.59	1.09E-08	2.01E-08	3.10E-08
3287	479888.81	3770308.77	1.07E-08	1.98E-08	3.06E-08
3288	479860.15	3770320.58	1.07E-08	1.99E-08	3.06E-08
3289	479831.49	3770332.38	1.07E-08	1.99E-08	3.06E-08
3290	479802.83	3770344.19	1.08E-08	1.99E-08	3.06E-08
3291	479774.17	3770355.99	1.08E-08	1.99E-08	3.06E-08
3292	479745.52	3770367.8	1.08E-08	1.99E-08	3.06E-08
3293	479716.86	3770379.6	1.08E-08	1.99E-08	3.06E-08
3294	479688.2	3770391.41	1.08E-08	1.99E-08	3.06E-08
3295	479659.54	3770403.21	1.08E-08	1.99E-08	3.07E-08
3296	479630.88	3770415.02	1.08E-08	1.99E-08	3.07E-08
3297	479602.22	3770426.82	1.08E-08	1.99E-08	3.07E-08
3298	479573.56	3770438.63	1.08E-08	1.99E-08	3.07E-08
3299	479544.9	3770450.43	1.08E-08	1.99E-08	3.07E-08
3300	479516.24	3770462.24	1.08E-08	1.99E-08	3.07E-08
3301	479487.58	3770474.04	1.08E-08	1.99E-08	3.07E-08
3302	479458.93	3770485.85	1.08E-08	1.99E-08	3.07E-08
3303	479430.27	3770497.66	1.08E-08	1.99E-08	3.07E-08
3304	479401.61	3770509.46	1.07E-08	1.98E-08	3.06E-08
3305	479372.95	3770521.27	1.07E-08	1.98E-08	3.05E-08
3306	479344.29	3770533.07	1.07E-08	1.98E-08	3.04E-08
3307	479315.63	3770544.88	1.07E-08	1.97E-08	3.04E-08
3308	479272.64	3770562.58	1.06E-08	1.96E-08	3.02E-08
3309	479100.69	3770633.41	1.04E-08	1.92E-08	2.96E-08
3310	480252.12	3769458.74	4.22E-08	7.80E-08	1.20E-07
3311	480252.36	3769427.27	4.42E-08	8.17E-08	1.26E-07
3312	480405.89	3769490.2	3.38E-08	6.24E-08	9.61E-08
3313	480357.14	3769605.98	2.95E-08	5.45E-08	8.40E-08
3314	480344.95	3769634.92	2.84E-08	5.25E-08	8.09E-08
3315	480332.76	3769663.87	2.73E-08	5.05E-08	7.78E-08
3316	480320.57	3769692.81	2.62E-08	4.84E-08	7.46E-08
3317	480308.38	3769721.76	2.51E-08	4.64E-08	7.16E-08
3318	480296.19	3769750.71	2.40E-08	4.44E-08	6.84E-08
3319	480284	3769779.65	2.30E-08	4.24E-08	6.53E-08
3320	480271.81	3769808.6	2.19E-08	4.04E-08	6.23E-08
3321	480259.62	3769837.54	2.09E-08	3.85E-08	5.94E-08
3322	480247.43	3769866.49	1.99E-08	3.67E-08	5.65E-08
3323	480235.24	3769895.43	1.89E-08	3.48E-08	5.37E-08
3324	480223.05	3769924.38	1.79E-08	3.31E-08	5.10E-08

3325	480210.86	3769953.32	1.70E-08	3.14E-08	4.83E-08
3326	480198.67	3769982.27	1.61E-08	2.97E-08	4.58E-08
3327	480186.48	3770011.21	1.53E-08	2.82E-08	4.35E-08
3328	480174.29	3770040.16	1.45E-08	2.68E-08	4.13E-08
3329	480162.11	3770069.1	1.38E-08	2.55E-08	3.93E-08
3330	480149.92	3770098.05	1.32E-08	2.43E-08	3.75E-08
3331	480137.73	3770127	1.26E-08	2.32E-08	3.58E-08
3332	480125.54	3770155.94	1.20E-08	2.22E-08	3.43E-08
3333	480113.35	3770184.89	1.16E-08	2.14E-08	3.29E-08
3334	480101.16	3770213.83	1.11E-08	2.05E-08	3.16E-08
3335	480088.97	3770242.78	1.07E-08	1.98E-08	3.05E-08
3336	480076.78	3770271.72	1.04E-08	1.91E-08	2.95E-08
3337	480064.59	3770300.67	1.00E-08	1.85E-08	2.86E-08
3338	480052.4	3770329.61	9.73E-09	1.80E-08	2.77E-08
3339	480021.93	3770401.98	9.11E-09	1.68E-08	2.59E-08
3340	480001.31	3770422.43	9.00E-09	1.66E-08	2.56E-08
3341	479972.27	3770434.39	9.00E-09	1.66E-08	2.56E-08
3342	479943.23	3770446.35	9.01E-09	1.66E-08	2.57E-08
3343	479914.19	3770458.32	9.01E-09	1.66E-08	2.57E-08
3344	479885.15	3770470.28	9.02E-09	1.67E-08	2.57E-08
3345	479856.11	3770482.24	9.02E-09	1.67E-08	2.57E-08
3346	479827.07	3770494.2	9.02E-09	1.67E-08	2.57E-08
3347	479798.03	3770506.17	9.02E-09	1.67E-08	2.57E-08
3348	479768.99	3770518.13	9.02E-09	1.67E-08	2.57E-08
3349	479739.95	3770530.09	9.01E-09	1.66E-08	2.57E-08
3350	479710.91	3770542.05	9.02E-09	1.67E-08	2.57E-08
3351	479681.87	3770554.01	9.02E-09	1.67E-08	2.57E-08
3352	479652.83	3770565.98	9.02E-09	1.67E-08	2.57E-08
3353	479623.79	3770577.94	9.02E-09	1.67E-08	2.57E-08
3354	479594.75	3770589.9	9.02E-09	1.67E-08	2.57E-08
3355	479565.71	3770601.86	9.03E-09	1.67E-08	2.57E-08
3356	479536.67	3770613.83	9.03E-09	1.67E-08	2.57E-08
3357	479507.63	3770625.79	9.02E-09	1.67E-08	2.57E-08
3358	479478.59	3770637.75	9.01E-09	1.66E-08	2.57E-08
3359	479449.55	3770649.71	9.02E-09	1.67E-08	2.57E-08
3360	479420.51	3770661.67	9.01E-09	1.66E-08	2.57E-08
3361	479391.47	3770673.64	8.99E-09	1.66E-08	2.56E-08
3362	479347.91	3770691.58	8.96E-09	1.65E-08	2.55E-08
3363	479101.07	3770793.26	8.75E-09	1.62E-08	2.49E-08
3364	480412.11	3769459.99	3.50E-08	6.47E-08	9.98E-08
3365	480412.36	3769428.52	3.66E-08	6.75E-08	1.04E-07
3366	480565.91	3769491.4	2.89E-08	5.34E-08	8.23E-08
3367	480553.76	3769520.25	2.81E-08	5.20E-08	8.01E-08
3368	480505.16	3769635.66	2.48E-08	4.59E-08	7.07E-08
3369	480493.01	3769664.51	2.39E-08	4.42E-08	6.82E-08
3370	480480.86	3769693.36	2.31E-08	4.27E-08	6.58E-08
3371	480468.71	3769722.21	2.22E-08	4.11E-08	6.33E-08
3372	480456.56	3769751.06	2.14E-08	3.95E-08	6.09E-08
3373	480444.41	3769779.91	2.06E-08	3.80E-08	5.85E-08
3374	480432.26	3769808.76	1.98E-08	3.65E-08	5.62E-08
3375	480420.11	3769837.61	1.89E-08	3.50E-08	5.39E-08
3376	480407.96	3769866.46	1.82E-08	3.35E-08	5.17E-08

3377	480395.82	3769895.31	1.74E-08	3.21E-08	4.95E-08
3378	480383.67	3769924.16	1.66E-08	3.07E-08	4.73E-08
3379	480371.52	3769953.01	1.59E-08	2.93E-08	4.52E-08
3380	480359.37	3769981.87	1.52E-08	2.80E-08	4.32E-08
3381	480347.22	3770010.72	1.45E-08	2.67E-08	4.12E-08
3382	480335.07	3770039.57	1.38E-08	2.55E-08	3.93E-08
3383	480322.92	3770068.42	1.32E-08	2.43E-08	3.75E-08
3384	480310.77	3770097.27	1.26E-08	2.32E-08	3.58E-08
3385	480298.62	3770126.12	1.20E-08	2.22E-08	3.43E-08
3386	480286.47	3770154.97	1.15E-08	2.13E-08	3.28E-08
3387	480274.32	3770183.82	1.11E-08	2.04E-08	3.15E-08
3388	480262.17	3770212.67	1.06E-08	1.96E-08	3.03E-08
3389	480250.02	3770241.52	1.02E-08	1.89E-08	2.91E-08
3390	480237.87	3770270.37	9.88E-09	1.82E-08	2.81E-08
3391	480225.72	3770299.22	9.55E-09	1.76E-08	2.72E-08
3392	480213.57	3770328.07	9.25E-09	1.71E-08	2.63E-08
3393	480201.42	3770356.92	8.97E-09	1.66E-08	2.55E-08
3394	480189.27	3770385.78	8.72E-09	1.61E-08	2.48E-08
3395	480177.12	3770414.63	8.49E-09	1.57E-08	2.42E-08
3396	480164.97	3770443.48	8.27E-09	1.53E-08	2.35E-08
3397	480140.67	3770501.18	7.90E-09	1.46E-08	2.25E-08
3398	480114.05	3770535.99	7.73E-09	1.43E-08	2.20E-08
3399	480085.11	3770547.91	7.74E-09	1.43E-08	2.20E-08
3400	480056.16	3770559.84	7.75E-09	1.43E-08	2.21E-08
3401	480027.22	3770571.76	7.76E-09	1.43E-08	2.21E-08
3402	479998.27	3770583.68	7.76E-09	1.43E-08	2.21E-08
3403	479969.33	3770595.61	7.76E-09	1.43E-08	2.21E-08
3404	479940.38	3770607.53	7.76E-09	1.43E-08	2.21E-08
3405	479911.44	3770619.45	7.76E-09	1.43E-08	2.21E-08
3406	479882.49	3770631.37	7.76E-09	1.43E-08	2.21E-08
3407	479853.55	3770643.3	7.76E-09	1.43E-08	2.21E-08
3408	479824.6	3770655.22	7.75E-09	1.43E-08	2.21E-08
3409	479795.66	3770667.14	7.76E-09	1.43E-08	2.21E-08
3410	479766.71	3770679.07	7.76E-09	1.43E-08	2.21E-08
3411	479737.77	3770690.99	7.76E-09	1.43E-08	2.21E-08
3412	479708.82	3770702.91	7.76E-09	1.43E-08	2.21E-08
3413	479679.88	3770714.84	7.76E-09	1.43E-08	2.21E-08
3414	479650.93	3770726.76	7.77E-09	1.44E-08	2.21E-08
3415	479621.99	3770738.68	7.76E-09	1.43E-08	2.21E-08
3416	479593.04	3770750.61	7.76E-09	1.43E-08	2.21E-08
3417	479564.1	3770762.53	7.77E-09	1.43E-08	2.21E-08
3418	479535.15	3770774.45	7.76E-09	1.43E-08	2.21E-08
3419	479506.21	3770786.37	7.76E-09	1.43E-08	2.21E-08
3420	479477.26	3770798.3	7.77E-09	1.43E-08	2.21E-08
3421	479448.32	3770810.22	7.75E-09	1.43E-08	2.21E-08
3422	479390.43	3770834.07	7.73E-09	1.43E-08	2.20E-08
3423	479173.34	3770923.49	7.61E-09	1.41E-08	2.17E-08
3424	480572.11	3769461.24	2.99E-08	5.52E-08	8.51E-08
3425	480572.35	3769429.78	3.11E-08	5.74E-08	8.85E-08

			T2	
			2229	478909.85
			3.18E-03	6.37E-03
			Yr 1	Yr 2
1	479085.48	3769432.66	2.00E-02	4.00E-02
2	479102.33	3769437.04	1.20E-02	2.41E-02
3	479086.14	3769452.65	1.12E-02	2.25E-02
4	479103	3769457.02	7.11E-03	1.42E-02
5	479103.66	3769477.01	4.04E-03	8.07E-03
6	479075.06	3769497.98	2.76E-03	5.52E-03
7	479104.33	3769497	2.36E-03	4.73E-03
8	479079.71	3769637.9	3.27E-04	6.53E-04
9	479081.04	3769677.88	2.34E-04	4.67E-04
10	479082.37	3769717.85	1.74E-04	3.48E-04
11	479085.03	3769797.81	1.07E-04	2.14E-04
12	479087.69	3769877.77	7.31E-05	1.46E-04
13	479090.35	3769957.72	5.36E-05	1.07E-04
14	479093.01	3770037.68	4.13E-05	8.27E-05
15	479095.67	3770117.63	3.32E-05	6.64E-05
16	479100.99	3770277.54	2.33E-05	4.67E-05
17	479156.3	3769397.46	7.41E-03	1.48E-02
18	479156.3	3769378.36	8.06E-03	1.61E-02
19	479156.3	3769359.27	8.56E-03	1.71E-02
20	479156.3	3769340.17	8.72E-03	1.74E-02
21	479156.3	3769321.07	7.85E-03	1.57E-02
22	479156.3	3769301.97	6.05E-03	1.21E-02
23	479156.3	3769282.87	4.14E-03	8.29E-03
24	479156.3	3769263.78	2.71E-03	5.42E-03
25	479156.3	3769244.68	1.79E-03	3.59E-03
26	479156.3	3769225.58	1.23E-03	2.46E-03
27	479170.68	3769430.47	4.16E-03	8.33E-03
28	479176.3	3769397.46	5.19E-03	1.04E-02
29	479176.3	3769378.36	5.66E-03	1.13E-02
30	479176.3	3769359.27	5.93E-03	1.19E-02
31	479176.3	3769340.17	5.91E-03	1.18E-02
32	479176.3	3769321.07	5.38E-03	1.08E-02
33	479176.3	3769301.97	4.44E-03	8.89E-03
34	479176.3	3769282.87	3.38E-03	6.75E-03
35	479176.3	3769263.78	2.44E-03	4.89E-03
36	479176.3	3769244.68	1.74E-03	3.48E-03
37	479176.3	3769225.58	1.25E-03	2.50E-03
38	479190.68	3769430.47	3.16E-03	6.32E-03
39	479179.43	3769458.28	2.51E-03	5.01E-03
40	479160.09	3769478.26	2.18E-03	4.36E-03
41	479196.3	3769397.46	3.88E-03	7.76E-03
42	479196.3	3769378.36	4.21E-03	8.43E-03
43	479196.3	3769359.27	4.37E-03	8.73E-03
44	479196.3	3769340.17	4.30E-03	8.60E-03
45	479196.3	3769321.07	3.97E-03	7.93E-03
46	479196.3	3769301.97	3.41E-03	6.83E-03
47	479196.3	3769282.87	2.76E-03	5.52E-03
48	479196.3	3769263.78	2.13E-03	4.27E-03

49	479196.3	3769244.68	1.61E-03	3.22E-03
50	479196.3	3769225.58	1.21E-03	2.42E-03
51	479209.27	3769433.94	2.45E-03	4.89E-03
52	479202.24	3769451.32	2.16E-03	4.33E-03
53	479195.21	3769468.7	1.84E-03	3.68E-03
54	479171.04	3769493.69	1.51E-03	3.01E-03
55	479153.9	3769501.3	1.51E-03	3.01E-03
56	479216.3	3769416.56	2.64E-03	5.28E-03
57	479216.3	3769397.46	2.99E-03	5.97E-03
58	479216.3	3769378.36	3.22E-03	6.44E-03
59	479216.3	3769359.27	3.33E-03	6.66E-03
60	479216.3	3769340.17	3.28E-03	6.56E-03
61	479216.3	3769321.07	3.08E-03	6.15E-03
62	479216.3	3769301.97	2.73E-03	5.47E-03
63	479216.3	3769282.87	2.30E-03	4.61E-03
64	479216.3	3769263.78	1.87E-03	3.74E-03
65	479216.3	3769244.68	1.48E-03	2.95E-03
66	479216.3	3769225.58	1.15E-03	2.31E-03
67	479249.74	3769432.78	1.65E-03	3.29E-03
68	479236.61	3769465.23	1.36E-03	2.72E-03
69	479223.49	3769497.67	1.01E-03	2.02E-03
70	479256.3	3769397.46	1.93E-03	3.86E-03
71	479256.3	3769378.36	2.06E-03	4.13E-03
72	479256.3	3769359.27	2.13E-03	4.25E-03
73	479256.3	3769340.17	2.11E-03	4.22E-03
74	479256.3	3769321.07	2.02E-03	4.03E-03
75	479256.3	3769301.97	1.86E-03	3.71E-03
76	479256.3	3769282.87	1.65E-03	3.30E-03
77	479256.3	3769263.78	1.42E-03	2.85E-03
78	479256.3	3769244.68	1.20E-03	2.40E-03
79	479256.3	3769225.58	1.00E-03	2.01E-03
80	479289.97	3769432.2	1.18E-03	2.35E-03
81	479277.32	3769463.49	1.02E-03	2.03E-03
82	479264.66	3769494.78	8.15E-04	1.63E-03
83	479296.3	3769397.46	1.33E-03	2.67E-03
84	479296.3	3769378.36	1.42E-03	2.84E-03
85	479296.3	3769359.27	1.47E-03	2.94E-03
86	479296.3	3769340.17	1.47E-03	2.94E-03
87	479296.3	3769321.07	1.43E-03	2.86E-03
88	479296.3	3769301.97	1.35E-03	2.70E-03
89	479296.3	3769282.87	1.24E-03	2.48E-03
90	479296.3	3769263.78	1.11E-03	2.23E-03
91	479296.3	3769244.68	9.79E-04	1.96E-03
92	479296.3	3769225.58	8.48E-04	1.70E-03
93	479329.43	3769433.56	8.74E-04	1.75E-03
94	479322.55	3769450.55	8.24E-04	1.65E-03
95	479315.68	3769467.55	7.63E-04	1.53E-03
96	479308.8	3769484.54	6.95E-04	1.39E-03
97	479301.93	3769501.54	6.20E-04	1.24E-03
98	479336.3	3769416.56	9.09E-04	1.82E-03
99	479336.3	3769397.46	9.83E-04	1.97E-03
100	479336.3	3769378.36	1.04E-03	2.07E-03

101	479336.3	3769359.27	1.07E-03	2.13E-03
102	479336.3	3769340.17	1.07E-03	2.15E-03
103	479336.3	3769321.07	1.06E-03	2.12E-03
104	479336.3	3769301.97	1.02E-03	2.04E-03
105	479336.3	3769282.87	9.57E-04	1.91E-03
106	479336.3	3769263.78	8.84E-04	1.77E-03
107	479336.3	3769244.68	8.03E-04	1.61E-03
108	479336.3	3769225.58	7.17E-04	1.43E-03
109	479369.65	3769432.99	6.76E-04	1.35E-03
110	479356.36	3769465.86	6.06E-04	1.21E-03
111	479343.06	3769498.73	5.13E-04	1.03E-03
112	479222.16	3769633.28	2.32E-04	4.64E-04
113	479189.76	3769647.66	2.25E-04	4.50E-04
114	479157.35	3769662.04	2.24E-04	4.47E-04
115	479376.3	3769397.46	7.46E-04	1.49E-03
116	479376.3	3769378.36	7.87E-04	1.57E-03
117	479376.3	3769359.27	8.13E-04	1.63E-03
118	479376.3	3769340.17	8.22E-04	1.64E-03
119	479376.3	3769321.07	8.15E-04	1.63E-03
120	479376.3	3769301.97	7.93E-04	1.59E-03
121	479376.3	3769282.87	7.57E-04	1.51E-03
122	479376.3	3769263.78	7.12E-04	1.42E-03
123	479376.3	3769244.68	6.60E-04	1.32E-03
124	479376.3	3769225.58	6.03E-04	1.21E-03
125	479409.27	3769433.94	5.37E-04	1.07E-03
126	479402.24	3769451.32	5.15E-04	1.03E-03
127	479395.21	3769468.7	4.85E-04	9.70E-04
128	479388.18	3769486.09	4.50E-04	9.00E-04
129	479381.15	3769503.47	4.15E-04	8.30E-04
130	479314.79	3769632.74	1.88E-04	3.76E-04
131	479297.65	3769640.35	1.85E-04	3.69E-04
132	479280.51	3769647.95	1.81E-04	3.63E-04
133	479263.38	3769655.56	1.79E-04	3.58E-04
134	479246.24	3769663.16	1.77E-04	3.53E-04
135	479229.1	3769670.77	1.74E-04	3.49E-04
136	479211.96	3769678.37	1.72E-04	3.44E-04
137	479194.82	3769685.98	1.71E-04	3.42E-04
138	479177.69	3769693.58	1.70E-04	3.39E-04
139	479160.55	3769701.18	1.69E-04	3.37E-04
140	479416.3	3769416.56	5.54E-04	1.11E-03
141	479416.3	3769397.46	5.88E-04	1.18E-03
142	479416.3	3769378.36	6.15E-04	1.23E-03
143	479416.3	3769359.27	6.35E-04	1.27E-03
144	479416.3	3769340.17	6.47E-04	1.29E-03
145	479416.3	3769321.07	6.46E-04	1.29E-03
146	479416.3	3769301.97	6.34E-04	1.27E-03
147	479416.3	3769282.87	6.13E-04	1.23E-03
148	479416.3	3769263.78	5.85E-04	1.17E-03
149	479416.3	3769244.68	5.51E-04	1.10E-03
150	479416.3	3769225.58	5.13E-04	1.03E-03
151	479489.18	3769434.17	3.62E-04	7.24E-04
152	479482.05	3769451.79	3.49E-04	6.99E-04

153	479474.93	3769469.4	3.34E-04	6.68E-04
154	479467.8	3769487.01	3.16E-04	6.32E-04
155	479460.68	3769504.63	2.97E-04	5.94E-04
156	479403.68	3769645.53	1.43E-04	2.87E-04
157	479396.55	3769663.14	1.30E-04	2.60E-04
158	479372.06	3769688.46	1.17E-04	2.34E-04
159	479354.7	3769696.17	1.16E-04	2.32E-04
160	479337.33	3769703.88	1.14E-04	2.29E-04
161	479319.96	3769711.58	1.13E-04	2.26E-04
162	479302.6	3769719.29	1.12E-04	2.24E-04
163	479285.23	3769726.99	1.12E-04	2.24E-04
164	479267.86	3769734.7	1.11E-04	2.22E-04
165	479250.5	3769742.41	1.10E-04	2.20E-04
166	479233.13	3769750.11	1.09E-04	2.18E-04
167	479215.76	3769757.82	1.08E-04	2.16E-04
168	479198.4	3769765.53	1.07E-04	2.15E-04
169	479181.03	3769773.23	1.06E-04	2.13E-04
170	479163.66	3769780.94	1.05E-04	2.10E-04
171	479496.3	3769416.56	3.72E-04	7.43E-04
172	479496.3	3769397.46	3.93E-04	7.86E-04
173	479496.3	3769378.36	4.09E-04	8.18E-04
174	479496.3	3769359.27	4.21E-04	8.42E-04
175	479496.3	3769340.17	4.29E-04	8.58E-04
176	479496.3	3769321.07	4.32E-04	8.63E-04
177	479496.3	3769301.97	4.29E-04	8.59E-04
178	479496.3	3769282.87	4.22E-04	8.45E-04
179	479496.3	3769263.78	4.11E-04	8.22E-04
180	479496.3	3769244.68	3.96E-04	7.92E-04
181	479496.3	3769225.58	3.78E-04	7.56E-04
182	479569.49	3769433.39	2.62E-04	5.24E-04
183	479562.68	3769450.23	2.55E-04	5.09E-04
184	479555.87	3769467.06	2.46E-04	4.92E-04
185	479549.06	3769483.89	2.36E-04	4.71E-04
186	479542.26	3769500.72	2.25E-04	4.51E-04
187	479480.98	3769652.22	1.19E-04	2.38E-04
188	479474.17	3769669.05	1.10E-04	2.20E-04
189	479467.36	3769685.88	1.01E-04	2.03E-04
190	479460.55	3769702.71	9.36E-05	1.87E-04
191	479453.74	3769719.55	8.71E-05	1.74E-04
192	479430.33	3769743.74	8.05E-05	1.61E-04
193	479413.74	3769751.11	7.95E-05	1.59E-04
194	479397.14	3769758.47	7.87E-05	1.57E-04
195	479380.54	3769765.84	7.81E-05	1.56E-04
196	479363.95	3769773.2	7.77E-05	1.55E-04
197	479347.35	3769780.57	7.76E-05	1.55E-04
198	479330.75	3769787.93	7.70E-05	1.54E-04
199	479314.16	3769795.29	7.66E-05	1.53E-04
200	479297.56	3769802.66	7.64E-05	1.53E-04
201	479280.96	3769810.02	7.60E-05	1.52E-04
202	479264.37	3769817.39	7.55E-05	1.51E-04
203	479247.77	3769824.75	7.50E-05	1.50E-04
204	479231.17	3769832.12	7.46E-05	1.49E-04

205	479214.57	3769839.48	7.42E-05	1.48E-04
206	479197.98	3769846.85	7.35E-05	1.47E-04
207	479181.38	3769854.21	7.31E-05	1.46E-04
208	479164.78	3769861.58	7.24E-05	1.45E-04
209	479576.3	3769416.56	2.67E-04	5.35E-04
210	479576.3	3769397.46	2.80E-04	5.59E-04
211	479576.3	3769378.36	2.90E-04	5.80E-04
212	479576.3	3769359.27	2.99E-04	5.97E-04
213	479576.3	3769340.17	3.05E-04	6.09E-04
214	479576.3	3769321.07	3.08E-04	6.17E-04
215	479576.3	3769301.97	3.09E-04	6.18E-04
216	479576.3	3769282.87	3.07E-04	6.15E-04
217	479576.3	3769263.78	3.03E-04	6.06E-04
218	479576.3	3769244.68	2.96E-04	5.93E-04
219	479576.3	3769225.58	2.88E-04	5.76E-04
220	479649.4	3769433.63	1.98E-04	3.95E-04
221	479642.49	3769450.69	1.92E-04	3.85E-04
222	479635.59	3769467.76	1.87E-04	3.73E-04
223	479628.69	3769484.82	1.80E-04	3.60E-04
224	479621.78	3769501.89	1.73E-04	3.46E-04
225	479566.56	3769638.41	1.09E-04	2.18E-04
226	479559.66	3769655.48	1.02E-04	2.04E-04
227	479552.75	3769672.54	9.47E-05	1.89E-04
228	479545.85	3769689.61	8.81E-05	1.76E-04
229	479538.95	3769706.67	8.20E-05	1.64E-04
230	479532.04	3769723.74	7.64E-05	1.53E-04
231	479525.14	3769740.8	7.13E-05	1.43E-04
232	479518.24	3769757.87	6.67E-05	1.33E-04
233	479511.33	3769774.93	6.28E-05	1.26E-04
234	479487.61	3769799.46	5.88E-05	1.18E-04
235	479470.78	3769806.93	5.82E-05	1.16E-04
236	479453.95	3769814.4	5.77E-05	1.15E-04
237	479437.13	3769821.86	5.73E-05	1.15E-04
238	479420.3	3769829.33	5.70E-05	1.14E-04
239	479403.47	3769836.8	5.68E-05	1.14E-04
240	479386.65	3769844.26	5.69E-05	1.14E-04
241	479369.82	3769851.73	5.66E-05	1.13E-04
242	479352.99	3769859.2	5.63E-05	1.13E-04
243	479336.17	3769866.66	5.62E-05	1.12E-04
244	479319.34	3769874.13	5.61E-05	1.12E-04
245	479302.51	3769881.6	5.58E-05	1.12E-04
246	479285.69	3769889.06	5.55E-05	1.11E-04
247	479268.86	3769896.53	5.54E-05	1.11E-04
248	479252.03	3769904	5.51E-05	1.10E-04
249	479235.21	3769911.46	5.48E-05	1.10E-04
250	479218.38	3769918.93	5.45E-05	1.09E-04
251	479201.56	3769926.4	5.41E-05	1.08E-04
252	479184.73	3769933.86	5.36E-05	1.07E-04
253	479656.3	3769416.56	2.02E-04	4.03E-04
254	479656.3	3769397.46	2.10E-04	4.20E-04
255	479656.3	3769378.36	2.17E-04	4.35E-04
256	479656.3	3769359.27	2.24E-04	4.47E-04

257	479656.3	3769340.17	2.28E-04	4.57E-04
258	479656.3	3769321.07	2.32E-04	4.64E-04
259	479656.3	3769301.97	2.34E-04	4.67E-04
260	479656.3	3769282.87	2.34E-04	4.68E-04
261	479656.3	3769263.78	2.33E-04	4.65E-04
262	479656.3	3769244.68	2.30E-04	4.60E-04
263	479656.3	3769225.58	2.26E-04	4.52E-04
264	479729.33	3769433.8	1.54E-04	3.09E-04
265	479722.35	3769451.04	1.51E-04	3.01E-04
266	479715.38	3769468.29	1.46E-04	2.92E-04
267	479708.4	3769485.53	1.41E-04	2.82E-04
268	479701.43	3769502.77	1.36E-04	2.73E-04
269	479652.6	3769623.47	9.80E-05	1.96E-04
270	479645.63	3769640.71	9.29E-05	1.86E-04
271	479638.65	3769657.95	8.74E-05	1.75E-04
272	479631.68	3769675.2	8.21E-05	1.64E-04
273	479624.7	3769692.44	7.71E-05	1.54E-04
274	479617.73	3769709.68	7.23E-05	1.45E-04
275	479610.76	3769726.92	6.78E-05	1.36E-04
276	479603.78	3769744.16	6.35E-05	1.27E-04
277	479596.81	3769761.41	5.97E-05	1.19E-04
278	479589.83	3769778.65	5.64E-05	1.13E-04
279	479582.86	3769795.89	5.32E-05	1.06E-04
280	479575.88	3769813.13	5.03E-05	1.01E-04
281	479568.91	3769830.38	4.76E-05	9.51E-05
282	479544.93	3769855.16	4.48E-05	8.95E-05
283	479527.93	3769862.71	4.44E-05	8.89E-05
284	479510.93	3769870.25	4.43E-05	8.87E-05
285	479493.93	3769877.79	4.42E-05	8.84E-05
286	479476.93	3769885.34	4.40E-05	8.80E-05
287	479459.93	3769892.88	4.38E-05	8.75E-05
288	479442.93	3769900.43	4.36E-05	8.72E-05
289	479425.92	3769907.97	4.35E-05	8.71E-05
290	479408.92	3769915.51	4.37E-05	8.74E-05
291	479391.92	3769923.06	4.35E-05	8.71E-05
292	479374.92	3769930.6	4.34E-05	8.69E-05
293	479357.92	3769938.15	4.34E-05	8.68E-05
294	479340.92	3769945.69	4.33E-05	8.66E-05
295	479323.92	3769953.23	4.31E-05	8.62E-05
296	479306.92	3769960.78	4.30E-05	8.60E-05
297	479289.92	3769968.32	4.29E-05	8.58E-05
298	479272.92	3769975.87	4.27E-05	8.53E-05
299	479255.92	3769983.41	4.24E-05	8.48E-05
300	479238.91	3769990.95	4.23E-05	8.45E-05
301	479221.91	3769998.5	4.20E-05	8.40E-05
302	479204.91	3770006.04	4.17E-05	8.34E-05
303	479187.91	3770013.59	4.13E-05	8.27E-05
304	479736.3	3769416.56	1.58E-04	3.15E-04
305	479736.3	3769397.46	1.64E-04	3.28E-04
306	479736.3	3769378.36	1.70E-04	3.39E-04
307	479736.3	3769359.27	1.75E-04	3.49E-04
308	479736.3	3769340.17	1.79E-04	3.57E-04

309	479736.3	3769321.07	1.82E-04	3.63E-04
310	479736.3	3769301.97	1.84E-04	3.67E-04
311	479736.3	3769282.87	1.85E-04	3.70E-04
312	479736.3	3769263.78	1.85E-04	3.70E-04
313	479736.3	3769244.68	1.84E-04	3.68E-04
314	479736.3	3769225.58	1.82E-04	3.64E-04
315	479809.27	3769433.94	1.26E-04	2.51E-04
316	479802.24	3769451.32	1.23E-04	2.46E-04
317	479795.21	3769468.7	1.20E-04	2.39E-04
318	479788.18	3769486.09	1.16E-04	2.32E-04
319	479781.15	3769503.47	1.12E-04	2.25E-04
320	479731.93	3769625.14	8.36E-05	1.67E-04
321	479724.9	3769642.52	7.93E-05	1.59E-04
322	479717.87	3769659.9	7.53E-05	1.51E-04
323	479710.84	3769677.28	7.14E-05	1.43E-04
324	479703.8	3769694.66	6.77E-05	1.35E-04
325	479696.77	3769712.04	6.41E-05	1.28E-04
326	479689.74	3769729.43	6.07E-05	1.21E-04
327	479682.71	3769746.81	5.73E-05	1.15E-04
328	479675.68	3769764.19	5.41E-05	1.08E-04
329	479668.65	3769781.57	5.11E-05	1.02E-04
330	479661.62	3769798.95	4.84E-05	9.67E-05
331	479654.59	3769816.33	4.58E-05	9.17E-05
332	479647.56	3769833.71	4.35E-05	8.70E-05
333	479640.53	3769851.09	4.13E-05	8.26E-05
334	479633.5	3769868.48	3.93E-05	7.87E-05
335	479626.46	3769885.86	3.75E-05	7.51E-05
336	479602.3	3769910.84	3.57E-05	7.15E-05
337	479585.16	3769918.45	3.56E-05	7.12E-05
338	479568.02	3769926.05	3.54E-05	7.08E-05
339	479550.88	3769933.66	3.52E-05	7.04E-05
340	479533.74	3769941.26	3.51E-05	7.02E-05
341	479516.61	3769948.87	3.51E-05	7.02E-05
342	479499.47	3769956.47	3.51E-05	7.01E-05
343	479482.33	3769964.08	3.50E-05	6.99E-05
344	479465.19	3769971.68	3.49E-05	6.98E-05
345	479448.05	3769979.29	3.49E-05	6.98E-05
346	479430.91	3769986.89	3.50E-05	7.00E-05
347	479413.78	3769994.5	3.49E-05	6.98E-05
348	479396.64	3770002.1	3.48E-05	6.96E-05
349	479379.5	3770009.71	3.48E-05	6.95E-05
350	479362.36	3770017.31	3.47E-05	6.94E-05
351	479345.22	3770024.92	3.46E-05	6.92E-05
352	479328.09	3770032.52	3.45E-05	6.89E-05
353	479310.95	3770040.13	3.43E-05	6.87E-05
354	479293.81	3770047.73	3.43E-05	6.85E-05
355	479276.67	3770055.33	3.41E-05	6.82E-05
356	479259.53	3770062.94	3.39E-05	6.78E-05
357	479242.4	3770070.54	3.38E-05	6.76E-05
358	479225.26	3770078.15	3.36E-05	6.73E-05
359	479208.12	3770085.75	3.34E-05	6.68E-05
360	479190.98	3770093.36	3.32E-05	6.63E-05

361	479173.84	3770100.96	3.29E-05	6.58E-05
362	479816.3	3769416.56	1.28E-04	2.56E-04
363	479816.3	3769397.46	1.33E-04	2.66E-04
364	479816.3	3769378.36	1.37E-04	2.74E-04
365	479816.3	3769359.27	1.41E-04	2.82E-04
366	479816.3	3769340.17	1.44E-04	2.88E-04
367	479816.3	3769321.07	1.47E-04	2.93E-04
368	479816.3	3769301.97	1.49E-04	2.97E-04
369	479816.3	3769282.87	1.50E-04	3.00E-04
370	479816.3	3769263.78	1.51E-04	3.02E-04
371	479816.3	3769244.68	1.51E-04	3.02E-04
372	479816.3	3769225.58	1.50E-04	3.01E-04
373	479969.19	3769434.15	8.98E-05	1.80E-04
374	479962.07	3769451.73	8.81E-05	1.76E-04
375	479954.96	3769469.32	8.62E-05	1.72E-04
376	479947.85	3769486.9	8.42E-05	1.68E-04
377	479940.73	3769504.49	8.20E-05	1.64E-04
378	479898.05	3769610	6.72E-05	1.34E-04
379	479890.94	3769627.59	6.47E-05	1.29E-04
380	479883.82	3769645.18	6.22E-05	1.24E-04
381	479876.71	3769662.76	5.96E-05	1.19E-04
382	479869.6	3769680.35	5.72E-05	1.14E-04
383	479862.48	3769697.93	5.47E-05	1.09E-04
384	479855.37	3769715.52	5.23E-05	1.05E-04
385	479848.25	3769733.11	4.99E-05	9.98E-05
386	479841.14	3769750.69	4.76E-05	9.52E-05
387	479834.03	3769768.28	4.54E-05	9.08E-05
388	479826.91	3769785.86	4.33E-05	8.65E-05
389	479819.8	3769803.45	4.12E-05	8.24E-05
390	479812.69	3769821.04	3.92E-05	7.85E-05
391	479805.57	3769838.62	3.75E-05	7.49E-05
392	479798.46	3769856.21	3.58E-05	7.16E-05
393	479791.34	3769873.79	3.42E-05	6.83E-05
394	479784.23	3769891.38	3.26E-05	6.53E-05
395	479777.12	3769908.96	3.12E-05	6.25E-05
396	479770	3769926.55	2.99E-05	5.99E-05
397	479762.89	3769944.14	2.88E-05	5.75E-05
398	479755.78	3769961.72	2.77E-05	5.54E-05
399	479748.66	3769979.31	2.67E-05	5.34E-05
400	479741.55	3769996.89	2.58E-05	5.16E-05
401	479717.1	3770022.17	2.48E-05	4.96E-05
402	479699.76	3770029.87	2.47E-05	4.95E-05
403	479682.42	3770037.56	2.47E-05	4.94E-05
404	479665.08	3770045.26	2.46E-05	4.92E-05
405	479647.74	3770052.95	2.45E-05	4.91E-05
406	479630.4	3770060.65	2.45E-05	4.90E-05
407	479613.06	3770068.34	2.45E-05	4.90E-05
408	479595.72	3770076.03	2.44E-05	4.89E-05
409	479578.38	3770083.73	2.44E-05	4.88E-05
410	479561.04	3770091.42	2.44E-05	4.87E-05
411	479543.7	3770099.12	2.44E-05	4.88E-05
412	479526.36	3770106.81	2.44E-05	4.88E-05

413	479509.02	3770114.51	2.44E-05	4.88E-05
414	479491.68	3770122.2	2.43E-05	4.87E-05
415	479474.34	3770129.89	2.43E-05	4.86E-05
416	479457	3770137.59	2.43E-05	4.86E-05
417	479439.66	3770145.28	2.44E-05	4.87E-05
418	479422.32	3770152.98	2.43E-05	4.86E-05
419	479404.98	3770160.67	2.43E-05	4.85E-05
420	479387.64	3770168.37	2.42E-05	4.85E-05
421	479370.3	3770176.06	2.42E-05	4.84E-05
422	479352.96	3770183.75	2.41E-05	4.82E-05
423	479335.62	3770191.45	2.40E-05	4.80E-05
424	479318.28	3770199.14	2.39E-05	4.78E-05
425	479300.94	3770206.84	2.39E-05	4.77E-05
426	479283.6	3770214.53	2.38E-05	4.76E-05
427	479266.26	3770222.22	2.37E-05	4.73E-05
428	479248.92	3770229.92	2.36E-05	4.72E-05
429	479231.58	3770237.61	2.35E-05	4.70E-05
430	479214.24	3770245.31	2.34E-05	4.68E-05
431	479196.9	3770253	2.33E-05	4.65E-05
432	479179.56	3770260.7	2.31E-05	4.63E-05
433	479976.3	3769416.56	9.14E-05	1.83E-04
434	479976.3	3769397.46	9.42E-05	1.88E-04
435	479976.3	3769378.36	9.68E-05	1.94E-04
436	479976.3	3769359.27	9.93E-05	1.99E-04
437	479976.3	3769340.17	1.01E-04	2.03E-04
438	479976.3	3769321.07	1.04E-04	2.07E-04
439	479976.3	3769301.97	1.05E-04	2.11E-04
440	479976.3	3769282.87	1.07E-04	2.13E-04
441	479976.3	3769263.78	1.08E-04	2.15E-04
442	479976.3	3769244.68	1.08E-04	2.17E-04
443	479976.3	3769225.58	1.09E-04	2.18E-04
444	480129.3	3769433.86	6.88E-05	1.38E-04
445	480122.31	3769451.15	6.76E-05	1.35E-04
446	480115.31	3769468.45	6.63E-05	1.33E-04
447	480108.31	3769485.75	6.50E-05	1.30E-04
448	480101.32	3769503.04	6.36E-05	1.27E-04
449	480059.34	3769606.82	5.43E-05	1.09E-04
450	480052.34	3769624.12	5.27E-05	1.05E-04
451	480045.34	3769641.42	5.10E-05	1.02E-04
452	480038.35	3769658.71	4.94E-05	9.87E-05
453	480031.35	3769676.01	4.77E-05	9.54E-05
454	480024.35	3769693.31	4.61E-05	9.21E-05
455	480017.36	3769710.6	4.45E-05	8.89E-05
456	480010.36	3769727.9	4.29E-05	8.59E-05
457	480003.36	3769745.2	4.13E-05	8.27E-05
458	479996.37	3769762.49	3.98E-05	7.96E-05
459	479989.37	3769779.79	3.83E-05	7.65E-05
460	479982.37	3769797.09	3.68E-05	7.35E-05
461	479975.38	3769814.38	3.53E-05	7.06E-05
462	479968.38	3769831.68	3.39E-05	6.79E-05
463	479961.38	3769848.98	3.26E-05	6.52E-05
464	479954.39	3769866.27	3.13E-05	6.26E-05

465	479947.39	3769883.57	3.01E-05	6.02E-05
466	479940.39	3769900.86	2.89E-05	5.78E-05
467	479933.4	3769918.16	2.78E-05	5.55E-05
468	479926.4	3769935.46	2.67E-05	5.34E-05
469	479919.4	3769952.75	2.57E-05	5.14E-05
470	479912.41	3769970.05	2.48E-05	4.96E-05
471	479905.41	3769987.35	2.39E-05	4.78E-05
472	479898.41	3770004.64	2.31E-05	4.62E-05
473	479891.42	3770021.94	2.24E-05	4.47E-05
474	479884.42	3770039.24	2.17E-05	4.33E-05
475	479877.42	3770056.53	2.10E-05	4.20E-05
476	479870.43	3770073.83	2.04E-05	4.08E-05
477	479863.43	3770091.13	1.98E-05	3.96E-05
478	479856.43	3770108.42	1.93E-05	3.86E-05
479	479832.38	3770133.29	1.88E-05	3.75E-05
480	479815.33	3770140.86	1.87E-05	3.74E-05
481	479798.27	3770148.42	1.87E-05	3.73E-05
482	479781.22	3770155.99	1.86E-05	3.73E-05
483	479764.17	3770163.56	1.86E-05	3.72E-05
484	479747.11	3770171.13	1.86E-05	3.72E-05
485	479730.06	3770178.69	1.86E-05	3.72E-05
486	479713	3770186.26	1.86E-05	3.71E-05
487	479695.95	3770193.83	1.85E-05	3.71E-05
488	479678.89	3770201.4	1.85E-05	3.70E-05
489	479661.84	3770208.97	1.85E-05	3.70E-05
490	479644.78	3770216.53	1.85E-05	3.70E-05
491	479627.73	3770224.1	1.85E-05	3.70E-05
492	479610.67	3770231.67	1.85E-05	3.70E-05
493	479593.62	3770239.24	1.85E-05	3.69E-05
494	479576.57	3770246.8	1.85E-05	3.70E-05
495	479559.51	3770254.37	1.85E-05	3.70E-05
496	479542.46	3770261.94	1.85E-05	3.70E-05
497	479525.4	3770269.51	1.85E-05	3.69E-05
498	479508.35	3770277.07	1.84E-05	3.69E-05
499	479491.29	3770284.64	1.84E-05	3.68E-05
500	479474.24	3770292.21	1.84E-05	3.68E-05
501	479457.18	3770299.78	1.84E-05	3.69E-05
502	479440.13	3770307.35	1.84E-05	3.68E-05
503	479423.08	3770314.91	1.84E-05	3.67E-05
504	479406.02	3770322.48	1.83E-05	3.66E-05
505	479388.97	3770330.05	1.83E-05	3.66E-05
506	479371.91	3770337.62	1.83E-05	3.65E-05
507	479354.86	3770345.18	1.82E-05	3.64E-05
508	479337.8	3770352.75	1.81E-05	3.63E-05
509	479320.75	3770360.32	1.81E-05	3.62E-05
510	479303.69	3770367.89	1.80E-05	3.60E-05
511	479286.64	3770375.45	1.80E-05	3.59E-05
512	479269.59	3770383.02	1.79E-05	3.59E-05
513	479252.53	3770390.59	1.79E-05	3.58E-05
514	479235.48	3770398.16	1.78E-05	3.56E-05
515	479218.42	3770405.73	1.77E-05	3.55E-05
516	479201.37	3770413.29	1.77E-05	3.53E-05

517	479184.31	3770420.86	1.76E-05	3.53E-05
518	479167.26	3770428.43	1.76E-05	3.52E-05
519	480136.3	3769416.56	6.99E-05	1.40E-04
520	480136.3	3769397.46	7.18E-05	1.44E-04
521	480136.3	3769378.36	7.38E-05	1.48E-04
522	480136.3	3769359.27	7.55E-05	1.51E-04
523	480136.3	3769340.17	7.71E-05	1.54E-04
524	480136.3	3769321.07	7.86E-05	1.57E-04
525	480136.3	3769301.97	8.00E-05	1.60E-04
526	480136.3	3769282.87	8.12E-05	1.62E-04
527	480136.3	3769263.78	8.22E-05	1.64E-04
528	480136.3	3769244.68	8.30E-05	1.66E-04
529	480136.3	3769225.58	8.36E-05	1.67E-04
530	480289.24	3769434.02	5.53E-05	1.11E-04
531	480282.18	3769451.47	5.44E-05	1.09E-04
532	480275.12	3769468.93	5.34E-05	1.07E-04
533	480268.06	3769486.38	5.25E-05	1.05E-04
534	480261	3769503.84	5.14E-05	1.03E-04
535	480218.63	3769608.57	4.48E-05	8.95E-05
536	480211.57	3769626.02	4.37E-05	8.73E-05
537	480204.51	3769643.48	4.25E-05	8.50E-05
538	480197.45	3769660.93	4.13E-05	8.27E-05
539	480190.39	3769678.39	4.02E-05	8.03E-05
540	480183.33	3769695.85	3.90E-05	7.80E-05
541	480176.27	3769713.3	3.79E-05	7.57E-05
542	480169.2	3769730.76	3.67E-05	7.35E-05
543	480162.14	3769748.21	3.56E-05	7.12E-05
544	480155.08	3769765.67	3.45E-05	6.90E-05
545	480148.02	3769783.12	3.34E-05	6.68E-05
546	480140.96	3769800.58	3.23E-05	6.46E-05
547	480133.9	3769818.03	3.12E-05	6.25E-05
548	480126.84	3769835.49	3.02E-05	6.04E-05
549	480119.78	3769852.94	2.92E-05	5.83E-05
550	480112.72	3769870.4	2.82E-05	5.63E-05
551	480105.66	3769887.85	2.72E-05	5.44E-05
552	480098.6	3769905.31	2.63E-05	5.25E-05
553	480091.54	3769922.77	2.53E-05	5.07E-05
554	480084.47	3769940.22	2.44E-05	4.89E-05
555	480077.41	3769957.68	2.36E-05	4.72E-05
556	480070.35	3769975.13	2.28E-05	4.56E-05
557	480063.29	3769992.59	2.20E-05	4.40E-05
558	480056.23	3770010.04	2.13E-05	4.25E-05
559	480049.17	3770027.5	2.06E-05	4.12E-05
560	480042.11	3770044.95	1.99E-05	3.99E-05
561	480035.05	3770062.41	1.93E-05	3.86E-05
562	480027.99	3770079.86	1.88E-05	3.75E-05
563	480020.93	3770097.32	1.82E-05	3.65E-05
564	480013.87	3770114.77	1.77E-05	3.55E-05
565	480006.8	3770132.23	1.73E-05	3.45E-05
566	479999.74	3770149.68	1.68E-05	3.37E-05
567	479992.68	3770167.14	1.64E-05	3.29E-05
568	479985.62	3770184.6	1.60E-05	3.21E-05

569	479978.56	3770202.05	1.57E-05	3.14E-05
570	479971.5	3770219.51	1.53E-05	3.07E-05
571	479947.23	3770244.6	1.50E-05	2.99E-05
572	479930.02	3770252.24	1.50E-05	2.99E-05
573	479912.81	3770259.87	1.49E-05	2.99E-05
574	479895.6	3770267.51	1.49E-05	2.98E-05
575	479878.38	3770275.15	1.49E-05	2.98E-05
576	479861.17	3770282.78	1.49E-05	2.98E-05
577	479843.96	3770290.42	1.49E-05	2.98E-05
578	479826.75	3770298.06	1.49E-05	2.97E-05
579	479809.54	3770305.7	1.49E-05	2.97E-05
580	479792.33	3770313.33	1.49E-05	2.97E-05
581	479775.12	3770320.97	1.48E-05	2.97E-05
582	479757.91	3770328.61	1.48E-05	2.97E-05
583	479740.7	3770336.24	1.48E-05	2.97E-05
584	479723.49	3770343.88	1.48E-05	2.97E-05
585	479706.27	3770351.52	1.48E-05	2.96E-05
586	479689.06	3770359.16	1.48E-05	2.96E-05
587	479671.85	3770366.79	1.48E-05	2.96E-05
588	479654.64	3770374.43	1.48E-05	2.96E-05
589	479637.43	3770382.07	1.48E-05	2.96E-05
590	479620.22	3770389.7	1.48E-05	2.96E-05
591	479603.01	3770397.34	1.48E-05	2.95E-05
592	479585.8	3770404.98	1.48E-05	2.95E-05
593	479568.59	3770412.62	1.48E-05	2.95E-05
594	479551.38	3770420.25	1.48E-05	2.95E-05
595	479534.16	3770427.89	1.48E-05	2.95E-05
596	479516.95	3770435.53	1.47E-05	2.95E-05
597	479499.74	3770443.16	1.47E-05	2.94E-05
598	479482.53	3770450.8	1.47E-05	2.94E-05
599	479465.32	3770458.44	1.47E-05	2.95E-05
600	479448.11	3770466.08	1.47E-05	2.94E-05
601	479430.9	3770473.71	1.47E-05	2.93E-05
602	479413.69	3770481.35	1.46E-05	2.93E-05
603	479396.48	3770488.99	1.46E-05	2.92E-05
604	479379.27	3770496.62	1.46E-05	2.92E-05
605	479362.05	3770504.26	1.46E-05	2.91E-05
606	479344.84	3770511.9	1.45E-05	2.90E-05
607	479327.63	3770519.54	1.45E-05	2.90E-05
608	479310.42	3770527.17	1.44E-05	2.89E-05
609	479293.21	3770534.81	1.44E-05	2.89E-05
610	479276	3770542.45	1.44E-05	2.88E-05
611	479258.79	3770550.09	1.43E-05	2.87E-05
612	479241.58	3770557.72	1.43E-05	2.86E-05
613	479224.37	3770565.36	1.43E-05	2.85E-05
614	479207.16	3770573	1.42E-05	2.85E-05
615	479189.94	3770580.63	1.42E-05	2.84E-05
616	479172.73	3770588.27	1.42E-05	2.83E-05
617	480296.3	3769416.56	5.62E-05	1.12E-04
618	480296.3	3769397.46	5.76E-05	1.15E-04
619	480296.3	3769378.36	5.90E-05	1.18E-04
620	480296.3	3769359.27	6.03E-05	1.21E-04

621	480296.3	3769340.17	6.16E-05	1.23E-04
622	480296.3	3769321.07	6.27E-05	1.26E-04
623	480296.3	3769301.97	6.38E-05	1.28E-04
624	480296.3	3769282.87	6.49E-05	1.30E-04
625	480296.3	3769263.78	6.58E-05	1.32E-04
626	480296.3	3769244.68	6.66E-05	1.33E-04
627	480296.3	3769225.58	6.72E-05	1.34E-04
628	480449.19	3769434.14	4.62E-05	9.23E-05
629	480442.08	3769451.72	4.54E-05	9.09E-05
630	480434.97	3769469.29	4.47E-05	8.94E-05
631	480427.86	3769486.87	4.39E-05	8.78E-05
632	480420.75	3769504.45	4.31E-05	8.62E-05
633	480378.08	3769609.92	3.80E-05	7.60E-05
634	480370.97	3769627.5	3.72E-05	7.43E-05
635	480363.86	3769645.08	3.63E-05	7.26E-05
636	480356.75	3769662.65	3.55E-05	7.10E-05
637	480349.64	3769680.23	3.46E-05	6.93E-05
638	480342.53	3769697.81	3.38E-05	6.75E-05
639	480335.42	3769715.39	3.29E-05	6.58E-05
640	480328.31	3769732.97	3.20E-05	6.41E-05
641	480321.2	3769750.55	3.12E-05	6.24E-05
642	480314.09	3769768.12	3.04E-05	6.07E-05
643	480306.98	3769785.7	2.95E-05	5.91E-05
644	480299.87	3769803.28	2.87E-05	5.74E-05
645	480292.76	3769820.86	2.79E-05	5.58E-05
646	480285.65	3769838.44	2.71E-05	5.42E-05
647	480278.54	3769856.01	2.63E-05	5.26E-05
648	480271.43	3769873.59	2.55E-05	5.11E-05
649	480264.32	3769891.17	2.48E-05	4.96E-05
650	480257.21	3769908.75	2.40E-05	4.81E-05
651	480250.09	3769926.33	2.33E-05	4.66E-05
652	480242.98	3769943.9	2.26E-05	4.52E-05
653	480235.87	3769961.48	2.19E-05	4.38E-05
654	480228.76	3769979.06	2.12E-05	4.24E-05
655	480221.65	3769996.64	2.05E-05	4.11E-05
656	480214.54	3770014.22	1.99E-05	3.98E-05
657	480207.43	3770031.8	1.93E-05	3.86E-05
658	480200.32	3770049.37	1.87E-05	3.74E-05
659	480193.21	3770066.95	1.82E-05	3.64E-05
660	480186.1	3770084.53	1.77E-05	3.53E-05
661	480178.99	3770102.11	1.72E-05	3.43E-05
662	480171.88	3770119.69	1.67E-05	3.34E-05
663	480164.77	3770137.26	1.62E-05	3.24E-05
664	480157.66	3770154.84	1.58E-05	3.16E-05
665	480150.55	3770172.42	1.54E-05	3.08E-05
666	480143.44	3770190	1.50E-05	3.01E-05
667	480136.33	3770207.58	1.47E-05	2.94E-05
668	480129.22	3770225.16	1.43E-05	2.87E-05
669	480122.1	3770242.73	1.40E-05	2.81E-05
670	480114.99	3770260.31	1.37E-05	2.74E-05
671	480107.88	3770277.89	1.34E-05	2.69E-05
672	480100.77	3770295.47	1.32E-05	2.63E-05

673	480093.66	3770313.05	1.29E-05	2.59E-05
674	480086.55	3770330.62	1.27E-05	2.54E-05
675	480062.11	3770355.89	1.25E-05	2.49E-05
676	480044.78	3770363.58	1.24E-05	2.49E-05
677	480027.45	3770371.28	1.24E-05	2.49E-05
678	480010.11	3770378.97	1.24E-05	2.48E-05
679	479992.78	3770386.66	1.24E-05	2.48E-05
680	479975.45	3770394.35	1.24E-05	2.48E-05
681	479958.12	3770402.04	1.24E-05	2.48E-05
682	479940.78	3770409.73	1.24E-05	2.48E-05
683	479923.45	3770417.42	1.24E-05	2.48E-05
684	479906.12	3770425.11	1.24E-05	2.48E-05
685	479888.79	3770432.8	1.24E-05	2.48E-05
686	479871.46	3770440.49	1.24E-05	2.47E-05
687	479854.12	3770448.18	1.24E-05	2.47E-05
688	479836.79	3770455.88	1.24E-05	2.47E-05
689	479819.46	3770463.57	1.23E-05	2.47E-05
690	479802.13	3770471.26	1.23E-05	2.47E-05
691	479784.8	3770478.95	1.23E-05	2.47E-05
692	479767.46	3770486.64	1.23E-05	2.47E-05
693	479750.13	3770494.33	1.23E-05	2.46E-05
694	479732.8	3770502.02	1.23E-05	2.46E-05
695	479715.47	3770509.71	1.23E-05	2.46E-05
696	479698.14	3770517.4	1.23E-05	2.46E-05
697	479680.8	3770525.09	1.23E-05	2.46E-05
698	479663.47	3770532.78	1.23E-05	2.46E-05
699	479646.14	3770540.47	1.23E-05	2.46E-05
700	479628.81	3770548.17	1.23E-05	2.46E-05
701	479611.47	3770555.86	1.23E-05	2.46E-05
702	479594.14	3770563.55	1.23E-05	2.45E-05
703	479576.81	3770571.24	1.23E-05	2.45E-05
704	479559.48	3770578.93	1.23E-05	2.46E-05
705	479542.15	3770586.62	1.23E-05	2.45E-05
706	479524.81	3770594.31	1.22E-05	2.45E-05
707	479507.48	3770602	1.22E-05	2.45E-05
708	479490.15	3770609.69	1.22E-05	2.44E-05
709	479472.82	3770617.38	1.22E-05	2.45E-05
710	479455.49	3770625.07	1.22E-05	2.44E-05
711	479438.15	3770632.77	1.22E-05	2.44E-05
712	479420.82	3770640.46	1.22E-05	2.44E-05
713	479403.49	3770648.15	1.22E-05	2.43E-05
714	479386.16	3770655.84	1.21E-05	2.43E-05
715	479368.83	3770663.53	1.21E-05	2.42E-05
716	479351.49	3770671.22	1.21E-05	2.42E-05
717	479334.16	3770678.91	1.21E-05	2.41E-05
718	479316.83	3770686.6	1.21E-05	2.41E-05
719	479299.5	3770694.29	1.20E-05	2.40E-05
720	479282.17	3770701.98	1.20E-05	2.40E-05
721	479264.83	3770709.67	1.20E-05	2.39E-05
722	479247.5	3770717.37	1.19E-05	2.39E-05
723	479230.17	3770725.06	1.19E-05	2.39E-05
724	479212.84	3770732.75	1.19E-05	2.38E-05

725	479195.5	3770740.44	1.19E-05	2.37E-05
726	479178.17	3770748.13	1.19E-05	2.37E-05
727	480456.3	3769416.56	4.69E-05	9.38E-05
728	480456.3	3769397.46	4.80E-05	9.60E-05
729	480456.3	3769378.36	4.91E-05	9.81E-05
730	480456.3	3769359.27	5.01E-05	1.00E-04
731	480456.3	3769340.17	5.11E-05	1.02E-04
732	480456.3	3769321.07	5.21E-05	1.04E-04
733	480456.3	3769301.97	5.30E-05	1.06E-04
734	480456.3	3769282.87	5.38E-05	1.08E-04
735	480456.3	3769263.78	5.46E-05	1.09E-04
736	480456.3	3769244.68	5.53E-05	1.11E-04
737	480456.3	3769225.58	5.59E-05	1.12E-04
738	480609.15	3769434.24	3.95E-05	7.90E-05
739	480602	3769451.91	3.89E-05	7.79E-05
740	480594.85	3769469.59	3.83E-05	7.67E-05
741	480587.7	3769487.26	3.77E-05	7.54E-05
742	480580.55	3769504.94	3.71E-05	7.42E-05
743	480573.4	3769522.62	3.65E-05	7.29E-05
744	480523.35	3769646.35	3.19E-05	6.37E-05
745	480516.2	3769664.02	3.12E-05	6.23E-05
746	480509.05	3769681.7	3.05E-05	6.10E-05
747	480501.9	3769699.38	2.98E-05	5.96E-05
748	480494.75	3769717.05	2.91E-05	5.83E-05
749	480487.6	3769734.73	2.85E-05	5.69E-05
750	480480.45	3769752.4	2.78E-05	5.56E-05
751	480473.3	3769770.08	2.71E-05	5.42E-05
752	480466.15	3769787.76	2.65E-05	5.29E-05
753	480459	3769805.43	2.58E-05	5.16E-05
754	480451.85	3769823.11	2.52E-05	5.04E-05
755	480444.7	3769840.78	2.46E-05	4.91E-05
756	480437.55	3769858.46	2.40E-05	4.79E-05
757	480430.4	3769876.14	2.34E-05	4.67E-05
758	480423.25	3769893.81	2.27E-05	4.55E-05
759	480416.1	3769911.49	2.21E-05	4.43E-05
760	480408.95	3769929.16	2.16E-05	4.31E-05
761	480401.8	3769946.84	2.10E-05	4.19E-05
762	480394.65	3769964.52	2.04E-05	4.08E-05
763	480387.5	3769982.19	1.98E-05	3.97E-05
764	480380.35	3769999.87	1.93E-05	3.85E-05
765	480373.2	3770017.54	1.87E-05	3.75E-05
766	480366.05	3770035.22	1.82E-05	3.64E-05
767	480358.9	3770052.9	1.77E-05	3.54E-05
768	480351.75	3770070.57	1.72E-05	3.44E-05
769	480344.6	3770088.25	1.67E-05	3.35E-05
770	480337.45	3770105.92	1.63E-05	3.26E-05
771	480330.3	3770123.6	1.58E-05	3.17E-05
772	480323.15	3770141.28	1.54E-05	3.09E-05
773	480316	3770158.95	1.50E-05	3.01E-05
774	480308.85	3770176.63	1.47E-05	2.93E-05
775	480301.7	3770194.3	1.43E-05	2.86E-05
776	480294.55	3770211.98	1.40E-05	2.79E-05

777	480287.4	3770229.66	1.37E-05	2.73E-05
778	480280.25	3770247.33	1.33E-05	2.67E-05
779	480273.09	3770265.01	1.30E-05	2.61E-05
780	480265.94	3770282.68	1.28E-05	2.55E-05
781	480258.79	3770300.36	1.25E-05	2.50E-05
782	480251.64	3770318.04	1.22E-05	2.45E-05
783	480244.49	3770335.71	1.20E-05	2.40E-05
784	480237.34	3770353.39	1.18E-05	2.36E-05
785	480230.19	3770371.06	1.16E-05	2.32E-05
786	480223.04	3770388.74	1.14E-05	2.28E-05
787	480215.89	3770406.42	1.12E-05	2.24E-05
788	480208.74	3770424.09	1.10E-05	2.20E-05
789	480201.59	3770441.77	1.08E-05	2.17E-05
790	480177.02	3770467.18	1.07E-05	2.13E-05
791	480159.59	3770474.91	1.06E-05	2.13E-05
792	480142.16	3770482.64	1.06E-05	2.13E-05
793	480124.73	3770490.38	1.06E-05	2.13E-05
794	480107.3	3770498.11	1.06E-05	2.12E-05
795	480089.87	3770505.85	1.06E-05	2.12E-05
796	480072.44	3770513.58	1.06E-05	2.12E-05
797	480055.02	3770521.31	1.06E-05	2.12E-05
798	480037.59	3770529.05	1.06E-05	2.12E-05
799	480020.16	3770536.78	1.06E-05	2.12E-05
800	480002.73	3770544.51	1.06E-05	2.12E-05
801	479985.3	3770552.25	1.06E-05	2.12E-05
802	479967.87	3770559.98	1.06E-05	2.12E-05
803	479950.44	3770567.72	1.06E-05	2.12E-05
804	479933.02	3770575.45	1.06E-05	2.12E-05
805	479915.59	3770583.18	1.06E-05	2.12E-05
806	479898.16	3770590.92	1.06E-05	2.12E-05
807	479880.73	3770598.65	1.06E-05	2.12E-05
808	479863.3	3770606.38	1.06E-05	2.11E-05
809	479845.87	3770614.12	1.06E-05	2.11E-05
810	479828.44	3770621.85	1.06E-05	2.11E-05
811	479811.02	3770629.58	1.06E-05	2.11E-05
812	479793.59	3770637.32	1.06E-05	2.11E-05
813	479776.16	3770645.05	1.05E-05	2.11E-05
814	479758.73	3770652.79	1.05E-05	2.11E-05
815	479741.3	3770660.52	1.05E-05	2.11E-05
816	479723.87	3770668.25	1.05E-05	2.11E-05
817	479706.44	3770675.99	1.05E-05	2.11E-05
818	479689.02	3770683.72	1.05E-05	2.10E-05
819	479671.59	3770691.45	1.05E-05	2.10E-05
820	479654.16	3770699.19	1.05E-05	2.10E-05
821	479636.73	3770706.92	1.05E-05	2.10E-05
822	479619.3	3770714.66	1.05E-05	2.10E-05
823	479601.87	3770722.39	1.05E-05	2.10E-05
824	479584.44	3770730.12	1.05E-05	2.10E-05
825	479567.02	3770737.86	1.05E-05	2.10E-05
826	479549.59	3770745.59	1.05E-05	2.10E-05
827	479532.16	3770753.32	1.05E-05	2.09E-05
828	479514.73	3770761.06	1.05E-05	2.09E-05

829	479497.3	3770768.79	1.05E-05	2.09E-05
830	479479.87	3770776.52	1.05E-05	2.09E-05
831	479462.44	3770784.26	1.05E-05	2.09E-05
832	479445.02	3770791.99	1.04E-05	2.09E-05
833	479427.59	3770799.73	1.04E-05	2.08E-05
834	479410.16	3770807.46	1.04E-05	2.08E-05
835	479392.73	3770815.19	1.04E-05	2.08E-05
836	479375.3	3770822.93	1.04E-05	2.07E-05
837	479357.87	3770830.66	1.04E-05	2.07E-05
838	479340.44	3770838.39	1.03E-05	2.07E-05
839	479323.02	3770846.13	1.03E-05	2.06E-05
840	479305.59	3770853.86	1.03E-05	2.06E-05
841	479288.16	3770861.6	1.03E-05	2.06E-05
842	479270.73	3770869.33	1.03E-05	2.05E-05
843	479253.3	3770877.06	1.03E-05	2.05E-05
844	479235.87	3770884.8	1.02E-05	2.05E-05
845	479218.44	3770892.53	1.02E-05	2.04E-05
846	479201.02	3770900.26	1.02E-05	2.04E-05
847	479183.59	3770908	1.02E-05	2.04E-05
848	480616.3	3769416.56	4.01E-05	8.02E-05
849	480616.3	3769397.46	4.10E-05	8.20E-05
850	480616.3	3769378.36	4.19E-05	8.38E-05
851	480616.3	3769359.27	4.27E-05	8.55E-05
852	480616.3	3769340.17	4.36E-05	8.72E-05
853	480616.3	3769321.07	4.44E-05	8.88E-05
854	480616.3	3769301.97	4.52E-05	9.03E-05
855	480616.3	3769282.87	4.59E-05	9.17E-05
856	480616.3	3769263.78	4.66E-05	9.31E-05
857	480616.3	3769244.68	4.72E-05	9.44E-05
858	480616.3	3769225.58	4.78E-05	9.56E-05
859	479077.49	3769215.89	6.17E-04	1.23E-03
860	479072.74	3769234.91	8.03E-04	1.61E-03
861	479084.3	3769193.04	4.70E-04	9.39E-04
862	479155.23	3769201.76	8.08E-04	1.62E-03
863	479058.09	3769211.04	4.95E-04	9.90E-04
864	479053.34	3769230.06	6.23E-04	1.25E-03
865	479038.68	3769206.2	4.07E-04	8.13E-04
866	479033.93	3769225.22	5.00E-04	1.00E-03
867	479081.69	3769158.48	3.05E-04	6.10E-04
868	479191.22	3769197.22	8.10E-04	1.62E-03
869	479019.28	3769201.35	3.38E-04	6.76E-04
870	479014.53	3769220.37	4.08E-04	8.17E-04
871	479026.35	3769160.15	2.32E-04	4.65E-04
872	479041.64	3769149.65	2.27E-04	4.55E-04
873	479056.93	3769139.14	2.22E-04	4.43E-04
874	479072.22	3769128.64	2.16E-04	4.32E-04
875	479087.51	3769118.14	2.10E-04	4.19E-04
876	479102.81	3769107.63	2.02E-04	4.05E-04
877	479170.26	3769128.31	3.23E-04	6.46E-04
878	479182.55	3769142.21	3.92E-04	7.84E-04
879	479194.84	3769156.1	4.76E-04	9.52E-04
880	479231.72	3769197.79	7.91E-04	1.58E-03

881	479244.01	3769211.68	9.05E-04	1.81E-03
882	478980.47	3769191.66	2.45E-04	4.90E-04
883	478975.72	3769210.68	2.90E-04	5.79E-04
884	478987.03	3769150.8	1.77E-04	3.54E-04
885	479002.16	3769140.42	1.75E-04	3.49E-04
886	479017.28	3769130.03	1.71E-04	3.43E-04
887	479032.41	3769119.64	1.68E-04	3.36E-04
888	479047.53	3769109.25	1.65E-04	3.29E-04
889	479062.65	3769098.86	1.61E-04	3.22E-04
890	479077.78	3769088.48	1.57E-04	3.14E-04
891	479092.9	3769078.09	1.53E-04	3.05E-04
892	479108.02	3769067.7	1.48E-04	2.96E-04
893	479174.74	3769088.15	2.20E-04	4.40E-04
894	479186.9	3769101.9	2.59E-04	5.19E-04
895	479199.05	3769115.64	3.07E-04	6.14E-04
896	479211.21	3769129.38	3.62E-04	7.24E-04
897	479223.36	3769143.12	4.25E-04	8.49E-04
898	479235.52	3769156.87	4.96E-04	9.92E-04
899	479271.99	3769198.09	7.27E-04	1.45E-03
900	479284.14	3769211.84	7.93E-04	1.59E-03
901	478936.91	3769200.99	2.19E-04	4.37E-04
902	478934.9	3769150.27	1.42E-04	2.84E-04
903	478950.92	3769139.26	1.40E-04	2.79E-04
904	478966.93	3769128.26	1.37E-04	2.75E-04
905	478982.95	3769117.26	1.35E-04	2.71E-04
906	478998.97	3769106.25	1.33E-04	2.67E-04
907	479014.99	3769095.25	1.31E-04	2.62E-04
908	479031.01	3769084.25	1.28E-04	2.56E-04
909	479047.03	3769073.24	1.26E-04	2.51E-04
910	479063.05	3769062.24	1.23E-04	2.46E-04
911	479079.07	3769051.24	1.20E-04	2.40E-04
912	479095.09	3769040.24	1.17E-04	2.34E-04
913	479111.11	3769029.23	1.14E-04	2.28E-04
914	479181.78	3769050.9	1.64E-04	3.28E-04
915	479194.66	3769065.45	1.91E-04	3.82E-04
916	479207.54	3769080.01	2.24E-04	4.47E-04
917	479220.41	3769094.57	2.62E-04	5.25E-04
918	479233.29	3769109.12	3.06E-04	6.12E-04
919	479246.16	3769123.68	3.55E-04	7.11E-04
920	479259.04	3769138.24	4.12E-04	8.24E-04
921	479271.92	3769152.8	4.70E-04	9.39E-04
922	479310.55	3769196.47	6.39E-04	1.28E-03
923	479323.42	3769211.02	6.84E-04	1.37E-03
924	478898.11	3769191.29	1.72E-04	3.45E-04
925	478879.82	3769151.75	1.19E-04	2.38E-04
926	478895.6	3769140.91	1.16E-04	2.32E-04
927	478911.38	3769130.07	1.14E-04	2.27E-04
928	478927.16	3769119.24	1.12E-04	2.24E-04
929	478942.93	3769108.4	1.10E-04	2.21E-04
930	478958.71	3769097.56	1.09E-04	2.18E-04
931	478974.49	3769086.73	1.07E-04	2.15E-04
932	478990.26	3769075.89	1.06E-04	2.12E-04

933	479006.04	3769065.05	1.04E-04	2.08E-04
934	479021.82	3769054.22	1.02E-04	2.04E-04
935	479037.6	3769043.38	1.00E-04	2.01E-04
936	479053.37	3769032.54	9.84E-05	1.97E-04
937	479069.15	3769021.71	9.64E-05	1.93E-04
938	479084.93	3769010.87	9.41E-05	1.88E-04
939	479100.7	3769000.03	9.22E-05	1.84E-04
940	479198.76	3769024.87	1.41E-04	2.82E-04
941	479211.44	3769039.21	1.62E-04	3.23E-04
942	479224.12	3769053.54	1.86E-04	3.72E-04
943	479236.81	3769067.88	2.14E-04	4.28E-04
944	479249.49	3769082.22	2.45E-04	4.91E-04
945	479262.17	3769096.55	2.81E-04	5.61E-04
946	479274.85	3769110.89	3.20E-04	6.40E-04
947	479287.53	3769125.22	3.61E-04	7.21E-04
948	479300.21	3769139.56	4.05E-04	8.10E-04
949	479312.89	3769153.9	4.50E-04	9.00E-04
950	479350.94	3769196.91	5.65E-04	1.13E-03
951	479363.62	3769211.24	5.88E-04	1.18E-03
952	478840.84	3769142.17	9.96E-05	1.99E-04
953	478856.45	3769131.46	9.69E-05	1.94E-04
954	478872.05	3769120.74	9.48E-05	1.90E-04
955	478887.65	3769110.02	9.31E-05	1.86E-04
956	478903.26	3769099.3	9.17E-05	1.83E-04
957	478918.86	3769088.59	9.06E-05	1.81E-04
958	478934.47	3769077.87	8.95E-05	1.79E-04
959	478950.07	3769067.15	8.85E-05	1.77E-04
960	478965.67	3769056.43	8.74E-05	1.75E-04
961	478981.28	3769045.72	8.62E-05	1.72E-04
962	478996.88	3769035	8.48E-05	1.70E-04
963	479012.48	3769024.28	8.35E-05	1.67E-04
964	479028.09	3769013.56	8.21E-05	1.64E-04
965	479043.69	3769002.85	8.08E-05	1.62E-04
966	479059.3	3768992.13	7.93E-05	1.59E-04
967	479074.9	3768981.41	7.78E-05	1.56E-04
968	479090.5	3768970.69	7.64E-05	1.53E-04
969	479106.11	3768959.98	7.51E-05	1.50E-04
970	479137.31	3768938.54	7.25E-05	1.45E-04
971	479165.46	3768942	7.87E-05	1.57E-04
972	479203.09	3768984.54	1.09E-04	2.18E-04
973	479215.63	3768998.72	1.23E-04	2.45E-04
974	479228.17	3769012.9	1.39E-04	2.77E-04
975	479240.71	3769027.08	1.57E-04	3.14E-04
976	479253.25	3769041.25	1.77E-04	3.54E-04
977	479265.8	3769055.43	2.01E-04	4.02E-04
978	479278.34	3769069.61	2.28E-04	4.56E-04
979	479290.88	3769083.79	2.58E-04	5.15E-04
980	479303.42	3769097.97	2.88E-04	5.77E-04
981	479315.96	3769112.15	3.21E-04	6.41E-04
982	479328.51	3769126.33	3.55E-04	7.09E-04
983	479341.05	3769140.51	3.89E-04	7.77E-04
984	479353.59	3769154.69	4.21E-04	8.41E-04

985	479391.22	3769197.22	4.91E-04	9.83E-04
986	479403.76	3769211.4	5.06E-04	1.01E-03
987	478825.24	3769152.89	1.03E-04	2.06E-04
988	478763.59	3769122.54	7.45E-05	1.49E-04
989	478779.55	3769111.58	7.18E-05	1.44E-04
990	478795.51	3769100.61	6.98E-05	1.40E-04
991	478811.48	3769089.65	6.82E-05	1.36E-04
992	478827.44	3769078.68	6.69E-05	1.34E-04
993	478843.41	3769067.72	6.60E-05	1.32E-04
994	478859.37	3769056.75	6.52E-05	1.30E-04
995	478875.33	3769045.79	6.45E-05	1.29E-04
996	478891.3	3769034.82	6.40E-05	1.28E-04
997	478907.26	3769023.86	6.34E-05	1.27E-04
998	478923.23	3769012.89	6.27E-05	1.25E-04
999	478939.19	3769001.93	6.20E-05	1.24E-04
1000	478955.15	3768990.96	6.13E-05	1.23E-04
1001	478971.12	3768980	6.05E-05	1.21E-04
1002	478987.08	3768969.03	5.96E-05	1.19E-04
1003	479003.04	3768958.07	5.88E-05	1.18E-04
1004	479019.01	3768947.11	5.81E-05	1.16E-04
1005	479034.97	3768936.14	5.73E-05	1.15E-04
1006	479050.94	3768925.18	5.64E-05	1.13E-04
1007	479066.9	3768914.21	5.56E-05	1.11E-04
1008	479082.86	3768903.25	5.49E-05	1.10E-04
1009	479098.83	3768892.28	5.42E-05	1.08E-04
1010	479146.72	3768859.39	5.22E-05	1.04E-04
1011	479175.51	3768862.93	5.57E-05	1.11E-04
1012	479226.84	3768920.95	8.02E-05	1.60E-04
1013	479239.67	3768935.46	8.85E-05	1.77E-04
1014	479252.5	3768949.96	9.77E-05	1.95E-04
1015	479265.33	3768964.47	1.08E-04	2.17E-04
1016	479278.17	3768978.98	1.21E-04	2.42E-04
1017	479291	3768993.48	1.35E-04	2.69E-04
1018	479303.83	3769007.99	1.50E-04	3.00E-04
1019	479316.66	3769022.49	1.66E-04	3.33E-04
1020	479329.49	3769037	1.85E-04	3.70E-04
1021	479342.32	3769051.51	2.05E-04	4.10E-04
1022	479355.15	3769066.01	2.26E-04	4.52E-04
1023	479367.99	3769080.52	2.47E-04	4.94E-04
1024	479380.82	3769095.03	2.68E-04	5.37E-04
1025	479393.65	3769109.53	2.90E-04	5.80E-04
1026	479406.48	3769124.04	3.11E-04	6.22E-04
1027	479419.31	3769138.54	3.29E-04	6.59E-04
1028	479432.14	3769153.05	3.47E-04	6.93E-04
1029	479470.64	3769196.57	3.75E-04	7.51E-04
1030	479483.47	3769211.07	3.79E-04	7.57E-04
1031	478747.62	3769133.51	7.79E-05	1.56E-04
1032	478742.87	3769152.53	8.82E-05	1.76E-04
1033	478685.71	3769103.34	6.01E-05	1.20E-04
1034	478701.41	3769092.56	5.75E-05	1.15E-04
1035	478717.11	3769081.77	5.53E-05	1.11E-04
1036	478732.81	3769070.99	5.35E-05	1.07E-04

1037	478748.51	3769060.2	5.21E-05	1.04E-04
1038	478764.21	3769049.42	5.11E-05	1.02E-04
1039	478779.92	3769038.63	5.03E-05	1.01E-04
1040	478795.62	3769027.85	4.97E-05	9.93E-05
1041	478811.32	3769017.06	4.92E-05	9.84E-05
1042	478827.02	3769006.28	4.88E-05	9.77E-05
1043	478842.72	3768995.49	4.85E-05	9.71E-05
1044	478858.42	3768984.71	4.82E-05	9.64E-05
1045	478874.12	3768973.93	4.79E-05	9.57E-05
1046	478889.82	3768963.14	4.75E-05	9.50E-05
1047	478905.53	3768952.36	4.71E-05	9.41E-05
1048	478921.23	3768941.57	4.66E-05	9.32E-05
1049	478936.93	3768930.79	4.61E-05	9.23E-05
1050	478952.63	3768920	4.56E-05	9.12E-05
1051	478968.33	3768909.22	4.51E-05	9.01E-05
1052	478984.03	3768898.43	4.46E-05	8.91E-05
1053	478999.73	3768887.65	4.41E-05	8.82E-05
1054	479015.44	3768876.86	4.36E-05	8.72E-05
1055	479031.14	3768866.08	4.31E-05	8.62E-05
1056	479046.84	3768855.3	4.27E-05	8.53E-05
1057	479062.54	3768844.51	4.23E-05	8.46E-05
1058	479078.24	3768833.73	4.19E-05	8.38E-05
1059	479093.94	3768822.94	4.16E-05	8.31E-05
1060	479109.64	3768812.16	4.11E-05	8.23E-05
1061	479141.05	3768790.59	4.03E-05	8.06E-05
1062	479156.75	3768779.8	3.99E-05	7.98E-05
1063	479185.07	3768783.29	4.22E-05	8.43E-05
1064	479197.69	3768797.55	4.51E-05	9.02E-05
1065	479248.17	3768854.62	6.08E-05	1.22E-04
1066	479260.79	3768868.89	6.60E-05	1.32E-04
1067	479273.41	3768883.16	7.18E-05	1.44E-04
1068	479286.03	3768897.43	7.81E-05	1.56E-04
1069	479298.65	3768911.69	8.53E-05	1.71E-04
1070	479311.27	3768925.96	9.34E-05	1.87E-04
1071	479323.89	3768940.23	1.02E-04	2.05E-04
1072	479336.51	3768954.5	1.12E-04	2.25E-04
1073	479349.13	3768968.76	1.23E-04	2.46E-04
1074	479361.75	3768983.03	1.34E-04	2.69E-04
1075	479374.37	3768997.3	1.47E-04	2.93E-04
1076	479386.99	3769011.57	1.60E-04	3.20E-04
1077	479399.61	3769025.83	1.74E-04	3.48E-04
1078	479412.24	3769040.1	1.88E-04	3.76E-04
1079	479424.86	3769054.37	2.02E-04	4.04E-04
1080	479437.48	3769068.64	2.16E-04	4.32E-04
1081	479450.1	3769082.9	2.30E-04	4.60E-04
1082	479462.72	3769097.17	2.44E-04	4.87E-04
1083	479475.34	3769111.44	2.56E-04	5.12E-04
1084	479487.96	3769125.71	2.67E-04	5.35E-04
1085	479500.58	3769139.97	2.77E-04	5.53E-04
1086	479538.44	3769182.78	2.92E-04	5.85E-04
1087	479551.06	3769197.04	2.93E-04	5.85E-04
1088	479563.68	3769211.31	2.91E-04	5.82E-04

1089	478670.01	3769114.12	6.31E-05	1.26E-04
1090	478665.26	3769133.14	7.08E-05	1.42E-04
1091	478608.33	3769083.79	5.07E-05	1.01E-04
1092	478624.27	3769072.84	4.83E-05	9.66E-05
1093	478640.21	3769061.89	4.62E-05	9.24E-05
1094	478656.16	3769050.94	4.44E-05	8.88E-05
1095	478672.1	3769039.99	4.29E-05	8.57E-05
1096	478688.04	3769029.04	4.16E-05	8.32E-05
1097	478703.98	3769018.1	4.06E-05	8.13E-05
1098	478719.92	3769007.15	3.99E-05	7.98E-05
1099	478735.86	3768996.2	3.94E-05	7.87E-05
1100	478751.8	3768985.25	3.90E-05	7.79E-05
1101	478767.74	3768974.3	3.87E-05	7.74E-05
1102	478783.68	3768963.35	3.85E-05	7.70E-05
1103	478799.63	3768952.4	3.83E-05	7.66E-05
1104	478815.57	3768941.45	3.82E-05	7.63E-05
1105	478831.51	3768930.5	3.80E-05	7.60E-05
1106	478847.45	3768919.55	3.78E-05	7.55E-05
1107	478863.39	3768908.6	3.75E-05	7.50E-05
1108	478879.33	3768897.65	3.72E-05	7.44E-05
1109	478895.27	3768886.7	3.69E-05	7.38E-05
1110	478911.21	3768875.76	3.65E-05	7.31E-05
1111	478927.15	3768864.81	3.61E-05	7.23E-05
1112	478943.1	3768853.86	3.58E-05	7.16E-05
1113	478959.04	3768842.91	3.54E-05	7.09E-05
1114	478974.98	3768831.96	3.51E-05	7.02E-05
1115	478990.92	3768821.01	3.48E-05	6.96E-05
1116	479006.86	3768810.06	3.45E-05	6.89E-05
1117	479022.8	3768799.11	3.42E-05	6.84E-05
1118	479038.74	3768788.16	3.39E-05	6.79E-05
1119	479054.68	3768777.21	3.37E-05	6.75E-05
1120	479070.62	3768766.26	3.34E-05	6.69E-05
1121	479086.57	3768755.31	3.32E-05	6.64E-05
1122	479102.51	3768744.36	3.30E-05	6.60E-05
1123	479150.33	3768711.52	3.23E-05	6.46E-05
1124	479166.27	3768700.57	3.21E-05	6.43E-05
1125	479195.03	3768704.1	3.38E-05	6.76E-05
1126	479207.84	3768718.59	3.58E-05	7.16E-05
1127	479220.65	3768733.07	3.80E-05	7.60E-05
1128	479259.09	3768776.53	4.60E-05	9.19E-05
1129	479271.9	3768791.02	4.92E-05	9.85E-05
1130	479284.72	3768805.5	5.28E-05	1.06E-04
1131	479297.53	3768819.99	5.68E-05	1.14E-04
1132	479310.34	3768834.47	6.12E-05	1.22E-04
1133	479323.16	3768848.96	6.59E-05	1.32E-04
1134	479335.97	3768863.44	7.13E-05	1.43E-04
1135	479348.78	3768877.93	7.72E-05	1.54E-04
1136	479361.6	3768892.41	8.37E-05	1.67E-04
1137	479374.41	3768906.9	9.08E-05	1.82E-04
1138	479387.22	3768921.39	9.83E-05	1.97E-04
1139	479400.04	3768935.87	1.07E-04	2.13E-04
1140	479412.85	3768950.36	1.16E-04	2.31E-04

1141	479425.66	3768964.84	1.25E-04	2.49E-04
1142	479438.48	3768979.33	1.34E-04	2.68E-04
1143	479451.29	3768993.81	1.44E-04	2.88E-04
1144	479464.1	3769008.3	1.55E-04	3.09E-04
1145	479476.92	3769022.78	1.65E-04	3.30E-04
1146	479489.73	3769037.27	1.76E-04	3.51E-04
1147	479502.54	3769051.75	1.86E-04	3.72E-04
1148	479515.36	3769066.24	1.95E-04	3.90E-04
1149	479528.17	3769080.73	2.04E-04	4.07E-04
1150	479540.98	3769095.21	2.12E-04	4.24E-04
1151	479553.79	3769109.7	2.19E-04	4.38E-04
1152	479566.61	3769124.18	2.25E-04	4.50E-04
1153	479579.42	3769138.67	2.30E-04	4.60E-04
1154	479592.23	3769153.15	2.33E-04	4.66E-04
1155	479617.86	3769182.12	2.35E-04	4.70E-04
1156	479630.67	3769196.61	2.33E-04	4.66E-04
1157	479643.49	3769211.09	2.30E-04	4.60E-04
1158	478592.39	3769094.74	5.34E-05	1.07E-04
1159	478587.64	3769113.76	5.94E-05	1.19E-04
1160	478530.9	3769064.28	4.41E-05	8.82E-05
1161	478547.02	3769053.21	4.20E-05	8.41E-05
1162	478563.15	3769042.13	4.01E-05	8.03E-05
1163	478579.27	3769031.06	3.84E-05	7.68E-05
1164	478595.39	3769019.98	3.69E-05	7.37E-05
1165	478611.52	3769008.91	3.55E-05	7.11E-05
1166	478627.64	3768997.83	3.44E-05	6.89E-05
1167	478643.77	3768986.76	3.35E-05	6.70E-05
1168	478659.89	3768975.68	3.28E-05	6.56E-05
1169	478676.01	3768964.61	3.23E-05	6.45E-05
1170	478692.14	3768953.53	3.19E-05	6.37E-05
1171	478708.26	3768942.46	3.16E-05	6.32E-05
1172	478724.38	3768931.38	3.14E-05	6.29E-05
1173	478740.51	3768920.31	3.13E-05	6.27E-05
1174	478756.63	3768909.24	3.13E-05	6.25E-05
1175	478772.76	3768898.16	3.12E-05	6.24E-05
1176	478788.88	3768887.09	3.11E-05	6.22E-05
1177	478805	3768876.01	3.10E-05	6.20E-05
1178	478821.13	3768864.94	3.09E-05	6.17E-05
1179	478837.25	3768853.86	3.07E-05	6.14E-05
1180	478853.38	3768842.79	3.05E-05	6.09E-05
1181	478869.5	3768831.71	3.02E-05	6.04E-05
1182	478885.62	3768820.64	3.00E-05	5.99E-05
1183	478901.75	3768809.56	2.97E-05	5.93E-05
1184	478917.87	3768798.49	2.94E-05	5.88E-05
1185	478934	3768787.41	2.92E-05	5.83E-05
1186	478950.12	3768776.34	2.89E-05	5.78E-05
1187	478966.24	3768765.26	2.86E-05	5.72E-05
1188	478982.37	3768754.19	2.84E-05	5.69E-05
1189	478998.49	3768743.11	2.82E-05	5.65E-05
1190	479014.61	3768732.04	2.81E-05	5.62E-05
1191	479030.74	3768720.96	2.79E-05	5.58E-05
1192	479046.86	3768709.89	2.77E-05	5.55E-05

1193	479062.99	3768698.81	2.76E-05	5.52E-05
1194	479079.11	3768687.74	2.75E-05	5.50E-05
1195	479095.23	3768676.66	2.74E-05	5.47E-05
1196	479111.36	3768665.59	2.72E-05	5.45E-05
1197	479143.61	3768643.44	2.70E-05	5.41E-05
1198	479159.73	3768632.37	2.69E-05	5.39E-05
1199	479175.85	3768621.29	2.68E-05	5.37E-05
1200	479204.94	3768624.87	2.80E-05	5.61E-05
1201	479217.9	3768639.52	2.95E-05	5.90E-05
1202	479230.86	3768654.17	3.11E-05	6.21E-05
1203	479243.82	3768668.82	3.28E-05	6.55E-05
1204	479282.7	3768712.78	3.89E-05	7.77E-05
1205	479295.66	3768727.43	4.13E-05	8.26E-05
1206	479308.62	3768742.08	4.39E-05	8.77E-05
1207	479321.58	3768756.73	4.68E-05	9.35E-05
1208	479334.54	3768771.38	4.99E-05	9.97E-05
1209	479347.5	3768786.03	5.32E-05	1.06E-04
1210	479360.46	3768800.69	5.69E-05	1.14E-04
1211	479373.42	3768815.34	6.10E-05	1.22E-04
1212	479386.38	3768829.99	6.54E-05	1.31E-04
1213	479399.34	3768844.64	7.03E-05	1.41E-04
1214	479412.3	3768859.29	7.55E-05	1.51E-04
1215	479425.26	3768873.94	8.12E-05	1.62E-04
1216	479438.22	3768888.59	8.72E-05	1.74E-04
1217	479451.18	3768903.25	9.37E-05	1.87E-04
1218	479464.14	3768917.9	1.01E-04	2.01E-04
1219	479477.1	3768932.55	1.08E-04	2.15E-04
1220	479490.06	3768947.2	1.15E-04	2.30E-04
1221	479503.02	3768961.85	1.23E-04	2.46E-04
1222	479515.98	3768976.5	1.30E-04	2.61E-04
1223	479528.94	3768991.16	1.38E-04	2.76E-04
1224	479541.9	3769005.81	1.46E-04	2.91E-04
1225	479554.86	3769020.46	1.53E-04	3.07E-04
1226	479567.82	3769035.11	1.61E-04	3.22E-04
1227	479580.78	3769049.76	1.68E-04	3.35E-04
1228	479593.74	3769064.41	1.74E-04	3.48E-04
1229	479606.7	3769079.06	1.79E-04	3.58E-04
1230	479619.66	3769093.72	1.84E-04	3.67E-04
1231	479632.62	3769108.37	1.88E-04	3.75E-04
1232	479645.58	3769123.02	1.90E-04	3.81E-04
1233	479658.54	3769137.67	1.92E-04	3.85E-04
1234	479671.5	3769152.32	1.93E-04	3.86E-04
1235	479697.42	3769181.63	1.92E-04	3.84E-04
1236	479710.38	3769196.28	1.90E-04	3.79E-04
1237	479723.34	3769210.93	1.86E-04	3.73E-04
1238	478514.77	3769075.36	4.64E-05	9.28E-05
1239	478510.02	3769094.38	5.11E-05	1.02E-04
1240	478453.09	3769045.03	3.92E-05	7.84E-05
1241	478469.02	3769034.09	3.75E-05	7.49E-05
1242	478484.94	3769023.15	3.58E-05	7.16E-05
1243	478500.87	3769012.21	3.43E-05	6.86E-05
1244	478516.8	3769001.27	3.29E-05	6.58E-05

1245	478532.73	3768990.33	3.16E-05	6.32E-05
1246	478548.66	3768979.39	3.04E-05	6.09E-05
1247	478564.59	3768968.45	2.94E-05	5.89E-05
1248	478580.52	3768957.51	2.86E-05	5.72E-05
1249	478596.45	3768946.56	2.79E-05	5.58E-05
1250	478612.38	3768935.62	2.73E-05	5.47E-05
1251	478628.3	3768924.68	2.69E-05	5.38E-05
1252	478644.23	3768913.74	2.66E-05	5.32E-05
1253	478660.16	3768902.8	2.64E-05	5.28E-05
1254	478676.09	3768891.86	2.63E-05	5.25E-05
1255	478692.02	3768880.92	2.62E-05	5.24E-05
1256	478707.95	3768869.98	2.62E-05	5.23E-05
1257	478723.88	3768859.04	2.61E-05	5.23E-05
1258	478739.81	3768848.1	2.61E-05	5.22E-05
1259	478755.73	3768837.16	2.61E-05	5.22E-05
1260	478771.66	3768826.22	2.60E-05	5.21E-05
1261	478787.59	3768815.28	2.60E-05	5.19E-05
1262	478803.52	3768804.33	2.58E-05	5.17E-05
1263	478819.45	3768793.39	2.57E-05	5.14E-05
1264	478835.38	3768782.45	2.55E-05	5.11E-05
1265	478851.31	3768771.51	2.53E-05	5.07E-05
1266	478867.24	3768760.57	2.51E-05	5.03E-05
1267	478883.17	3768749.63	2.49E-05	4.99E-05
1268	478899.09	3768738.69	2.47E-05	4.95E-05
1269	478915.02	3768727.75	2.45E-05	4.91E-05
1270	478930.95	3768716.81	2.43E-05	4.87E-05
1271	478946.88	3768705.87	2.41E-05	4.83E-05
1272	478962.81	3768694.93	2.40E-05	4.80E-05
1273	478978.74	3768683.99	2.39E-05	4.78E-05
1274	478994.67	3768673.04	2.38E-05	4.75E-05
1275	479010.6	3768662.1	2.36E-05	4.72E-05
1276	479026.53	3768651.16	2.35E-05	4.71E-05
1277	479042.45	3768640.22	2.35E-05	4.69E-05
1278	479058.38	3768629.28	2.34E-05	4.67E-05
1279	479074.31	3768618.34	2.33E-05	4.66E-05
1280	479090.24	3768607.4	2.33E-05	4.65E-05
1281	479106.17	3768596.46	2.32E-05	4.64E-05
1282	479138.03	3768574.58	2.31E-05	4.62E-05
1283	479153.96	3768563.64	2.30E-05	4.61E-05
1284	479169.88	3768552.7	2.30E-05	4.60E-05
1285	479185.81	3768541.75	2.29E-05	4.59E-05
1286	479214.55	3768545.29	2.40E-05	4.79E-05
1287	479227.35	3768559.76	2.50E-05	5.00E-05
1288	479240.15	3768574.24	2.62E-05	5.25E-05
1289	479252.96	3768588.71	2.75E-05	5.49E-05
1290	479265.76	3768603.19	2.88E-05	5.76E-05
1291	479316.97	3768661.08	3.51E-05	7.02E-05
1292	479329.78	3768675.56	3.70E-05	7.40E-05
1293	479342.58	3768690.03	3.91E-05	7.81E-05
1294	479355.38	3768704.51	4.13E-05	8.26E-05
1295	479368.19	3768718.98	4.37E-05	8.74E-05
1296	479380.99	3768733.45	4.64E-05	9.27E-05

1297	479393.79	3768747.93	4.92E-05	9.83E-05
1298	479406.59	3768762.4	5.22E-05	1.05E-04
1299	479419.4	3768776.88	5.55E-05	1.11E-04
1300	479432.2	3768791.35	5.90E-05	1.18E-04
1301	479445	3768805.83	6.27E-05	1.25E-04
1302	479457.81	3768820.3	6.67E-05	1.33E-04
1303	479470.61	3768834.77	7.11E-05	1.42E-04
1304	479483.41	3768849.25	7.57E-05	1.51E-04
1305	479496.22	3768863.72	8.06E-05	1.61E-04
1306	479509.02	3768878.2	8.58E-05	1.72E-04
1307	479521.82	3768892.67	9.12E-05	1.82E-04
1308	479534.63	3768907.15	9.68E-05	1.94E-04
1309	479547.43	3768921.62	1.03E-04	2.05E-04
1310	479560.23	3768936.09	1.09E-04	2.17E-04
1311	479573.04	3768950.57	1.15E-04	2.29E-04
1312	479585.84	3768965.04	1.21E-04	2.41E-04
1313	479598.64	3768979.52	1.26E-04	2.52E-04
1314	479611.45	3768993.99	1.32E-04	2.63E-04
1315	479624.25	3769008.47	1.37E-04	2.74E-04
1316	479637.05	3769022.94	1.42E-04	2.84E-04
1317	479649.86	3769037.41	1.47E-04	2.94E-04
1318	479662.66	3769051.89	1.51E-04	3.02E-04
1319	479675.46	3769066.36	1.55E-04	3.10E-04
1320	479688.27	3769080.84	1.58E-04	3.16E-04
1321	479701.07	3769095.31	1.60E-04	3.20E-04
1322	479713.87	3769109.79	1.62E-04	3.23E-04
1323	479726.68	3769124.26	1.63E-04	3.25E-04
1324	479739.48	3769138.73	1.63E-04	3.26E-04
1325	479790.69	3769196.63	1.57E-04	3.13E-04
1326	479803.5	3769211.11	1.54E-04	3.07E-04
1327	478437.16	3769055.97	4.10E-05	8.21E-05
1328	478432.41	3769074.99	4.48E-05	8.96E-05
1329	478297.85	3769006.27	3.19E-05	6.39E-05
1330	478313.77	3768995.33	3.07E-05	6.15E-05
1331	478329.69	3768984.4	2.96E-05	5.91E-05
1332	478345.61	3768973.46	2.84E-05	5.69E-05
1333	478361.53	3768962.53	2.74E-05	5.47E-05
1334	478377.45	3768951.59	2.63E-05	5.27E-05
1335	478393.37	3768940.66	2.53E-05	5.07E-05
1336	478409.29	3768929.72	2.44E-05	4.88E-05
1337	478425.22	3768918.79	2.35E-05	4.71E-05
1338	478441.14	3768907.85	2.27E-05	4.55E-05
1339	478457.06	3768896.92	2.20E-05	4.41E-05
1340	478472.98	3768885.98	2.14E-05	4.28E-05
1341	478488.9	3768875.04	2.09E-05	4.18E-05
1342	478504.82	3768864.11	2.04E-05	4.09E-05
1343	478520.74	3768853.17	2.01E-05	4.02E-05
1344	478536.66	3768842.24	1.98E-05	3.96E-05
1345	478552.58	3768831.3	1.96E-05	3.92E-05
1346	478568.51	3768820.37	1.95E-05	3.89E-05
1347	478584.43	3768809.43	1.94E-05	3.88E-05
1348	478600.35	3768798.5	1.94E-05	3.87E-05

1349	478616.27	3768787.56	1.94E-05	3.87E-05
1350	478632.19	3768776.62	1.94E-05	3.88E-05
1351	478648.11	3768765.69	1.94E-05	3.88E-05
1352	478664.03	3768754.75	1.94E-05	3.89E-05
1353	478679.95	3768743.82	1.95E-05	3.89E-05
1354	478695.88	3768732.88	1.95E-05	3.89E-05
1355	478711.8	3768721.95	1.95E-05	3.89E-05
1356	478727.72	3768711.01	1.94E-05	3.88E-05
1357	478743.64	3768700.08	1.94E-05	3.87E-05
1358	478759.56	3768689.14	1.93E-05	3.86E-05
1359	478775.48	3768678.2	1.92E-05	3.84E-05
1360	478791.4	3768667.27	1.91E-05	3.82E-05
1361	478807.32	3768656.33	1.90E-05	3.79E-05
1362	478823.24	3768645.4	1.88E-05	3.77E-05
1363	478839.17	3768634.46	1.87E-05	3.74E-05
1364	478855.09	3768623.53	1.86E-05	3.71E-05
1365	478871.01	3768612.59	1.84E-05	3.69E-05
1366	478886.93	3768601.66	1.83E-05	3.67E-05
1367	478902.85	3768590.72	1.82E-05	3.64E-05
1368	478918.77	3768579.79	1.81E-05	3.62E-05
1369	478934.69	3768568.85	1.80E-05	3.60E-05
1370	478950.61	3768557.91	1.79E-05	3.59E-05
1371	478966.53	3768546.98	1.79E-05	3.58E-05
1372	478982.46	3768536.04	1.78E-05	3.57E-05
1373	478998.38	3768525.11	1.78E-05	3.56E-05
1374	479014.3	3768514.17	1.78E-05	3.55E-05
1375	479030.22	3768503.24	1.78E-05	3.55E-05
1376	479046.14	3768492.3	1.78E-05	3.55E-05
1377	479062.06	3768481.37	1.78E-05	3.55E-05
1378	479077.98	3768470.43	1.77E-05	3.55E-05
1379	479093.9	3768459.49	1.77E-05	3.55E-05
1380	479109.82	3768448.56	1.78E-05	3.55E-05
1381	479157.59	3768415.75	1.78E-05	3.55E-05
1382	479173.51	3768404.82	1.78E-05	3.56E-05
1383	479189.43	3768393.88	1.78E-05	3.56E-05
1384	479205.35	3768382.95	1.78E-05	3.56E-05
1385	479234.07	3768386.48	1.85E-05	3.70E-05
1386	479246.87	3768400.95	1.92E-05	3.84E-05
1387	479259.66	3768415.41	1.99E-05	3.98E-05
1388	479272.46	3768429.88	2.07E-05	4.14E-05
1389	479285.26	3768444.35	2.15E-05	4.29E-05
1390	479298.05	3768458.81	2.23E-05	4.46E-05
1391	479310.85	3768473.28	2.32E-05	4.64E-05
1392	479323.65	3768487.75	2.41E-05	4.83E-05
1393	479336.45	3768502.22	2.51E-05	5.02E-05
1394	479349.24	3768516.68	2.61E-05	5.23E-05
1395	479387.63	3768560.09	2.96E-05	5.93E-05
1396	479400.43	3768574.55	3.10E-05	6.19E-05
1397	479413.23	3768589.02	3.24E-05	6.47E-05
1398	479426.03	3768603.49	3.39E-05	6.77E-05
1399	479438.82	3768617.95	3.55E-05	7.10E-05
1400	479451.62	3768632.42	3.72E-05	7.43E-05

1401	479464.42	3768646.89	3.89E-05	7.79E-05
1402	479477.21	3768661.36	4.09E-05	8.17E-05
1403	479490.01	3768675.82	4.29E-05	8.59E-05
1404	479502.81	3768690.29	4.51E-05	9.02E-05
1405	479515.6	3768704.76	4.74E-05	9.49E-05
1406	479528.4	3768719.23	4.99E-05	9.98E-05
1407	479541.2	3768733.69	5.25E-05	1.05E-04
1408	479554	3768748.16	5.53E-05	1.11E-04
1409	479566.79	3768762.63	5.82E-05	1.16E-04
1410	479579.59	3768777.09	6.12E-05	1.22E-04
1411	479592.39	3768791.56	6.44E-05	1.29E-04
1412	479605.18	3768806.03	6.77E-05	1.35E-04
1413	479617.98	3768820.5	7.12E-05	1.42E-04
1414	479630.78	3768834.96	7.48E-05	1.50E-04
1415	479643.58	3768849.43	7.85E-05	1.57E-04
1416	479656.37	3768863.9	8.23E-05	1.65E-04
1417	479669.17	3768878.37	8.61E-05	1.72E-04
1418	479681.97	3768892.83	8.99E-05	1.80E-04
1419	479694.76	3768907.3	9.35E-05	1.87E-04
1420	479707.56	3768921.77	9.71E-05	1.94E-04
1421	479720.36	3768936.23	1.00E-04	2.01E-04
1422	479733.16	3768950.7	1.04E-04	2.08E-04
1423	479745.95	3768965.17	1.07E-04	2.14E-04
1424	479758.75	3768979.64	1.10E-04	2.20E-04
1425	479771.55	3768994.1	1.13E-04	2.26E-04
1426	479784.34	3769008.57	1.15E-04	2.31E-04
1427	479797.14	3769023.04	1.18E-04	2.35E-04
1428	479809.94	3769037.51	1.19E-04	2.38E-04
1429	479822.73	3769051.97	1.21E-04	2.41E-04
1430	479835.53	3769066.44	1.22E-04	2.43E-04
1431	479848.33	3769080.91	1.22E-04	2.45E-04
1432	479861.13	3769095.37	1.22E-04	2.45E-04
1433	479873.92	3769109.84	1.22E-04	2.45E-04
1434	479886.72	3769124.31	1.22E-04	2.44E-04
1435	479899.52	3769138.78	1.21E-04	2.42E-04
1436	479937.91	3769182.18	1.16E-04	2.32E-04
1437	479950.71	3769196.65	1.14E-04	2.27E-04
1438	479963.5	3769211.11	1.11E-04	2.23E-04
1439	478281.93	3769017.21	3.32E-05	6.63E-05
1440	478277.18	3769036.23	3.56E-05	7.13E-05
1441	478142.84	3768967.35	2.67E-05	5.34E-05
1442	478158.99	3768956.26	2.59E-05	5.17E-05
1443	478175.13	3768945.17	2.50E-05	5.01E-05
1444	478191.28	3768934.08	2.42E-05	4.84E-05
1445	478207.43	3768922.99	2.34E-05	4.69E-05
1446	478223.57	3768911.9	2.26E-05	4.53E-05
1447	478239.72	3768900.81	2.19E-05	4.38E-05
1448	478255.87	3768889.72	2.11E-05	4.22E-05
1449	478272.01	3768878.63	2.04E-05	4.08E-05
1450	478288.16	3768867.54	1.97E-05	3.94E-05
1451	478304.3	3768856.45	1.90E-05	3.81E-05
1452	478320.45	3768845.35	1.84E-05	3.68E-05

1453	478336.6	3768834.26	1.78E-05	3.57E-05
1454	478352.74	3768823.17	1.73E-05	3.46E-05
1455	478368.89	3768812.08	1.69E-05	3.37E-05
1456	478385.04	3768800.99	1.65E-05	3.29E-05
1457	478401.18	3768789.9	1.61E-05	3.22E-05
1458	478417.33	3768778.81	1.58E-05	3.16E-05
1459	478433.48	3768767.72	1.56E-05	3.12E-05
1460	478449.62	3768756.63	1.54E-05	3.08E-05
1461	478465.77	3768745.54	1.53E-05	3.06E-05
1462	478481.92	3768734.45	1.52E-05	3.04E-05
1463	478498.06	3768723.36	1.52E-05	3.03E-05
1464	478514.21	3768712.27	1.51E-05	3.03E-05
1465	478530.36	3768701.18	1.52E-05	3.03E-05
1466	478546.5	3768690.09	1.52E-05	3.04E-05
1467	478562.65	3768679	1.52E-05	3.05E-05
1468	478578.8	3768667.91	1.53E-05	3.05E-05
1469	478594.94	3768656.82	1.53E-05	3.06E-05
1470	478611.09	3768645.73	1.53E-05	3.07E-05
1471	478627.23	3768634.64	1.54E-05	3.07E-05
1472	478643.38	3768623.55	1.54E-05	3.07E-05
1473	478659.53	3768612.46	1.54E-05	3.07E-05
1474	478675.67	3768601.37	1.53E-05	3.07E-05
1475	478691.82	3768590.28	1.53E-05	3.06E-05
1476	478707.97	3768579.19	1.53E-05	3.05E-05
1477	478724.11	3768568.1	1.52E-05	3.04E-05
1478	478740.26	3768557.01	1.51E-05	3.03E-05
1479	478756.41	3768545.92	1.50E-05	3.01E-05
1480	478772.55	3768534.83	1.50E-05	2.99E-05
1481	478788.7	3768523.74	1.49E-05	2.97E-05
1482	478804.85	3768512.65	1.48E-05	2.96E-05
1483	478820.99	3768501.56	1.47E-05	2.94E-05
1484	478837.14	3768490.46	1.46E-05	2.92E-05
1485	478853.29	3768479.37	1.45E-05	2.90E-05
1486	478869.43	3768468.28	1.44E-05	2.89E-05
1487	478885.58	3768457.19	1.44E-05	2.88E-05
1488	478901.73	3768446.1	1.43E-05	2.87E-05
1489	478917.87	3768435.01	1.43E-05	2.85E-05
1490	478934.02	3768423.92	1.42E-05	2.84E-05
1491	478950.16	3768412.83	1.42E-05	2.84E-05
1492	478966.31	3768401.74	1.42E-05	2.84E-05
1493	478982.46	3768390.65	1.42E-05	2.84E-05
1494	478998.6	3768379.56	1.42E-05	2.84E-05
1495	479014.75	3768368.47	1.42E-05	2.83E-05
1496	479030.9	3768357.38	1.42E-05	2.84E-05
1497	479047.04	3768346.29	1.42E-05	2.84E-05
1498	479063.19	3768335.2	1.41E-05	2.83E-05
1499	479079.34	3768324.11	1.42E-05	2.83E-05
1500	479095.48	3768313.02	1.42E-05	2.84E-05
1501	479111.63	3768301.93	1.42E-05	2.85E-05
1502	479160.07	3768268.66	1.43E-05	2.87E-05
1503	479176.22	3768257.57	1.44E-05	2.87E-05
1504	479192.36	3768246.48	1.44E-05	2.88E-05

1505	479208.51	3768235.39	1.45E-05	2.89E-05
1506	479224.66	3768224.3	1.45E-05	2.90E-05
1507	479253.78	3768227.88	1.50E-05	3.01E-05
1508	479266.76	3768242.55	1.55E-05	3.11E-05
1509	479279.74	3768257.22	1.61E-05	3.21E-05
1510	479292.71	3768271.9	1.66E-05	3.32E-05
1511	479305.69	3768286.57	1.71E-05	3.43E-05
1512	479318.67	3768301.24	1.77E-05	3.54E-05
1513	479331.65	3768315.91	1.83E-05	3.66E-05
1514	479344.63	3768330.58	1.89E-05	3.78E-05
1515	479357.61	3768345.26	1.96E-05	3.91E-05
1516	479370.58	3768359.93	2.02E-05	4.04E-05
1517	479383.56	3768374.6	2.09E-05	4.19E-05
1518	479396.54	3768389.27	2.16E-05	4.33E-05
1519	479409.52	3768403.94	2.24E-05	4.48E-05
1520	479422.5	3768418.62	2.32E-05	4.64E-05
1521	479487.39	3768491.98	2.79E-05	5.58E-05
1522	479500.37	3768506.65	2.90E-05	5.80E-05
1523	479513.34	3768521.32	3.02E-05	6.04E-05
1524	479526.32	3768535.99	3.14E-05	6.29E-05
1525	479539.3	3768550.66	3.28E-05	6.55E-05
1526	479552.28	3768565.34	3.41E-05	6.83E-05
1527	479565.26	3768580.01	3.55E-05	7.11E-05
1528	479578.24	3768594.68	3.71E-05	7.41E-05
1529	479591.21	3768609.35	3.87E-05	7.73E-05
1530	479604.19	3768624.02	4.04E-05	8.07E-05
1531	479617.17	3768638.7	4.21E-05	8.43E-05
1532	479630.15	3768653.37	4.40E-05	8.79E-05
1533	479643.13	3768668.04	4.58E-05	9.17E-05
1534	479656.11	3768682.71	4.79E-05	9.58E-05
1535	479669.08	3768697.39	5.00E-05	1.00E-04
1536	479682.06	3768712.06	5.22E-05	1.04E-04
1537	479695.04	3768726.73	5.46E-05	1.09E-04
1538	479708.02	3768741.4	5.70E-05	1.14E-04
1539	479721	3768756.07	5.94E-05	1.19E-04
1540	479733.97	3768770.75	6.20E-05	1.24E-04
1541	479746.95	3768785.42	6.46E-05	1.29E-04
1542	479759.93	3768800.09	6.72E-05	1.34E-04
1543	479772.91	3768814.76	6.98E-05	1.40E-04
1544	479785.89	3768829.43	7.24E-05	1.45E-04
1545	479798.87	3768844.11	7.49E-05	1.50E-04
1546	479811.84	3768858.78	7.75E-05	1.55E-04
1547	479824.82	3768873.45	8.00E-05	1.60E-04
1548	479837.8	3768888.12	8.24E-05	1.65E-04
1549	479850.78	3768902.79	8.47E-05	1.69E-04
1550	479863.76	3768917.47	8.69E-05	1.74E-04
1551	479876.74	3768932.14	8.88E-05	1.78E-04
1552	479889.71	3768946.81	9.06E-05	1.81E-04
1553	479902.69	3768961.48	9.22E-05	1.84E-04
1554	479915.67	3768976.15	9.37E-05	1.87E-04
1555	479928.65	3768990.83	9.50E-05	1.90E-04
1556	479941.63	3769005.5	9.60E-05	1.92E-04

1557	479954.6	3769020.17	9.68E-05	1.94E-04
1558	479967.58	3769034.84	9.73E-05	1.95E-04
1559	479980.56	3769049.52	9.76E-05	1.95E-04
1560	479993.54	3769064.19	9.75E-05	1.95E-04
1561	480006.52	3769078.86	9.72E-05	1.94E-04
1562	480019.5	3769093.53	9.67E-05	1.93E-04
1563	480032.47	3769108.2	9.60E-05	1.92E-04
1564	480045.45	3769122.88	9.50E-05	1.90E-04
1565	480058.43	3769137.55	9.39E-05	1.88E-04
1566	480071.41	3769152.22	9.26E-05	1.85E-04
1567	480084.39	3769166.89	9.10E-05	1.82E-04
1568	480097.37	3769181.56	8.93E-05	1.79E-04
1569	480110.34	3769196.24	8.75E-05	1.75E-04
1570	480123.32	3769210.91	8.56E-05	1.71E-04
1571	478126.69	3768978.44	2.75E-05	5.51E-05
1572	478121.94	3768997.46	2.93E-05	5.85E-05
1573	477987.57	3768928.61	2.27E-05	4.55E-05
1574	478003.68	3768917.54	2.22E-05	4.43E-05
1575	478019.79	3768906.47	2.16E-05	4.31E-05
1576	478035.9	3768895.41	2.10E-05	4.20E-05
1577	478052.02	3768884.34	2.04E-05	4.08E-05
1578	478068.13	3768873.28	1.98E-05	3.97E-05
1579	478084.24	3768862.21	1.93E-05	3.85E-05
1580	478100.35	3768851.14	1.87E-05	3.74E-05
1581	478116.46	3768840.08	1.81E-05	3.63E-05
1582	478132.57	3768829.01	1.76E-05	3.52E-05
1583	478148.68	3768817.95	1.70E-05	3.41E-05
1584	478164.79	3768806.88	1.65E-05	3.30E-05
1585	478180.9	3768795.82	1.60E-05	3.20E-05
1586	478197.01	3768784.75	1.55E-05	3.10E-05
1587	478213.12	3768773.68	1.51E-05	3.01E-05
1588	478229.24	3768762.62	1.46E-05	2.93E-05
1589	478245.35	3768751.55	1.42E-05	2.85E-05
1590	478261.46	3768740.49	1.39E-05	2.77E-05
1591	478277.57	3768729.42	1.35E-05	2.71E-05
1592	478293.68	3768718.35	1.33E-05	2.65E-05
1593	478309.79	3768707.29	1.30E-05	2.60E-05
1594	478325.9	3768696.22	1.28E-05	2.56E-05
1595	478342.01	3768685.16	1.26E-05	2.53E-05
1596	478358.12	3768674.09	1.25E-05	2.50E-05
1597	478374.23	3768663.02	1.24E-05	2.49E-05
1598	478390.34	3768651.96	1.24E-05	2.48E-05
1599	478406.45	3768640.89	1.23E-05	2.47E-05
1600	478422.57	3768629.83	1.23E-05	2.47E-05
1601	478438.68	3768618.76	1.23E-05	2.47E-05
1602	478454.79	3768607.7	1.24E-05	2.47E-05
1603	478470.9	3768596.63	1.24E-05	2.48E-05
1604	478487.01	3768585.56	1.24E-05	2.49E-05
1605	478503.12	3768574.5	1.25E-05	2.50E-05
1606	478519.23	3768563.43	1.25E-05	2.50E-05
1607	478535.34	3768552.37	1.26E-05	2.51E-05
1608	478551.45	3768541.3	1.26E-05	2.52E-05

1609	478567.56	3768530.23	1.26E-05	2.52E-05
1610	478583.67	3768519.17	1.26E-05	2.52E-05
1611	478599.79	3768508.1	1.26E-05	2.52E-05
1612	478615.9	3768497.04	1.26E-05	2.52E-05
1613	478632.01	3768485.97	1.26E-05	2.52E-05
1614	478648.12	3768474.91	1.26E-05	2.51E-05
1615	478664.23	3768463.84	1.25E-05	2.50E-05
1616	478680.34	3768452.77	1.25E-05	2.49E-05
1617	478696.45	3768441.71	1.24E-05	2.48E-05
1618	478712.56	3768430.64	1.24E-05	2.47E-05
1619	478728.67	3768419.58	1.23E-05	2.46E-05
1620	478744.78	3768408.51	1.23E-05	2.45E-05
1621	478760.89	3768397.44	1.22E-05	2.44E-05
1622	478777.01	3768386.38	1.21E-05	2.42E-05
1623	478793.12	3768375.31	1.21E-05	2.41E-05
1624	478809.23	3768364.25	1.20E-05	2.40E-05
1625	478825.34	3768353.18	1.19E-05	2.39E-05
1626	478841.45	3768342.12	1.19E-05	2.37E-05
1627	478857.56	3768331.05	1.18E-05	2.37E-05
1628	478873.67	3768319.98	1.18E-05	2.36E-05
1629	478889.78	3768308.92	1.18E-05	2.35E-05
1630	478905.89	3768297.85	1.17E-05	2.35E-05
1631	478922	3768286.79	1.17E-05	2.34E-05
1632	478938.11	3768275.72	1.17E-05	2.34E-05
1633	478954.22	3768264.65	1.17E-05	2.34E-05
1634	478970.34	3768253.59	1.17E-05	2.34E-05
1635	478986.45	3768242.52	1.16E-05	2.32E-05
1636	479002.56	3768231.46	1.16E-05	2.32E-05
1637	479018.67	3768220.39	1.16E-05	2.33E-05
1638	479034.78	3768209.33	1.17E-05	2.33E-05
1639	479050.89	3768198.26	1.17E-05	2.34E-05
1640	479067	3768187.19	1.18E-05	2.35E-05
1641	479083.11	3768176.13	1.18E-05	2.35E-05
1642	479099.22	3768165.06	1.18E-05	2.36E-05
1643	479163.67	3768120.8	1.20E-05	2.39E-05
1644	479179.78	3768109.73	1.20E-05	2.40E-05
1645	479195.89	3768098.67	1.21E-05	2.41E-05
1646	479212	3768087.6	1.21E-05	2.43E-05
1647	479228.11	3768076.53	1.22E-05	2.44E-05
1648	479244.22	3768065.47	1.22E-05	2.45E-05
1649	479273.28	3768069.04	1.27E-05	2.53E-05
1650	479286.23	3768083.68	1.30E-05	2.61E-05
1651	479299.18	3768098.32	1.34E-05	2.68E-05
1652	479312.13	3768112.96	1.38E-05	2.76E-05
1653	479325.08	3768127.6	1.42E-05	2.84E-05
1654	479338.03	3768142.24	1.46E-05	2.93E-05
1655	479350.98	3768156.88	1.51E-05	3.01E-05
1656	479363.93	3768171.52	1.55E-05	3.10E-05
1657	479376.88	3768186.16	1.59E-05	3.19E-05
1658	479389.83	3768200.8	1.64E-05	3.28E-05
1659	479402.78	3768215.44	1.69E-05	3.37E-05
1660	479415.73	3768230.08	1.74E-05	3.47E-05

1661	479428.68	3768244.72	1.79E-05	3.57E-05
1662	479441.63	3768259.36	1.84E-05	3.68E-05
1663	479454.58	3768274	1.89E-05	3.79E-05
1664	479467.53	3768288.64	1.95E-05	3.90E-05
1665	479480.47	3768303.28	2.01E-05	4.02E-05
1666	479493.42	3768317.92	2.07E-05	4.15E-05
1667	479506.37	3768332.56	2.14E-05	4.28E-05
1668	479519.32	3768347.2	2.21E-05	4.42E-05
1669	479597.02	3768435.04	2.70E-05	5.41E-05
1670	479609.97	3768449.68	2.80E-05	5.60E-05
1671	479622.92	3768464.32	2.90E-05	5.80E-05
1672	479635.87	3768478.95	3.00E-05	6.01E-05
1673	479648.82	3768493.59	3.11E-05	6.22E-05
1674	479661.77	3768508.23	3.22E-05	6.45E-05
1675	479674.72	3768522.87	3.34E-05	6.68E-05
1676	479687.67	3768537.51	3.46E-05	6.92E-05
1677	479700.62	3768552.15	3.59E-05	7.18E-05
1678	479713.57	3768566.79	3.73E-05	7.45E-05
1679	479726.52	3768581.43	3.86E-05	7.73E-05
1680	479739.47	3768596.07	4.01E-05	8.01E-05
1681	479752.42	3768610.71	4.16E-05	8.32E-05
1682	479765.37	3768625.35	4.32E-05	8.64E-05
1683	479778.32	3768639.99	4.49E-05	8.97E-05
1684	479791.27	3768654.63	4.66E-05	9.32E-05
1685	479804.21	3768669.27	4.84E-05	9.67E-05
1686	479817.16	3768683.91	5.02E-05	1.00E-04
1687	479830.11	3768698.55	5.20E-05	1.04E-04
1688	479843.06	3768713.19	5.39E-05	1.08E-04
1689	479856.01	3768727.83	5.57E-05	1.11E-04
1690	479868.96	3768742.47	5.76E-05	1.15E-04
1691	479881.91	3768757.11	5.96E-05	1.19E-04
1692	479894.86	3768771.75	6.15E-05	1.23E-04
1693	479907.81	3768786.39	6.33E-05	1.27E-04
1694	479920.76	3768801.03	6.52E-05	1.30E-04
1695	479933.71	3768815.67	6.69E-05	1.34E-04
1696	479946.66	3768830.31	6.86E-05	1.37E-04
1697	479959.61	3768844.95	7.03E-05	1.41E-04
1698	479972.56	3768859.59	7.19E-05	1.44E-04
1699	479985.51	3768874.23	7.34E-05	1.47E-04
1700	479998.46	3768888.87	7.48E-05	1.50E-04
1701	480011.41	3768903.51	7.60E-05	1.52E-04
1702	480024.36	3768918.15	7.72E-05	1.54E-04
1703	480037.31	3768932.79	7.82E-05	1.56E-04
1704	480050.26	3768947.43	7.90E-05	1.58E-04
1705	480063.21	3768962.07	7.97E-05	1.59E-04
1706	480076.16	3768976.7	8.02E-05	1.60E-04
1707	480089.11	3768991.34	8.06E-05	1.61E-04
1708	480102.06	3769005.98	8.08E-05	1.62E-04
1709	480115.01	3769020.62	8.09E-05	1.62E-04
1710	480127.96	3769035.26	8.07E-05	1.61E-04
1711	480140.9	3769049.9	8.05E-05	1.61E-04
1712	480153.85	3769064.54	8.00E-05	1.60E-04

1713	480166.8	3769079.18	7.94E-05	1.59E-04
1714	480179.75	3769093.82	7.86E-05	1.57E-04
1715	480192.7	3769108.46	7.77E-05	1.55E-04
1716	480205.65	3769123.1	7.67E-05	1.53E-04
1717	480218.6	3769137.74	7.55E-05	1.51E-04
1718	480231.55	3769152.38	7.43E-05	1.49E-04
1719	480244.5	3769167.02	7.31E-05	1.46E-04
1720	480257.45	3769181.66	7.17E-05	1.43E-04
1721	480270.4	3769196.3	7.02E-05	1.40E-04
1722	480283.35	3769210.94	6.87E-05	1.37E-04
1723	477971.46	3768939.67	2.33E-05	4.67E-05
1724	477966.71	3768958.69	2.46E-05	4.92E-05
1725	477832.31	3768889.86	1.97E-05	3.93E-05
1726	477848.4	3768878.81	1.92E-05	3.85E-05
1727	477864.48	3768867.76	1.88E-05	3.76E-05
1728	477880.56	3768856.71	1.84E-05	3.68E-05
1729	477896.65	3768845.67	1.80E-05	3.59E-05
1730	477912.73	3768834.62	1.75E-05	3.51E-05
1731	477928.82	3768823.57	1.71E-05	3.42E-05
1732	477944.9	3768812.53	1.67E-05	3.34E-05
1733	477960.98	3768801.48	1.63E-05	3.25E-05
1734	477977.07	3768790.43	1.58E-05	3.17E-05
1735	477993.15	3768779.38	1.54E-05	3.08E-05
1736	478009.24	3768768.34	1.50E-05	3.00E-05
1737	478025.32	3768757.29	1.46E-05	2.91E-05
1738	478041.4	3768746.24	1.42E-05	2.83E-05
1739	478057.49	3768735.19	1.38E-05	2.75E-05
1740	478073.57	3768724.15	1.34E-05	2.68E-05
1741	478089.65	3768713.1	1.30E-05	2.60E-05
1742	478105.74	3768702.05	1.27E-05	2.53E-05
1743	478121.82	3768691.01	1.23E-05	2.46E-05
1744	478137.91	3768679.96	1.20E-05	2.40E-05
1745	478153.99	3768668.91	1.17E-05	2.34E-05
1746	478170.07	3768657.86	1.15E-05	2.29E-05
1747	478186.16	3768646.82	1.12E-05	2.24E-05
1748	478202.24	3768635.77	1.10E-05	2.20E-05
1749	478218.33	3768624.72	1.08E-05	2.17E-05
1750	478234.41	3768613.67	1.07E-05	2.14E-05
1751	478250.49	3768602.63	1.06E-05	2.12E-05
1752	478266.58	3768591.58	1.05E-05	2.10E-05
1753	478282.66	3768580.53	1.04E-05	2.08E-05
1754	478298.74	3768569.48	1.04E-05	2.07E-05
1755	478314.83	3768558.44	1.03E-05	2.07E-05
1756	478330.91	3768547.39	1.03E-05	2.07E-05
1757	478347	3768536.34	1.03E-05	2.07E-05
1758	478363.08	3768525.3	1.04E-05	2.07E-05
1759	478379.16	3768514.25	1.04E-05	2.08E-05
1760	478395.25	3768503.2	1.04E-05	2.09E-05
1761	478411.33	3768492.15	1.05E-05	2.09E-05
1762	478427.42	3768481.11	1.05E-05	2.10E-05
1763	478443.5	3768470.06	1.05E-05	2.11E-05
1764	478459.58	3768459.01	1.06E-05	2.11E-05

1765	478475.67	3768447.96	1.06E-05	2.12E-05
1766	478491.75	3768436.92	1.06E-05	2.13E-05
1767	478507.84	3768425.87	1.06E-05	2.13E-05
1768	478523.92	3768414.82	1.07E-05	2.13E-05
1769	478540	3768403.78	1.07E-05	2.13E-05
1770	478556.09	3768392.73	1.06E-05	2.13E-05
1771	478572.17	3768381.68	1.06E-05	2.13E-05
1772	478588.25	3768370.63	1.06E-05	2.13E-05
1773	478604.34	3768359.59	1.06E-05	2.12E-05
1774	478620.42	3768348.54	1.06E-05	2.11E-05
1775	478636.51	3768337.49	1.05E-05	2.11E-05
1776	478652.59	3768326.44	1.05E-05	2.10E-05
1777	478668.67	3768315.4	1.05E-05	2.09E-05
1778	478684.76	3768304.35	1.04E-05	2.08E-05
1779	478700.84	3768293.3	1.04E-05	2.07E-05
1780	478716.93	3768282.26	1.03E-05	2.06E-05
1781	478733.01	3768271.21	1.03E-05	2.05E-05
1782	478749.09	3768260.16	1.02E-05	2.05E-05
1783	478765.18	3768249.11	1.02E-05	2.03E-05
1784	478781.26	3768238.07	1.01E-05	2.03E-05
1785	478797.34	3768227.02	1.01E-05	2.02E-05
1786	478813.43	3768215.97	1.01E-05	2.01E-05
1787	478829.51	3768204.92	1.00E-05	2.01E-05
1788	478845.6	3768193.88	1.00E-05	2.00E-05
1789	478861.68	3768182.83	9.97E-06	1.99E-05
1790	478877.76	3768171.78	9.95E-06	1.99E-05
1791	478893.85	3768160.73	9.88E-06	1.98E-05
1792	478909.93	3768149.69	9.85E-06	1.97E-05
1793	478926.02	3768138.64	9.84E-06	1.97E-05
1794	478942.1	3768127.59	9.84E-06	1.97E-05
1795	478958.18	3768116.55	9.85E-06	1.97E-05
1796	478974.27	3768105.5	9.84E-06	1.97E-05
1797	478990.35	3768094.45	9.84E-06	1.97E-05
1798	479006.44	3768083.4	9.82E-06	1.96E-05
1799	479022.52	3768072.36	9.85E-06	1.97E-05
1800	479038.6	3768061.31	9.88E-06	1.98E-05
1801	479054.69	3768050.26	9.91E-06	1.98E-05
1802	479070.77	3768039.21	9.93E-06	1.99E-05
1803	479086.85	3768028.17	9.97E-06	1.99E-05
1804	479102.94	3768017.12	1.00E-05	2.00E-05
1805	479151.19	3767983.98	1.02E-05	2.04E-05
1806	479167.27	3767972.93	1.02E-05	2.05E-05
1807	479183.36	3767961.88	1.03E-05	2.06E-05
1808	479199.44	3767950.84	1.03E-05	2.07E-05
1809	479215.53	3767939.79	1.04E-05	2.08E-05
1810	479231.61	3767928.74	1.05E-05	2.09E-05
1811	479247.69	3767917.69	1.05E-05	2.10E-05
1812	479263.78	3767906.65	1.06E-05	2.11E-05
1813	479292.79	3767910.21	1.09E-05	2.18E-05
1814	479305.72	3767924.83	1.12E-05	2.24E-05
1815	479318.64	3767939.45	1.15E-05	2.30E-05
1816	479331.57	3767954.06	1.18E-05	2.36E-05

1817	479344.5	3767968.68	1.21E-05	2.43E-05
1818	479357.43	3767983.29	1.24E-05	2.49E-05
1819	479370.36	3767997.91	1.28E-05	2.55E-05
1820	479383.28	3768012.52	1.31E-05	2.62E-05
1821	479396.21	3768027.14	1.34E-05	2.69E-05
1822	479409.14	3768041.75	1.38E-05	2.76E-05
1823	479422.07	3768056.37	1.41E-05	2.83E-05
1824	479435	3768070.98	1.45E-05	2.90E-05
1825	479447.92	3768085.6	1.49E-05	2.97E-05
1826	479460.85	3768100.21	1.52E-05	3.04E-05
1827	479473.78	3768114.83	1.56E-05	3.12E-05
1828	479486.71	3768129.44	1.60E-05	3.20E-05
1829	479499.64	3768144.06	1.64E-05	3.28E-05
1830	479512.56	3768158.67	1.68E-05	3.37E-05
1831	479525.49	3768173.29	1.73E-05	3.45E-05
1832	479538.42	3768187.9	1.77E-05	3.55E-05
1833	479551.35	3768202.52	1.82E-05	3.64E-05
1834	479564.27	3768217.13	1.87E-05	3.74E-05
1835	479577.2	3768231.75	1.93E-05	3.85E-05
1836	479590.13	3768246.36	1.98E-05	3.96E-05
1837	479603.06	3768260.98	2.04E-05	4.08E-05
1838	479615.99	3768275.59	2.10E-05	4.20E-05
1839	479628.91	3768290.21	2.16E-05	4.33E-05
1840	479641.84	3768304.82	2.23E-05	4.46E-05
1841	479654.77	3768319.44	2.30E-05	4.59E-05
1842	479667.7	3768334.05	2.37E-05	4.74E-05
1843	479719.41	3768392.52	2.69E-05	5.37E-05
1844	479732.34	3768407.13	2.77E-05	5.54E-05
1845	479745.27	3768421.75	2.86E-05	5.71E-05
1846	479758.19	3768436.36	2.94E-05	5.89E-05
1847	479771.12	3768450.98	3.04E-05	6.08E-05
1848	479784.05	3768465.59	3.13E-05	6.27E-05
1849	479796.98	3768480.21	3.24E-05	6.47E-05
1850	479809.9	3768494.82	3.34E-05	6.68E-05
1851	479822.83	3768509.44	3.45E-05	6.90E-05
1852	479835.76	3768524.05	3.56E-05	7.13E-05
1853	479848.69	3768538.67	3.68E-05	7.37E-05
1854	479861.62	3768553.28	3.81E-05	7.62E-05
1855	479874.54	3768567.9	3.94E-05	7.88E-05
1856	479887.47	3768582.51	4.07E-05	8.14E-05
1857	479900.4	3768597.13	4.21E-05	8.42E-05
1858	479913.33	3768611.74	4.35E-05	8.70E-05
1859	479926.26	3768626.36	4.49E-05	8.98E-05
1860	479939.18	3768640.97	4.63E-05	9.26E-05
1861	479952.11	3768655.59	4.77E-05	9.54E-05
1862	479965.04	3768670.2	4.92E-05	9.83E-05
1863	479977.97	3768684.82	5.06E-05	1.01E-04
1864	479990.9	3768699.43	5.20E-05	1.04E-04
1865	480003.82	3768714.05	5.34E-05	1.07E-04
1866	480016.75	3768728.66	5.48E-05	1.10E-04
1867	480029.68	3768743.28	5.62E-05	1.12E-04
1868	480042.61	3768757.89	5.76E-05	1.15E-04

1869	480055.54	3768772.51	5.89E-05	1.18E-04
1870	480068.46	3768787.12	6.02E-05	1.20E-04
1871	480081.39	3768801.74	6.14E-05	1.23E-04
1872	480094.32	3768816.36	6.26E-05	1.25E-04
1873	480107.25	3768830.97	6.36E-05	1.27E-04
1874	480120.17	3768845.59	6.46E-05	1.29E-04
1875	480133.1	3768860.2	6.56E-05	1.31E-04
1876	480146.03	3768874.82	6.64E-05	1.33E-04
1877	480158.96	3768889.43	6.70E-05	1.34E-04
1878	480171.89	3768904.05	6.76E-05	1.35E-04
1879	480184.81	3768918.66	6.81E-05	1.36E-04
1880	480197.74	3768933.28	6.85E-05	1.37E-04
1881	480210.67	3768947.89	6.88E-05	1.38E-04
1882	480223.6	3768962.51	6.90E-05	1.38E-04
1883	480236.53	3768977.12	6.90E-05	1.38E-04
1884	480249.45	3768991.74	6.90E-05	1.38E-04
1885	480262.38	3769006.35	6.88E-05	1.38E-04
1886	480275.31	3769020.97	6.85E-05	1.37E-04
1887	480288.24	3769035.58	6.80E-05	1.36E-04
1888	480301.17	3769050.2	6.76E-05	1.35E-04
1889	480314.09	3769064.81	6.70E-05	1.34E-04
1890	480327.02	3769079.43	6.62E-05	1.32E-04
1891	480339.95	3769094.04	6.54E-05	1.31E-04
1892	480352.88	3769108.66	6.46E-05	1.29E-04
1893	480365.8	3769123.27	6.37E-05	1.27E-04
1894	480378.73	3769137.89	6.27E-05	1.25E-04
1895	480391.66	3769152.5	6.17E-05	1.23E-04
1896	480404.59	3769167.12	6.06E-05	1.21E-04
1897	480417.52	3769181.73	5.95E-05	1.19E-04
1898	480430.44	3769196.35	5.84E-05	1.17E-04
1899	480443.37	3769210.96	5.72E-05	1.14E-04
1900	477816.23	3768900.9	2.01E-05	4.02E-05
1901	477811.48	3768919.92	2.10E-05	4.20E-05
1902	477677.06	3768851.1	1.72E-05	3.44E-05
1903	477693.12	3768840.07	1.69E-05	3.38E-05
1904	477709.18	3768829.04	1.66E-05	3.31E-05
1905	477725.25	3768818.01	1.63E-05	3.25E-05
1906	477741.31	3768806.97	1.59E-05	3.19E-05
1907	477757.37	3768795.94	1.56E-05	3.12E-05
1908	477773.44	3768784.91	1.53E-05	3.06E-05
1909	477789.5	3768773.87	1.50E-05	2.99E-05
1910	477805.56	3768762.84	1.46E-05	2.93E-05
1911	477821.62	3768751.81	1.43E-05	2.87E-05
1912	477837.69	3768740.78	1.40E-05	2.80E-05
1913	477853.75	3768729.74	1.37E-05	2.73E-05
1914	477869.81	3768718.71	1.33E-05	2.67E-05
1915	477885.87	3768707.68	1.30E-05	2.60E-05
1916	477901.94	3768696.65	1.27E-05	2.54E-05
1917	477918	3768685.61	1.24E-05	2.47E-05
1918	477934.06	3768674.58	1.21E-05	2.41E-05
1919	477950.12	3768663.55	1.17E-05	2.35E-05
1920	477966.19	3768652.51	1.14E-05	2.29E-05

1921	477982.25	3768641.48	1.11E-05	2.23E-05
1922	477998.31	3768630.45	1.09E-05	2.17E-05
1923	478014.38	3768619.42	1.06E-05	2.12E-05
1924	478030.44	3768608.38	1.03E-05	2.07E-05
1925	478046.5	3768597.35	1.01E-05	2.02E-05
1926	478062.56	3768586.32	9.89E-06	1.98E-05
1927	478078.63	3768575.29	9.71E-06	1.94E-05
1928	478094.69	3768564.25	9.53E-06	1.91E-05
1929	478110.75	3768553.22	9.38E-06	1.88E-05
1930	478126.81	3768542.19	9.24E-06	1.85E-05
1931	478142.88	3768531.15	9.13E-06	1.83E-05
1932	478158.94	3768520.12	9.05E-06	1.81E-05
1933	478175	3768509.09	8.98E-06	1.80E-05
1934	478191.07	3768498.06	8.92E-06	1.78E-05
1935	478207.13	3768487.02	8.89E-06	1.78E-05
1936	478223.19	3768475.99	8.87E-06	1.77E-05
1937	478239.25	3768464.96	8.87E-06	1.77E-05
1938	478255.32	3768453.92	8.88E-06	1.78E-05
1939	478271.38	3768442.89	8.89E-06	1.78E-05
1940	478287.44	3768431.86	8.91E-06	1.78E-05
1941	478303.5	3768420.83	8.94E-06	1.79E-05
1942	478319.57	3768409.79	8.97E-06	1.79E-05
1943	478335.63	3768398.76	9.01E-06	1.80E-05
1944	478351.69	3768387.73	9.04E-06	1.81E-05
1945	478367.75	3768376.7	9.07E-06	1.81E-05
1946	478383.82	3768365.66	9.10E-06	1.82E-05
1947	478399.88	3768354.63	9.13E-06	1.83E-05
1948	478415.94	3768343.6	9.15E-06	1.83E-05
1949	478432.01	3768332.56	9.17E-06	1.83E-05
1950	478448.07	3768321.53	9.18E-06	1.84E-05
1951	478464.13	3768310.5	9.19E-06	1.84E-05
1952	478480.19	3768299.47	9.19E-06	1.84E-05
1953	478496.26	3768288.43	9.19E-06	1.84E-05
1954	478512.32	3768277.4	9.18E-06	1.84E-05
1955	478528.38	3768266.37	9.17E-06	1.83E-05
1956	478544.44	3768255.34	9.15E-06	1.83E-05
1957	478560.51	3768244.3	9.13E-06	1.83E-05
1958	478576.57	3768233.27	9.12E-06	1.82E-05
1959	478592.63	3768222.24	9.09E-06	1.82E-05
1960	478608.7	3768211.2	9.06E-06	1.81E-05
1961	478624.76	3768200.17	9.03E-06	1.81E-05
1962	478640.82	3768189.14	8.99E-06	1.80E-05
1963	478656.88	3768178.11	8.96E-06	1.79E-05
1964	478672.95	3768167.07	8.93E-06	1.79E-05
1965	478689.01	3768156.04	8.89E-06	1.78E-05
1966	478705.07	3768145.01	8.85E-06	1.77E-05
1967	478721.13	3768133.98	8.82E-06	1.76E-05
1968	478737.2	3768122.94	8.78E-06	1.76E-05
1969	478753.26	3768111.91	8.76E-06	1.75E-05
1970	478769.32	3768100.88	8.72E-06	1.74E-05
1971	478785.38	3768089.84	8.69E-06	1.74E-05
1972	478801.45	3768078.81	8.67E-06	1.73E-05

1973	478817.51	3768067.78	8.65E-06	1.73E-05
1974	478833.57	3768056.75	8.59E-06	1.72E-05
1975	478849.64	3768045.71	8.57E-06	1.71E-05
1976	478865.7	3768034.68	8.55E-06	1.71E-05
1977	478881.76	3768023.65	8.54E-06	1.71E-05
1978	478897.82	3768012.61	8.52E-06	1.70E-05
1979	478913.89	3768001.58	8.51E-06	1.70E-05
1980	478929.95	3767990.55	8.48E-06	1.70E-05
1981	478946.01	3767979.52	8.48E-06	1.70E-05
1982	478962.07	3767968.48	8.47E-06	1.69E-05
1983	478978.14	3767957.45	8.48E-06	1.70E-05
1984	478994.2	3767946.42	8.50E-06	1.70E-05
1985	479010.26	3767935.39	8.52E-06	1.70E-05
1986	479026.32	3767924.35	8.55E-06	1.71E-05
1987	479042.39	3767913.32	8.57E-06	1.71E-05
1988	479058.45	3767902.29	8.59E-06	1.72E-05
1989	479074.51	3767891.25	8.63E-06	1.73E-05
1990	479090.58	3767880.22	8.67E-06	1.73E-05
1991	479106.64	3767869.19	8.70E-06	1.74E-05
1992	479154.83	3767836.09	8.86E-06	1.77E-05
1993	479170.89	3767825.06	8.92E-06	1.78E-05
1994	479186.95	3767814.03	8.97E-06	1.79E-05
1995	479203.01	3767802.99	9.02E-06	1.80E-05
1996	479219.08	3767791.96	9.08E-06	1.82E-05
1997	479235.14	3767780.93	9.13E-06	1.83E-05
1998	479251.2	3767769.89	9.19E-06	1.84E-05
1999	479267.27	3767758.86	9.24E-06	1.85E-05
2000	479283.33	3767747.83	9.29E-06	1.86E-05
2001	479312.3	3767751.39	9.58E-06	1.92E-05
2002	479325.21	3767765.99	9.81E-06	1.96E-05
2003	479338.12	3767780.58	1.01E-05	2.01E-05
2004	479351.03	3767795.18	1.03E-05	2.06E-05
2005	479363.95	3767809.78	1.06E-05	2.11E-05
2006	479376.86	3767824.37	1.08E-05	2.16E-05
2007	479389.77	3767838.97	1.11E-05	2.22E-05
2008	479402.68	3767853.56	1.13E-05	2.27E-05
2009	479415.59	3767868.16	1.16E-05	2.32E-05
2010	479428.5	3767882.76	1.19E-05	2.38E-05
2011	479441.41	3767897.35	1.22E-05	2.43E-05
2012	479454.32	3767911.95	1.24E-05	2.49E-05
2013	479467.23	3767926.54	1.27E-05	2.54E-05
2014	479480.14	3767941.14	1.30E-05	2.60E-05
2015	479493.05	3767955.73	1.33E-05	2.66E-05
2016	479505.96	3767970.33	1.36E-05	2.71E-05
2017	479518.88	3767984.93	1.39E-05	2.77E-05
2018	479531.79	3767999.52	1.42E-05	2.84E-05
2019	479544.7	3768014.12	1.45E-05	2.90E-05
2020	479557.61	3768028.71	1.48E-05	2.96E-05
2021	479570.52	3768043.31	1.52E-05	3.03E-05
2022	479583.43	3768057.91	1.55E-05	3.10E-05
2023	479596.34	3768072.5	1.59E-05	3.17E-05
2024	479609.25	3768087.1	1.63E-05	3.25E-05

2025	479622.16	3768101.69	1.66E-05	3.33E-05
2026	479635.07	3768116.29	1.71E-05	3.41E-05
2027	479647.98	3768130.89	1.75E-05	3.50E-05
2028	479660.9	3768145.48	1.79E-05	3.59E-05
2029	479673.81	3768160.08	1.84E-05	3.69E-05
2030	479686.72	3768174.67	1.89E-05	3.78E-05
2031	479699.63	3768189.27	1.94E-05	3.89E-05
2032	479712.54	3768203.87	2.00E-05	3.99E-05
2033	479725.45	3768218.46	2.05E-05	4.10E-05
2034	479738.36	3768233.06	2.11E-05	4.21E-05
2035	479751.27	3768247.65	2.17E-05	4.33E-05
2036	479764.18	3768262.25	2.23E-05	4.45E-05
2037	479777.09	3768276.85	2.29E-05	4.58E-05
2038	479790	3768291.44	2.35E-05	4.71E-05
2039	479802.91	3768306.04	2.42E-05	4.84E-05
2040	479815.83	3768320.63	2.49E-05	4.97E-05
2041	479828.74	3768335.23	2.56E-05	5.11E-05
2042	479880.38	3768393.61	2.86E-05	5.71E-05
2043	479893.29	3768408.21	2.94E-05	5.88E-05
2044	479906.2	3768422.8	3.03E-05	6.06E-05
2045	479919.11	3768437.4	3.12E-05	6.24E-05
2046	479932.02	3768452	3.21E-05	6.43E-05
2047	479944.93	3768466.59	3.31E-05	6.62E-05
2048	479957.85	3768481.19	3.41E-05	6.82E-05
2049	479970.76	3768495.78	3.52E-05	7.03E-05
2050	479983.67	3768510.38	3.62E-05	7.24E-05
2051	479996.58	3768524.98	3.73E-05	7.46E-05
2052	480009.49	3768539.57	3.84E-05	7.68E-05
2053	480022.4	3768554.17	3.95E-05	7.90E-05
2054	480035.31	3768568.76	4.06E-05	8.12E-05
2055	480048.22	3768583.36	4.18E-05	8.35E-05
2056	480061.13	3768597.96	4.29E-05	8.58E-05
2057	480074.04	3768612.55	4.41E-05	8.81E-05
2058	480086.95	3768627.15	4.52E-05	9.04E-05
2059	480099.86	3768641.74	4.63E-05	9.26E-05
2060	480112.78	3768656.34	4.74E-05	9.48E-05
2061	480125.69	3768670.93	4.85E-05	9.71E-05
2062	480138.6	3768685.53	4.96E-05	9.92E-05
2063	480151.51	3768700.13	5.07E-05	1.01E-04
2064	480164.42	3768714.72	5.17E-05	1.03E-04
2065	480177.33	3768729.32	5.27E-05	1.05E-04
2066	480190.24	3768743.91	5.36E-05	1.07E-04
2067	480203.15	3768758.51	5.45E-05	1.09E-04
2068	480216.06	3768773.11	5.54E-05	1.11E-04
2069	480228.97	3768787.7	5.62E-05	1.12E-04
2070	480241.88	3768802.3	5.70E-05	1.14E-04
2071	480254.8	3768816.89	5.76E-05	1.15E-04
2072	480267.71	3768831.49	5.82E-05	1.16E-04
2073	480280.62	3768846.09	5.88E-05	1.18E-04
2074	480293.53	3768860.68	5.92E-05	1.18E-04
2075	480306.44	3768875.28	5.96E-05	1.19E-04
2076	480319.35	3768889.87	5.99E-05	1.20E-04

2077	480332.26	3768904.47	6.01E-05	1.20E-04
2078	480345.17	3768919.07	6.03E-05	1.21E-04
2079	480358.08	3768933.66	6.03E-05	1.21E-04
2080	480370.99	3768948.26	6.03E-05	1.21E-04
2081	480383.9	3768962.85	6.02E-05	1.20E-04
2082	480396.82	3768977.45	6.00E-05	1.20E-04
2083	480409.73	3768992.05	5.97E-05	1.19E-04
2084	480422.64	3769006.64	5.93E-05	1.19E-04
2085	480435.55	3769021.24	5.89E-05	1.18E-04
2086	480448.46	3769035.83	5.84E-05	1.17E-04
2087	480461.37	3769050.43	5.79E-05	1.16E-04
2088	480474.28	3769065.02	5.72E-05	1.14E-04
2089	480487.19	3769079.62	5.65E-05	1.13E-04
2090	480500.1	3769094.22	5.58E-05	1.12E-04
2091	480513.01	3769108.81	5.51E-05	1.10E-04
2092	480525.92	3769123.41	5.43E-05	1.09E-04
2093	480538.83	3769138	5.34E-05	1.07E-04
2094	480551.75	3769152.6	5.25E-05	1.05E-04
2095	480564.66	3769167.2	5.16E-05	1.03E-04
2096	480577.57	3769181.79	5.07E-05	1.01E-04
2097	480590.48	3769196.39	4.97E-05	9.95E-05
2098	480603.39	3769210.98	4.88E-05	9.76E-05
2099	477661	3768862.14	1.75E-05	3.51E-05
2100	477656.25	3768881.16	1.82E-05	3.65E-05
2101	478291.65	3768985.06	2.94E-05	5.89E-05
2102	478139.11	3768936.78	2.42E-05	4.84E-05
2103	477986.57	3768888.49	2.04E-05	4.08E-05
2104	477834.03	3768840.2	1.75E-05	3.50E-05
2105	477681.49	3768791.92	1.52E-05	3.05E-05
2106	478850.19	3769100.43	7.93E-05	1.59E-04
2107	478781.09	3769060.13	5.54E-05	1.11E-04
2108	478573.76	3768939.23	2.68E-05	5.35E-05
2109	478504.65	3768898.93	2.26E-05	4.52E-05
2110	478228.22	3768737.73	1.37E-05	2.75E-05
2111	478090.01	3768657.13	1.14E-05	2.29E-05
2112	477951.79	3768576.53	9.76E-06	1.95E-05
2113	477813.57	3768495.93	8.49E-06	1.70E-05
2114	479063.97	3769251.6	9.90E-04	1.98E-03
2115	479038.91	3769256.47	8.40E-04	1.68E-03
2116	479021.16	3769247.26	6.19E-04	1.24E-03
2117	479003.41	3769238.04	4.75E-04	9.51E-04
2118	478840.53	3769117.71	8.54E-05	1.71E-04
2119	478769.53	3769080.85	5.98E-05	1.20E-04
2120	478698.53	3769043.99	4.50E-05	9.00E-05
2121	478683.9	3769072.17	5.06E-05	1.01E-04
2122	478612.9	3769035.31	3.99E-05	7.98E-05
2123	478491.05	3768923.37	2.43E-05	4.86E-05
2124	478478.21	3768947.49	2.63E-05	5.27E-05
2125	478350.31	3768847.36	1.86E-05	3.71E-05
2126	478336.21	3768873.77	2.01E-05	4.02E-05
2127	478186.89	3768814.14	1.68E-05	3.37E-05
2128	478066.5	3768699.55	1.26E-05	2.52E-05

2129	478080.46	3768674.2	1.19E-05	2.38E-05
2130	477923.86	3768626.99	1.09E-05	2.17E-05
2131	477936.54	3768603.95	1.03E-05	2.07E-05
2132	477910.2	3768652.6	1.15E-05	2.30E-05
2133	477782.61	3768551.89	9.46E-06	1.89E-05
2134	477796.81	3768526.11	9.00E-06	1.80E-05
2135	477768.19	3768578.88	9.99E-06	2.00E-05
2136	479051.67	3769273.61	1.36E-03	2.72E-03
2137	479028.23	3769273.56	1.06E-03	2.13E-03
2138	479011.19	3769263.09	7.48E-04	1.50E-03
2139	478960.06	3769231.68	3.40E-04	6.79E-04
2140	478755.58	3769106.05	6.67E-05	1.33E-04
2141	479040.44	3769289.72	1.84E-03	3.67E-03
2142	478985.81	3769262.1	6.13E-04	1.23E-03
2143	478922.99	3769212.57	2.32E-04	4.64E-04
2144	478592.43	3768921.16	2.57E-05	5.13E-05
2145	478529.6	3768871.64	2.12E-05	4.24E-05
2146	478278.28	3768673.55	1.21E-05	2.41E-05
2147	478263.28	3768692.58	1.25E-05	2.49E-05
2148	478152.63	3768574.5	9.79E-06	1.96E-05
2149	478137.63	3768593.53	1.01E-05	2.02E-05
2150	478026.97	3768475.45	8.20E-06	1.64E-05
2151	478011.97	3768494.48	8.42E-06	1.68E-05
2152	477901.31	3768376.41	7.01E-06	1.40E-05
2153	477886.31	3768395.44	7.19E-06	1.44E-05
2154	479026.71	3769306.3	2.60E-03	5.19E-03
2155	479011.64	3769293.15	1.48E-03	2.96E-03
2156	478996.57	3769280	9.39E-04	1.88E-03
2157	478943.86	3769249.14	3.95E-04	7.91E-04
2158	478416.36	3768758.57	1.51E-05	3.03E-05
2159	478295.81	3768653.37	1.17E-05	2.34E-05
2160	478175.25	3768548.17	9.46E-06	1.89E-05
2161	478054.7	3768442.98	7.89E-06	1.58E-05
2162	478039.7	3768460.17	8.04E-06	1.61E-05
2163	477934.14	3768337.78	6.75E-06	1.35E-05
2164	477919.14	3768354.97	6.85E-06	1.37E-05
2165	479012.61	3769320.84	3.22E-03	6.45E-03
2166	478998.9	3769306.28	1.81E-03	3.62E-03
2167	478975.86	3769300.49	1.24E-03	2.48E-03
2168	478971.49	3769277.15	7.36E-04	1.47E-03
2169	478907.33	3769227.67	2.57E-04	5.14E-04
2170	478879.92	3769198.54	1.73E-04	3.46E-04
2171	478624.45	3768889.68	2.44E-05	4.87E-05
2172	478605.79	3768907.24	2.50E-05	5.00E-05
2173	478459.98	3768714.9	1.44E-05	2.89E-05
2174	478441.32	3768732.46	1.46E-05	2.93E-05
2175	478350.33	3768598.38	1.12E-05	2.23E-05
2176	478331.67	3768615.94	1.13E-05	2.26E-05
2177	478222.02	3768499.42	9.09E-06	1.82E-05
2178	478131.03	3768365.34	7.55E-06	1.51E-05
2179	478112.37	3768382.9	7.59E-06	1.52E-05
2180	478021.38	3768248.82	6.46E-06	1.29E-05

2181	478002.72	3768266.38	6.49E-06	1.30E-05
2182	478995.93	3769335.56	3.46E-03	6.93E-03
2183	478983.21	3769320.12	2.07E-03	4.13E-03
2184	478961.17	3769312.37	1.38E-03	2.75E-03
2185	478957.78	3769289.25	8.46E-04	1.69E-03
2186	478923.02	3769266.06	4.60E-04	9.20E-04
2187	478483.92	3768694.94	1.43E-05	2.86E-05
2188	478382.19	3768571.44	1.11E-05	2.22E-05
2189	478178.75	3768324.44	7.54E-06	1.51E-05
2190	478160.09	3768339.81	7.53E-06	1.51E-05
2191	478077.02	3768200.94	6.47E-06	1.29E-05
2192	478058.36	3768216.31	6.46E-06	1.29E-05
2193	478981.09	3769347.07	3.39E-03	6.78E-03
2194	478651.48	3768869.74	2.40E-05	4.81E-05
2195	478511.91	3768674.49	1.43E-05	2.86E-05
2196	478418.86	3768544.33	1.11E-05	2.22E-05
2197	478232.77	3768284	7.61E-06	1.52E-05
2198	478139.72	3768153.84	6.55E-06	1.31E-05
2199	478957.62	3769338.9	2.14E-03	4.29E-03
2200	478946.31	3769322.4	1.43E-03	2.86E-03
2201	478935	3769305.91	9.71E-04	1.94E-03
2202	478889.78	3769239.92	2.79E-04	5.58E-04
2203	478156.32	3768142.34	6.57E-06	1.31E-05
2204	478956.96	3769362.34	3.15E-03	6.30E-03
2205	478906.19	3769276.19	4.96E-04	9.91E-04
2206	478676.75	3768854.25	2.41E-05	4.82E-05
2207	478554.89	3768647.49	1.45E-05	2.89E-05
2208	478473.65	3768509.64	1.13E-05	2.26E-05
2209	478311.18	3768233.96	7.75E-06	1.55E-05
2210	478229.94	3768096.12	6.68E-06	1.34E-05
2211	478932.81	3769353.66	2.10E-03	4.19E-03
2212	478922.38	3769336.59	1.46E-03	2.92E-03
2213	478911.95	3769319.53	1.03E-03	2.06E-03
2214	478870.22	3769251.27	3.01E-04	6.01E-04
2215	478862.53	3769209.09	1.82E-04	3.63E-04
2216	478807.64	3769148.88	9.62E-05	1.92E-04
2217	478528.76	3768663.02	1.43E-05	2.87E-05
2218	478452.35	3768522.28	1.12E-05	2.24E-05
2219	478287.67	3768247.92	7.71E-06	1.54E-05
2220	478265.25	3768261.52	7.66E-06	1.53E-05
2221	478205.32	3768110.74	6.64E-06	1.33E-05
2222	478181.81	3768125	6.61E-06	1.32E-05
2223	478930.83	3769376.77	3.12E-03	6.24E-03
2224	478886.09	3769287.34	5.34E-04	1.07E-03
2225	478579.3	3768635.74	1.46E-05	2.92E-05
2226	478507.7	3768492.65	1.14E-05	2.29E-05
2227	478364.52	3768206.47	7.87E-06	1.57E-05
2228	478292.93	3768063.38	6.77E-06	1.35E-05
2229	478909.85	3769387.63	3.18E-03	6.37E-03
2230	478910.89	3769364.57	2.10E-03	4.19E-03
2231	478901.69	3769346.81	1.47E-03	2.94E-03
2232	478892.49	3769329.05	1.05E-03	2.10E-03

2233	478863.85	3769298.84	5.72E-04	1.14E-03
2234	478845.45	3769263.32	3.24E-04	6.49E-04
2235	478837.29	3769222.5	1.94E-04	3.89E-04
2236	478808.65	3769192.29	1.35E-04	2.71E-04
2237	478790.25	3769156.77	9.82E-05	1.96E-04
2238	478340.74	3768218.45	7.82E-06	1.56E-05
2239	478268.14	3768075.87	6.74E-06	1.35E-05
2240	478248.49	3768085.97	6.71E-06	1.34E-05
2241	478893.59	3769395.94	3.16E-03	6.32E-03
2242	478884.49	3769378.12	2.16E-03	4.32E-03
2243	478875.4	3769360.31	1.52E-03	3.05E-03
2244	478866.3	3769342.5	1.10E-03	2.20E-03
2245	478811.73	3769235.63	2.11E-04	4.21E-04
2246	478738.97	3769093.13	6.05E-05	1.21E-04
2247	478835.38	3769313.06	6.19E-04	1.24E-03
2248	478817.84	3769277.11	3.56E-04	7.12E-04
2249	478782.75	3769205.22	1.45E-04	2.90E-04
2250	478674.95	3768946.26	3.04E-05	6.08E-05
2251	478862.19	3769412.08	2.89E-03	5.77E-03
2252	478868.31	3769386.06	2.16E-03	4.32E-03
2253	478837.09	3769402.89	2.10E-03	4.19E-03
2254	478858.82	3769368.46	1.55E-03	3.10E-03
2255	478827.6	3769385.28	1.59E-03	3.19E-03
2256	478849.34	3769350.85	1.13E-03	2.27E-03
2257	478818.12	3769367.68	1.20E-03	2.41E-03
2258	478814.75	3769324.05	6.61E-04	1.32E-03
2259	478783.53	3769340.88	7.21E-04	1.44E-03
2260	478795.77	3769288.84	3.87E-04	7.74E-04
2261	478764.55	3769305.67	4.33E-04	8.66E-04
2262	478792.4	3769245.22	2.25E-04	4.50E-04
2263	478761.18	3769262.04	2.54E-04	5.09E-04
2264	478757.81	3769218.42	1.58E-04	3.15E-04
2265	478726.59	3769235.25	1.77E-04	3.54E-04
2266	478707.62	3769200.03	1.23E-04	2.46E-04
2267	478716.49	3769104.37	6.25E-05	1.25E-04
2268	478650.27	3768958.55	3.06E-05	6.12E-05
2269	478624.97	3768971.94	3.12E-05	6.24E-05
2270	478593.75	3768988.77	3.24E-05	6.48E-05
2271	478587.01	3768901.52	2.41E-05	4.83E-05
2272	478555.79	3768918.34	2.47E-05	4.94E-05
2273	478441.93	3768707.08	1.40E-05	2.81E-05
2274	478397.23	3768549.4	1.10E-05	2.19E-05
2275	478245.41	3768267.71	7.59E-06	1.52E-05
2276	478214.19	3768284.54	7.51E-06	1.50E-05
2277	478865.47	3769484.48	3.24E-03	6.47E-03
2278	478897.42	3769485.21	4.00E-03	8.00E-03
2279	478839.54	3769496.45	2.52E-03	5.04E-03
2280	478865.01	3769504.48	2.61E-03	5.22E-03
2281	478896.96	3769505.21	2.88E-03	5.75E-03
2282	478837.18	3769514.91	2.10E-03	4.19E-03
2283	478803	3769487.33	2.16E-03	4.32E-03
2284	478815.56	3769517.83	1.89E-03	3.78E-03

2285	478783.01	3769491.56	1.91E-03	3.82E-03
2286	478800.61	3769419.16	1.85E-03	3.70E-03
2287	478788.32	3769516.21	1.74E-03	3.47E-03
2288	478764.58	3769497.05	1.71E-03	3.43E-03
2289	478790.06	3769403.94	1.52E-03	3.04E-03
2290	478737.99	3769516.32	1.43E-03	2.85E-03
2291	478720.16	3769482.64	1.40E-03	2.81E-03
2292	478745.51	3769425.93	1.37E-03	2.73E-03
2293	478758.18	3769397.58	1.19E-03	2.38E-03
2294	478770.85	3769369.23	9.55E-04	1.91E-03
2295	478687.13	3769516	1.17E-03	2.35E-03
2296	478681.33	3769491.83	1.18E-03	2.36E-03
2297	478706.93	3769434.55	1.16E-03	2.32E-03
2298	478719.74	3769405.91	1.04E-03	2.08E-03
2299	478732.54	3769377.27	8.61E-04	1.72E-03
2300	478745.34	3769348.63	6.73E-04	1.35E-03
2301	478861.8	3769644.44	3.41E-04	6.82E-04
2302	478893.75	3769645.17	3.21E-04	6.42E-04
2303	478832.62	3769674.15	2.64E-04	5.29E-04
2304	478808.04	3769654.31	3.52E-04	7.03E-04
2305	478642.48	3769501.08	1.01E-03	2.02E-03
2306	478681.14	3769414.6	9.15E-04	1.83E-03
2307	478694.02	3769385.77	7.81E-04	1.56E-03
2308	478706.91	3769356.94	6.30E-04	1.26E-03
2309	478719.8	3769328.11	4.86E-04	9.72E-04
2310	478732.68	3769299.29	3.64E-04	7.28E-04
2311	478860.88	3769684.43	2.29E-04	4.58E-04
2312	478892.83	3769685.16	2.24E-04	4.47E-04
2313	478831.64	3769714.09	1.84E-04	3.68E-04
2314	478806.96	3769694.17	2.30E-04	4.59E-04
2315	478782.27	3769674.25	3.02E-04	6.05E-04
2316	478757.59	3769654.33	4.06E-04	8.13E-04
2317	478603.61	3769510.36	8.76E-04	1.75E-03
2318	478642.45	3769423.48	8.13E-04	1.63E-03
2319	478655.39	3769394.52	7.11E-04	1.42E-03
2320	478668.34	3769365.56	5.89E-04	1.18E-03
2321	478681.28	3769336.6	4.66E-04	9.32E-04
2322	478694.23	3769307.64	3.58E-04	7.16E-04
2323	478707.18	3769278.68	2.70E-04	5.40E-04
2324	478859.96	3769724.42	1.67E-04	3.34E-04
2325	478891.91	3769725.15	1.67E-04	3.33E-04
2326	478830.68	3769754.05	1.38E-04	2.76E-04
2327	478805.92	3769734.06	1.63E-04	3.25E-04
2328	478781.15	3769714.07	2.02E-04	4.05E-04
2329	478756.38	3769694.08	2.64E-04	5.27E-04
2330	478731.61	3769674.09	3.49E-04	6.98E-04
2331	478706.85	3769654.11	4.54E-04	9.08E-04
2332	478564.74	3769519.65	7.71E-04	1.54E-03
2333	478577.73	3769490.59	7.89E-04	1.58E-03
2334	478603.71	3769432.48	7.26E-04	1.45E-03
2335	478616.69	3769403.42	6.48E-04	1.30E-03
2336	478629.68	3769374.37	5.50E-04	1.10E-03

2337	478642.67	3769345.31	4.47E-04	8.94E-04
2338	478655.66	3769316.26	3.51E-04	7.01E-04
2339	478668.65	3769287.2	2.70E-04	5.40E-04
2340	478681.64	3769258.15	2.06E-04	4.12E-04
2341	478694.63	3769229.09	1.58E-04	3.16E-04
2342	478859.04	3769764.41	1.29E-04	2.58E-04
2343	478891	3769765.14	1.30E-04	2.60E-04
2344	478829.21	3769834.31	8.87E-05	1.77E-04
2345	478805.15	3769814.9	9.75E-05	1.95E-04
2346	478781.1	3769795.49	1.10E-04	2.20E-04
2347	478757.05	3769776.08	1.29E-04	2.57E-04
2348	478733	3769756.67	1.57E-04	3.14E-04
2349	478708.95	3769737.26	1.98E-04	3.96E-04
2350	478684.9	3769717.85	2.53E-04	5.07E-04
2351	478660.84	3769698.44	3.22E-04	6.43E-04
2352	478636.79	3769679.03	3.97E-04	7.95E-04
2353	478612.74	3769659.62	4.73E-04	9.47E-04
2354	478588.69	3769640.21	5.41E-04	1.08E-03
2355	478499.38	3769510.53	6.29E-04	1.26E-03
2356	478537.22	3769425.88	5.52E-04	1.10E-03
2357	478549.83	3769397.67	4.92E-04	9.84E-04
2358	478562.44	3769369.45	4.22E-04	8.44E-04
2359	478575.06	3769341.23	3.51E-04	7.02E-04
2360	478587.67	3769313.02	2.84E-04	5.69E-04
2361	478600.29	3769284.8	2.26E-04	4.53E-04
2362	478612.9	3769256.59	1.79E-04	3.58E-04
2363	478625.51	3769228.37	1.42E-04	2.84E-04
2364	478638.13	3769200.15	1.13E-04	2.27E-04
2365	478857.21	3769844.39	8.55E-05	1.71E-04
2366	478889.16	3769845.12	8.65E-05	1.73E-04
2367	478827.26	3769914.21	6.36E-05	1.27E-04
2368	478803	3769894.63	6.81E-05	1.36E-04
2369	478778.74	3769875.05	7.36E-05	1.47E-04
2370	478754.48	3769855.46	8.10E-05	1.62E-04
2371	478730.21	3769835.88	9.15E-05	1.83E-04
2372	478705.95	3769816.3	1.07E-04	2.14E-04
2373	478681.69	3769796.72	1.29E-04	2.59E-04
2374	478657.43	3769777.14	1.61E-04	3.22E-04
2375	478633.16	3769757.56	2.02E-04	4.03E-04
2376	478608.9	3769737.98	2.52E-04	5.03E-04
2377	478584.64	3769718.4	3.08E-04	6.15E-04
2378	478560.38	3769698.82	3.65E-04	7.30E-04
2379	478536.11	3769679.23	4.19E-04	8.39E-04
2380	478511.85	3769659.65	4.65E-04	9.29E-04
2381	478487.59	3769640.07	4.97E-04	9.95E-04
2382	478421.75	3769528.84	5.18E-04	1.04E-03
2383	478434.48	3769500.38	5.15E-04	1.03E-03
2384	478472.65	3769414.99	4.27E-04	8.54E-04
2385	478485.38	3769386.52	3.77E-04	7.54E-04
2386	478498.1	3769358.06	3.24E-04	6.47E-04
2387	478510.82	3769329.6	2.71E-04	5.41E-04
2388	478523.55	3769301.13	2.22E-04	4.44E-04

2389	478536.27	3769272.67	1.80E-04	3.59E-04
2390	478549	3769244.2	1.45E-04	2.90E-04
2391	478561.72	3769215.74	1.17E-04	2.35E-04
2392	478574.45	3769187.28	9.58E-05	1.92E-04
2393	478587.17	3769158.81	7.92E-05	1.58E-04
2394	478599.89	3769130.35	6.63E-05	1.33E-04
2395	478612.62	3769101.89	5.62E-05	1.12E-04
2396	478855.37	3769924.37	6.18E-05	1.24E-04
2397	478887.33	3769925.1	6.23E-05	1.25E-04
2398	478825.35	3769994.13	4.84E-05	9.67E-05
2399	478800.94	3769974.42	5.12E-05	1.02E-04
2400	478776.53	3769954.72	5.44E-05	1.09E-04
2401	478752.11	3769935.02	5.81E-05	1.16E-04
2402	478727.7	3769915.32	6.29E-05	1.26E-04
2403	478703.29	3769895.61	6.94E-05	1.39E-04
2404	478678.87	3769875.91	7.85E-05	1.57E-04
2405	478654.46	3769856.21	9.14E-05	1.83E-04
2406	478630.05	3769836.5	1.10E-04	2.19E-04
2407	478605.63	3769816.8	1.34E-04	2.68E-04
2408	478581.22	3769797.1	1.65E-04	3.31E-04
2409	478556.81	3769777.4	2.03E-04	4.06E-04
2410	478532.39	3769757.69	2.46E-04	4.92E-04
2411	478507.98	3769737.99	2.91E-04	5.81E-04
2412	478483.57	3769718.29	3.34E-04	6.68E-04
2413	478459.15	3769698.59	3.73E-04	7.46E-04
2414	478434.74	3769678.88	4.05E-04	8.09E-04
2415	478410.33	3769659.18	4.26E-04	8.53E-04
2416	478385.91	3769639.48	4.37E-04	8.75E-04
2417	478395.3	3769432.7	3.73E-04	7.47E-04
2418	478408.1	3769404.06	3.37E-04	6.74E-04
2419	478420.9	3769375.42	2.97E-04	5.93E-04
2420	478433.71	3769346.77	2.55E-04	5.11E-04
2421	478446.51	3769318.13	2.15E-04	4.31E-04
2422	478459.31	3769289.49	1.79E-04	3.58E-04
2423	478472.12	3769260.85	1.47E-04	2.94E-04
2424	478484.92	3769232.21	1.21E-04	2.42E-04
2425	478497.72	3769203.57	9.96E-05	1.99E-04
2426	478523.33	3769146.29	6.96E-05	1.39E-04
2427	478536.13	3769117.65	5.90E-05	1.18E-04
2428	478548.94	3769089.01	5.06E-05	1.01E-04
2429	478853.54	3770004.34	4.72E-05	9.44E-05
2430	478885.49	3770005.08	4.74E-05	9.48E-05
2431	478823.46	3770074.06	3.84E-05	7.67E-05
2432	478798.94	3770054.27	4.03E-05	8.06E-05
2433	478774.41	3770034.47	4.24E-05	8.49E-05
2434	478749.88	3770014.68	4.48E-05	8.96E-05
2435	478725.36	3769994.88	4.75E-05	9.50E-05
2436	478700.83	3769975.09	5.08E-05	1.02E-04
2437	478676.3	3769955.3	5.51E-05	1.10E-04
2438	478651.78	3769935.5	6.08E-05	1.22E-04
2439	478627.25	3769915.71	6.87E-05	1.37E-04
2440	478602.72	3769895.91	7.97E-05	1.59E-04

2441	478578.2	3769876.12	9.46E-05	1.89E-04
2442	478553.67	3769856.33	1.14E-04	2.28E-04
2443	478529.14	3769836.53	1.39E-04	2.78E-04
2444	478504.62	3769816.74	1.68E-04	3.37E-04
2445	478480.09	3769796.94	2.01E-04	4.02E-04
2446	478455.57	3769777.15	2.36E-04	4.73E-04
2447	478431.04	3769757.36	2.72E-04	5.43E-04
2448	478406.51	3769737.56	3.05E-04	6.09E-04
2449	478381.99	3769717.77	3.33E-04	6.66E-04
2450	478357.46	3769697.97	3.56E-04	7.11E-04
2451	478332.93	3769678.18	3.70E-04	7.40E-04
2452	478308.41	3769658.39	3.77E-04	7.55E-04
2453	478283.88	3769638.59	3.77E-04	7.53E-04
2454	478330.7	3769421.88	3.03E-04	6.06E-04
2455	478343.56	3769393.1	2.72E-04	5.44E-04
2456	478356.42	3769364.33	2.39E-04	4.79E-04
2457	478369.29	3769335.56	2.06E-04	4.13E-04
2458	478382.15	3769306.78	1.75E-04	3.51E-04
2459	478395.01	3769278.01	1.47E-04	2.95E-04
2460	478407.87	3769249.24	1.23E-04	2.46E-04
2461	478420.74	3769220.46	1.03E-04	2.06E-04
2462	478433.6	3769191.69	8.61E-05	1.72E-04
2463	478446.46	3769162.92	7.27E-05	1.45E-04
2464	478459.32	3769134.14	6.20E-05	1.24E-04
2465	478472.19	3769105.37	5.33E-05	1.07E-04
2466	478485.05	3769076.6	4.61E-05	9.23E-05
2467	478497.91	3769047.82	4.03E-05	8.05E-05
2468	478536.5	3768961.5	2.83E-05	5.66E-05
2469	478851.7	3770084.32	3.75E-05	7.50E-05
2470	478883.65	3770085.06	3.76E-05	7.52E-05
2471	478821.58	3770154	3.14E-05	6.29E-05
2472	478796.97	3770134.14	3.29E-05	6.57E-05
2473	478772.35	3770114.27	3.44E-05	6.87E-05
2474	478747.74	3770094.41	3.60E-05	7.20E-05
2475	478723.12	3770074.54	3.78E-05	7.56E-05
2476	478698.51	3770054.68	3.98E-05	7.97E-05
2477	478673.9	3770034.81	4.22E-05	8.45E-05
2478	478649.28	3770014.95	4.52E-05	9.04E-05
2479	478624.67	3769995.08	4.90E-05	9.81E-05
2480	478600.05	3769975.22	5.41E-05	1.08E-04
2481	478575.44	3769955.35	6.11E-05	1.22E-04
2482	478550.82	3769935.49	7.05E-05	1.41E-04
2483	478526.21	3769915.62	8.30E-05	1.66E-04
2484	478501.6	3769895.76	9.89E-05	1.98E-04
2485	478476.98	3769875.89	1.19E-04	2.37E-04
2486	478452.37	3769856.03	1.42E-04	2.84E-04
2487	478427.75	3769836.16	1.68E-04	3.37E-04
2488	478403.14	3769816.3	1.97E-04	3.93E-04
2489	478378.52	3769796.43	2.25E-04	4.51E-04
2490	478353.91	3769776.57	2.53E-04	5.06E-04
2491	478329.3	3769756.71	2.78E-04	5.56E-04
2492	478304.68	3769736.84	2.99E-04	5.98E-04

2493	478280.07	3769716.98	3.15E-04	6.30E-04
2494	478255.45	3769697.11	3.25E-04	6.50E-04
2495	478230.84	3769677.25	3.30E-04	6.59E-04
2496	478206.22	3769657.38	3.28E-04	6.57E-04
2497	478181.61	3769637.52	3.22E-04	6.45E-04
2498	478253.21	3769439.89	2.73E-04	5.45E-04
2499	478266.12	3769411.01	2.49E-04	4.98E-04
2500	478279.03	3769382.13	2.23E-04	4.46E-04
2501	478291.94	3769353.26	1.96E-04	3.93E-04
2502	478304.84	3769324.38	1.70E-04	3.41E-04
2503	478317.75	3769295.5	1.46E-04	2.92E-04
2504	478330.66	3769266.63	1.24E-04	2.48E-04
2505	478343.57	3769237.75	1.05E-04	2.10E-04
2506	478356.48	3769208.88	8.87E-05	1.77E-04
2507	478382.3	3769151.12	6.47E-05	1.29E-04
2508	478395.2	3769122.25	5.58E-05	1.12E-04
2509	478408.11	3769093.37	4.85E-05	9.70E-05
2510	478433.93	3769035.62	3.74E-05	7.48E-05
2511	478446.84	3769006.74	3.31E-05	6.62E-05
2512	478459.75	3768977.86	2.94E-05	5.89E-05
2513	478849.87	3770164.3	3.08E-05	6.16E-05
2514	478881.82	3770165.04	3.08E-05	6.17E-05
2515	478817.85	3770313.91	2.27E-05	4.54E-05
2516	478793.1	3770293.94	2.35E-05	4.70E-05
2517	478768.36	3770273.97	2.44E-05	4.87E-05
2518	478743.62	3770254.01	2.53E-05	5.06E-05
2519	478718.88	3770234.04	2.63E-05	5.26E-05
2520	478694.14	3770214.07	2.73E-05	5.47E-05
2521	478669.39	3770194.1	2.85E-05	5.70E-05
2522	478644.65	3770174.13	2.98E-05	5.95E-05
2523	478619.91	3770154.16	3.12E-05	6.24E-05
2524	478595.17	3770134.2	3.28E-05	6.56E-05
2525	478570.43	3770114.23	3.48E-05	6.95E-05
2526	478545.68	3770094.26	3.72E-05	7.45E-05
2527	478520.94	3770074.29	4.04E-05	8.08E-05
2528	478496.2	3770054.32	4.45E-05	8.91E-05
2529	478471.46	3770034.36	5.00E-05	9.99E-05
2530	478446.71	3770014.39	5.70E-05	1.14E-04
2531	478421.97	3769994.42	6.60E-05	1.32E-04
2532	478397.23	3769974.45	7.70E-05	1.54E-04
2533	478372.49	3769954.48	9.03E-05	1.81E-04
2534	478347.75	3769934.52	1.06E-04	2.12E-04
2535	478323	3769914.55	1.23E-04	2.47E-04
2536	478298.26	3769894.58	1.42E-04	2.84E-04
2537	478273.52	3769874.61	1.62E-04	3.23E-04
2538	478248.78	3769854.64	1.81E-04	3.63E-04
2539	478224.04	3769834.68	2.00E-04	4.01E-04
2540	478199.29	3769814.71	2.18E-04	4.35E-04
2541	478174.55	3769794.74	2.32E-04	4.65E-04
2542	478149.81	3769774.77	2.44E-04	4.88E-04
2543	478125.07	3769754.8	2.53E-04	5.05E-04
2544	478100.32	3769734.83	2.58E-04	5.15E-04

2545	478075.58	3769714.87	2.59E-04	5.18E-04
2546	478050.84	3769694.9	2.57E-04	5.14E-04
2547	478026.1	3769674.93	2.52E-04	5.05E-04
2548	478085.09	3769505.3	2.37E-04	4.74E-04
2549	478098.07	3769476.27	2.25E-04	4.49E-04
2550	478111.04	3769447.25	2.10E-04	4.20E-04
2551	478124.02	3769418.22	1.93E-04	3.87E-04
2552	478137	3769389.2	1.76E-04	3.51E-04
2553	478149.97	3769360.17	1.57E-04	3.15E-04
2554	478162.95	3769331.14	1.39E-04	2.78E-04
2555	478175.92	3769302.12	1.22E-04	2.44E-04
2556	478188.9	3769273.09	1.06E-04	2.12E-04
2557	478201.87	3769244.06	9.17E-05	1.83E-04
2558	478214.85	3769215.04	7.93E-05	1.59E-04
2559	478240.8	3769156.98	5.98E-05	1.20E-04
2560	478253.78	3769127.96	5.24E-05	1.05E-04
2561	478266.75	3769098.93	4.62E-05	9.24E-05
2562	478279.73	3769069.91	4.10E-05	8.19E-05
2563	478299.19	3769026.37	3.46E-05	6.91E-05
2564	478331.63	3768953.8	2.64E-05	5.28E-05
2565	478344.61	3768924.77	2.38E-05	4.77E-05
2566	478357.58	3768895.75	2.16E-05	4.32E-05
2567	478370.56	3768866.72	1.97E-05	3.94E-05
2568	478383.53	3768837.69	1.81E-05	3.63E-05
2569	478846.19	3770324.26	2.23E-05	4.46E-05
2570	478878.15	3770324.99	2.23E-05	4.46E-05
2571	478814.13	3770473.83	1.75E-05	3.51E-05
2572	478789.3	3770453.79	1.80E-05	3.61E-05
2573	478764.47	3770433.75	1.86E-05	3.72E-05
2574	478739.64	3770413.71	1.91E-05	3.83E-05
2575	478714.81	3770393.67	1.98E-05	3.95E-05
2576	478689.98	3770373.63	2.04E-05	4.08E-05
2577	478665.15	3770353.59	2.11E-05	4.22E-05
2578	478640.32	3770333.55	2.19E-05	4.37E-05
2579	478615.49	3770313.52	2.27E-05	4.53E-05
2580	478590.66	3770293.48	2.35E-05	4.71E-05
2581	478565.82	3770273.44	2.45E-05	4.89E-05
2582	478540.99	3770253.4	2.55E-05	5.10E-05
2583	478516.16	3770233.36	2.66E-05	5.33E-05
2584	478491.33	3770213.32	2.80E-05	5.61E-05
2585	478466.5	3770193.28	2.97E-05	5.94E-05
2586	478441.67	3770173.24	3.18E-05	6.36E-05
2587	478416.84	3770153.2	3.45E-05	6.89E-05
2588	478392.01	3770133.16	3.79E-05	7.57E-05
2589	478367.18	3770113.12	4.22E-05	8.44E-05
2590	478342.35	3770093.08	4.76E-05	9.52E-05
2591	478317.52	3770073.04	5.42E-05	1.08E-04
2592	478292.69	3770053	6.22E-05	1.24E-04
2593	478267.86	3770032.96	7.17E-05	1.43E-04
2594	478243.03	3770012.92	8.26E-05	1.65E-04
2595	478218.2	3769992.88	9.48E-05	1.90E-04
2596	478193.36	3769972.84	1.08E-04	2.16E-04

2597	478168.53	3769952.8	1.22E-04	2.44E-04
2598	478143.7	3769932.76	1.36E-04	2.73E-04
2599	478118.87	3769912.72	1.51E-04	3.01E-04
2600	478094.04	3769892.68	1.64E-04	3.28E-04
2601	478069.21	3769872.65	1.76E-04	3.53E-04
2602	478044.38	3769852.61	1.87E-04	3.75E-04
2603	478019.55	3769832.57	1.96E-04	3.93E-04
2604	477994.72	3769812.53	2.03E-04	4.07E-04
2605	477969.89	3769792.49	2.08E-04	4.16E-04
2606	477945.06	3769772.45	2.11E-04	4.22E-04
2607	477870.57	3769712.33	2.06E-04	4.11E-04
2608	477864.66	3769687.74	2.05E-04	4.10E-04
2609	477877.68	3769658.61	2.07E-04	4.14E-04
2610	477890.71	3769629.48	2.08E-04	4.16E-04
2611	477942.79	3769512.96	1.89E-04	3.79E-04
2612	477955.82	3769483.83	1.79E-04	3.59E-04
2613	477968.84	3769454.7	1.68E-04	3.37E-04
2614	477981.86	3769425.57	1.56E-04	3.12E-04
2615	477994.88	3769396.44	1.43E-04	2.86E-04
2616	478007.91	3769367.31	1.30E-04	2.59E-04
2617	478020.93	3769338.18	1.16E-04	2.33E-04
2618	478033.95	3769309.05	1.04E-04	2.07E-04
2619	478046.97	3769279.92	9.18E-05	1.84E-04
2620	478059.99	3769250.79	8.09E-05	1.62E-04
2621	478073.02	3769221.66	7.11E-05	1.42E-04
2622	478086.04	3769192.53	6.25E-05	1.25E-04
2623	478099.06	3769163.4	5.52E-05	1.10E-04
2624	478112.08	3769134.27	4.89E-05	9.78E-05
2625	478125.1	3769105.14	4.36E-05	8.72E-05
2626	478138.13	3769076.01	3.91E-05	7.81E-05
2627	478151.15	3769046.88	3.52E-05	7.05E-05
2628	478164.17	3769017.75	3.19E-05	6.38E-05
2629	478177.19	3768988.62	2.89E-05	5.79E-05
2630	478190.22	3768959.49	2.63E-05	5.26E-05
2631	478222.77	3768886.66	2.09E-05	4.18E-05
2632	478235.79	3768857.53	1.91E-05	3.82E-05
2633	478248.81	3768828.4	1.75E-05	3.50E-05
2634	478261.84	3768799.27	1.61E-05	3.23E-05
2635	478274.86	3768770.14	1.49E-05	2.99E-05
2636	478313.93	3768682.75	1.24E-05	2.49E-05
2637	478326.95	3768653.62	1.19E-05	2.38E-05
2638	478359.5	3768580.8	1.10E-05	2.20E-05
2639	478842.52	3770484.22	1.73E-05	3.46E-05
2640	478874.48	3770484.95	1.73E-05	3.46E-05
2641	478810.56	3770633.87	1.42E-05	2.84E-05
2642	478785.94	3770614	1.45E-05	2.91E-05
2643	478761.32	3770594.13	1.49E-05	2.98E-05
2644	478736.7	3770574.26	1.53E-05	3.05E-05
2645	478712.08	3770554.39	1.57E-05	3.13E-05
2646	478687.45	3770534.52	1.61E-05	3.22E-05
2647	478662.83	3770514.65	1.65E-05	3.30E-05
2648	478638.21	3770494.78	1.70E-05	3.40E-05

2649	478613.59	3770474.9	1.75E-05	3.51E-05
2650	478588.97	3770455.03	1.81E-05	3.62E-05
2651	478564.34	3770435.16	1.87E-05	3.73E-05
2652	478539.72	3770415.29	1.93E-05	3.85E-05
2653	478515.1	3770395.42	1.99E-05	3.98E-05
2654	478490.48	3770375.55	2.06E-05	4.12E-05
2655	478465.86	3770355.68	2.14E-05	4.27E-05
2656	478441.23	3770335.81	2.22E-05	4.44E-05
2657	478416.61	3770315.94	2.32E-05	4.63E-05
2658	478391.99	3770296.06	2.43E-05	4.86E-05
2659	478367.37	3770276.19	2.57E-05	5.14E-05
2660	478342.75	3770256.32	2.74E-05	5.48E-05
2661	478318.12	3770236.45	2.95E-05	5.91E-05
2662	478293.5	3770216.58	3.22E-05	6.44E-05
2663	478268.88	3770196.71	3.55E-05	7.09E-05
2664	478244.26	3770176.84	3.95E-05	7.89E-05
2665	478219.64	3770156.97	4.42E-05	8.85E-05
2666	478195.01	3770137.1	4.99E-05	9.98E-05
2667	478170.39	3770117.22	5.66E-05	1.13E-04
2668	478145.77	3770097.35	6.42E-05	1.28E-04
2669	478121.15	3770077.48	7.27E-05	1.45E-04
2670	478096.53	3770057.61	8.19E-05	1.64E-04
2671	478071.9	3770037.74	9.19E-05	1.84E-04
2672	478047.28	3770017.87	1.02E-04	2.05E-04
2673	478022.66	3769998	1.13E-04	2.26E-04
2674	477998.04	3769978.13	1.24E-04	2.47E-04
2675	477973.42	3769958.25	1.34E-04	2.68E-04
2676	477948.79	3769938.38	1.43E-04	2.87E-04
2677	477924.17	3769918.51	1.52E-04	3.04E-04
2678	477899.55	3769898.64	1.60E-04	3.19E-04
2679	477874.93	3769878.77	1.66E-04	3.32E-04
2680	477850.31	3769858.9	1.71E-04	3.42E-04
2681	477825.68	3769839.03	1.74E-04	3.49E-04
2682	477776.44	3769799.29	1.77E-04	3.54E-04
2683	477751.82	3769779.41	1.76E-04	3.52E-04
2684	477727.2	3769759.54	1.73E-04	3.47E-04
2685	477709.03	3769725.23	1.71E-04	3.43E-04
2686	477721.94	3769696.34	1.73E-04	3.46E-04
2687	477734.86	3769667.46	1.74E-04	3.47E-04
2688	477747.77	3769638.57	1.73E-04	3.45E-04
2689	477812.33	3769494.15	1.48E-04	2.95E-04
2690	477825.24	3769465.26	1.39E-04	2.78E-04
2691	477838.16	3769436.38	1.30E-04	2.60E-04
2692	477851.07	3769407.49	1.20E-04	2.41E-04
2693	477863.98	3769378.6	1.11E-04	2.21E-04
2694	477876.9	3769349.72	1.01E-04	2.01E-04
2695	477889.81	3769320.83	9.11E-05	1.82E-04
2696	477902.72	3769291.95	8.18E-05	1.64E-04
2697	477915.63	3769263.06	7.33E-05	1.47E-04
2698	477928.55	3769234.18	6.54E-05	1.31E-04
2699	477941.46	3769205.29	5.84E-05	1.17E-04
2700	477967.28	3769147.52	4.67E-05	9.35E-05

2701	477980.2	3769118.64	4.20E-05	8.40E-05
2702	477993.11	3769089.75	3.79E-05	7.59E-05
2703	478006.02	3769060.86	3.45E-05	6.89E-05
2704	478018.94	3769031.98	3.14E-05	6.29E-05
2705	478031.85	3769003.09	2.88E-05	5.76E-05
2706	478044.76	3768974.21	2.64E-05	5.29E-05
2707	478057.67	3768945.32	2.44E-05	4.87E-05
2708	478070.59	3768916.44	2.24E-05	4.49E-05
2709	478083.5	3768887.55	2.07E-05	4.14E-05
2710	478115.78	3768815.34	1.69E-05	3.39E-05
2711	478128.69	3768786.45	1.56E-05	3.13E-05
2712	478141.61	3768757.57	1.45E-05	2.90E-05
2713	478154.52	3768728.68	1.35E-05	2.69E-05
2714	478167.43	3768699.8	1.26E-05	2.51E-05
2715	478212.63	3768598.7	1.04E-05	2.07E-05
2716	478225.54	3768569.81	9.96E-06	1.99E-05
2717	478238.45	3768540.93	9.65E-06	1.93E-05
2718	478251.36	3768512.04	9.40E-06	1.88E-05
2719	478264.28	3768483.16	9.19E-06	1.84E-05
2720	478838.85	3770644.18	1.41E-05	2.81E-05
2721	478870.81	3770644.91	1.40E-05	2.81E-05
2722	478806.85	3770793.8	1.19E-05	2.38E-05
2723	478782.15	3770773.86	1.22E-05	2.43E-05
2724	478757.45	3770753.93	1.24E-05	2.48E-05
2725	478732.74	3770733.99	1.27E-05	2.53E-05
2726	478708.04	3770714.05	1.29E-05	2.58E-05
2727	478683.34	3770694.12	1.32E-05	2.64E-05
2728	478658.64	3770674.18	1.35E-05	2.70E-05
2729	478633.93	3770654.24	1.38E-05	2.77E-05
2730	478609.23	3770634.31	1.42E-05	2.84E-05
2731	478584.53	3770614.37	1.46E-05	2.92E-05
2732	478559.82	3770594.43	1.50E-05	3.00E-05
2733	478535.12	3770574.5	1.54E-05	3.08E-05
2734	478510.42	3770554.56	1.59E-05	3.17E-05
2735	478485.71	3770534.62	1.63E-05	3.26E-05
2736	478461.01	3770514.69	1.68E-05	3.36E-05
2737	478436.31	3770494.75	1.73E-05	3.46E-05
2738	478411.6	3770474.81	1.78E-05	3.57E-05
2739	478386.9	3770454.88	1.84E-05	3.68E-05
2740	478362.2	3770434.94	1.90E-05	3.81E-05
2741	478337.5	3770415	1.98E-05	3.96E-05
2742	478312.79	3770395.07	2.06E-05	4.13E-05
2743	478288.09	3770375.13	2.16E-05	4.33E-05
2744	478263.39	3770355.19	2.29E-05	4.57E-05
2745	478238.68	3770335.26	2.44E-05	4.87E-05
2746	478213.98	3770315.32	2.62E-05	5.24E-05
2747	478189.28	3770295.39	2.84E-05	5.68E-05
2748	478164.57	3770275.45	3.11E-05	6.22E-05
2749	478139.87	3770255.51	3.43E-05	6.86E-05
2750	478115.17	3770235.58	3.81E-05	7.61E-05
2751	478090.46	3770215.64	4.25E-05	8.50E-05
2752	478065.76	3770195.7	4.76E-05	9.51E-05

2753	478041.06	3770175.77	5.33E-05	1.07E-04
2754	478016.36	3770155.83	5.97E-05	1.19E-04
2755	477991.65	3770135.89	6.67E-05	1.33E-04
2756	477966.95	3770115.96	7.42E-05	1.48E-04
2757	477942.25	3770096.02	8.22E-05	1.64E-04
2758	477917.54	3770076.08	9.03E-05	1.81E-04
2759	477892.84	3770056.15	9.86E-05	1.97E-04
2760	477868.14	3770036.21	1.07E-04	2.14E-04
2761	477843.43	3770016.27	1.15E-04	2.29E-04
2762	477818.73	3769996.34	1.22E-04	2.44E-04
2763	477794.03	3769976.4	1.29E-04	2.58E-04
2764	477769.33	3769956.46	1.35E-04	2.70E-04
2765	477744.62	3769936.53	1.40E-04	2.80E-04
2766	477670.51	3769876.72	1.49E-04	2.99E-04
2767	477645.81	3769856.78	1.51E-04	3.01E-04
2768	477621.11	3769836.84	1.51E-04	3.01E-04
2769	477596.4	3769816.91	1.50E-04	2.99E-04
2770	477571.7	3769796.97	1.48E-04	2.95E-04
2771	477553.48	3769762.54	1.46E-04	2.92E-04
2772	477566.43	3769733.56	1.47E-04	2.95E-04
2773	477579.39	3769704.58	1.48E-04	2.96E-04
2774	477592.34	3769675.6	1.47E-04	2.95E-04
2775	477605.3	3769646.62	1.46E-04	2.92E-04
2776	477670.07	3769501.72	1.24E-04	2.48E-04
2777	477683.03	3769472.74	1.17E-04	2.34E-04
2778	477695.98	3769443.76	1.10E-04	2.20E-04
2779	477708.94	3769414.78	1.02E-04	2.05E-04
2780	477721.89	3769385.8	9.46E-05	1.89E-04
2781	477734.85	3769356.82	8.69E-05	1.74E-04
2782	477747.8	3769327.84	7.93E-05	1.59E-04
2783	477760.76	3769298.86	7.22E-05	1.44E-04
2784	477773.71	3769269.88	6.53E-05	1.31E-04
2785	477786.67	3769240.9	5.89E-05	1.18E-04
2786	477799.62	3769211.92	5.31E-05	1.06E-04
2787	477825.53	3769153.95	4.33E-05	8.67E-05
2788	477838.49	3769124.97	3.93E-05	7.85E-05
2789	477851.45	3769095.99	3.57E-05	7.15E-05
2790	477864.4	3769067.01	3.26E-05	6.52E-05
2791	477877.36	3769038.03	2.99E-05	5.98E-05
2792	477890.31	3769009.05	2.76E-05	5.52E-05
2793	477903.27	3768980.07	2.55E-05	5.10E-05
2794	477916.22	3768951.09	2.36E-05	4.73E-05
2795	477929.18	3768922.11	2.20E-05	4.39E-05
2796	477942.13	3768893.13	2.04E-05	4.09E-05
2797	477955.09	3768864.15	1.90E-05	3.80E-05
2798	477968.04	3768835.17	1.77E-05	3.54E-05
2799	478006.91	3768748.23	1.43E-05	2.85E-05
2800	478019.86	3768719.25	1.33E-05	2.66E-05
2801	478032.82	3768690.27	1.24E-05	2.48E-05
2802	478045.77	3768661.29	1.16E-05	2.32E-05
2803	478058.73	3768632.31	1.09E-05	2.17E-05
2804	478071.68	3768603.33	1.02E-05	2.05E-05

2805	478104.07	3768530.87	9.04E-06	1.81E-05
2806	478117.03	3768501.89	8.69E-06	1.74E-05
2807	478129.98	3768472.91	8.42E-06	1.68E-05
2808	478142.94	3768443.93	8.19E-06	1.64E-05
2809	478155.89	3768414.95	8.01E-06	1.60E-05
2810	478168.85	3768385.97	7.87E-06	1.57E-05
2811	478181.8	3768356.99	7.75E-06	1.55E-05
2812	478201.24	3768313.52	7.59E-06	1.52E-05
2813	478835.18	3770804.13	1.18E-05	2.36E-05
2814	478867.13	3770804.87	1.18E-05	2.36E-05
2815	478803.15	3770953.73	1.02E-05	2.05E-05
2816	478778.38	3770933.74	1.04E-05	2.08E-05
2817	478753.62	3770913.75	1.06E-05	2.12E-05
2818	478728.85	3770893.77	1.08E-05	2.16E-05
2819	478704.08	3770873.78	1.10E-05	2.19E-05
2820	478679.31	3770853.79	1.12E-05	2.24E-05
2821	478654.55	3770833.8	1.14E-05	2.28E-05
2822	478629.78	3770813.81	1.16E-05	2.33E-05
2823	478605.01	3770793.82	1.19E-05	2.38E-05
2824	478580.25	3770773.84	1.21E-05	2.43E-05
2825	478555.48	3770753.85	1.24E-05	2.49E-05
2826	478530.71	3770733.86	1.27E-05	2.55E-05
2827	478505.94	3770713.87	1.31E-05	2.61E-05
2828	478481.18	3770693.88	1.34E-05	2.68E-05
2829	478456.41	3770673.89	1.38E-05	2.75E-05
2830	478431.64	3770653.91	1.41E-05	2.82E-05
2831	478406.88	3770633.92	1.45E-05	2.90E-05
2832	478382.11	3770613.93	1.49E-05	2.97E-05
2833	478357.34	3770593.94	1.53E-05	3.05E-05
2834	478332.57	3770573.95	1.57E-05	3.14E-05
2835	478307.81	3770553.97	1.61E-05	3.23E-05
2836	478283.04	3770533.98	1.66E-05	3.33E-05
2837	478258.27	3770513.99	1.72E-05	3.44E-05
2838	478233.51	3770494	1.79E-05	3.57E-05
2839	478208.74	3770474.01	1.86E-05	3.72E-05
2840	478183.97	3770454.02	1.95E-05	3.91E-05
2841	478159.2	3770434.04	2.06E-05	4.13E-05
2842	478134.44	3770414.05	2.19E-05	4.39E-05
2843	478109.67	3770394.06	2.35E-05	4.70E-05
2844	478084.9	3770374.07	2.54E-05	5.08E-05
2845	478060.14	3770354.08	2.76E-05	5.52E-05
2846	478035.37	3770334.09	3.02E-05	6.04E-05
2847	478010.6	3770314.11	3.32E-05	6.65E-05
2848	477985.83	3770294.12	3.67E-05	7.35E-05
2849	477961.07	3770274.13	4.07E-05	8.14E-05
2850	477936.3	3770254.14	4.52E-05	9.03E-05
2851	477911.53	3770234.15	5.01E-05	1.00E-04
2852	477886.76	3770214.16	5.55E-05	1.11E-04
2853	477862	3770194.18	6.13E-05	1.23E-04
2854	477837.23	3770174.19	6.74E-05	1.35E-04
2855	477812.46	3770154.2	7.38E-05	1.48E-04
2856	477787.7	3770134.21	8.04E-05	1.61E-04

2857	477762.93	3770114.22	8.69E-05	1.74E-04
2858	477738.16	3770094.23	9.34E-05	1.87E-04
2859	477713.39	3770074.25	9.96E-05	1.99E-04
2860	477688.63	3770054.26	1.06E-04	2.11E-04
2861	477663.86	3770034.27	1.11E-04	2.22E-04
2862	477639.09	3770014.28	1.16E-04	2.32E-04
2863	477564.79	3769954.32	1.27E-04	2.53E-04
2864	477540.02	3769934.33	1.29E-04	2.58E-04
2865	477515.26	3769914.34	1.30E-04	2.60E-04
2866	477490.49	3769894.35	1.31E-04	2.61E-04
2867	477465.72	3769874.36	1.31E-04	2.61E-04
2868	477440.96	3769854.37	1.30E-04	2.59E-04
2869	477416.19	3769834.39	1.28E-04	2.56E-04
2870	477397.92	3769799.87	1.27E-04	2.53E-04
2871	477410.9	3769770.81	1.28E-04	2.55E-04
2872	477423.89	3769741.76	1.28E-04	2.56E-04
2873	477436.88	3769712.7	1.28E-04	2.55E-04
2874	477449.87	3769683.65	1.27E-04	2.53E-04
2875	477462.86	3769654.59	1.25E-04	2.50E-04
2876	477527.8	3769509.31	1.06E-04	2.12E-04
2877	477540.79	3769480.26	1.00E-04	2.01E-04
2878	477553.78	3769451.2	9.45E-05	1.89E-04
2879	477566.77	3769422.15	8.84E-05	1.77E-04
2880	477579.76	3769393.09	8.23E-05	1.65E-04
2881	477592.75	3769364.03	7.61E-05	1.52E-04
2882	477605.74	3769334.98	7.01E-05	1.40E-04
2883	477618.73	3769305.92	6.42E-05	1.28E-04
2884	477631.71	3769276.87	5.86E-05	1.17E-04
2885	477644.7	3769247.81	5.34E-05	1.07E-04
2886	477657.69	3769218.76	4.86E-05	9.72E-05
2887	477683.67	3769160.64	4.03E-05	8.05E-05
2888	477696.66	3769131.59	3.67E-05	7.34E-05
2889	477709.65	3769102.53	3.36E-05	6.72E-05
2890	477722.64	3769073.48	3.09E-05	6.17E-05
2891	477735.63	3769044.42	2.84E-05	5.69E-05
2892	477748.61	3769015.37	2.63E-05	5.26E-05
2893	477761.6	3768986.31	2.44E-05	4.89E-05
2894	477774.59	3768957.25	2.28E-05	4.55E-05
2895	477787.58	3768928.2	2.13E-05	4.25E-05
2896	477807.06	3768884.62	1.93E-05	3.86E-05
2897	477820.05	3768855.56	1.81E-05	3.61E-05
2898	477839.54	3768811.98	1.64E-05	3.28E-05
2899	477852.52	3768782.92	1.54E-05	3.08E-05
2900	477865.51	3768753.86	1.44E-05	2.89E-05
2901	477956.44	3768550.47	9.27E-06	1.85E-05
2902	477969.42	3768521.42	8.79E-06	1.76E-05
2903	477982.41	3768492.36	8.37E-06	1.67E-05
2904	477995.4	3768463.31	8.01E-06	1.60E-05
2905	478008.39	3768434.25	7.71E-06	1.54E-05
2906	478021.38	3768405.2	7.46E-06	1.49E-05
2907	478034.37	3768376.14	7.26E-06	1.45E-05
2908	478047.36	3768347.08	7.10E-06	1.42E-05

2909	478060.35	3768318.03	6.96E-06	1.39E-05
2910	478073.33	3768288.97	6.86E-06	1.37E-05
2911	478086.32	3768259.92	6.77E-06	1.35E-05
2912	478099.31	3768230.86	6.69E-06	1.34E-05
2913	478112.3	3768201.81	6.63E-06	1.33E-05
2914	478125.29	3768172.75	6.56E-06	1.31E-05
2915	478831.51	3770964.09	1.02E-05	2.03E-05
2916	478863.46	3770964.83	1.02E-05	2.03E-05
2917	478917.23	3769485.22	4.54E-03	9.07E-03
2918	478936.58	3769485.22	5.04E-03	1.01E-02
2919	478955.93	3769485.22	5.41E-03	1.08E-02
2920	478975.28	3769485.22	5.63E-03	1.13E-02
2921	478994.63	3769485.22	5.67E-03	1.13E-02
2922	479013.98	3769485.22	5.52E-03	1.10E-02
2923	479033.33	3769485.22	5.15E-03	1.03E-02
2924	479052.68	3769485.22	4.65E-03	9.29E-03
2925	478917.23	3769505.22	2.99E-03	5.98E-03
2926	478936.58	3769505.22	3.02E-03	6.04E-03
2927	478955.93	3769505.22	2.99E-03	5.98E-03
2928	478975.28	3769505.22	2.94E-03	5.88E-03
2929	478994.63	3769505.22	2.87E-03	5.74E-03
2930	479013.98	3769505.22	2.79E-03	5.57E-03
2931	479033.33	3769505.22	2.66E-03	5.32E-03
2932	479052.68	3769505.22	2.49E-03	4.98E-03
2933	478917.23	3769645.22	3.17E-04	6.34E-04
2934	478936.58	3769645.22	3.18E-04	6.36E-04
2935	478955.93	3769645.22	3.21E-04	6.43E-04
2936	478975.28	3769645.22	3.25E-04	6.50E-04
2937	478994.63	3769645.22	3.27E-04	6.54E-04
2938	479013.98	3769645.22	3.27E-04	6.55E-04
2939	479033.33	3769645.22	3.24E-04	6.48E-04
2940	479052.68	3769645.22	3.17E-04	6.35E-04
2941	478917.23	3769685.22	2.25E-04	4.49E-04
2942	478936.58	3769685.22	2.26E-04	4.53E-04
2943	478955.93	3769685.22	2.29E-04	4.58E-04
2944	478975.28	3769685.22	2.31E-04	4.63E-04
2945	478994.63	3769685.22	2.33E-04	4.65E-04
2946	479013.98	3769685.22	2.33E-04	4.65E-04
2947	479033.33	3769685.22	2.31E-04	4.62E-04
2948	479052.68	3769685.22	2.28E-04	4.56E-04
2949	478917.23	3769725.22	1.69E-04	3.37E-04
2950	478936.58	3769725.22	1.71E-04	3.41E-04
2951	478955.93	3769725.22	1.73E-04	3.45E-04
2952	478975.28	3769725.22	1.74E-04	3.48E-04
2953	478994.63	3769725.22	1.74E-04	3.48E-04
2954	479013.98	3769725.22	1.74E-04	3.47E-04
2955	479033.33	3769725.22	1.72E-04	3.45E-04
2956	479052.68	3769725.22	1.70E-04	3.41E-04
2957	478917.23	3769765.22	1.32E-04	2.64E-04
2958	478936.58	3769765.22	1.33E-04	2.66E-04
2959	478955.93	3769765.22	1.34E-04	2.69E-04
2960	478975.28	3769765.22	1.35E-04	2.70E-04

2961	478994.63	3769765.22	1.35E-04	2.71E-04
2962	479013.98	3769765.22	1.35E-04	2.70E-04
2963	479033.33	3769765.22	1.34E-04	2.68E-04
2964	479052.68	3769765.22	1.32E-04	2.65E-04
2965	479072.03	3769765.22	1.30E-04	2.61E-04
2966	478917.23	3769845.22	8.75E-05	1.75E-04
2967	478936.58	3769845.22	8.81E-05	1.76E-04
2968	478955.93	3769845.22	8.85E-05	1.77E-04
2969	478975.28	3769845.22	8.87E-05	1.77E-04
2970	478994.63	3769845.22	8.87E-05	1.77E-04
2971	479013.98	3769845.22	8.83E-05	1.77E-04
2972	479033.33	3769845.22	8.76E-05	1.75E-04
2973	479052.68	3769845.22	8.68E-05	1.74E-04
2974	479072.03	3769845.22	8.57E-05	1.71E-04
2975	478917.23	3769925.22	6.28E-05	1.26E-04
2976	478936.58	3769925.22	6.30E-05	1.26E-04
2977	478955.93	3769925.22	6.32E-05	1.26E-04
2978	478975.28	3769925.22	6.32E-05	1.26E-04
2979	478994.63	3769925.22	6.30E-05	1.26E-04
2980	479013.98	3769925.22	6.28E-05	1.26E-04
2981	479033.33	3769925.22	6.24E-05	1.25E-04
2982	479052.68	3769925.22	6.17E-05	1.23E-04
2983	479072.03	3769925.22	6.11E-05	1.22E-04
2984	478917.23	3770005.22	4.76E-05	9.53E-05
2985	478936.58	3770005.22	4.77E-05	9.54E-05
2986	478955.93	3770005.22	4.77E-05	9.55E-05
2987	478975.28	3770005.22	4.77E-05	9.54E-05
2988	478994.63	3770005.22	4.76E-05	9.51E-05
2989	479013.98	3770005.22	4.74E-05	9.47E-05
2990	479033.33	3770005.22	4.71E-05	9.41E-05
2991	479052.68	3770005.22	4.67E-05	9.34E-05
2992	479072.03	3770005.22	4.62E-05	9.25E-05
2993	478917.23	3770085.22	3.77E-05	7.54E-05
2994	478936.58	3770085.22	3.77E-05	7.55E-05
2995	478955.93	3770085.22	3.77E-05	7.54E-05
2996	478975.28	3770085.22	3.76E-05	7.53E-05
2997	478994.63	3770085.22	3.75E-05	7.51E-05
2998	479013.98	3770085.22	3.74E-05	7.47E-05
2999	479033.33	3770085.22	3.72E-05	7.43E-05
3000	479052.68	3770085.22	3.69E-05	7.38E-05
3001	479072.03	3770085.22	3.66E-05	7.31E-05
3002	478917.23	3770165.22	3.09E-05	6.17E-05
3003	478936.58	3770165.22	3.09E-05	6.17E-05
3004	478955.93	3770165.22	3.08E-05	6.17E-05
3005	478975.28	3770165.22	3.08E-05	6.15E-05
3006	478994.63	3770165.22	3.07E-05	6.13E-05
3007	479013.98	3770165.22	3.05E-05	6.11E-05
3008	479033.33	3770165.22	3.04E-05	6.07E-05
3009	479052.68	3770165.22	3.02E-05	6.03E-05
3010	479072.03	3770165.22	2.99E-05	5.99E-05
3011	478897.88	3770325.22	2.23E-05	4.46E-05
3012	478917.23	3770325.22	2.23E-05	4.46E-05

3013	478936.58	3770325.22	2.23E-05	4.45E-05
3014	478955.93	3770325.22	2.22E-05	4.45E-05
3015	478975.28	3770325.22	2.22E-05	4.44E-05
3016	478994.63	3770325.22	2.21E-05	4.42E-05
3017	479013.98	3770325.22	2.20E-05	4.40E-05
3018	479033.33	3770325.22	2.19E-05	4.38E-05
3019	479052.68	3770325.22	2.18E-05	4.35E-05
3020	479072.03	3770325.22	2.16E-05	4.32E-05
3021	478897.88	3770485.22	1.73E-05	3.46E-05
3022	478917.23	3770485.22	1.73E-05	3.45E-05
3023	478936.58	3770485.22	1.72E-05	3.45E-05
3024	478955.93	3770485.22	1.72E-05	3.44E-05
3025	478975.28	3770485.22	1.72E-05	3.43E-05
3026	478994.63	3770485.22	1.71E-05	3.42E-05
3027	479013.98	3770485.22	1.71E-05	3.41E-05
3028	479033.33	3770485.22	1.70E-05	3.40E-05
3029	479052.68	3770485.22	1.69E-05	3.38E-05
3030	479072.03	3770485.22	1.68E-05	3.36E-05
3031	478897.88	3770645.22	1.40E-05	2.81E-05
3032	478917.23	3770645.22	1.40E-05	2.80E-05
3033	478936.58	3770645.22	1.40E-05	2.80E-05
3034	478955.93	3770645.22	1.40E-05	2.79E-05
3035	478975.28	3770645.22	1.39E-05	2.79E-05
3036	478994.63	3770645.22	1.39E-05	2.78E-05
3037	479013.98	3770645.22	1.39E-05	2.77E-05
3038	479033.33	3770645.22	1.38E-05	2.76E-05
3039	479052.68	3770645.22	1.37E-05	2.75E-05
3040	479072.03	3770645.22	1.37E-05	2.74E-05
3041	478897.88	3770805.22	1.18E-05	2.36E-05
3042	478917.23	3770805.22	1.18E-05	2.35E-05
3043	478936.58	3770805.22	1.18E-05	2.35E-05
3044	478955.93	3770805.22	1.17E-05	2.35E-05
3045	478975.28	3770805.22	1.17E-05	2.34E-05
3046	478994.63	3770805.22	1.17E-05	2.34E-05
3047	479013.98	3770805.22	1.16E-05	2.33E-05
3048	479033.33	3770805.22	1.16E-05	2.32E-05
3049	479052.68	3770805.22	1.16E-05	2.31E-05
3050	479072.03	3770805.22	1.15E-05	2.30E-05
3051	478897.88	3770965.22	1.01E-05	2.03E-05
3052	478917.23	3770965.22	1.01E-05	2.03E-05
3053	478936.58	3770965.22	1.01E-05	2.02E-05
3054	478955.93	3770965.22	1.01E-05	2.02E-05
3055	478975.28	3770965.22	1.01E-05	2.02E-05
3056	478994.63	3770965.22	1.01E-05	2.01E-05
3057	479013.98	3770965.22	1.00E-05	2.01E-05
3058	479033.33	3770965.22	1.00E-05	2.00E-05
3059	479052.68	3770965.22	9.97E-06	1.99E-05
3060	479072.03	3770965.22	9.94E-06	1.99E-05
3061	479200.2	3769494.4	1.22E-03	2.45E-03
3062	479246.11	3769480.67	1.07E-03	2.14E-03
3063	479252.15	3769450.9	1.38E-03	2.77E-03
3064	479286.11	3769480.99	8.21E-04	1.64E-03

3065	479170.64	3769644.6	2.43E-04	4.87E-04
3066	479292.15	3769451.21	1.01E-03	2.02E-03
3067	479366.11	3769481.61	5.17E-04	1.03E-03
3068	479289.24	3769664.14	1.59E-04	3.17E-04
3069	479269.24	3769683.98	1.46E-04	2.93E-04
3070	479241.07	3769695.59	1.45E-04	2.90E-04
3071	479212.9	3769707.19	1.44E-04	2.88E-04
3072	479184.72	3769718.8	1.43E-04	2.86E-04
3073	479156.55	3769730.4	1.42E-04	2.84E-04
3074	479100.2	3769753.61	1.35E-04	2.70E-04
3075	479372.14	3769451.84	6.04E-04	1.21E-03
3076	479446.11	3769482.24	3.55E-04	7.10E-04
3077	479434.28	3769510.32	3.18E-04	6.37E-04
3078	479375.15	3769650.73	1.47E-04	2.93E-04
3079	479345.59	3769720.93	1.03E-04	2.05E-04
3080	479325.59	3769740.77	9.61E-05	1.92E-04
3081	479297.42	3769752.38	9.59E-05	1.92E-04
3082	479269.24	3769763.98	9.55E-05	1.91E-04
3083	479241.07	3769775.59	9.48E-05	1.90E-04
3084	479212.9	3769787.19	9.41E-05	1.88E-04
3085	479184.72	3769798.8	9.31E-05	1.86E-04
3086	479156.55	3769810.4	9.18E-05	1.84E-04
3087	479100.2	3769833.61	8.80E-05	1.76E-04
3088	479452.14	3769452.47	4.00E-04	7.99E-04
3089	479452.39	3769421	4.52E-04	9.04E-04
3090	479526.1	3769482.87	2.58E-04	5.16E-04
3091	479514.28	3769510.95	2.37E-04	4.74E-04
3092	479455.15	3769651.35	1.26E-04	2.51E-04
3093	479443.32	3769679.44	1.09E-04	2.18E-04
3094	479431.5	3769707.52	9.57E-05	1.91E-04
3095	479401.93	3769777.72	7.18E-05	1.44E-04
3096	479381.94	3769797.56	6.86E-05	1.37E-04
3097	479353.76	3769809.17	6.81E-05	1.36E-04
3098	479325.59	3769820.77	6.77E-05	1.35E-04
3099	479297.42	3769832.38	6.76E-05	1.35E-04
3100	479269.24	3769843.98	6.72E-05	1.34E-04
3101	479241.07	3769855.59	6.69E-05	1.34E-04
3102	479212.9	3769867.19	6.64E-05	1.33E-04
3103	479184.72	3769878.8	6.58E-05	1.32E-04
3104	479100.2	3769913.61	6.27E-05	1.25E-04
3105	479532.14	3769453.09	2.83E-04	5.66E-04
3106	479532.39	3769421.63	3.13E-04	6.26E-04
3107	479606.1	3769483.49	1.94E-04	3.89E-04
3108	479594.28	3769511.57	1.82E-04	3.63E-04
3109	479535.15	3769651.98	1.08E-04	2.16E-04
3110	479523.32	3769680.06	9.56E-05	1.91E-04
3111	479511.5	3769708.14	8.46E-05	1.69E-04
3112	479499.67	3769736.23	7.52E-05	1.50E-04
3113	479487.84	3769764.31	6.76E-05	1.35E-04
3114	479458.28	3769834.51	5.33E-05	1.07E-04
3115	479438.28	3769854.35	5.09E-05	1.02E-04
3116	479410.11	3769865.96	5.11E-05	1.02E-04

3117	479381.94	3769877.56	5.09E-05	1.02E-04
3118	479353.76	3769889.17	5.08E-05	1.02E-04
3119	479325.59	3769900.77	5.08E-05	1.02E-04
3120	479297.42	3769912.38	5.06E-05	1.01E-04
3121	479269.24	3769923.98	5.04E-05	1.01E-04
3122	479241.07	3769935.59	5.02E-05	1.00E-04
3123	479212.9	3769947.19	4.98E-05	9.97E-05
3124	479184.72	3769958.8	4.92E-05	9.85E-05
3125	479100.2	3769993.61	4.72E-05	9.43E-05
3126	479612.14	3769453.72	2.11E-04	4.22E-04
3127	479612.38	3769422.25	2.31E-04	4.61E-04
3128	479686.1	3769484.12	1.51E-04	3.02E-04
3129	479674.27	3769512.2	1.42E-04	2.83E-04
3130	479626.97	3769624.53	1.03E-04	2.06E-04
3131	479615.14	3769652.61	9.33E-05	1.87E-04
3132	479603.32	3769680.69	8.38E-05	1.68E-04
3133	479591.49	3769708.77	7.51E-05	1.50E-04
3134	479579.67	3769736.85	6.76E-05	1.35E-04
3135	479567.84	3769764.93	6.10E-05	1.22E-04
3136	479556.02	3769793.02	5.53E-05	1.11E-04
3137	479544.19	3769821.1	5.04E-05	1.01E-04
3138	479514.63	3769891.3	4.13E-05	8.27E-05
3139	479494.63	3769911.14	3.99E-05	7.99E-05
3140	479466.45	3769922.75	3.98E-05	7.95E-05
3141	479438.28	3769934.35	3.97E-05	7.93E-05
3142	479410.11	3769945.96	3.99E-05	7.98E-05
3143	479381.94	3769957.56	3.98E-05	7.96E-05
3144	479353.76	3769969.17	3.99E-05	7.97E-05
3145	479325.59	3769980.77	3.97E-05	7.94E-05
3146	479297.42	3769992.38	3.97E-05	7.93E-05
3147	479269.24	3770003.98	3.94E-05	7.89E-05
3148	479241.07	3770015.59	3.92E-05	7.85E-05
3149	479212.9	3770027.19	3.89E-05	7.79E-05
3150	479184.72	3770038.8	3.85E-05	7.71E-05
3151	479100.2	3770073.61	3.72E-05	7.43E-05
3152	479692.13	3769454.35	1.63E-04	3.25E-04
3153	479692.38	3769422.88	1.77E-04	3.54E-04
3154	479765.92	3769485.16	1.23E-04	2.45E-04
3155	479753.75	3769514.07	1.16E-04	2.32E-04
3156	479705.05	3769629.7	8.60E-05	1.72E-04
3157	479692.88	3769658.6	7.90E-05	1.58E-04
3158	479680.71	3769687.51	7.21E-05	1.44E-04
3159	479668.53	3769716.42	6.56E-05	1.31E-04
3160	479656.36	3769745.33	5.95E-05	1.19E-04
3161	479644.19	3769774.23	5.40E-05	1.08E-04
3162	479632.01	3769803.14	4.91E-05	9.82E-05
3163	479619.84	3769832.05	4.48E-05	8.96E-05
3164	479607.67	3769860.96	4.13E-05	8.26E-05
3165	479595.49	3769889.86	3.82E-05	7.65E-05
3166	479571.15	3769947.68	3.33E-05	6.66E-05
3167	479550.56	3769968.1	3.23E-05	6.46E-05
3168	479521.56	3769980.05	3.23E-05	6.47E-05

3169	479492.56	3769992	3.23E-05	6.45E-05
3170	479463.55	3770003.94	3.22E-05	6.45E-05
3171	479434.55	3770015.89	3.24E-05	6.48E-05
3172	479405.55	3770027.84	3.24E-05	6.47E-05
3173	479376.55	3770039.78	3.24E-05	6.48E-05
3174	479347.55	3770051.73	3.23E-05	6.46E-05
3175	479318.55	3770063.68	3.21E-05	6.43E-05
3176	479289.54	3770075.62	3.21E-05	6.41E-05
3177	479260.54	3770087.57	3.19E-05	6.37E-05
3178	479231.54	3770099.51	3.17E-05	6.35E-05
3179	479202.54	3770111.46	3.15E-05	6.29E-05
3180	479173.54	3770123.41	3.11E-05	6.23E-05
3181	479772.13	3769454.97	1.31E-04	2.62E-04
3182	479772.38	3769423.51	1.41E-04	2.82E-04
3183	479925.95	3769486.34	8.77E-05	1.75E-04
3184	479865.41	3769630.09	6.65E-05	1.33E-04
3185	479853.31	3769658.84	6.22E-05	1.24E-04
3186	479841.2	3769687.59	5.79E-05	1.16E-04
3187	479829.09	3769716.34	5.37E-05	1.07E-04
3188	479816.99	3769745.09	4.97E-05	9.94E-05
3189	479804.88	3769773.84	4.58E-05	9.16E-05
3190	479792.77	3769802.59	4.22E-05	8.45E-05
3191	479780.66	3769831.34	3.90E-05	7.81E-05
3192	479768.56	3769860.09	3.61E-05	7.22E-05
3193	479756.45	3769888.84	3.35E-05	6.69E-05
3194	479744.34	3769917.59	3.12E-05	6.24E-05
3195	479732.24	3769946.34	2.93E-05	5.85E-05
3196	479720.13	3769975.09	2.75E-05	5.50E-05
3197	479708.02	3770003.84	2.60E-05	5.19E-05
3198	479683.81	3770061.34	2.35E-05	4.70E-05
3199	479663.33	3770081.65	2.29E-05	4.59E-05
3200	479634.49	3770093.53	2.29E-05	4.59E-05
3201	479605.64	3770105.41	2.29E-05	4.59E-05
3202	479576.8	3770117.3	2.30E-05	4.60E-05
3203	479547.96	3770129.18	2.30E-05	4.60E-05
3204	479519.11	3770141.06	2.30E-05	4.60E-05
3205	479490.27	3770152.94	2.30E-05	4.60E-05
3206	479461.42	3770164.82	2.30E-05	4.60E-05
3207	479432.58	3770176.7	2.31E-05	4.61E-05
3208	479403.74	3770188.58	2.30E-05	4.61E-05
3209	479374.89	3770200.47	2.30E-05	4.60E-05
3210	479346.05	3770212.35	2.29E-05	4.58E-05
3211	479317.2	3770224.23	2.28E-05	4.56E-05
3212	479288.36	3770236.11	2.28E-05	4.55E-05
3213	479259.52	3770247.99	2.26E-05	4.53E-05
3214	479230.67	3770259.87	2.25E-05	4.50E-05
3215	479201.83	3770271.75	2.24E-05	4.48E-05
3216	479172.98	3770283.64	2.23E-05	4.45E-05
3217	479932.13	3769456.23	9.25E-05	1.85E-04
3218	479932.37	3769424.76	9.81E-05	1.96E-04
3219	480085.97	3769487.54	6.70E-05	1.34E-04
3220	480025.66	3769630.75	5.36E-05	1.07E-04

3221	480013.6	3769659.39	5.07E-05	1.01E-04
3222	480001.53	3769688.04	4.79E-05	9.57E-05
3223	479989.47	3769716.68	4.51E-05	9.02E-05
3224	479977.41	3769745.32	4.23E-05	8.46E-05
3225	479965.35	3769773.97	3.97E-05	7.93E-05
3226	479953.28	3769802.61	3.71E-05	7.42E-05
3227	479941.22	3769831.25	3.47E-05	6.93E-05
3228	479929.16	3769859.9	3.24E-05	6.47E-05
3229	479917.1	3769888.54	3.02E-05	6.04E-05
3230	479905.04	3769917.18	2.82E-05	5.65E-05
3231	479892.97	3769945.82	2.65E-05	5.30E-05
3232	479880.91	3769974.47	2.50E-05	4.99E-05
3233	479868.85	3770003.11	2.35E-05	4.71E-05
3234	479856.79	3770031.75	2.23E-05	4.46E-05
3235	479844.73	3770060.4	2.12E-05	4.24E-05
3236	479832.66	3770089.04	2.03E-05	4.05E-05
3237	479820.6	3770117.68	1.94E-05	3.88E-05
3238	479796.48	3770174.97	1.79E-05	3.58E-05
3239	479776.08	3770195.21	1.76E-05	3.52E-05
3240	479747.34	3770207.05	1.76E-05	3.52E-05
3241	479718.6	3770218.88	1.76E-05	3.52E-05
3242	479689.87	3770230.72	1.76E-05	3.52E-05
3243	479661.13	3770242.56	1.76E-05	3.52E-05
3244	479632.39	3770254.39	1.76E-05	3.53E-05
3245	479603.66	3770266.23	1.76E-05	3.52E-05
3246	479574.92	3770278.07	1.77E-05	3.53E-05
3247	479546.18	3770289.91	1.77E-05	3.54E-05
3248	479517.45	3770301.74	1.77E-05	3.53E-05
3249	479488.71	3770313.58	1.77E-05	3.53E-05
3250	479459.97	3770325.42	1.77E-05	3.54E-05
3251	479431.24	3770337.26	1.77E-05	3.53E-05
3252	479402.5	3770349.09	1.76E-05	3.53E-05
3253	479373.76	3770360.93	1.76E-05	3.52E-05
3254	479345.03	3770372.77	1.75E-05	3.51E-05
3255	479316.29	3770384.6	1.75E-05	3.49E-05
3256	479287.55	3770396.44	1.74E-05	3.48E-05
3257	479258.82	3770408.28	1.74E-05	3.47E-05
3258	479230.08	3770420.12	1.73E-05	3.46E-05
3259	479201.34	3770431.95	1.72E-05	3.44E-05
3260	479100.77	3770473.38	1.69E-05	3.38E-05
3261	480092.12	3769457.48	7.00E-05	1.40E-04
3262	480092.37	3769426.02	7.38E-05	1.48E-04
3263	480245.98	3769488.75	5.37E-05	1.07E-04
3264	480185.83	3769631.58	4.44E-05	8.87E-05
3265	480173.8	3769660.15	4.24E-05	8.47E-05
3266	480161.77	3769688.71	4.04E-05	8.09E-05
3267	480149.74	3769717.28	3.85E-05	7.70E-05
3268	480137.71	3769745.84	3.65E-05	7.31E-05
3269	480125.68	3769774.41	3.46E-05	6.93E-05
3270	480113.65	3769802.97	3.28E-05	6.56E-05
3271	480101.63	3769831.54	3.10E-05	6.20E-05
3272	480089.6	3769860.1	2.92E-05	5.85E-05

3273	480077.57	3769888.67	2.76E-05	5.51E-05
3274	480065.54	3769917.24	2.60E-05	5.19E-05
3275	480053.51	3769945.8	2.45E-05	4.89E-05
3276	480041.48	3769974.37	2.31E-05	4.61E-05
3277	480029.45	3770002.93	2.18E-05	4.36E-05
3278	480017.42	3770031.5	2.07E-05	4.14E-05
3279	480005.39	3770060.06	1.97E-05	3.93E-05
3280	479993.36	3770088.63	1.87E-05	3.74E-05
3281	479981.33	3770117.19	1.79E-05	3.58E-05
3282	479969.3	3770145.76	1.72E-05	3.43E-05
3283	479957.27	3770174.33	1.65E-05	3.30E-05
3284	479945.24	3770202.89	1.59E-05	3.18E-05
3285	479933.21	3770231.46	1.54E-05	3.07E-05
3286	479909.15	3770288.59	1.44E-05	2.88E-05
3287	479888.81	3770308.77	1.42E-05	2.84E-05
3288	479860.15	3770320.58	1.42E-05	2.84E-05
3289	479831.49	3770332.38	1.42E-05	2.84E-05
3290	479802.83	3770344.19	1.42E-05	2.85E-05
3291	479774.17	3770355.99	1.42E-05	2.85E-05
3292	479745.52	3770367.8	1.42E-05	2.85E-05
3293	479716.86	3770379.6	1.42E-05	2.85E-05
3294	479688.2	3770391.41	1.42E-05	2.85E-05
3295	479659.54	3770403.21	1.42E-05	2.85E-05
3296	479630.88	3770415.02	1.43E-05	2.85E-05
3297	479602.22	3770426.82	1.42E-05	2.85E-05
3298	479573.56	3770438.63	1.43E-05	2.85E-05
3299	479544.9	3770450.43	1.43E-05	2.86E-05
3300	479516.24	3770462.24	1.43E-05	2.85E-05
3301	479487.58	3770474.04	1.43E-05	2.85E-05
3302	479458.93	3770485.85	1.43E-05	2.86E-05
3303	479430.27	3770497.66	1.42E-05	2.85E-05
3304	479401.61	3770509.46	1.42E-05	2.84E-05
3305	479372.95	3770521.27	1.42E-05	2.84E-05
3306	479344.29	3770533.07	1.41E-05	2.83E-05
3307	479315.63	3770544.88	1.41E-05	2.82E-05
3308	479272.64	3770562.58	1.41E-05	2.81E-05
3309	479100.69	3770633.41	1.38E-05	2.75E-05
3310	480252.12	3769458.74	5.59E-05	1.12E-04
3311	480252.36	3769427.27	5.85E-05	1.17E-04
3312	480405.89	3769490.2	4.47E-05	8.93E-05
3313	480357.14	3769605.98	3.90E-05	7.81E-05
3314	480344.95	3769634.92	3.76E-05	7.52E-05
3315	480332.76	3769663.87	3.62E-05	7.23E-05
3316	480320.57	3769692.81	3.47E-05	6.94E-05
3317	480308.38	3769721.76	3.33E-05	6.65E-05
3318	480296.19	3769750.71	3.18E-05	6.36E-05
3319	480284	3769779.65	3.04E-05	6.07E-05
3320	480271.81	3769808.6	2.90E-05	5.79E-05
3321	480259.62	3769837.54	2.76E-05	5.52E-05
3322	480247.43	3769866.49	2.63E-05	5.26E-05
3323	480235.24	3769895.43	2.50E-05	4.99E-05
3324	480223.05	3769924.38	2.37E-05	4.74E-05

3325	480210.86	3769953.32	2.25E-05	4.49E-05
3326	480198.67	3769982.27	2.13E-05	4.26E-05
3327	480186.48	3770011.21	2.02E-05	4.04E-05
3328	480174.29	3770040.16	1.92E-05	3.84E-05
3329	480162.11	3770069.1	1.83E-05	3.66E-05
3330	480149.92	3770098.05	1.74E-05	3.48E-05
3331	480137.73	3770127	1.66E-05	3.33E-05
3332	480125.54	3770155.94	1.59E-05	3.19E-05
3333	480113.35	3770184.89	1.53E-05	3.06E-05
3334	480101.16	3770213.83	1.47E-05	2.94E-05
3335	480088.97	3770242.78	1.42E-05	2.84E-05
3336	480076.78	3770271.72	1.37E-05	2.74E-05
3337	480064.59	3770300.67	1.33E-05	2.65E-05
3338	480052.4	3770329.61	1.29E-05	2.58E-05
3339	480021.93	3770401.98	1.21E-05	2.41E-05
3340	480001.31	3770422.43	1.19E-05	2.38E-05
3341	479972.27	3770434.39	1.19E-05	2.38E-05
3342	479943.23	3770446.35	1.19E-05	2.38E-05
3343	479914.19	3770458.32	1.19E-05	2.39E-05
3344	479885.15	3770470.28	1.19E-05	2.39E-05
3345	479856.11	3770482.24	1.19E-05	2.39E-05
3346	479827.07	3770494.2	1.19E-05	2.39E-05
3347	479798.03	3770506.17	1.19E-05	2.39E-05
3348	479768.99	3770518.13	1.19E-05	2.39E-05
3349	479739.95	3770530.09	1.19E-05	2.39E-05
3350	479710.91	3770542.05	1.19E-05	2.39E-05
3351	479681.87	3770554.01	1.19E-05	2.39E-05
3352	479652.83	3770565.98	1.19E-05	2.39E-05
3353	479623.79	3770577.94	1.19E-05	2.39E-05
3354	479594.75	3770589.9	1.19E-05	2.39E-05
3355	479565.71	3770601.86	1.20E-05	2.39E-05
3356	479536.67	3770613.83	1.19E-05	2.39E-05
3357	479507.63	3770625.79	1.19E-05	2.39E-05
3358	479478.59	3770637.75	1.19E-05	2.39E-05
3359	479449.55	3770649.71	1.19E-05	2.39E-05
3360	479420.51	3770661.67	1.19E-05	2.38E-05
3361	479391.47	3770673.64	1.19E-05	2.38E-05
3362	479347.91	3770691.58	1.18E-05	2.37E-05
3363	479101.07	3770793.26	1.16E-05	2.32E-05
3364	480412.11	3769459.99	4.64E-05	9.27E-05
3365	480412.36	3769428.52	4.84E-05	9.67E-05
3366	480565.91	3769491.4	3.83E-05	7.65E-05
3367	480553.76	3769520.25	3.72E-05	7.45E-05
3368	480505.16	3769635.66	3.28E-05	6.57E-05
3369	480493.01	3769664.51	3.17E-05	6.34E-05
3370	480480.86	3769693.36	3.06E-05	6.11E-05
3371	480468.71	3769722.21	2.94E-05	5.88E-05
3372	480456.56	3769751.06	2.83E-05	5.66E-05
3373	480444.41	3769779.91	2.72E-05	5.44E-05
3374	480432.26	3769808.76	2.61E-05	5.23E-05
3375	480420.11	3769837.61	2.51E-05	5.01E-05
3376	480407.96	3769866.46	2.40E-05	4.80E-05

3377	480395.82	3769895.31	2.30E-05	4.60E-05
3378	480383.67	3769924.16	2.20E-05	4.40E-05
3379	480371.52	3769953.01	2.10E-05	4.20E-05
3380	480359.37	3769981.87	2.01E-05	4.01E-05
3381	480347.22	3770010.72	1.91E-05	3.83E-05
3382	480335.07	3770039.57	1.83E-05	3.65E-05
3383	480322.92	3770068.42	1.74E-05	3.49E-05
3384	480310.77	3770097.27	1.66E-05	3.33E-05
3385	480298.62	3770126.12	1.59E-05	3.18E-05
3386	480286.47	3770154.97	1.53E-05	3.05E-05
3387	480274.32	3770183.82	1.46E-05	2.93E-05
3388	480262.17	3770212.67	1.41E-05	2.81E-05
3389	480250.02	3770241.52	1.35E-05	2.71E-05
3390	480237.87	3770270.37	1.31E-05	2.61E-05
3391	480225.72	3770299.22	1.26E-05	2.53E-05
3392	480213.57	3770328.07	1.22E-05	2.45E-05
3393	480201.42	3770356.92	1.19E-05	2.37E-05
3394	480189.27	3770385.78	1.15E-05	2.31E-05
3395	480177.12	3770414.63	1.12E-05	2.25E-05
3396	480164.97	3770443.48	1.09E-05	2.19E-05
3397	480140.67	3770501.18	1.05E-05	2.09E-05
3398	480114.05	3770535.99	1.02E-05	2.05E-05
3399	480085.11	3770547.91	1.02E-05	2.05E-05
3400	480056.16	3770559.84	1.03E-05	2.05E-05
3401	480027.22	3770571.76	1.03E-05	2.05E-05
3402	479998.27	3770583.68	1.03E-05	2.05E-05
3403	479969.33	3770595.61	1.03E-05	2.05E-05
3404	479940.38	3770607.53	1.03E-05	2.05E-05
3405	479911.44	3770619.45	1.03E-05	2.05E-05
3406	479882.49	3770631.37	1.03E-05	2.05E-05
3407	479853.55	3770643.3	1.03E-05	2.05E-05
3408	479824.6	3770655.22	1.03E-05	2.05E-05
3409	479795.66	3770667.14	1.03E-05	2.05E-05
3410	479766.71	3770679.07	1.03E-05	2.05E-05
3411	479737.77	3770690.99	1.03E-05	2.05E-05
3412	479708.82	3770702.91	1.03E-05	2.05E-05
3413	479679.88	3770714.84	1.03E-05	2.05E-05
3414	479650.93	3770726.76	1.03E-05	2.06E-05
3415	479621.99	3770738.68	1.03E-05	2.05E-05
3416	479593.04	3770750.61	1.03E-05	2.05E-05
3417	479564.1	3770762.53	1.03E-05	2.06E-05
3418	479535.15	3770774.45	1.03E-05	2.05E-05
3419	479506.21	3770786.37	1.03E-05	2.05E-05
3420	479477.26	3770798.3	1.03E-05	2.06E-05
3421	479448.32	3770810.22	1.03E-05	2.05E-05
3422	479390.43	3770834.07	1.02E-05	2.04E-05
3423	479173.34	3770923.49	1.01E-05	2.01E-05
3424	480572.11	3769461.24	3.96E-05	7.91E-05
3425	480572.35	3769429.78	4.11E-05	8.22E-05

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T2

1

479085.48

7.75E-07

Yr 1

Yr 2

Total

1	479085.5	3769433	2.58E-07	5.17E-07	7.75E-07
2	479102.3	3769437	1.55E-07	3.11E-07	4.66E-07
3	479086.1	3769453	1.45E-07	2.90E-07	4.35E-07
4	479103	3769457	9.19E-08	1.84E-07	2.76E-07
5	479103.7	3769477	5.21E-08	1.04E-07	1.56E-07
6	479075.1	3769498	3.56E-08	7.13E-08	1.07E-07
7	479104.3	3769497	3.05E-08	6.10E-08	9.16E-08
8	479079.7	3769638	4.22E-09	8.44E-09	1.27E-08
9	479081	3769678	3.02E-09	6.04E-09	9.06E-09
10	479082.4	3769718	2.25E-09	4.49E-09	6.74E-09
11	479085	3769798	1.39E-09	2.77E-09	4.15E-09
12	479087.7	3769878	9.44E-10	1.89E-09	2.83E-09
13	479090.4	3769958	6.92E-10	1.38E-09	2.08E-09
14	479093	3770038	5.34E-10	1.07E-09	1.60E-09
15	479095.7	3770118	4.29E-10	8.57E-10	1.29E-09
16	479101	3770278	3.01E-10	6.03E-10	9.04E-10
17	479156.3	3769397	9.58E-08	1.92E-07	2.87E-07
18	479156.3	3769378	1.04E-07	2.08E-07	3.12E-07
19	479156.3	3769359	1.11E-07	2.21E-07	3.32E-07
20	479156.3	3769340	1.13E-07	2.25E-07	3.38E-07
21	479156.3	3769321	1.01E-07	2.03E-07	3.04E-07
22	479156.3	3769302	7.82E-08	1.56E-07	2.34E-07
23	479156.3	3769283	5.35E-08	1.07E-07	1.61E-07
24	479156.3	3769264	3.50E-08	7.00E-08	1.05E-07
25	479156.3	3769245	2.32E-08	4.63E-08	6.95E-08
26	479156.3	3769226	1.59E-08	3.17E-08	4.76E-08
27	479170.7	3769430	5.38E-08	1.08E-07	1.61E-07
28	479176.3	3769397	6.70E-08	1.34E-07	2.01E-07
29	479176.3	3769378	7.31E-08	1.46E-07	2.19E-07
30	479176.3	3769359	7.66E-08	1.53E-07	2.30E-07
31	479176.3	3769340	7.63E-08	1.53E-07	2.29E-07
32	479176.3	3769321	6.95E-08	1.39E-07	2.09E-07
33	479176.3	3769302	5.74E-08	1.15E-07	1.72E-07
34	479176.3	3769283	4.36E-08	8.72E-08	1.31E-07
35	479176.3	3769264	3.15E-08	6.31E-08	9.46E-08
36	479176.3	3769245	2.25E-08	4.49E-08	6.74E-08
37	479176.3	3769226	1.61E-08	3.23E-08	4.84E-08
38	479190.7	3769430	4.08E-08	8.16E-08	1.22E-07
39	479179.4	3769458	3.24E-08	6.47E-08	9.71E-08
40	479160.1	3769478	2.81E-08	5.63E-08	8.44E-08
41	479196.3	3769397	5.01E-08	1.00E-07	1.50E-07
42	479196.3	3769378	5.44E-08	1.09E-07	1.63E-07
43	479196.3	3769359	5.64E-08	1.13E-07	1.69E-07
44	479196.3	3769340	5.55E-08	1.11E-07	1.67E-07
45	479196.3	3769321	5.12E-08	1.02E-07	1.54E-07
46	479196.3	3769302	4.41E-08	8.82E-08	1.32E-07
47	479196.3	3769283	3.56E-08	7.13E-08	1.07E-07
48	479196.3	3769264	2.75E-08	5.51E-08	8.26E-08

49	479196.3	3769245	2.08E-08	4.16E-08	6.24E-08
50	479196.3	3769226	1.56E-08	3.12E-08	4.69E-08
51	479209.3	3769434	3.16E-08	6.32E-08	9.48E-08
52	479202.2	3769451	2.79E-08	5.59E-08	8.38E-08
53	479195.2	3769469	2.38E-08	4.75E-08	7.13E-08
54	479171	3769494	1.95E-08	3.89E-08	5.83E-08
55	479153.9	3769501	1.95E-08	3.89E-08	5.84E-08
56	479216.3	3769417	3.41E-08	6.82E-08	1.02E-07
57	479216.3	3769397	3.86E-08	7.71E-08	1.16E-07
58	479216.3	3769378	4.16E-08	8.32E-08	1.25E-07
59	479216.3	3769359	4.30E-08	8.60E-08	1.29E-07
60	479216.3	3769340	4.23E-08	8.47E-08	1.27E-07
61	479216.3	3769321	3.97E-08	7.94E-08	1.19E-07
62	479216.3	3769302	3.53E-08	7.06E-08	1.06E-07
63	479216.3	3769283	2.98E-08	5.95E-08	8.93E-08
64	479216.3	3769264	2.41E-08	4.83E-08	7.24E-08
65	479216.3	3769245	1.91E-08	3.81E-08	5.72E-08
66	479216.3	3769226	1.49E-08	2.98E-08	4.47E-08
67	479249.7	3769433	2.13E-08	4.25E-08	6.38E-08
68	479236.6	3769465	1.76E-08	3.51E-08	5.27E-08
69	479223.5	3769498	1.30E-08	2.61E-08	3.91E-08
70	479256.3	3769397	2.49E-08	4.99E-08	7.48E-08
71	479256.3	3769378	2.66E-08	5.33E-08	7.99E-08
72	479256.3	3769359	2.74E-08	5.49E-08	8.23E-08
73	479256.3	3769340	2.72E-08	5.45E-08	8.17E-08
74	479256.3	3769321	2.60E-08	5.21E-08	7.81E-08
75	479256.3	3769302	2.40E-08	4.80E-08	7.20E-08
76	479256.3	3769283	2.13E-08	4.26E-08	6.40E-08
77	479256.3	3769264	1.84E-08	3.68E-08	5.52E-08
78	479256.3	3769245	1.55E-08	3.10E-08	4.65E-08
79	479256.3	3769226	1.30E-08	2.59E-08	3.89E-08
80	479290	3769432	1.52E-08	3.04E-08	4.55E-08
81	479277.3	3769463	1.31E-08	2.63E-08	3.94E-08
82	479264.7	3769495	1.05E-08	2.11E-08	3.16E-08
83	479296.3	3769397	1.72E-08	3.45E-08	5.17E-08
84	479296.3	3769378	1.84E-08	3.67E-08	5.51E-08
85	479296.3	3769359	1.90E-08	3.80E-08	5.70E-08
86	479296.3	3769340	1.90E-08	3.80E-08	5.70E-08
87	479296.3	3769321	1.85E-08	3.69E-08	5.54E-08
88	479296.3	3769302	1.74E-08	3.49E-08	5.23E-08
89	479296.3	3769283	1.60E-08	3.21E-08	4.81E-08
90	479296.3	3769264	1.44E-08	2.88E-08	4.31E-08
91	479296.3	3769245	1.26E-08	2.53E-08	3.79E-08
92	479296.3	3769226	1.09E-08	2.19E-08	3.28E-08
93	479329.4	3769434	1.13E-08	2.26E-08	3.39E-08
94	479322.6	3769451	1.06E-08	2.13E-08	3.19E-08
95	479315.7	3769468	9.85E-09	1.97E-08	2.96E-08
96	479308.8	3769485	8.98E-09	1.80E-08	2.69E-08
97	479301.9	3769502	8.01E-09	1.60E-08	2.40E-08
98	479336.3	3769417	1.17E-08	2.35E-08	3.52E-08
99	479336.3	3769397	1.27E-08	2.54E-08	3.81E-08
100	479336.3	3769378	1.34E-08	2.68E-08	4.01E-08

101	479336.3	3769359	1.38E-08	2.76E-08	4.14E-08
102	479336.3	3769340	1.39E-08	2.77E-08	4.16E-08
103	479336.3	3769321	1.37E-08	2.73E-08	4.10E-08
104	479336.3	3769302	1.32E-08	2.63E-08	3.95E-08
105	479336.3	3769283	1.24E-08	2.47E-08	3.71E-08
106	479336.3	3769264	1.14E-08	2.28E-08	3.43E-08
107	479336.3	3769245	1.04E-08	2.08E-08	3.11E-08
108	479336.3	3769226	9.26E-09	1.85E-08	2.78E-08
109	479369.7	3769433	8.73E-09	1.75E-08	2.62E-08
110	479356.4	3769466	7.83E-09	1.57E-08	2.35E-08
111	479343.1	3769499	6.63E-09	1.33E-08	1.99E-08
112	479222.2	3769633	2.99E-09	5.99E-09	8.98E-09
113	479189.8	3769648	2.91E-09	5.82E-09	8.73E-09
114	479157.4	3769662	2.89E-09	5.77E-09	8.66E-09
115	479376.3	3769397	9.63E-09	1.93E-08	2.89E-08
116	479376.3	3769378	1.02E-08	2.03E-08	3.05E-08
117	479376.3	3769359	1.05E-08	2.10E-08	3.15E-08
118	479376.3	3769340	1.06E-08	2.12E-08	3.18E-08
119	479376.3	3769321	1.05E-08	2.10E-08	3.16E-08
120	479376.3	3769302	1.02E-08	2.05E-08	3.07E-08
121	479376.3	3769283	9.78E-09	1.96E-08	2.93E-08
122	479376.3	3769264	9.20E-09	1.84E-08	2.76E-08
123	479376.3	3769245	8.52E-09	1.70E-08	2.56E-08
124	479376.3	3769226	7.78E-09	1.56E-08	2.34E-08
125	479409.3	3769434	6.94E-09	1.39E-08	2.08E-08
126	479402.2	3769451	6.65E-09	1.33E-08	1.99E-08
127	479395.2	3769469	6.26E-09	1.25E-08	1.88E-08
128	479388.2	3769486	5.81E-09	1.16E-08	1.74E-08
129	479381.2	3769503	5.36E-09	1.07E-08	1.61E-08
130	479314.8	3769633	2.43E-09	4.86E-09	7.29E-09
131	479297.7	3769640	2.39E-09	4.77E-09	7.16E-09
132	479280.5	3769648	2.34E-09	4.69E-09	7.03E-09
133	479263.4	3769656	2.31E-09	4.63E-09	6.94E-09
134	479246.2	3769663	2.28E-09	4.56E-09	6.85E-09
135	479229.1	3769671	2.25E-09	4.51E-09	6.76E-09
136	479212	3769678	2.22E-09	4.45E-09	6.67E-09
137	479194.8	3769686	2.21E-09	4.42E-09	6.63E-09
138	479177.7	3769694	2.19E-09	4.38E-09	6.58E-09
139	479160.6	3769701	2.18E-09	4.35E-09	6.53E-09
140	479416.3	3769417	7.15E-09	1.43E-08	2.15E-08
141	479416.3	3769397	7.60E-09	1.52E-08	2.28E-08
142	479416.3	3769378	7.95E-09	1.59E-08	2.38E-08
143	479416.3	3769359	8.20E-09	1.64E-08	2.46E-08
144	479416.3	3769340	8.35E-09	1.67E-08	2.51E-08
145	479416.3	3769321	8.34E-09	1.67E-08	2.50E-08
146	479416.3	3769302	8.19E-09	1.64E-08	2.46E-08
147	479416.3	3769283	7.92E-09	1.58E-08	2.38E-08
148	479416.3	3769264	7.56E-09	1.51E-08	2.27E-08
149	479416.3	3769245	7.11E-09	1.42E-08	2.13E-08
150	479416.3	3769226	6.62E-09	1.32E-08	1.99E-08
151	479489.2	3769434	4.67E-09	9.35E-09	1.40E-08
152	479482.1	3769452	4.51E-09	9.02E-09	1.35E-08

153	479474.9	3769469	4.31E-09	8.62E-09	1.29E-08
154	479467.8	3769487	4.08E-09	8.17E-09	1.23E-08
155	479460.7	3769505	3.83E-09	7.67E-09	1.15E-08
156	479403.7	3769646	1.85E-09	3.70E-09	5.56E-09
157	479396.6	3769663	1.68E-09	3.36E-09	5.04E-09
158	479372.1	3769688	1.51E-09	3.02E-09	4.52E-09
159	479354.7	3769696	1.50E-09	2.99E-09	4.49E-09
160	479337.3	3769704	1.48E-09	2.96E-09	4.44E-09
161	479320	3769712	1.46E-09	2.92E-09	4.38E-09
162	479302.6	3769719	1.45E-09	2.89E-09	4.34E-09
163	479285.2	3769727	1.45E-09	2.89E-09	4.34E-09
164	479267.9	3769735	1.43E-09	2.86E-09	4.30E-09
165	479250.5	3769742	1.42E-09	2.84E-09	4.26E-09
166	479233.1	3769750	1.41E-09	2.82E-09	4.23E-09
167	479215.8	3769758	1.40E-09	2.80E-09	4.19E-09
168	479198.4	3769766	1.39E-09	2.77E-09	4.16E-09
169	479181	3769773	1.37E-09	2.75E-09	4.12E-09
170	479163.7	3769781	1.36E-09	2.72E-09	4.08E-09
171	479496.3	3769417	4.80E-09	9.60E-09	1.44E-08
172	479496.3	3769397	5.07E-09	1.01E-08	1.52E-08
173	479496.3	3769378	5.28E-09	1.06E-08	1.59E-08
174	479496.3	3769359	5.44E-09	1.09E-08	1.63E-08
175	479496.3	3769340	5.54E-09	1.11E-08	1.66E-08
176	479496.3	3769321	5.57E-09	1.11E-08	1.67E-08
177	479496.3	3769302	5.55E-09	1.11E-08	1.66E-08
178	479496.3	3769283	5.46E-09	1.09E-08	1.64E-08
179	479496.3	3769264	5.31E-09	1.06E-08	1.59E-08
180	479496.3	3769245	5.12E-09	1.02E-08	1.53E-08
181	479496.3	3769226	4.88E-09	9.77E-09	1.46E-08
182	479569.5	3769433	3.38E-09	6.76E-09	1.01E-08
183	479562.7	3769450	3.29E-09	6.58E-09	9.87E-09
184	479555.9	3769467	3.18E-09	6.35E-09	9.53E-09
185	479549.1	3769484	3.04E-09	6.09E-09	9.13E-09
186	479542.3	3769501	2.91E-09	5.82E-09	8.73E-09
187	479481	3769652	1.54E-09	3.08E-09	4.62E-09
188	479474.2	3769669	1.42E-09	2.84E-09	4.25E-09
189	479467.4	3769686	1.31E-09	2.62E-09	3.92E-09
190	479460.6	3769703	1.21E-09	2.42E-09	3.63E-09
191	479453.7	3769720	1.13E-09	2.25E-09	3.38E-09
192	479430.3	3769744	1.04E-09	2.08E-09	3.12E-09
193	479413.7	3769751	1.03E-09	2.05E-09	3.08E-09
194	479397.1	3769758	1.02E-09	2.03E-09	3.05E-09
195	479380.5	3769766	1.01E-09	2.02E-09	3.03E-09
196	479364	3769773	1.00E-09	2.01E-09	3.01E-09
197	479347.4	3769781	1.00E-09	2.00E-09	3.01E-09
198	479330.8	3769788	9.95E-10	1.99E-09	2.98E-09
199	479314.2	3769795	9.89E-10	1.98E-09	2.97E-09
200	479297.6	3769803	9.86E-10	1.97E-09	2.96E-09
201	479281	3769810	9.82E-10	1.96E-09	2.94E-09
202	479264.4	3769817	9.75E-10	1.95E-09	2.92E-09
203	479247.8	3769825	9.69E-10	1.94E-09	2.91E-09
204	479231.2	3769832	9.64E-10	1.93E-09	2.89E-09

205	479214.6	3769839	9.58E-10	1.92E-09	2.87E-09
206	479198	3769847	9.50E-10	1.90E-09	2.85E-09
207	479181.4	3769854	9.44E-10	1.89E-09	2.83E-09
208	479164.8	3769862	9.35E-10	1.87E-09	2.81E-09
209	479576.3	3769417	3.45E-09	6.91E-09	1.04E-08
210	479576.3	3769397	3.61E-09	7.23E-09	1.08E-08
211	479576.3	3769378	3.75E-09	7.50E-09	1.12E-08
212	479576.3	3769359	3.86E-09	7.72E-09	1.16E-08
213	479576.3	3769340	3.94E-09	7.87E-09	1.18E-08
214	479576.3	3769321	3.98E-09	7.96E-09	1.19E-08
215	479576.3	3769302	3.99E-09	7.99E-09	1.20E-08
216	479576.3	3769283	3.97E-09	7.94E-09	1.19E-08
217	479576.3	3769264	3.92E-09	7.83E-09	1.17E-08
218	479576.3	3769245	3.83E-09	7.66E-09	1.15E-08
219	479576.3	3769226	3.72E-09	7.43E-09	1.12E-08
220	479649.4	3769434	2.55E-09	5.11E-09	7.66E-09
221	479642.5	3769451	2.49E-09	4.97E-09	7.46E-09
222	479635.6	3769468	2.41E-09	4.82E-09	7.23E-09
223	479628.7	3769485	2.32E-09	4.64E-09	6.97E-09
224	479621.8	3769502	2.23E-09	4.47E-09	6.70E-09
225	479566.6	3769638	1.41E-09	2.82E-09	4.23E-09
226	479559.7	3769655	1.32E-09	2.63E-09	3.95E-09
227	479552.8	3769673	1.22E-09	2.45E-09	3.67E-09
228	479545.9	3769690	1.14E-09	2.28E-09	3.41E-09
229	479539	3769707	1.06E-09	2.12E-09	3.18E-09
230	479532	3769724	9.87E-10	1.97E-09	2.96E-09
231	479525.1	3769741	9.21E-10	1.84E-09	2.76E-09
232	479518.2	3769758	8.61E-10	1.72E-09	2.58E-09
233	479511.3	3769775	8.11E-10	1.62E-09	2.43E-09
234	479487.6	3769799	7.59E-10	1.52E-09	2.28E-09
235	479470.8	3769807	7.52E-10	1.50E-09	2.26E-09
236	479454	3769814	7.45E-10	1.49E-09	2.24E-09
237	479437.1	3769822	7.40E-10	1.48E-09	2.22E-09
238	479420.3	3769829	7.36E-10	1.47E-09	2.21E-09
239	479403.5	3769837	7.34E-10	1.47E-09	2.20E-09
240	479386.7	3769844	7.34E-10	1.47E-09	2.20E-09
241	479369.8	3769852	7.31E-10	1.46E-09	2.19E-09
242	479353	3769859	7.27E-10	1.45E-09	2.18E-09
243	479336.2	3769867	7.26E-10	1.45E-09	2.18E-09
244	479319.3	3769874	7.24E-10	1.45E-09	2.17E-09
245	479302.5	3769882	7.21E-10	1.44E-09	2.16E-09
246	479285.7	3769889	7.17E-10	1.43E-09	2.15E-09
247	479268.9	3769897	7.16E-10	1.43E-09	2.15E-09
248	479252	3769904	7.12E-10	1.42E-09	2.14E-09
249	479235.2	3769911	7.08E-10	1.42E-09	2.12E-09
250	479218.4	3769919	7.04E-10	1.41E-09	2.11E-09
251	479201.6	3769926	6.99E-10	1.40E-09	2.10E-09
252	479184.7	3769934	6.93E-10	1.39E-09	2.08E-09
253	479656.3	3769417	2.60E-09	5.21E-09	7.81E-09
254	479656.3	3769397	2.71E-09	5.43E-09	8.14E-09
255	479656.3	3769378	2.81E-09	5.62E-09	8.43E-09
256	479656.3	3769359	2.89E-09	5.78E-09	8.66E-09

257	479656.3	3769340	2.95E-09	5.90E-09	8.85E-09
258	479656.3	3769321	2.99E-09	5.99E-09	8.98E-09
259	479656.3	3769302	3.02E-09	6.04E-09	9.05E-09
260	479656.3	3769283	3.02E-09	6.04E-09	9.07E-09
261	479656.3	3769264	3.01E-09	6.01E-09	9.02E-09
262	479656.3	3769245	2.97E-09	5.94E-09	8.91E-09
263	479656.3	3769226	2.92E-09	5.83E-09	8.75E-09
264	479729.3	3769434	1.99E-09	3.99E-09	5.98E-09
265	479722.4	3769451	1.95E-09	3.89E-09	5.84E-09
266	479715.4	3769468	1.89E-09	3.78E-09	5.66E-09
267	479708.4	3769486	1.82E-09	3.64E-09	5.47E-09
268	479701.4	3769503	1.76E-09	3.52E-09	5.28E-09
269	479652.6	3769623	1.27E-09	2.53E-09	3.80E-09
270	479645.6	3769641	1.20E-09	2.40E-09	3.60E-09
271	479638.7	3769658	1.13E-09	2.26E-09	3.39E-09
272	479631.7	3769675	1.06E-09	2.12E-09	3.18E-09
273	479624.7	3769692	9.95E-10	1.99E-09	2.99E-09
274	479617.7	3769710	9.34E-10	1.87E-09	2.80E-09
275	479610.8	3769727	8.75E-10	1.75E-09	2.63E-09
276	479603.8	3769744	8.21E-10	1.64E-09	2.46E-09
277	479596.8	3769761	7.71E-10	1.54E-09	2.31E-09
278	479589.8	3769779	7.28E-10	1.46E-09	2.18E-09
279	479582.9	3769796	6.87E-10	1.37E-09	2.06E-09
280	479575.9	3769813	6.49E-10	1.30E-09	1.95E-09
281	479568.9	3769830	6.14E-10	1.23E-09	1.84E-09
282	479544.9	3769855	5.78E-10	1.16E-09	1.73E-09
283	479527.9	3769863	5.74E-10	1.15E-09	1.72E-09
284	479510.9	3769870	5.73E-10	1.15E-09	1.72E-09
285	479493.9	3769878	5.71E-10	1.14E-09	1.71E-09
286	479476.9	3769885	5.68E-10	1.14E-09	1.70E-09
287	479459.9	3769893	5.65E-10	1.13E-09	1.70E-09
288	479442.9	3769900	5.63E-10	1.13E-09	1.69E-09
289	479425.9	3769908	5.62E-10	1.12E-09	1.69E-09
290	479408.9	3769916	5.64E-10	1.13E-09	1.69E-09
291	479391.9	3769923	5.62E-10	1.12E-09	1.69E-09
292	479374.9	3769931	5.61E-10	1.12E-09	1.68E-09
293	479357.9	3769938	5.60E-10	1.12E-09	1.68E-09
294	479340.9	3769946	5.59E-10	1.12E-09	1.68E-09
295	479323.9	3769953	5.57E-10	1.11E-09	1.67E-09
296	479306.9	3769961	5.55E-10	1.11E-09	1.67E-09
297	479289.9	3769968	5.54E-10	1.11E-09	1.66E-09
298	479272.9	3769976	5.51E-10	1.10E-09	1.65E-09
299	479255.9	3769983	5.48E-10	1.10E-09	1.64E-09
300	479238.9	3769991	5.46E-10	1.09E-09	1.64E-09
301	479221.9	3769999	5.43E-10	1.09E-09	1.63E-09
302	479204.9	3770006	5.38E-10	1.08E-09	1.62E-09
303	479187.9	3770014	5.34E-10	1.07E-09	1.60E-09
304	479736.3	3769417	2.03E-09	4.07E-09	6.10E-09
305	479736.3	3769397	2.12E-09	4.23E-09	6.35E-09
306	479736.3	3769378	2.19E-09	4.38E-09	6.58E-09
307	479736.3	3769359	2.26E-09	4.51E-09	6.77E-09
308	479736.3	3769340	2.31E-09	4.61E-09	6.92E-09

309	479736.3	3769321	2.35E-09	4.69E-09	7.04E-09
310	479736.3	3769302	2.37E-09	4.74E-09	7.12E-09
311	479736.3	3769283	2.39E-09	4.77E-09	7.16E-09
312	479736.3	3769264	2.39E-09	4.78E-09	7.16E-09
313	479736.3	3769245	2.38E-09	4.75E-09	7.13E-09
314	479736.3	3769226	2.35E-09	4.71E-09	7.06E-09
315	479809.3	3769434	1.62E-09	3.24E-09	4.87E-09
316	479802.2	3769451	1.59E-09	3.18E-09	4.76E-09
317	479795.2	3769469	1.55E-09	3.09E-09	4.64E-09
318	479788.2	3769486	1.50E-09	3.00E-09	4.50E-09
319	479781.2	3769503	1.45E-09	2.90E-09	4.35E-09
320	479731.9	3769625	1.08E-09	2.16E-09	3.24E-09
321	479724.9	3769643	1.02E-09	2.05E-09	3.07E-09
322	479717.9	3769660	9.73E-10	1.95E-09	2.92E-09
323	479710.8	3769677	9.22E-10	1.84E-09	2.77E-09
324	479703.8	3769695	8.74E-10	1.75E-09	2.62E-09
325	479696.8	3769712	8.28E-10	1.66E-09	2.48E-09
326	479689.7	3769729	7.83E-10	1.57E-09	2.35E-09
327	479682.7	3769747	7.40E-10	1.48E-09	2.22E-09
328	479675.7	3769764	6.99E-10	1.40E-09	2.10E-09
329	479668.7	3769782	6.60E-10	1.32E-09	1.98E-09
330	479661.6	3769799	6.25E-10	1.25E-09	1.87E-09
331	479654.6	3769816	5.92E-10	1.18E-09	1.78E-09
332	479647.6	3769834	5.62E-10	1.12E-09	1.69E-09
333	479640.5	3769851	5.34E-10	1.07E-09	1.60E-09
334	479633.5	3769868	5.08E-10	1.02E-09	1.52E-09
335	479626.5	3769886	4.85E-10	9.69E-10	1.45E-09
336	479602.3	3769911	4.62E-10	9.23E-10	1.38E-09
337	479585.2	3769918	4.60E-10	9.19E-10	1.38E-09
338	479568	3769926	4.57E-10	9.14E-10	1.37E-09
339	479550.9	3769934	4.55E-10	9.09E-10	1.36E-09
340	479533.7	3769941	4.53E-10	9.06E-10	1.36E-09
341	479516.6	3769949	4.53E-10	9.06E-10	1.36E-09
342	479499.5	3769956	4.53E-10	9.06E-10	1.36E-09
343	479482.3	3769964	4.51E-10	9.03E-10	1.35E-09
344	479465.2	3769972	4.51E-10	9.01E-10	1.35E-09
345	479448.1	3769979	4.51E-10	9.01E-10	1.35E-09
346	479430.9	3769987	4.52E-10	9.04E-10	1.36E-09
347	479413.8	3769995	4.51E-10	9.01E-10	1.35E-09
348	479396.6	3770002	4.50E-10	8.99E-10	1.35E-09
349	479379.5	3770010	4.49E-10	8.98E-10	1.35E-09
350	479362.4	3770017	4.48E-10	8.97E-10	1.34E-09
351	479345.2	3770025	4.47E-10	8.94E-10	1.34E-09
352	479328.1	3770033	4.45E-10	8.90E-10	1.34E-09
353	479311	3770040	4.44E-10	8.87E-10	1.33E-09
354	479293.8	3770048	4.43E-10	8.85E-10	1.33E-09
355	479276.7	3770055	4.40E-10	8.81E-10	1.32E-09
356	479259.5	3770063	4.38E-10	8.76E-10	1.31E-09
357	479242.4	3770071	4.36E-10	8.73E-10	1.31E-09
358	479225.3	3770078	4.34E-10	8.69E-10	1.30E-09
359	479208.1	3770086	4.31E-10	8.63E-10	1.29E-09
360	479191	3770093	4.28E-10	8.57E-10	1.28E-09

361	479173.8	3770101	4.25E-10	8.50E-10	1.28E-09
362	479816.3	3769417	1.65E-09	3.31E-09	4.96E-09
363	479816.3	3769397	1.72E-09	3.43E-09	5.15E-09
364	479816.3	3769378	1.77E-09	3.54E-09	5.31E-09
365	479816.3	3769359	1.82E-09	3.64E-09	5.46E-09
366	479816.3	3769340	1.86E-09	3.72E-09	5.58E-09
367	479816.3	3769321	1.89E-09	3.79E-09	5.68E-09
368	479816.3	3769302	1.92E-09	3.84E-09	5.76E-09
369	479816.3	3769283	1.94E-09	3.88E-09	5.82E-09
370	479816.3	3769264	1.95E-09	3.90E-09	5.85E-09
371	479816.3	3769245	1.95E-09	3.90E-09	5.85E-09
372	479816.3	3769226	1.94E-09	3.88E-09	5.83E-09
373	479969.2	3769434	1.16E-09	2.32E-09	3.48E-09
374	479962.1	3769452	1.14E-09	2.28E-09	3.41E-09
375	479955	3769469	1.11E-09	2.23E-09	3.34E-09
376	479947.9	3769487	1.09E-09	2.17E-09	3.26E-09
377	479940.7	3769504	1.06E-09	2.12E-09	3.18E-09
378	479898.1	3769610	8.68E-10	1.74E-09	2.60E-09
379	479890.9	3769628	8.36E-10	1.67E-09	2.51E-09
380	479883.8	3769645	8.03E-10	1.61E-09	2.41E-09
381	479876.7	3769663	7.70E-10	1.54E-09	2.31E-09
382	479869.6	3769680	7.38E-10	1.48E-09	2.21E-09
383	479862.5	3769698	7.07E-10	1.41E-09	2.12E-09
384	479855.4	3769716	6.75E-10	1.35E-09	2.03E-09
385	479848.3	3769733	6.44E-10	1.29E-09	1.93E-09
386	479841.1	3769751	6.15E-10	1.23E-09	1.84E-09
387	479834	3769768	5.87E-10	1.17E-09	1.76E-09
388	479826.9	3769786	5.59E-10	1.12E-09	1.68E-09
389	479819.8	3769803	5.32E-10	1.06E-09	1.60E-09
390	479812.7	3769821	5.07E-10	1.01E-09	1.52E-09
391	479805.6	3769839	4.84E-10	9.68E-10	1.45E-09
392	479798.5	3769856	4.62E-10	9.24E-10	1.39E-09
393	479791.3	3769874	4.41E-10	8.82E-10	1.32E-09
394	479784.2	3769891	4.22E-10	8.43E-10	1.26E-09
395	479777.1	3769909	4.03E-10	8.07E-10	1.21E-09
396	479770	3769927	3.87E-10	7.73E-10	1.16E-09
397	479762.9	3769944	3.72E-10	7.43E-10	1.11E-09
398	479755.8	3769962	3.58E-10	7.15E-10	1.07E-09
399	479748.7	3769979	3.45E-10	6.90E-10	1.03E-09
400	479741.6	3769997	3.33E-10	6.66E-10	1.00E-09
401	479717.1	3770022	3.20E-10	6.41E-10	9.61E-10
402	479699.8	3770030	3.19E-10	6.39E-10	9.58E-10
403	479682.4	3770038	3.19E-10	6.38E-10	9.56E-10
404	479665.1	3770045	3.18E-10	6.36E-10	9.53E-10
405	479647.7	3770053	3.17E-10	6.34E-10	9.51E-10
406	479630.4	3770061	3.17E-10	6.33E-10	9.50E-10
407	479613.1	3770068	3.16E-10	6.33E-10	9.49E-10
408	479595.7	3770076	3.16E-10	6.31E-10	9.47E-10
409	479578.4	3770084	3.15E-10	6.30E-10	9.45E-10
410	479561	3770091	3.15E-10	6.30E-10	9.44E-10
411	479543.7	3770099	3.15E-10	6.31E-10	9.46E-10
412	479526.4	3770107	3.15E-10	6.31E-10	9.46E-10

413	479509	3770115	3.15E-10	6.30E-10	9.45E-10
414	479491.7	3770122	3.14E-10	6.29E-10	9.43E-10
415	479474.3	3770130	3.14E-10	6.28E-10	9.42E-10
416	479457	3770138	3.14E-10	6.28E-10	9.41E-10
417	479439.7	3770145	3.15E-10	6.30E-10	9.44E-10
418	479422.3	3770153	3.14E-10	6.28E-10	9.42E-10
419	479405	3770161	3.13E-10	6.27E-10	9.40E-10
420	479387.6	3770168	3.13E-10	6.26E-10	9.39E-10
421	479370.3	3770176	3.12E-10	6.25E-10	9.37E-10
422	479353	3770184	3.11E-10	6.22E-10	9.34E-10
423	479335.6	3770191	3.10E-10	6.20E-10	9.30E-10
424	479318.3	3770199	3.09E-10	6.18E-10	9.27E-10
425	479300.9	3770207	3.08E-10	6.16E-10	9.24E-10
426	479283.6	3770215	3.07E-10	6.14E-10	9.22E-10
427	479266.3	3770222	3.06E-10	6.11E-10	9.17E-10
428	479248.9	3770230	3.05E-10	6.09E-10	9.14E-10
429	479231.6	3770238	3.04E-10	6.07E-10	9.11E-10
430	479214.2	3770245	3.02E-10	6.04E-10	9.06E-10
431	479196.9	3770253	3.01E-10	6.01E-10	9.02E-10
432	479179.6	3770261	2.99E-10	5.98E-10	8.97E-10
433	479976.3	3769417	1.18E-09	2.36E-09	3.54E-09
434	479976.3	3769397	1.22E-09	2.43E-09	3.65E-09
435	479976.3	3769378	1.25E-09	2.50E-09	3.75E-09
436	479976.3	3769359	1.28E-09	2.56E-09	3.85E-09
437	479976.3	3769340	1.31E-09	2.62E-09	3.93E-09
438	479976.3	3769321	1.34E-09	2.67E-09	4.01E-09
439	479976.3	3769302	1.36E-09	2.72E-09	4.08E-09
440	479976.3	3769283	1.38E-09	2.76E-09	4.13E-09
441	479976.3	3769264	1.39E-09	2.78E-09	4.17E-09
442	479976.3	3769245	1.40E-09	2.80E-09	4.20E-09
443	479976.3	3769226	1.41E-09	2.81E-09	4.22E-09
444	480129.3	3769434	8.89E-10	1.78E-09	2.67E-09
445	480122.3	3769451	8.73E-10	1.75E-09	2.62E-09
446	480115.3	3769468	8.57E-10	1.71E-09	2.57E-09
447	480108.3	3769486	8.39E-10	1.68E-09	2.52E-09
448	480101.3	3769503	8.21E-10	1.64E-09	2.46E-09
449	480059.3	3769607	7.02E-10	1.40E-09	2.10E-09
450	480052.3	3769624	6.80E-10	1.36E-09	2.04E-09
451	480045.3	3769641	6.59E-10	1.32E-09	1.98E-09
452	480038.4	3769659	6.37E-10	1.27E-09	1.91E-09
453	480031.4	3769676	6.16E-10	1.23E-09	1.85E-09
454	480024.4	3769693	5.95E-10	1.19E-09	1.78E-09
455	480017.4	3769711	5.74E-10	1.15E-09	1.72E-09
456	480010.4	3769728	5.55E-10	1.11E-09	1.66E-09
457	480003.4	3769745	5.34E-10	1.07E-09	1.60E-09
458	479996.4	3769762	5.14E-10	1.03E-09	1.54E-09
459	479989.4	3769780	4.94E-10	9.88E-10	1.48E-09
460	479982.4	3769797	4.75E-10	9.50E-10	1.42E-09
461	479975.4	3769814	4.56E-10	9.12E-10	1.37E-09
462	479968.4	3769832	4.38E-10	8.77E-10	1.32E-09
463	479961.4	3769849	4.21E-10	8.42E-10	1.26E-09
464	479954.4	3769866	4.05E-10	8.09E-10	1.21E-09

465	479947.4	3769884	3.89E-10	7.77E-10	1.17E-09
466	479940.4	3769901	3.73E-10	7.46E-10	1.12E-09
467	479933.4	3769918	3.59E-10	7.17E-10	1.08E-09
468	479926.4	3769935	3.45E-10	6.90E-10	1.03E-09
469	479919.4	3769953	3.32E-10	6.64E-10	9.96E-10
470	479912.4	3769970	3.20E-10	6.40E-10	9.60E-10
471	479905.4	3769987	3.09E-10	6.18E-10	9.27E-10
472	479898.4	3770005	2.99E-10	5.97E-10	8.96E-10
473	479891.4	3770022	2.89E-10	5.78E-10	8.67E-10
474	479884.4	3770039	2.80E-10	5.60E-10	8.39E-10
475	479877.4	3770057	2.71E-10	5.43E-10	8.14E-10
476	479870.4	3770074	2.63E-10	5.27E-10	7.90E-10
477	479863.4	3770091	2.56E-10	5.12E-10	7.68E-10
478	479856.4	3770108	2.49E-10	4.98E-10	7.47E-10
479	479832.4	3770133	2.42E-10	4.85E-10	7.27E-10
480	479815.3	3770141	2.42E-10	4.83E-10	7.25E-10
481	479798.3	3770148	2.41E-10	4.82E-10	7.23E-10
482	479781.2	3770156	2.41E-10	4.81E-10	7.22E-10
483	479764.2	3770164	2.40E-10	4.81E-10	7.21E-10
484	479747.1	3770171	2.40E-10	4.81E-10	7.21E-10
485	479730.1	3770179	2.40E-10	4.80E-10	7.21E-10
486	479713	3770186	2.40E-10	4.80E-10	7.19E-10
487	479696	3770194	2.39E-10	4.79E-10	7.18E-10
488	479678.9	3770201	2.39E-10	4.78E-10	7.18E-10
489	479661.8	3770209	2.39E-10	4.78E-10	7.18E-10
490	479644.8	3770217	2.39E-10	4.78E-10	7.18E-10
491	479627.7	3770224	2.39E-10	4.78E-10	7.17E-10
492	479610.7	3770232	2.39E-10	4.77E-10	7.16E-10
493	479593.6	3770239	2.38E-10	4.77E-10	7.15E-10
494	479576.6	3770247	2.39E-10	4.77E-10	7.16E-10
495	479559.5	3770254	2.39E-10	4.78E-10	7.17E-10
496	479542.5	3770262	2.39E-10	4.77E-10	7.16E-10
497	479525.4	3770270	2.38E-10	4.77E-10	7.15E-10
498	479508.4	3770277	2.38E-10	4.76E-10	7.14E-10
499	479491.3	3770285	2.38E-10	4.76E-10	7.14E-10
500	479474.2	3770292	2.38E-10	4.76E-10	7.13E-10
501	479457.2	3770300	2.38E-10	4.76E-10	7.15E-10
502	479440.1	3770307	2.38E-10	4.75E-10	7.13E-10
503	479423.1	3770315	2.37E-10	4.74E-10	7.11E-10
504	479406	3770322	2.37E-10	4.73E-10	7.10E-10
505	479389	3770330	2.36E-10	4.73E-10	7.09E-10
506	479371.9	3770338	2.36E-10	4.72E-10	7.07E-10
507	479354.9	3770345	2.35E-10	4.70E-10	7.05E-10
508	479337.8	3770353	2.34E-10	4.69E-10	7.03E-10
509	479320.8	3770360	2.34E-10	4.67E-10	7.01E-10
510	479303.7	3770368	2.33E-10	4.65E-10	6.98E-10
511	479286.6	3770375	2.32E-10	4.64E-10	6.96E-10
512	479269.6	3770383	2.32E-10	4.63E-10	6.95E-10
513	479252.5	3770391	2.31E-10	4.62E-10	6.93E-10
514	479235.5	3770398	2.30E-10	4.60E-10	6.90E-10
515	479218.4	3770406	2.29E-10	4.58E-10	6.87E-10
516	479201.4	3770413	2.28E-10	4.56E-10	6.85E-10

517	479184.3	3770421	2.28E-10	4.55E-10	6.83E-10
518	479167.3	3770428	2.27E-10	4.54E-10	6.81E-10
519	480136.3	3769417	9.03E-10	1.81E-09	2.71E-09
520	480136.3	3769397	9.28E-10	1.86E-09	2.78E-09
521	480136.3	3769378	9.53E-10	1.91E-09	2.86E-09
522	480136.3	3769359	9.75E-10	1.95E-09	2.93E-09
523	480136.3	3769340	9.95E-10	1.99E-09	2.99E-09
524	480136.3	3769321	1.02E-09	2.03E-09	3.05E-09
525	480136.3	3769302	1.03E-09	2.07E-09	3.10E-09
526	480136.3	3769283	1.05E-09	2.10E-09	3.15E-09
527	480136.3	3769264	1.06E-09	2.12E-09	3.18E-09
528	480136.3	3769245	1.07E-09	2.14E-09	3.22E-09
529	480136.3	3769226	1.08E-09	2.16E-09	3.24E-09
530	480289.2	3769434	7.15E-10	1.43E-09	2.14E-09
531	480282.2	3769451	7.02E-10	1.40E-09	2.11E-09
532	480275.1	3769469	6.90E-10	1.38E-09	2.07E-09
533	480268.1	3769486	6.77E-10	1.35E-09	2.03E-09
534	480261	3769504	6.64E-10	1.33E-09	1.99E-09
535	480218.6	3769609	5.78E-10	1.16E-09	1.73E-09
536	480211.6	3769626	5.64E-10	1.13E-09	1.69E-09
537	480204.5	3769643	5.49E-10	1.10E-09	1.65E-09
538	480197.5	3769661	5.34E-10	1.07E-09	1.60E-09
539	480190.4	3769678	5.19E-10	1.04E-09	1.56E-09
540	480183.3	3769696	5.04E-10	1.01E-09	1.51E-09
541	480176.3	3769713	4.89E-10	9.78E-10	1.47E-09
542	480169.2	3769731	4.75E-10	9.49E-10	1.42E-09
543	480162.1	3769748	4.60E-10	9.20E-10	1.38E-09
544	480155.1	3769766	4.46E-10	8.91E-10	1.34E-09
545	480148	3769783	4.31E-10	8.63E-10	1.29E-09
546	480141	3769801	4.17E-10	8.34E-10	1.25E-09
547	480133.9	3769818	4.03E-10	8.07E-10	1.21E-09
548	480126.8	3769835	3.90E-10	7.80E-10	1.17E-09
549	480119.8	3769853	3.77E-10	7.53E-10	1.13E-09
550	480112.7	3769870	3.64E-10	7.27E-10	1.09E-09
551	480105.7	3769888	3.51E-10	7.02E-10	1.05E-09
552	480098.6	3769905	3.39E-10	6.78E-10	1.02E-09
553	480091.5	3769923	3.27E-10	6.54E-10	9.81E-10
554	480084.5	3769940	3.16E-10	6.31E-10	9.47E-10
555	480077.4	3769958	3.05E-10	6.09E-10	9.14E-10
556	480070.4	3769975	2.94E-10	5.88E-10	8.83E-10
557	480063.3	3769993	2.84E-10	5.68E-10	8.53E-10
558	480056.2	3770010	2.75E-10	5.50E-10	8.24E-10
559	480049.2	3770028	2.66E-10	5.32E-10	7.97E-10
560	480042.1	3770045	2.57E-10	5.15E-10	7.72E-10
561	480035.1	3770062	2.50E-10	4.99E-10	7.49E-10
562	480028	3770080	2.42E-10	4.85E-10	7.27E-10
563	480020.9	3770097	2.35E-10	4.71E-10	7.06E-10
564	480013.9	3770115	2.29E-10	4.58E-10	6.87E-10
565	480006.8	3770132	2.23E-10	4.46E-10	6.69E-10
566	479999.7	3770150	2.17E-10	4.35E-10	6.52E-10
567	479992.7	3770167	2.12E-10	4.24E-10	6.36E-10
568	479985.6	3770185	2.07E-10	4.14E-10	6.22E-10

569	479978.6	3770202	2.03E-10	4.05E-10	6.08E-10
570	479971.5	3770220	1.98E-10	3.96E-10	5.94E-10
571	479947.2	3770245	1.93E-10	3.87E-10	5.80E-10
572	479930	3770252	1.93E-10	3.86E-10	5.80E-10
573	479912.8	3770260	1.93E-10	3.86E-10	5.79E-10
574	479895.6	3770268	1.93E-10	3.85E-10	5.78E-10
575	479878.4	3770275	1.92E-10	3.85E-10	5.77E-10
576	479861.2	3770283	1.92E-10	3.85E-10	5.77E-10
577	479844	3770290	1.92E-10	3.84E-10	5.76E-10
578	479826.8	3770298	1.92E-10	3.84E-10	5.76E-10
579	479809.5	3770306	1.92E-10	3.84E-10	5.76E-10
580	479792.3	3770313	1.92E-10	3.84E-10	5.76E-10
581	479775.1	3770321	1.92E-10	3.83E-10	5.75E-10
582	479757.9	3770329	1.92E-10	3.83E-10	5.75E-10
583	479740.7	3770336	1.92E-10	3.83E-10	5.75E-10
584	479723.5	3770344	1.92E-10	3.83E-10	5.75E-10
585	479706.3	3770352	1.91E-10	3.83E-10	5.74E-10
586	479689.1	3770359	1.91E-10	3.82E-10	5.74E-10
587	479671.9	3770367	1.91E-10	3.82E-10	5.73E-10
588	479654.6	3770374	1.91E-10	3.82E-10	5.73E-10
589	479637.4	3770382	1.91E-10	3.82E-10	5.73E-10
590	479620.2	3770390	1.91E-10	3.82E-10	5.73E-10
591	479603	3770397	1.91E-10	3.81E-10	5.72E-10
592	479585.8	3770405	1.91E-10	3.81E-10	5.72E-10
593	479568.6	3770413	1.91E-10	3.82E-10	5.72E-10
594	479551.4	3770420	1.91E-10	3.82E-10	5.72E-10
595	479534.2	3770428	1.91E-10	3.81E-10	5.72E-10
596	479517	3770436	1.90E-10	3.81E-10	5.71E-10
597	479499.7	3770443	1.90E-10	3.80E-10	5.70E-10
598	479482.5	3770451	1.90E-10	3.80E-10	5.70E-10
599	479465.3	3770458	1.90E-10	3.81E-10	5.71E-10
600	479448.1	3770466	1.90E-10	3.80E-10	5.70E-10
601	479430.9	3770474	1.89E-10	3.79E-10	5.68E-10
602	479413.7	3770481	1.89E-10	3.78E-10	5.67E-10
603	479396.5	3770489	1.89E-10	3.78E-10	5.66E-10
604	479379.3	3770497	1.89E-10	3.77E-10	5.66E-10
605	479362.1	3770504	1.88E-10	3.76E-10	5.64E-10
606	479344.8	3770512	1.88E-10	3.75E-10	5.63E-10
607	479327.6	3770520	1.87E-10	3.74E-10	5.61E-10
608	479310.4	3770527	1.87E-10	3.73E-10	5.60E-10
609	479293.2	3770535	1.86E-10	3.73E-10	5.59E-10
610	479276	3770542	1.86E-10	3.72E-10	5.58E-10
611	479258.8	3770550	1.85E-10	3.71E-10	5.56E-10
612	479241.6	3770558	1.85E-10	3.70E-10	5.54E-10
613	479224.4	3770565	1.84E-10	3.69E-10	5.53E-10
614	479207.2	3770573	1.84E-10	3.68E-10	5.52E-10
615	479189.9	3770581	1.83E-10	3.67E-10	5.50E-10
616	479172.7	3770588	1.83E-10	3.66E-10	5.49E-10
617	480296.3	3769417	7.26E-10	1.45E-09	2.18E-09
618	480296.3	3769397	7.44E-10	1.49E-09	2.23E-09
619	480296.3	3769378	7.62E-10	1.52E-09	2.29E-09
620	480296.3	3769359	7.79E-10	1.56E-09	2.34E-09

621	480296.3	3769340	7.95E-10	1.59E-09	2.39E-09
622	480296.3	3769321	8.10E-10	1.62E-09	2.43E-09
623	480296.3	3769302	8.25E-10	1.65E-09	2.47E-09
624	480296.3	3769283	8.38E-10	1.68E-09	2.51E-09
625	480296.3	3769264	8.50E-10	1.70E-09	2.55E-09
626	480296.3	3769245	8.60E-10	1.72E-09	2.58E-09
627	480296.3	3769226	8.68E-10	1.74E-09	2.61E-09
628	480449.2	3769434	5.96E-10	1.19E-09	1.79E-09
629	480442.1	3769452	5.87E-10	1.17E-09	1.76E-09
630	480435	3769469	5.77E-10	1.15E-09	1.73E-09
631	480427.9	3769487	5.67E-10	1.13E-09	1.70E-09
632	480420.8	3769504	5.57E-10	1.11E-09	1.67E-09
633	480378.1	3769610	4.91E-10	9.82E-10	1.47E-09
634	480371	3769628	4.80E-10	9.60E-10	1.44E-09
635	480363.9	3769645	4.69E-10	9.38E-10	1.41E-09
636	480356.8	3769663	4.58E-10	9.16E-10	1.37E-09
637	480349.6	3769680	4.47E-10	8.94E-10	1.34E-09
638	480342.5	3769698	4.36E-10	8.72E-10	1.31E-09
639	480335.4	3769715	4.25E-10	8.50E-10	1.27E-09
640	480328.3	3769733	4.14E-10	8.28E-10	1.24E-09
641	480321.2	3769751	4.03E-10	8.06E-10	1.21E-09
642	480314.1	3769768	3.92E-10	7.85E-10	1.18E-09
643	480307	3769786	3.82E-10	7.63E-10	1.14E-09
644	480299.9	3769803	3.71E-10	7.42E-10	1.11E-09
645	480292.8	3769821	3.60E-10	7.21E-10	1.08E-09
646	480285.7	3769838	3.50E-10	7.00E-10	1.05E-09
647	480278.5	3769856	3.40E-10	6.80E-10	1.02E-09
648	480271.4	3769874	3.30E-10	6.60E-10	9.90E-10
649	480264.3	3769891	3.20E-10	6.40E-10	9.60E-10
650	480257.2	3769909	3.11E-10	6.21E-10	9.32E-10
651	480250.1	3769926	3.01E-10	6.02E-10	9.03E-10
652	480243	3769944	2.92E-10	5.83E-10	8.75E-10
653	480235.9	3769961	2.83E-10	5.65E-10	8.48E-10
654	480228.8	3769979	2.74E-10	5.48E-10	8.21E-10
655	480221.7	3769997	2.65E-10	5.30E-10	7.96E-10
656	480214.5	3770014	2.57E-10	5.14E-10	7.71E-10
657	480207.4	3770032	2.49E-10	4.98E-10	7.47E-10
658	480200.3	3770049	2.42E-10	4.84E-10	7.25E-10
659	480193.2	3770067	2.35E-10	4.70E-10	7.04E-10
660	480186.1	3770085	2.28E-10	4.56E-10	6.84E-10
661	480179	3770102	2.22E-10	4.43E-10	6.65E-10
662	480171.9	3770120	2.15E-10	4.31E-10	6.46E-10
663	480164.8	3770137	2.10E-10	4.19E-10	6.29E-10
664	480157.7	3770155	2.04E-10	4.08E-10	6.12E-10
665	480150.6	3770172	1.99E-10	3.98E-10	5.97E-10
666	480143.4	3770190	1.94E-10	3.88E-10	5.82E-10
667	480136.3	3770208	1.90E-10	3.79E-10	5.69E-10
668	480129.2	3770225	1.85E-10	3.71E-10	5.56E-10
669	480122.1	3770243	1.81E-10	3.62E-10	5.44E-10
670	480115	3770260	1.77E-10	3.55E-10	5.32E-10
671	480107.9	3770278	1.74E-10	3.47E-10	5.21E-10
672	480100.8	3770295	1.70E-10	3.40E-10	5.10E-10

673	480093.7	3770313	1.67E-10	3.34E-10	5.01E-10
674	480086.6	3770331	1.64E-10	3.28E-10	4.92E-10
675	480062.1	3770356	1.61E-10	3.22E-10	4.83E-10
676	480044.8	3770364	1.61E-10	3.22E-10	4.82E-10
677	480027.5	3770371	1.61E-10	3.21E-10	4.82E-10
678	480010.1	3770379	1.60E-10	3.21E-10	4.81E-10
679	479992.8	3770387	1.60E-10	3.20E-10	4.80E-10
680	479975.5	3770394	1.60E-10	3.20E-10	4.80E-10
681	479958.1	3770402	1.60E-10	3.20E-10	4.80E-10
682	479940.8	3770410	1.60E-10	3.20E-10	4.80E-10
683	479923.5	3770417	1.60E-10	3.20E-10	4.80E-10
684	479906.1	3770425	1.60E-10	3.20E-10	4.80E-10
685	479888.8	3770433	1.60E-10	3.20E-10	4.80E-10
686	479871.5	3770440	1.60E-10	3.20E-10	4.79E-10
687	479854.1	3770448	1.60E-10	3.19E-10	4.79E-10
688	479836.8	3770456	1.60E-10	3.19E-10	4.79E-10
689	479819.5	3770464	1.60E-10	3.19E-10	4.78E-10
690	479802.1	3770471	1.60E-10	3.19E-10	4.78E-10
691	479784.8	3770479	1.59E-10	3.19E-10	4.78E-10
692	479767.5	3770487	1.59E-10	3.19E-10	4.78E-10
693	479750.1	3770494	1.59E-10	3.18E-10	4.77E-10
694	479732.8	3770502	1.59E-10	3.18E-10	4.77E-10
695	479715.5	3770510	1.59E-10	3.18E-10	4.77E-10
696	479698.1	3770517	1.59E-10	3.18E-10	4.77E-10
697	479680.8	3770525	1.59E-10	3.18E-10	4.77E-10
698	479663.5	3770533	1.59E-10	3.17E-10	4.76E-10
699	479646.1	3770540	1.59E-10	3.17E-10	4.76E-10
700	479628.8	3770548	1.59E-10	3.17E-10	4.76E-10
701	479611.5	3770556	1.59E-10	3.17E-10	4.76E-10
702	479594.1	3770564	1.58E-10	3.17E-10	4.75E-10
703	479576.8	3770571	1.59E-10	3.17E-10	4.76E-10
704	479559.5	3770579	1.59E-10	3.17E-10	4.76E-10
705	479542.2	3770587	1.58E-10	3.17E-10	4.75E-10
706	479524.8	3770594	1.58E-10	3.16E-10	4.75E-10
707	479507.5	3770602	1.58E-10	3.16E-10	4.74E-10
708	479490.2	3770610	1.58E-10	3.16E-10	4.73E-10
709	479472.8	3770617	1.58E-10	3.16E-10	4.74E-10
710	479455.5	3770625	1.58E-10	3.16E-10	4.73E-10
711	479438.2	3770633	1.58E-10	3.15E-10	4.73E-10
712	479420.8	3770640	1.57E-10	3.15E-10	4.72E-10
713	479403.5	3770648	1.57E-10	3.14E-10	4.71E-10
714	479386.2	3770656	1.57E-10	3.14E-10	4.70E-10
715	479368.8	3770664	1.56E-10	3.13E-10	4.69E-10
716	479351.5	3770671	1.56E-10	3.12E-10	4.68E-10
717	479334.2	3770679	1.56E-10	3.12E-10	4.67E-10
718	479316.8	3770687	1.56E-10	3.11E-10	4.67E-10
719	479299.5	3770694	1.55E-10	3.11E-10	4.66E-10
720	479282.2	3770702	1.55E-10	3.10E-10	4.65E-10
721	479264.8	3770710	1.55E-10	3.09E-10	4.64E-10
722	479247.5	3770717	1.54E-10	3.09E-10	4.63E-10
723	479230.2	3770725	1.54E-10	3.08E-10	4.62E-10
724	479212.8	3770733	1.54E-10	3.07E-10	4.61E-10

725	479195.5	3770740	1.53E-10	3.07E-10	4.60E-10
726	479178.2	3770748	1.53E-10	3.06E-10	4.59E-10
727	480456.3	3769417	6.05E-10	1.21E-09	1.82E-09
728	480456.3	3769397	6.20E-10	1.24E-09	1.86E-09
729	480456.3	3769378	6.34E-10	1.27E-09	1.90E-09
730	480456.3	3769359	6.47E-10	1.29E-09	1.94E-09
731	480456.3	3769340	6.60E-10	1.32E-09	1.98E-09
732	480456.3	3769321	6.72E-10	1.34E-09	2.02E-09
733	480456.3	3769302	6.84E-10	1.37E-09	2.05E-09
734	480456.3	3769283	6.95E-10	1.39E-09	2.09E-09
735	480456.3	3769264	7.05E-10	1.41E-09	2.12E-09
736	480456.3	3769245	7.14E-10	1.43E-09	2.14E-09
737	480456.3	3769226	7.22E-10	1.44E-09	2.17E-09
738	480609.2	3769434	5.10E-10	1.02E-09	1.53E-09
739	480602	3769452	5.03E-10	1.01E-09	1.51E-09
740	480594.9	3769470	4.95E-10	9.90E-10	1.49E-09
741	480587.7	3769487	4.87E-10	9.74E-10	1.46E-09
742	480580.6	3769505	4.79E-10	9.58E-10	1.44E-09
743	480573.4	3769523	4.71E-10	9.42E-10	1.41E-09
744	480523.4	3769646	4.11E-10	8.23E-10	1.23E-09
745	480516.2	3769664	4.03E-10	8.05E-10	1.21E-09
746	480509.1	3769682	3.94E-10	7.87E-10	1.18E-09
747	480501.9	3769699	3.85E-10	7.70E-10	1.16E-09
748	480494.8	3769717	3.76E-10	7.53E-10	1.13E-09
749	480487.6	3769735	3.68E-10	7.35E-10	1.10E-09
750	480480.5	3769752	3.59E-10	7.18E-10	1.08E-09
751	480473.3	3769770	3.50E-10	7.01E-10	1.05E-09
752	480466.2	3769788	3.42E-10	6.84E-10	1.03E-09
753	480459	3769805	3.33E-10	6.67E-10	1.00E-09
754	480451.9	3769823	3.25E-10	6.51E-10	9.76E-10
755	480444.7	3769841	3.17E-10	6.35E-10	9.52E-10
756	480437.6	3769858	3.09E-10	6.19E-10	9.28E-10
757	480430.4	3769876	3.02E-10	6.03E-10	9.05E-10
758	480423.3	3769894	2.94E-10	5.87E-10	8.81E-10
759	480416.1	3769911	2.86E-10	5.72E-10	8.58E-10
760	480409	3769929	2.78E-10	5.57E-10	8.35E-10
761	480401.8	3769947	2.71E-10	5.42E-10	8.13E-10
762	480394.7	3769965	2.63E-10	5.27E-10	7.90E-10
763	480387.5	3769982	2.56E-10	5.12E-10	7.68E-10
764	480380.4	3770000	2.49E-10	4.98E-10	7.47E-10
765	480373.2	3770018	2.42E-10	4.84E-10	7.26E-10
766	480366.1	3770035	2.35E-10	4.70E-10	7.05E-10
767	480358.9	3770053	2.29E-10	4.57E-10	6.86E-10
768	480351.8	3770071	2.22E-10	4.45E-10	6.67E-10
769	480344.6	3770088	2.16E-10	4.32E-10	6.49E-10
770	480337.5	3770106	2.10E-10	4.21E-10	6.31E-10
771	480330.3	3770124	2.05E-10	4.09E-10	6.14E-10
772	480323.2	3770141	1.99E-10	3.99E-10	5.98E-10
773	480316	3770159	1.94E-10	3.88E-10	5.82E-10
774	480308.9	3770177	1.89E-10	3.79E-10	5.68E-10
775	480301.7	3770194	1.85E-10	3.70E-10	5.55E-10
776	480294.6	3770212	1.80E-10	3.61E-10	5.41E-10

777	480287.4	3770230	1.76E-10	3.53E-10	5.29E-10
778	480280.3	3770247	1.72E-10	3.45E-10	5.17E-10
779	480273.1	3770265	1.68E-10	3.37E-10	5.05E-10
780	480265.9	3770283	1.65E-10	3.30E-10	4.95E-10
781	480258.8	3770300	1.61E-10	3.23E-10	4.84E-10
782	480251.6	3770318	1.58E-10	3.16E-10	4.75E-10
783	480244.5	3770336	1.55E-10	3.10E-10	4.66E-10
784	480237.3	3770353	1.52E-10	3.05E-10	4.57E-10
785	480230.2	3770371	1.50E-10	2.99E-10	4.49E-10
786	480223	3770389	1.47E-10	2.94E-10	4.41E-10
787	480215.9	3770406	1.44E-10	2.89E-10	4.33E-10
788	480208.7	3770424	1.42E-10	2.84E-10	4.26E-10
789	480201.6	3770442	1.40E-10	2.80E-10	4.20E-10
790	480177	3770467	1.38E-10	2.75E-10	4.13E-10
791	480159.6	3770475	1.37E-10	2.75E-10	4.12E-10
792	480142.2	3770483	1.37E-10	2.75E-10	4.12E-10
793	480124.7	3770490	1.37E-10	2.74E-10	4.12E-10
794	480107.3	3770498	1.37E-10	2.74E-10	4.11E-10
795	480089.9	3770506	1.37E-10	2.74E-10	4.11E-10
796	480072.4	3770514	1.37E-10	2.74E-10	4.11E-10
797	480055	3770521	1.37E-10	2.74E-10	4.11E-10
798	480037.6	3770529	1.37E-10	2.74E-10	4.11E-10
799	480020.2	3770537	1.37E-10	2.74E-10	4.11E-10
800	480002.7	3770545	1.37E-10	2.74E-10	4.11E-10
801	479985.3	3770552	1.37E-10	2.74E-10	4.11E-10
802	479967.9	3770560	1.37E-10	2.74E-10	4.11E-10
803	479950.4	3770568	1.37E-10	2.74E-10	4.11E-10
804	479933	3770575	1.37E-10	2.74E-10	4.11E-10
805	479915.6	3770583	1.37E-10	2.73E-10	4.10E-10
806	479898.2	3770591	1.37E-10	2.73E-10	4.10E-10
807	479880.7	3770599	1.37E-10	2.73E-10	4.10E-10
808	479863.3	3770606	1.36E-10	2.73E-10	4.09E-10
809	479845.9	3770614	1.36E-10	2.73E-10	4.09E-10
810	479828.4	3770622	1.36E-10	2.73E-10	4.09E-10
811	479811	3770630	1.36E-10	2.73E-10	4.09E-10
812	479793.6	3770637	1.36E-10	2.73E-10	4.09E-10
813	479776.2	3770645	1.36E-10	2.72E-10	4.08E-10
814	479758.7	3770653	1.36E-10	2.72E-10	4.08E-10
815	479741.3	3770661	1.36E-10	2.72E-10	4.08E-10
816	479723.9	3770668	1.36E-10	2.72E-10	4.08E-10
817	479706.4	3770676	1.36E-10	2.72E-10	4.08E-10
818	479689	3770684	1.36E-10	2.72E-10	4.08E-10
819	479671.6	3770691	1.36E-10	2.72E-10	4.08E-10
820	479654.2	3770699	1.36E-10	2.72E-10	4.08E-10
821	479636.7	3770707	1.36E-10	2.72E-10	4.07E-10
822	479619.3	3770715	1.36E-10	2.71E-10	4.07E-10
823	479601.9	3770722	1.36E-10	2.71E-10	4.07E-10
824	479584.4	3770730	1.35E-10	2.71E-10	4.06E-10
825	479567	3770738	1.36E-10	2.71E-10	4.07E-10
826	479549.6	3770746	1.35E-10	2.71E-10	4.06E-10
827	479532.2	3770753	1.35E-10	2.71E-10	4.06E-10
828	479514.7	3770761	1.35E-10	2.70E-10	4.05E-10

829	479497.3	3770769	1.35E-10	2.70E-10	4.05E-10
830	479479.9	3770777	1.35E-10	2.70E-10	4.06E-10
831	479462.4	3770784	1.35E-10	2.70E-10	4.05E-10
832	479445	3770792	1.35E-10	2.70E-10	4.04E-10
833	479427.6	3770800	1.35E-10	2.69E-10	4.04E-10
834	479410.2	3770807	1.34E-10	2.69E-10	4.03E-10
835	479392.7	3770815	1.34E-10	2.68E-10	4.03E-10
836	479375.3	3770823	1.34E-10	2.68E-10	4.02E-10
837	479357.9	3770831	1.34E-10	2.68E-10	4.01E-10
838	479340.4	3770838	1.34E-10	2.67E-10	4.01E-10
839	479323	3770846	1.33E-10	2.67E-10	4.00E-10
840	479305.6	3770854	1.33E-10	2.66E-10	3.99E-10
841	479288.2	3770862	1.33E-10	2.66E-10	3.98E-10
842	479270.7	3770869	1.33E-10	2.65E-10	3.98E-10
843	479253.3	3770877	1.32E-10	2.65E-10	3.97E-10
844	479235.9	3770885	1.32E-10	2.64E-10	3.97E-10
845	479218.4	3770893	1.32E-10	2.64E-10	3.96E-10
846	479201	3770900	1.32E-10	2.64E-10	3.95E-10
847	479183.6	3770908	1.32E-10	2.63E-10	3.95E-10
848	480616.3	3769417	5.18E-10	1.04E-09	1.55E-09
849	480616.3	3769397	5.29E-10	1.06E-09	1.59E-09
850	480616.3	3769378	5.41E-10	1.08E-09	1.62E-09
851	480616.3	3769359	5.52E-10	1.10E-09	1.66E-09
852	480616.3	3769340	5.63E-10	1.13E-09	1.69E-09
853	480616.3	3769321	5.73E-10	1.15E-09	1.72E-09
854	480616.3	3769302	5.83E-10	1.17E-09	1.75E-09
855	480616.3	3769283	5.92E-10	1.19E-09	1.78E-09
856	480616.3	3769264	6.01E-10	1.20E-09	1.80E-09
857	480616.3	3769245	6.10E-10	1.22E-09	1.83E-09
858	480616.3	3769226	6.17E-10	1.23E-09	1.85E-09
859	479077.5	3769216	7.97E-09	1.59E-08	2.39E-08
860	479072.7	3769235	1.04E-08	2.07E-08	3.11E-08
861	479084.3	3769193	6.06E-09	1.21E-08	1.82E-08
862	479155.2	3769202	1.04E-08	2.09E-08	3.13E-08
863	479058.1	3769211	6.40E-09	1.28E-08	1.92E-08
864	479053.3	3769230	8.05E-09	1.61E-08	2.42E-08
865	479038.7	3769206	5.25E-09	1.05E-08	1.58E-08
866	479033.9	3769225	6.46E-09	1.29E-08	1.94E-08
867	479081.7	3769158	3.94E-09	7.88E-09	1.18E-08
868	479191.2	3769197	1.05E-08	2.09E-08	3.14E-08
869	479019.3	3769201	4.37E-09	8.73E-09	1.31E-08
870	479014.5	3769220	5.27E-09	1.05E-08	1.58E-08
871	479026.4	3769160	3.00E-09	6.00E-09	9.00E-09
872	479041.6	3769150	2.94E-09	5.87E-09	8.81E-09
873	479056.9	3769139	2.86E-09	5.73E-09	8.59E-09
874	479072.2	3769129	2.79E-09	5.58E-09	8.37E-09
875	479087.5	3769118	2.71E-09	5.41E-09	8.12E-09
876	479102.8	3769108	2.61E-09	5.22E-09	7.84E-09
877	479170.3	3769128	4.17E-09	8.34E-09	1.25E-08
878	479182.6	3769142	5.06E-09	1.01E-08	1.52E-08
879	479194.8	3769156	6.15E-09	1.23E-08	1.84E-08
880	479231.7	3769198	1.02E-08	2.04E-08	3.07E-08

881	479244	3769212	1.17E-08	2.34E-08	3.51E-08
882	478980.5	3769192	3.17E-09	6.33E-09	9.50E-09
883	478975.7	3769211	3.74E-09	7.48E-09	1.12E-08
884	478987	3769151	2.29E-09	4.58E-09	6.87E-09
885	479002.2	3769140	2.25E-09	4.51E-09	6.76E-09
886	479017.3	3769130	2.21E-09	4.43E-09	6.64E-09
887	479032.4	3769120	2.17E-09	4.34E-09	6.51E-09
888	479047.5	3769109	2.13E-09	4.25E-09	6.38E-09
889	479062.7	3769099	2.08E-09	4.16E-09	6.24E-09
890	479077.8	3769088	2.03E-09	4.06E-09	6.09E-09
891	479092.9	3769078	1.97E-09	3.94E-09	5.92E-09
892	479108	3769068	1.91E-09	3.82E-09	5.73E-09
893	479174.7	3769088	2.84E-09	5.68E-09	8.52E-09
894	479186.9	3769102	3.35E-09	6.70E-09	1.00E-08
895	479199.1	3769116	3.96E-09	7.93E-09	1.19E-08
896	479211.2	3769129	4.68E-09	9.35E-09	1.40E-08
897	479223.4	3769143	5.49E-09	1.10E-08	1.65E-08
898	479235.5	3769157	6.40E-09	1.28E-08	1.92E-08
899	479272	3769198	9.40E-09	1.88E-08	2.82E-08
900	479284.1	3769212	1.02E-08	2.05E-08	3.07E-08
901	478936.9	3769201	2.82E-09	5.65E-09	8.47E-09
902	478934.9	3769150	1.83E-09	3.67E-09	5.50E-09
903	478950.9	3769139	1.80E-09	3.61E-09	5.41E-09
904	478966.9	3769128	1.78E-09	3.55E-09	5.33E-09
905	478983	3769117	1.75E-09	3.50E-09	5.25E-09
906	478999	3769106	1.72E-09	3.44E-09	5.17E-09
907	479015	3769095	1.69E-09	3.38E-09	5.07E-09
908	479031	3769084	1.66E-09	3.31E-09	4.97E-09
909	479047	3769073	1.62E-09	3.25E-09	4.87E-09
910	479063.1	3769062	1.59E-09	3.18E-09	4.76E-09
911	479079.1	3769051	1.55E-09	3.10E-09	4.66E-09
912	479095.1	3769040	1.51E-09	3.02E-09	4.53E-09
913	479111.1	3769029	1.47E-09	2.94E-09	4.41E-09
914	479181.8	3769051	2.12E-09	4.23E-09	6.35E-09
915	479194.7	3769065	2.47E-09	4.93E-09	7.40E-09
916	479207.5	3769080	2.89E-09	5.77E-09	8.66E-09
917	479220.4	3769095	3.39E-09	6.78E-09	1.02E-08
918	479233.3	3769109	3.95E-09	7.91E-09	1.19E-08
919	479246.2	3769124	4.59E-09	9.18E-09	1.38E-08
920	479259	3769138	5.32E-09	1.06E-08	1.60E-08
921	479271.9	3769153	6.07E-09	1.21E-08	1.82E-08
922	479310.6	3769196	8.26E-09	1.65E-08	2.48E-08
923	479323.4	3769211	8.84E-09	1.77E-08	2.65E-08
924	478898.1	3769191	2.23E-09	4.45E-09	6.68E-09
925	478879.8	3769152	1.53E-09	3.07E-09	4.60E-09
926	478895.6	3769141	1.50E-09	2.99E-09	4.49E-09
927	478911.4	3769130	1.47E-09	2.93E-09	4.40E-09
928	478927.2	3769119	1.44E-09	2.89E-09	4.33E-09
929	478942.9	3769108	1.42E-09	2.85E-09	4.27E-09
930	478958.7	3769098	1.41E-09	2.81E-09	4.22E-09
931	478974.5	3769087	1.39E-09	2.77E-09	4.16E-09
932	478990.3	3769076	1.37E-09	2.73E-09	4.10E-09

933	479006	3769065	1.35E-09	2.69E-09	4.04E-09
934	479021.8	3769054	1.32E-09	2.64E-09	3.96E-09
935	479037.6	3769043	1.30E-09	2.59E-09	3.89E-09
936	479053.4	3769033	1.27E-09	2.54E-09	3.81E-09
937	479069.2	3769022	1.24E-09	2.49E-09	3.73E-09
938	479084.9	3769011	1.22E-09	2.43E-09	3.65E-09
939	479100.7	3769000	1.19E-09	2.38E-09	3.57E-09
940	479198.8	3769025	1.82E-09	3.64E-09	5.47E-09
941	479211.4	3769039	2.09E-09	4.18E-09	6.26E-09
942	479224.1	3769054	2.40E-09	4.80E-09	7.20E-09
943	479236.8	3769068	2.76E-09	5.53E-09	8.29E-09
944	479249.5	3769082	3.17E-09	6.34E-09	9.50E-09
945	479262.2	3769097	3.63E-09	7.25E-09	1.09E-08
946	479274.9	3769111	4.14E-09	8.27E-09	1.24E-08
947	479287.5	3769125	4.66E-09	9.32E-09	1.40E-08
948	479300.2	3769140	5.23E-09	1.05E-08	1.57E-08
949	479312.9	3769154	5.81E-09	1.16E-08	1.74E-08
950	479350.9	3769197	7.30E-09	1.46E-08	2.19E-08
951	479363.6	3769211	7.60E-09	1.52E-08	2.28E-08
952	478840.8	3769142	1.29E-09	2.57E-09	3.86E-09
953	478856.5	3769131	1.25E-09	2.50E-09	3.75E-09
954	478872.1	3769121	1.22E-09	2.45E-09	3.67E-09
955	478887.7	3769110	1.20E-09	2.40E-09	3.61E-09
956	478903.3	3769099	1.18E-09	2.37E-09	3.55E-09
957	478918.9	3769089	1.17E-09	2.34E-09	3.51E-09
958	478934.5	3769078	1.16E-09	2.31E-09	3.47E-09
959	478950.1	3769067	1.14E-09	2.29E-09	3.43E-09
960	478965.7	3769056	1.13E-09	2.26E-09	3.39E-09
961	478981.3	3769046	1.11E-09	2.23E-09	3.34E-09
962	478996.9	3769035	1.09E-09	2.19E-09	3.28E-09
963	479012.5	3769024	1.08E-09	2.16E-09	3.23E-09
964	479028.1	3769014	1.06E-09	2.12E-09	3.18E-09
965	479043.7	3769003	1.04E-09	2.09E-09	3.13E-09
966	479059.3	3768992	1.02E-09	2.05E-09	3.07E-09
967	479074.9	3768981	1.00E-09	2.01E-09	3.01E-09
968	479090.5	3768971	9.87E-10	1.97E-09	2.96E-09
969	479106.1	3768960	9.70E-10	1.94E-09	2.91E-09
970	479137.3	3768939	9.37E-10	1.87E-09	2.81E-09
971	479165.5	3768942	1.02E-09	2.03E-09	3.05E-09
972	479203.1	3768985	1.41E-09	2.82E-09	4.22E-09
973	479215.6	3768999	1.58E-09	3.17E-09	4.75E-09
974	479228.2	3769013	1.79E-09	3.58E-09	5.37E-09
975	479240.7	3769027	2.03E-09	4.05E-09	6.08E-09
976	479253.3	3769041	2.29E-09	4.58E-09	6.87E-09
977	479265.8	3769055	2.59E-09	5.19E-09	7.78E-09
978	479278.3	3769070	2.94E-09	5.89E-09	8.83E-09
979	479290.9	3769084	3.33E-09	6.66E-09	9.99E-09
980	479303.4	3769098	3.73E-09	7.45E-09	1.12E-08
981	479316	3769112	4.14E-09	8.28E-09	1.24E-08
982	479328.5	3769126	4.58E-09	9.16E-09	1.37E-08
983	479341.1	3769141	5.02E-09	1.00E-08	1.51E-08
984	479353.6	3769155	5.43E-09	1.09E-08	1.63E-08

985	479391.2	3769197	6.35E-09	1.27E-08	1.90E-08
986	479403.8	3769211	6.53E-09	1.31E-08	1.96E-08
987	478825.2	3769153	1.33E-09	2.66E-09	3.99E-09
988	478763.6	3769123	9.63E-10	1.93E-09	2.89E-09
989	478779.6	3769112	9.28E-10	1.86E-09	2.78E-09
990	478795.5	3769101	9.01E-10	1.80E-09	2.70E-09
991	478811.5	3769090	8.80E-10	1.76E-09	2.64E-09
992	478827.4	3769079	8.64E-10	1.73E-09	2.59E-09
993	478843.4	3769068	8.52E-10	1.70E-09	2.56E-09
994	478859.4	3769057	8.42E-10	1.68E-09	2.53E-09
995	478875.3	3769046	8.34E-10	1.67E-09	2.50E-09
996	478891.3	3769035	8.26E-10	1.65E-09	2.48E-09
997	478907.3	3769024	8.18E-10	1.64E-09	2.45E-09
998	478923.2	3769013	8.10E-10	1.62E-09	2.43E-09
999	478939.2	3769002	8.01E-10	1.60E-09	2.40E-09
1000	478955.2	3768991	7.92E-10	1.58E-09	2.38E-09
1001	478971.1	3768980	7.82E-10	1.56E-09	2.35E-09
1002	478987.1	3768969	7.70E-10	1.54E-09	2.31E-09
1003	479003	3768958	7.60E-10	1.52E-09	2.28E-09
1004	479019	3768947	7.50E-10	1.50E-09	2.25E-09
1005	479035	3768936	7.40E-10	1.48E-09	2.22E-09
1006	479050.9	3768925	7.28E-10	1.46E-09	2.19E-09
1007	479066.9	3768914	7.18E-10	1.44E-09	2.15E-09
1008	479082.9	3768903	7.09E-10	1.42E-09	2.13E-09
1009	479098.8	3768892	7.01E-10	1.40E-09	2.10E-09
1010	479146.7	3768859	6.74E-10	1.35E-09	2.02E-09
1011	479175.5	3768863	7.19E-10	1.44E-09	2.16E-09
1012	479226.8	3768921	1.04E-09	2.07E-09	3.11E-09
1013	479239.7	3768935	1.14E-09	2.29E-09	3.43E-09
1014	479252.5	3768950	1.26E-09	2.52E-09	3.79E-09
1015	479265.3	3768964	1.40E-09	2.80E-09	4.20E-09
1016	479278.2	3768979	1.56E-09	3.12E-09	4.68E-09
1017	479291	3768993	1.74E-09	3.48E-09	5.22E-09
1018	479303.8	3769008	1.93E-09	3.87E-09	5.80E-09
1019	479316.7	3769022	2.15E-09	4.30E-09	6.45E-09
1020	479329.5	3769037	2.39E-09	4.78E-09	7.17E-09
1021	479342.3	3769052	2.65E-09	5.30E-09	7.95E-09
1022	479355.2	3769066	2.92E-09	5.84E-09	8.76E-09
1023	479368	3769081	3.19E-09	6.38E-09	9.57E-09
1024	479380.8	3769095	3.47E-09	6.93E-09	1.04E-08
1025	479393.7	3769110	3.75E-09	7.49E-09	1.12E-08
1026	479406.5	3769124	4.02E-09	8.03E-09	1.20E-08
1027	479419.3	3769139	4.25E-09	8.51E-09	1.28E-08
1028	479432.1	3769153	4.48E-09	8.96E-09	1.34E-08
1029	479470.6	3769197	4.85E-09	9.70E-09	1.45E-08
1030	479483.5	3769211	4.89E-09	9.78E-09	1.47E-08
1031	478747.6	3769134	1.01E-09	2.01E-09	3.02E-09
1032	478742.9	3769153	1.14E-09	2.28E-09	3.42E-09
1033	478685.7	3769103	7.76E-10	1.55E-09	2.33E-09
1034	478701.4	3769093	7.42E-10	1.48E-09	2.23E-09
1035	478717.1	3769082	7.14E-10	1.43E-09	2.14E-09
1036	478732.8	3769071	6.91E-10	1.38E-09	2.07E-09

1037	478748.5	3769060	6.73E-10	1.35E-09	2.02E-09
1038	478764.2	3769049	6.60E-10	1.32E-09	1.98E-09
1039	478779.9	3769039	6.49E-10	1.30E-09	1.95E-09
1040	478795.6	3769028	6.42E-10	1.28E-09	1.92E-09
1041	478811.3	3769017	6.36E-10	1.27E-09	1.91E-09
1042	478827	3769006	6.31E-10	1.26E-09	1.89E-09
1043	478842.7	3768995	6.27E-10	1.25E-09	1.88E-09
1044	478858.4	3768985	6.23E-10	1.25E-09	1.87E-09
1045	478874.1	3768974	6.18E-10	1.24E-09	1.86E-09
1046	478889.8	3768963	6.13E-10	1.23E-09	1.84E-09
1047	478905.5	3768952	6.08E-10	1.22E-09	1.82E-09
1048	478921.2	3768942	6.02E-10	1.20E-09	1.81E-09
1049	478936.9	3768931	5.96E-10	1.19E-09	1.79E-09
1050	478952.6	3768920	5.89E-10	1.18E-09	1.77E-09
1051	478968.3	3768909	5.82E-10	1.16E-09	1.75E-09
1052	478984	3768898	5.76E-10	1.15E-09	1.73E-09
1053	478999.7	3768888	5.69E-10	1.14E-09	1.71E-09
1054	479015.4	3768877	5.63E-10	1.13E-09	1.69E-09
1055	479031.1	3768866	5.57E-10	1.11E-09	1.67E-09
1056	479046.8	3768855	5.51E-10	1.10E-09	1.65E-09
1057	479062.5	3768845	5.46E-10	1.09E-09	1.64E-09
1058	479078.2	3768834	5.41E-10	1.08E-09	1.62E-09
1059	479093.9	3768823	5.37E-10	1.07E-09	1.61E-09
1060	479109.6	3768812	5.31E-10	1.06E-09	1.59E-09
1061	479141.1	3768791	5.21E-10	1.04E-09	1.56E-09
1062	479156.8	3768780	5.16E-10	1.03E-09	1.55E-09
1063	479185.1	3768783	5.45E-10	1.09E-09	1.63E-09
1064	479197.7	3768798	5.82E-10	1.16E-09	1.75E-09
1065	479248.2	3768855	7.85E-10	1.57E-09	2.36E-09
1066	479260.8	3768869	8.52E-10	1.70E-09	2.56E-09
1067	479273.4	3768883	9.27E-10	1.85E-09	2.78E-09
1068	479286	3768897	1.01E-09	2.02E-09	3.03E-09
1069	479298.7	3768912	1.10E-09	2.20E-09	3.30E-09
1070	479311.3	3768926	1.21E-09	2.41E-09	3.62E-09
1071	479323.9	3768940	1.32E-09	2.64E-09	3.96E-09
1072	479336.5	3768955	1.45E-09	2.90E-09	4.35E-09
1073	479349.1	3768969	1.59E-09	3.18E-09	4.77E-09
1074	479361.8	3768983	1.74E-09	3.47E-09	5.21E-09
1075	479374.4	3768997	1.89E-09	3.79E-09	5.68E-09
1076	479387	3769012	2.06E-09	4.13E-09	6.19E-09
1077	479399.6	3769026	2.24E-09	4.49E-09	6.73E-09
1078	479412.2	3769040	2.43E-09	4.86E-09	7.29E-09
1079	479424.9	3769054	2.61E-09	5.22E-09	7.82E-09
1080	479437.5	3769069	2.79E-09	5.58E-09	8.36E-09
1081	479450.1	3769083	2.97E-09	5.94E-09	8.91E-09
1082	479462.7	3769097	3.15E-09	6.29E-09	9.44E-09
1083	479475.3	3769111	3.31E-09	6.62E-09	9.92E-09
1084	479488	3769126	3.45E-09	6.90E-09	1.04E-08
1085	479500.6	3769140	3.57E-09	7.15E-09	1.07E-08
1086	479538.4	3769183	3.78E-09	7.55E-09	1.13E-08
1087	479551.1	3769197	3.78E-09	7.56E-09	1.13E-08
1088	479563.7	3769211	3.76E-09	7.52E-09	1.13E-08

1089	478670	3769114	8.15E-10	1.63E-09	2.45E-09
1090	478665.3	3769133	9.15E-10	1.83E-09	2.74E-09
1091	478608.3	3769084	6.55E-10	1.31E-09	1.96E-09
1092	478624.3	3769073	6.24E-10	1.25E-09	1.87E-09
1093	478640.2	3769062	5.97E-10	1.19E-09	1.79E-09
1094	478656.2	3769051	5.73E-10	1.15E-09	1.72E-09
1095	478672.1	3769040	5.54E-10	1.11E-09	1.66E-09
1096	478688	3769029	5.38E-10	1.08E-09	1.61E-09
1097	478704	3769018	5.25E-10	1.05E-09	1.57E-09
1098	478719.9	3769007	5.15E-10	1.03E-09	1.55E-09
1099	478735.9	3768996	5.08E-10	1.02E-09	1.52E-09
1100	478751.8	3768985	5.03E-10	1.01E-09	1.51E-09
1101	478767.7	3768974	5.00E-10	9.99E-10	1.50E-09
1102	478783.7	3768963	4.97E-10	9.94E-10	1.49E-09
1103	478799.6	3768952	4.95E-10	9.90E-10	1.48E-09
1104	478815.6	3768941	4.93E-10	9.86E-10	1.48E-09
1105	478831.5	3768931	4.90E-10	9.81E-10	1.47E-09
1106	478847.5	3768920	4.88E-10	9.75E-10	1.46E-09
1107	478863.4	3768909	4.84E-10	9.69E-10	1.45E-09
1108	478879.3	3768898	4.81E-10	9.61E-10	1.44E-09
1109	478895.3	3768887	4.76E-10	9.53E-10	1.43E-09
1110	478911.2	3768876	4.72E-10	9.44E-10	1.42E-09
1111	478927.2	3768865	4.67E-10	9.34E-10	1.40E-09
1112	478943.1	3768854	4.62E-10	9.24E-10	1.39E-09
1113	478959	3768843	4.58E-10	9.16E-10	1.37E-09
1114	478975	3768832	4.54E-10	9.07E-10	1.36E-09
1115	478990.9	3768821	4.49E-10	8.99E-10	1.35E-09
1116	479006.9	3768810	4.45E-10	8.90E-10	1.34E-09
1117	479022.8	3768799	4.41E-10	8.83E-10	1.32E-09
1118	479038.7	3768788	4.38E-10	8.77E-10	1.32E-09
1119	479054.7	3768777	4.36E-10	8.71E-10	1.31E-09
1120	479070.6	3768766	4.32E-10	8.64E-10	1.30E-09
1121	479086.6	3768755	4.29E-10	8.57E-10	1.29E-09
1122	479102.5	3768744	4.26E-10	8.53E-10	1.28E-09
1123	479150.3	3768712	4.17E-10	8.35E-10	1.25E-09
1124	479166.3	3768701	4.15E-10	8.30E-10	1.25E-09
1125	479195	3768704	4.36E-10	8.73E-10	1.31E-09
1126	479207.8	3768719	4.62E-10	9.25E-10	1.39E-09
1127	479220.7	3768733	4.91E-10	9.82E-10	1.47E-09
1128	479259.1	3768777	5.94E-10	1.19E-09	1.78E-09
1129	479271.9	3768791	6.36E-10	1.27E-09	1.91E-09
1130	479284.7	3768806	6.82E-10	1.36E-09	2.05E-09
1131	479297.5	3768820	7.34E-10	1.47E-09	2.20E-09
1132	479310.3	3768834	7.90E-10	1.58E-09	2.37E-09
1133	479323.2	3768849	8.51E-10	1.70E-09	2.55E-09
1134	479336	3768863	9.21E-10	1.84E-09	2.76E-09
1135	479348.8	3768878	9.97E-10	1.99E-09	2.99E-09
1136	479361.6	3768892	1.08E-09	2.16E-09	3.24E-09
1137	479374.4	3768907	1.17E-09	2.35E-09	3.52E-09
1138	479387.2	3768921	1.27E-09	2.54E-09	3.81E-09
1139	479400	3768936	1.38E-09	2.75E-09	4.13E-09
1140	479412.9	3768950	1.49E-09	2.99E-09	4.48E-09

1141	479425.7	3768965	1.61E-09	3.22E-09	4.82E-09
1142	479438.5	3768979	1.73E-09	3.46E-09	5.19E-09
1143	479451.3	3768994	1.86E-09	3.72E-09	5.58E-09
1144	479464.1	3769008	2.00E-09	3.99E-09	5.99E-09
1145	479476.9	3769023	2.13E-09	4.27E-09	6.40E-09
1146	479489.7	3769037	2.27E-09	4.54E-09	6.81E-09
1147	479502.5	3769052	2.40E-09	4.80E-09	7.20E-09
1148	479515.4	3769066	2.52E-09	5.04E-09	7.56E-09
1149	479528.2	3769081	2.63E-09	5.26E-09	7.89E-09
1150	479541	3769095	2.74E-09	5.47E-09	8.21E-09
1151	479553.8	3769110	2.83E-09	5.66E-09	8.50E-09
1152	479566.6	3769124	2.91E-09	5.82E-09	8.72E-09
1153	479579.4	3769139	2.97E-09	5.94E-09	8.90E-09
1154	479592.2	3769153	3.01E-09	6.02E-09	9.02E-09
1155	479617.9	3769182	3.03E-09	6.06E-09	9.10E-09
1156	479630.7	3769197	3.01E-09	6.02E-09	9.03E-09
1157	479643.5	3769211	2.97E-09	5.94E-09	8.91E-09
1158	478592.4	3769095	6.89E-10	1.38E-09	2.07E-09
1159	478587.6	3769114	7.67E-10	1.53E-09	2.30E-09
1160	478530.9	3769064	5.70E-10	1.14E-09	1.71E-09
1161	478547	3769053	5.43E-10	1.09E-09	1.63E-09
1162	478563.2	3769042	5.18E-10	1.04E-09	1.56E-09
1163	478579.3	3769031	4.96E-10	9.92E-10	1.49E-09
1164	478595.4	3769020	4.76E-10	9.52E-10	1.43E-09
1165	478611.5	3769009	4.59E-10	9.18E-10	1.38E-09
1166	478627.6	3768998	4.45E-10	8.90E-10	1.33E-09
1167	478643.8	3768987	4.33E-10	8.66E-10	1.30E-09
1168	478659.9	3768976	4.24E-10	8.47E-10	1.27E-09
1169	478676	3768965	4.17E-10	8.33E-10	1.25E-09
1170	478692.1	3768954	4.12E-10	8.23E-10	1.23E-09
1171	478708.3	3768942	4.08E-10	8.17E-10	1.22E-09
1172	478724.4	3768931	4.06E-10	8.12E-10	1.22E-09
1173	478740.5	3768920	4.05E-10	8.09E-10	1.21E-09
1174	478756.6	3768909	4.04E-10	8.07E-10	1.21E-09
1175	478772.8	3768898	4.03E-10	8.05E-10	1.21E-09
1176	478788.9	3768887	4.02E-10	8.03E-10	1.21E-09
1177	478805	3768876	4.00E-10	8.01E-10	1.20E-09
1178	478821.1	3768865	3.99E-10	7.97E-10	1.20E-09
1179	478837.3	3768854	3.96E-10	7.92E-10	1.19E-09
1180	478853.4	3768843	3.93E-10	7.87E-10	1.18E-09
1181	478869.5	3768832	3.90E-10	7.81E-10	1.17E-09
1182	478885.6	3768821	3.87E-10	7.74E-10	1.16E-09
1183	478901.8	3768810	3.83E-10	7.66E-10	1.15E-09
1184	478917.9	3768798	3.80E-10	7.60E-10	1.14E-09
1185	478934	3768787	3.77E-10	7.53E-10	1.13E-09
1186	478950.1	3768776	3.73E-10	7.46E-10	1.12E-09
1187	478966.2	3768765	3.70E-10	7.39E-10	1.11E-09
1188	478982.4	3768754	3.67E-10	7.34E-10	1.10E-09
1189	478998.5	3768743	3.65E-10	7.30E-10	1.09E-09
1190	479014.6	3768732	3.63E-10	7.26E-10	1.09E-09
1191	479030.7	3768721	3.61E-10	7.21E-10	1.08E-09
1192	479046.9	3768710	3.58E-10	7.17E-10	1.07E-09

1193	479063	3768699	3.57E-10	7.14E-10	1.07E-09
1194	479079.1	3768688	3.55E-10	7.11E-10	1.07E-09
1195	479095.2	3768677	3.53E-10	7.07E-10	1.06E-09
1196	479111.4	3768666	3.52E-10	7.03E-10	1.06E-09
1197	479143.6	3768643	3.49E-10	6.99E-10	1.05E-09
1198	479159.7	3768632	3.48E-10	6.96E-10	1.04E-09
1199	479175.9	3768621	3.47E-10	6.93E-10	1.04E-09
1200	479204.9	3768625	3.62E-10	7.24E-10	1.09E-09
1201	479217.9	3768640	3.81E-10	7.62E-10	1.14E-09
1202	479230.9	3768654	4.01E-10	8.02E-10	1.20E-09
1203	479243.8	3768669	4.23E-10	8.47E-10	1.27E-09
1204	479282.7	3768713	5.02E-10	1.00E-09	1.51E-09
1205	479295.7	3768727	5.34E-10	1.07E-09	1.60E-09
1206	479308.6	3768742	5.67E-10	1.13E-09	1.70E-09
1207	479321.6	3768757	6.04E-10	1.21E-09	1.81E-09
1208	479334.5	3768771	6.44E-10	1.29E-09	1.93E-09
1209	479347.5	3768786	6.87E-10	1.37E-09	2.06E-09
1210	479360.5	3768801	7.35E-10	1.47E-09	2.21E-09
1211	479373.4	3768815	7.88E-10	1.58E-09	2.36E-09
1212	479386.4	3768830	8.45E-10	1.69E-09	2.54E-09
1213	479399.3	3768845	9.08E-10	1.82E-09	2.72E-09
1214	479412.3	3768859	9.75E-10	1.95E-09	2.93E-09
1215	479425.3	3768874	1.05E-09	2.10E-09	3.14E-09
1216	479438.2	3768889	1.13E-09	2.25E-09	3.38E-09
1217	479451.2	3768903	1.21E-09	2.42E-09	3.63E-09
1218	479464.1	3768918	1.30E-09	2.60E-09	3.90E-09
1219	479477.1	3768933	1.39E-09	2.78E-09	4.17E-09
1220	479490.1	3768947	1.49E-09	2.98E-09	4.46E-09
1221	479503	3768962	1.59E-09	3.17E-09	4.76E-09
1222	479516	3768977	1.68E-09	3.37E-09	5.05E-09
1223	479528.9	3768991	1.78E-09	3.56E-09	5.34E-09
1224	479541.9	3769006	1.88E-09	3.76E-09	5.65E-09
1225	479554.9	3769020	1.98E-09	3.96E-09	5.94E-09
1226	479567.8	3769035	2.08E-09	4.15E-09	6.23E-09
1227	479580.8	3769050	2.17E-09	4.33E-09	6.50E-09
1228	479593.7	3769064	2.25E-09	4.49E-09	6.74E-09
1229	479606.7	3769079	2.31E-09	4.63E-09	6.94E-09
1230	479619.7	3769094	2.37E-09	4.74E-09	7.12E-09
1231	479632.6	3769108	2.42E-09	4.84E-09	7.27E-09
1232	479645.6	3769123	2.46E-09	4.92E-09	7.38E-09
1233	479658.5	3769138	2.48E-09	4.97E-09	7.45E-09
1234	479671.5	3769152	2.50E-09	4.99E-09	7.49E-09
1235	479697.4	3769182	2.48E-09	4.95E-09	7.43E-09
1236	479710.4	3769196	2.45E-09	4.90E-09	7.35E-09
1237	479723.3	3769211	2.41E-09	4.81E-09	7.22E-09
1238	478514.8	3769075	5.99E-10	1.20E-09	1.80E-09
1239	478510	3769094	6.60E-10	1.32E-09	1.98E-09
1240	478453.1	3769045	5.06E-10	1.01E-09	1.52E-09
1241	478469	3769034	4.84E-10	9.68E-10	1.45E-09
1242	478484.9	3769023	4.63E-10	9.25E-10	1.39E-09
1243	478500.9	3769012	4.43E-10	8.86E-10	1.33E-09
1244	478516.8	3769001	4.25E-10	8.50E-10	1.27E-09

1245	478532.7	3768990	4.08E-10	8.16E-10	1.22E-09
1246	478548.7	3768979	3.93E-10	7.86E-10	1.18E-09
1247	478564.6	3768968	3.80E-10	7.60E-10	1.14E-09
1248	478580.5	3768958	3.69E-10	7.39E-10	1.11E-09
1249	478596.5	3768947	3.60E-10	7.20E-10	1.08E-09
1250	478612.4	3768936	3.53E-10	7.06E-10	1.06E-09
1251	478628.3	3768925	3.47E-10	6.95E-10	1.04E-09
1252	478644.2	3768914	3.43E-10	6.87E-10	1.03E-09
1253	478660.2	3768903	3.41E-10	6.81E-10	1.02E-09
1254	478676.1	3768892	3.39E-10	6.78E-10	1.02E-09
1255	478692	3768881	3.38E-10	6.77E-10	1.01E-09
1256	478708	3768870	3.38E-10	6.76E-10	1.01E-09
1257	478723.9	3768859	3.38E-10	6.75E-10	1.01E-09
1258	478739.8	3768848	3.37E-10	6.75E-10	1.01E-09
1259	478755.7	3768837	3.37E-10	6.74E-10	1.01E-09
1260	478771.7	3768826	3.36E-10	6.73E-10	1.01E-09
1261	478787.6	3768815	3.35E-10	6.70E-10	1.01E-09
1262	478803.5	3768804	3.34E-10	6.67E-10	1.00E-09
1263	478819.5	3768793	3.32E-10	6.64E-10	9.96E-10
1264	478835.4	3768782	3.30E-10	6.59E-10	9.89E-10
1265	478851.3	3768772	3.27E-10	6.54E-10	9.81E-10
1266	478867.2	3768761	3.25E-10	6.49E-10	9.74E-10
1267	478883.2	3768750	3.22E-10	6.44E-10	9.66E-10
1268	478899.1	3768739	3.19E-10	6.39E-10	9.58E-10
1269	478915	3768728	3.17E-10	6.34E-10	9.51E-10
1270	478931	3768717	3.14E-10	6.28E-10	9.43E-10
1271	478946.9	3768706	3.12E-10	6.24E-10	9.36E-10
1272	478962.8	3768695	3.10E-10	6.20E-10	9.30E-10
1273	478978.7	3768684	3.09E-10	6.17E-10	9.26E-10
1274	478994.7	3768673	3.07E-10	6.14E-10	9.21E-10
1275	479010.6	3768662	3.05E-10	6.10E-10	9.15E-10
1276	479026.5	3768651	3.04E-10	6.08E-10	9.12E-10
1277	479042.5	3768640	3.03E-10	6.06E-10	9.09E-10
1278	479058.4	3768629	3.02E-10	6.04E-10	9.05E-10
1279	479074.3	3768618	3.01E-10	6.02E-10	9.03E-10
1280	479090.2	3768607	3.00E-10	6.01E-10	9.01E-10
1281	479106.2	3768596	3.00E-10	6.00E-10	9.00E-10
1282	479138	3768575	2.99E-10	5.97E-10	8.96E-10
1283	479154	3768564	2.98E-10	5.95E-10	8.93E-10
1284	479169.9	3768553	2.97E-10	5.94E-10	8.91E-10
1285	479185.8	3768542	2.96E-10	5.93E-10	8.89E-10
1286	479214.6	3768545	3.10E-10	6.19E-10	9.29E-10
1287	479227.4	3768560	3.23E-10	6.46E-10	9.69E-10
1288	479240.2	3768574	3.39E-10	6.77E-10	1.02E-09
1289	479253	3768589	3.55E-10	7.09E-10	1.06E-09
1290	479265.8	3768603	3.72E-10	7.44E-10	1.12E-09
1291	479317	3768661	4.53E-10	9.06E-10	1.36E-09
1292	479329.8	3768676	4.78E-10	9.56E-10	1.43E-09
1293	479342.6	3768690	5.05E-10	1.01E-09	1.51E-09
1294	479355.4	3768705	5.33E-10	1.07E-09	1.60E-09
1295	479368.2	3768719	5.65E-10	1.13E-09	1.69E-09
1296	479381	3768733	5.99E-10	1.20E-09	1.80E-09

1297	479393.8	3768748	6.35E-10	1.27E-09	1.90E-09
1298	479406.6	3768762	6.75E-10	1.35E-09	2.02E-09
1299	479419.4	3768777	7.17E-10	1.43E-09	2.15E-09
1300	479432.2	3768791	7.62E-10	1.52E-09	2.28E-09
1301	479445	3768806	8.10E-10	1.62E-09	2.43E-09
1302	479457.8	3768820	8.62E-10	1.72E-09	2.59E-09
1303	479470.6	3768835	9.18E-10	1.84E-09	2.75E-09
1304	479483.4	3768849	9.78E-10	1.96E-09	2.93E-09
1305	479496.2	3768864	1.04E-09	2.08E-09	3.12E-09
1306	479509	3768878	1.11E-09	2.22E-09	3.32E-09
1307	479521.8	3768893	1.18E-09	2.36E-09	3.53E-09
1308	479534.6	3768907	1.25E-09	2.50E-09	3.75E-09
1309	479547.4	3768922	1.33E-09	2.65E-09	3.98E-09
1310	479560.2	3768936	1.40E-09	2.80E-09	4.20E-09
1311	479573	3768951	1.48E-09	2.96E-09	4.44E-09
1312	479585.8	3768965	1.56E-09	3.11E-09	4.67E-09
1313	479598.6	3768980	1.63E-09	3.26E-09	4.89E-09
1314	479611.5	3768994	1.70E-09	3.40E-09	5.10E-09
1315	479624.3	3769008	1.77E-09	3.54E-09	5.31E-09
1316	479637.1	3769023	1.84E-09	3.67E-09	5.51E-09
1317	479649.9	3769037	1.90E-09	3.80E-09	5.69E-09
1318	479662.7	3769052	1.95E-09	3.90E-09	5.86E-09
1319	479675.5	3769066	2.00E-09	4.00E-09	6.01E-09
1320	479688.3	3769081	2.04E-09	4.08E-09	6.12E-09
1321	479701.1	3769095	2.07E-09	4.13E-09	6.20E-09
1322	479713.9	3769110	2.09E-09	4.17E-09	6.26E-09
1323	479726.7	3769124	2.10E-09	4.20E-09	6.30E-09
1324	479739.5	3769139	2.10E-09	4.21E-09	6.31E-09
1325	479790.7	3769197	2.02E-09	4.05E-09	6.07E-09
1326	479803.5	3769211	1.99E-09	3.97E-09	5.96E-09
1327	478437.2	3769056	5.30E-10	1.06E-09	1.59E-09
1328	478432.4	3769075	5.79E-10	1.16E-09	1.74E-09
1329	478297.9	3769006	4.12E-10	8.25E-10	1.24E-09
1330	478313.8	3768995	3.97E-10	7.94E-10	1.19E-09
1331	478329.7	3768984	3.82E-10	7.64E-10	1.15E-09
1332	478345.6	3768973	3.67E-10	7.35E-10	1.10E-09
1333	478361.5	3768963	3.53E-10	7.07E-10	1.06E-09
1334	478377.5	3768952	3.40E-10	6.80E-10	1.02E-09
1335	478393.4	3768941	3.27E-10	6.54E-10	9.82E-10
1336	478409.3	3768930	3.15E-10	6.30E-10	9.45E-10
1337	478425.2	3768919	3.04E-10	6.08E-10	9.12E-10
1338	478441.1	3768908	2.94E-10	5.87E-10	8.81E-10
1339	478457.1	3768897	2.85E-10	5.69E-10	8.54E-10
1340	478473	3768886	2.77E-10	5.53E-10	8.30E-10
1341	478488.9	3768875	2.70E-10	5.39E-10	8.09E-10
1342	478504.8	3768864	2.64E-10	5.28E-10	7.92E-10
1343	478520.7	3768853	2.59E-10	5.19E-10	7.78E-10
1344	478536.7	3768842	2.56E-10	5.12E-10	7.68E-10
1345	478552.6	3768831	2.53E-10	5.07E-10	7.60E-10
1346	478568.5	3768820	2.52E-10	5.03E-10	7.55E-10
1347	478584.4	3768809	2.51E-10	5.01E-10	7.52E-10
1348	478600.4	3768799	2.50E-10	5.00E-10	7.51E-10

1349	478616.3	3768788	2.50E-10	5.00E-10	7.51E-10
1350	478632.2	3768777	2.50E-10	5.01E-10	7.51E-10
1351	478648.1	3768766	2.51E-10	5.01E-10	7.52E-10
1352	478664	3768755	2.51E-10	5.02E-10	7.53E-10
1353	478680	3768744	2.51E-10	5.03E-10	7.54E-10
1354	478695.9	3768733	2.51E-10	5.03E-10	7.54E-10
1355	478711.8	3768722	2.51E-10	5.02E-10	7.54E-10
1356	478727.7	3768711	2.51E-10	5.02E-10	7.53E-10
1357	478743.6	3768700	2.50E-10	5.00E-10	7.50E-10
1358	478759.6	3768689	2.49E-10	4.98E-10	7.47E-10
1359	478775.5	3768678	2.48E-10	4.96E-10	7.44E-10
1360	478791.4	3768667	2.47E-10	4.93E-10	7.40E-10
1361	478807.3	3768656	2.45E-10	4.90E-10	7.35E-10
1362	478823.2	3768645	2.43E-10	4.86E-10	7.30E-10
1363	478839.2	3768634	2.41E-10	4.83E-10	7.24E-10
1364	478855.1	3768624	2.40E-10	4.79E-10	7.19E-10
1365	478871	3768613	2.38E-10	4.76E-10	7.15E-10
1366	478886.9	3768602	2.37E-10	4.74E-10	7.10E-10
1367	478902.9	3768591	2.35E-10	4.71E-10	7.06E-10
1368	478918.8	3768580	2.34E-10	4.68E-10	7.01E-10
1369	478934.7	3768569	2.33E-10	4.65E-10	6.98E-10
1370	478950.6	3768558	2.32E-10	4.64E-10	6.95E-10
1371	478966.5	3768547	2.31E-10	4.62E-10	6.93E-10
1372	478982.5	3768536	2.30E-10	4.61E-10	6.91E-10
1373	478998.4	3768525	2.30E-10	4.59E-10	6.89E-10
1374	479014.3	3768514	2.29E-10	4.59E-10	6.88E-10
1375	479030.2	3768503	2.29E-10	4.59E-10	6.88E-10
1376	479046.1	3768492	2.29E-10	4.59E-10	6.88E-10
1377	479062.1	3768481	2.29E-10	4.59E-10	6.88E-10
1378	479078	3768470	2.29E-10	4.58E-10	6.87E-10
1379	479093.9	3768459	2.29E-10	4.58E-10	6.87E-10
1380	479109.8	3768449	2.29E-10	4.59E-10	6.88E-10
1381	479157.6	3768416	2.29E-10	4.59E-10	6.88E-10
1382	479173.5	3768405	2.30E-10	4.59E-10	6.89E-10
1383	479189.4	3768394	2.30E-10	4.60E-10	6.90E-10
1384	479205.4	3768383	2.30E-10	4.60E-10	6.90E-10
1385	479234.1	3768386	2.39E-10	4.77E-10	7.16E-10
1386	479246.9	3768401	2.48E-10	4.95E-10	7.43E-10
1387	479259.7	3768415	2.57E-10	5.14E-10	7.71E-10
1388	479272.5	3768430	2.67E-10	5.34E-10	8.01E-10
1389	479285.3	3768444	2.77E-10	5.54E-10	8.32E-10
1390	479298.1	3768459	2.88E-10	5.76E-10	8.65E-10
1391	479310.9	3768473	2.99E-10	5.99E-10	8.98E-10
1392	479323.7	3768488	3.12E-10	6.23E-10	9.35E-10
1393	479336.5	3768502	3.24E-10	6.48E-10	9.72E-10
1394	479349.2	3768517	3.37E-10	6.75E-10	1.01E-09
1395	479387.6	3768560	3.83E-10	7.65E-10	1.15E-09
1396	479400.4	3768575	4.00E-10	8.00E-10	1.20E-09
1397	479413.2	3768589	4.18E-10	8.36E-10	1.25E-09
1398	479426	3768603	4.37E-10	8.75E-10	1.31E-09
1399	479438.8	3768618	4.58E-10	9.16E-10	1.37E-09
1400	479451.6	3768632	4.80E-10	9.60E-10	1.44E-09

1401	479464.4	3768647	5.03E-10	1.01E-09	1.51E-09
1402	479477.2	3768661	5.28E-10	1.06E-09	1.58E-09
1403	479490	3768676	5.54E-10	1.11E-09	1.66E-09
1404	479502.8	3768690	5.83E-10	1.17E-09	1.75E-09
1405	479515.6	3768705	6.13E-10	1.23E-09	1.84E-09
1406	479528.4	3768719	6.45E-10	1.29E-09	1.93E-09
1407	479541.2	3768734	6.78E-10	1.36E-09	2.04E-09
1408	479554	3768748	7.14E-10	1.43E-09	2.14E-09
1409	479566.8	3768763	7.51E-10	1.50E-09	2.25E-09
1410	479579.6	3768777	7.91E-10	1.58E-09	2.37E-09
1411	479592.4	3768792	8.32E-10	1.66E-09	2.50E-09
1412	479605.2	3768806	8.74E-10	1.75E-09	2.62E-09
1413	479618	3768821	9.20E-10	1.84E-09	2.76E-09
1414	479630.8	3768835	9.66E-10	1.93E-09	2.90E-09
1415	479643.6	3768849	1.01E-09	2.03E-09	3.04E-09
1416	479656.4	3768864	1.06E-09	2.13E-09	3.19E-09
1417	479669.2	3768878	1.11E-09	2.22E-09	3.33E-09
1418	479682	3768893	1.16E-09	2.32E-09	3.48E-09
1419	479694.8	3768907	1.21E-09	2.42E-09	3.62E-09
1420	479707.6	3768922	1.25E-09	2.51E-09	3.76E-09
1421	479720.4	3768936	1.30E-09	2.60E-09	3.89E-09
1422	479733.2	3768951	1.34E-09	2.68E-09	4.02E-09
1423	479746	3768965	1.38E-09	2.76E-09	4.15E-09
1424	479758.8	3768980	1.42E-09	2.84E-09	4.26E-09
1425	479771.6	3768994	1.46E-09	2.91E-09	4.37E-09
1426	479784.3	3769009	1.49E-09	2.98E-09	4.47E-09
1427	479797.1	3769023	1.52E-09	3.04E-09	4.55E-09
1428	479809.9	3769038	1.54E-09	3.08E-09	4.62E-09
1429	479822.7	3769052	1.56E-09	3.11E-09	4.67E-09
1430	479835.5	3769066	1.57E-09	3.14E-09	4.71E-09
1431	479848.3	3769081	1.58E-09	3.16E-09	4.74E-09
1432	479861.1	3769095	1.58E-09	3.16E-09	4.74E-09
1433	479873.9	3769110	1.58E-09	3.16E-09	4.74E-09
1434	479886.7	3769124	1.57E-09	3.15E-09	4.72E-09
1435	479899.5	3769139	1.56E-09	3.12E-09	4.68E-09
1436	479937.9	3769182	1.50E-09	2.99E-09	4.49E-09
1437	479950.7	3769197	1.47E-09	2.94E-09	4.41E-09
1438	479963.5	3769211	1.44E-09	2.88E-09	4.31E-09
1439	478281.9	3769017	4.28E-10	8.56E-10	1.28E-09
1440	478277.2	3769036	4.60E-10	9.21E-10	1.38E-09
1441	478142.8	3768967	3.45E-10	6.90E-10	1.03E-09
1442	478159	3768956	3.34E-10	6.68E-10	1.00E-09
1443	478175.1	3768945	3.23E-10	6.47E-10	9.70E-10
1444	478191.3	3768934	3.13E-10	6.26E-10	9.38E-10
1445	478207.4	3768923	3.03E-10	6.05E-10	9.08E-10
1446	478223.6	3768912	2.93E-10	5.85E-10	8.78E-10
1447	478239.7	3768901	2.83E-10	5.65E-10	8.48E-10
1448	478255.9	3768890	2.73E-10	5.46E-10	8.18E-10
1449	478272	3768879	2.63E-10	5.27E-10	7.90E-10
1450	478288.2	3768868	2.54E-10	5.09E-10	7.63E-10
1451	478304.3	3768856	2.46E-10	4.92E-10	7.38E-10
1452	478320.5	3768845	2.38E-10	4.76E-10	7.14E-10

1453	478336.6	3768834	2.30E-10	4.61E-10	6.91E-10
1454	478352.7	3768823	2.24E-10	4.47E-10	6.71E-10
1455	478368.9	3768812	2.18E-10	4.35E-10	6.53E-10
1456	478385	3768801	2.12E-10	4.25E-10	6.37E-10
1457	478401.2	3768790	2.08E-10	4.16E-10	6.24E-10
1458	478417.3	3768779	2.04E-10	4.08E-10	6.13E-10
1459	478433.5	3768768	2.01E-10	4.02E-10	6.04E-10
1460	478449.6	3768757	1.99E-10	3.98E-10	5.97E-10
1461	478465.8	3768746	1.97E-10	3.95E-10	5.92E-10
1462	478481.9	3768734	1.96E-10	3.93E-10	5.89E-10
1463	478498.1	3768723	1.96E-10	3.92E-10	5.87E-10
1464	478514.2	3768712	1.96E-10	3.91E-10	5.87E-10
1465	478530.4	3768701	1.96E-10	3.92E-10	5.88E-10
1466	478546.5	3768690	1.96E-10	3.92E-10	5.89E-10
1467	478562.7	3768679	1.97E-10	3.93E-10	5.90E-10
1468	478578.8	3768668	1.97E-10	3.94E-10	5.92E-10
1469	478594.9	3768657	1.98E-10	3.95E-10	5.93E-10
1470	478611.1	3768646	1.98E-10	3.96E-10	5.94E-10
1471	478627.2	3768635	1.98E-10	3.97E-10	5.95E-10
1472	478643.4	3768624	1.98E-10	3.97E-10	5.95E-10
1473	478659.5	3768612	1.98E-10	3.97E-10	5.95E-10
1474	478675.7	3768601	1.98E-10	3.96E-10	5.95E-10
1475	478691.8	3768590	1.98E-10	3.95E-10	5.93E-10
1476	478708	3768579	1.97E-10	3.94E-10	5.91E-10
1477	478724.1	3768568	1.96E-10	3.93E-10	5.89E-10
1478	478740.3	3768557	1.95E-10	3.91E-10	5.86E-10
1479	478756.4	3768546	1.94E-10	3.89E-10	5.83E-10
1480	478772.6	3768535	1.93E-10	3.86E-10	5.79E-10
1481	478788.7	3768524	1.92E-10	3.84E-10	5.76E-10
1482	478804.9	3768513	1.91E-10	3.82E-10	5.73E-10
1483	478821	3768502	1.90E-10	3.79E-10	5.69E-10
1484	478837.1	3768490	1.88E-10	3.77E-10	5.65E-10
1485	478853.3	3768479	1.87E-10	3.75E-10	5.62E-10
1486	478869.4	3768468	1.86E-10	3.73E-10	5.59E-10
1487	478885.6	3768457	1.86E-10	3.71E-10	5.57E-10
1488	478901.7	3768446	1.85E-10	3.70E-10	5.55E-10
1489	478917.9	3768435	1.84E-10	3.68E-10	5.53E-10
1490	478934	3768424	1.84E-10	3.67E-10	5.51E-10
1491	478950.2	3768413	1.83E-10	3.67E-10	5.50E-10
1492	478966.3	3768402	1.83E-10	3.66E-10	5.50E-10
1493	478982.5	3768391	1.83E-10	3.66E-10	5.49E-10
1494	478998.6	3768380	1.83E-10	3.66E-10	5.49E-10
1495	479014.8	3768368	1.83E-10	3.66E-10	5.49E-10
1496	479030.9	3768357	1.83E-10	3.66E-10	5.50E-10
1497	479047	3768346	1.84E-10	3.67E-10	5.51E-10
1498	479063.2	3768335	1.83E-10	3.65E-10	5.48E-10
1499	479079.3	3768324	1.83E-10	3.66E-10	5.48E-10
1500	479095.5	3768313	1.83E-10	3.67E-10	5.50E-10
1501	479111.6	3768302	1.84E-10	3.68E-10	5.51E-10
1502	479160.1	3768269	1.85E-10	3.71E-10	5.56E-10
1503	479176.2	3768258	1.85E-10	3.71E-10	5.56E-10
1504	479192.4	3768246	1.86E-10	3.72E-10	5.59E-10

1505	479208.5	3768235	1.87E-10	3.74E-10	5.61E-10
1506	479224.7	3768224	1.88E-10	3.75E-10	5.63E-10
1507	479253.8	3768228	1.94E-10	3.88E-10	5.82E-10
1508	479266.8	3768243	2.01E-10	4.01E-10	6.02E-10
1509	479279.7	3768257	2.07E-10	4.15E-10	6.22E-10
1510	479292.7	3768272	2.14E-10	4.28E-10	6.43E-10
1511	479305.7	3768287	2.21E-10	4.43E-10	6.64E-10
1512	479318.7	3768301	2.29E-10	4.58E-10	6.86E-10
1513	479331.7	3768316	2.36E-10	4.73E-10	7.09E-10
1514	479344.6	3768331	2.44E-10	4.89E-10	7.33E-10
1515	479357.6	3768345	2.53E-10	5.05E-10	7.58E-10
1516	479370.6	3768360	2.61E-10	5.22E-10	7.84E-10
1517	479383.6	3768375	2.70E-10	5.41E-10	8.11E-10
1518	479396.5	3768389	2.80E-10	5.59E-10	8.39E-10
1519	479409.5	3768404	2.89E-10	5.79E-10	8.68E-10
1520	479422.5	3768419	3.00E-10	6.00E-10	9.00E-10
1521	479487.4	3768492	3.60E-10	7.21E-10	1.08E-09
1522	479500.4	3768507	3.75E-10	7.49E-10	1.12E-09
1523	479513.3	3768521	3.90E-10	7.80E-10	1.17E-09
1524	479526.3	3768536	4.06E-10	8.12E-10	1.22E-09
1525	479539.3	3768551	4.23E-10	8.46E-10	1.27E-09
1526	479552.3	3768565	4.41E-10	8.82E-10	1.32E-09
1527	479565.3	3768580	4.59E-10	9.18E-10	1.38E-09
1528	479578.2	3768595	4.79E-10	9.57E-10	1.44E-09
1529	479591.2	3768609	4.99E-10	9.99E-10	1.50E-09
1530	479604.2	3768624	5.21E-10	1.04E-09	1.56E-09
1531	479617.2	3768639	5.44E-10	1.09E-09	1.63E-09
1532	479630.2	3768653	5.68E-10	1.14E-09	1.70E-09
1533	479643.1	3768668	5.92E-10	1.18E-09	1.78E-09
1534	479656.1	3768683	6.19E-10	1.24E-09	1.86E-09
1535	479669.1	3768697	6.46E-10	1.29E-09	1.94E-09
1536	479682.1	3768712	6.75E-10	1.35E-09	2.02E-09
1537	479695	3768727	7.05E-10	1.41E-09	2.11E-09
1538	479708	3768741	7.36E-10	1.47E-09	2.21E-09
1539	479721	3768756	7.68E-10	1.54E-09	2.30E-09
1540	479734	3768771	8.01E-10	1.60E-09	2.40E-09
1541	479747	3768785	8.34E-10	1.67E-09	2.50E-09
1542	479759.9	3768800	8.68E-10	1.74E-09	2.60E-09
1543	479772.9	3768815	9.02E-10	1.80E-09	2.71E-09
1544	479785.9	3768829	9.35E-10	1.87E-09	2.80E-09
1545	479798.9	3768844	9.68E-10	1.94E-09	2.90E-09
1546	479811.8	3768859	1.00E-09	2.00E-09	3.00E-09
1547	479824.8	3768873	1.03E-09	2.07E-09	3.10E-09
1548	479837.8	3768888	1.06E-09	2.13E-09	3.19E-09
1549	479850.8	3768903	1.09E-09	2.19E-09	3.28E-09
1550	479863.8	3768917	1.12E-09	2.24E-09	3.37E-09
1551	479876.7	3768932	1.15E-09	2.29E-09	3.44E-09
1552	479889.7	3768947	1.17E-09	2.34E-09	3.51E-09
1553	479902.7	3768961	1.19E-09	2.38E-09	3.57E-09
1554	479915.7	3768976	1.21E-09	2.42E-09	3.63E-09
1555	479928.7	3768991	1.23E-09	2.45E-09	3.68E-09
1556	479941.6	3769006	1.24E-09	2.48E-09	3.72E-09

1557	479954.6	3769020	1.25E-09	2.50E-09	3.75E-09
1558	479967.6	3769035	1.26E-09	2.51E-09	3.77E-09
1559	479980.6	3769050	1.26E-09	2.52E-09	3.78E-09
1560	479993.5	3769064	1.26E-09	2.52E-09	3.78E-09
1561	480006.5	3769079	1.26E-09	2.51E-09	3.77E-09
1562	480019.5	3769094	1.25E-09	2.50E-09	3.75E-09
1563	480032.5	3769108	1.24E-09	2.48E-09	3.72E-09
1564	480045.5	3769123	1.23E-09	2.45E-09	3.68E-09
1565	480058.4	3769138	1.21E-09	2.43E-09	3.64E-09
1566	480071.4	3769152	1.20E-09	2.39E-09	3.59E-09
1567	480084.4	3769167	1.18E-09	2.35E-09	3.53E-09
1568	480097.4	3769182	1.15E-09	2.31E-09	3.46E-09
1569	480110.3	3769196	1.13E-09	2.26E-09	3.39E-09
1570	480123.3	3769211	1.11E-09	2.21E-09	3.32E-09
1571	478126.7	3768978	3.56E-10	7.12E-10	1.07E-09
1572	478121.9	3768997	3.78E-10	7.56E-10	1.13E-09
1573	477987.6	3768929	2.94E-10	5.87E-10	8.81E-10
1574	478003.7	3768918	2.86E-10	5.72E-10	8.58E-10
1575	478019.8	3768906	2.79E-10	5.57E-10	8.36E-10
1576	478035.9	3768895	2.71E-10	5.42E-10	8.14E-10
1577	478052	3768884	2.64E-10	5.28E-10	7.91E-10
1578	478068.1	3768873	2.56E-10	5.13E-10	7.69E-10
1579	478084.2	3768862	2.49E-10	4.98E-10	7.46E-10
1580	478100.4	3768851	2.41E-10	4.83E-10	7.24E-10
1581	478116.5	3768840	2.34E-10	4.68E-10	7.03E-10
1582	478132.6	3768829	2.27E-10	4.54E-10	6.81E-10
1583	478148.7	3768818	2.20E-10	4.40E-10	6.60E-10
1584	478164.8	3768807	2.13E-10	4.27E-10	6.40E-10
1585	478180.9	3768796	2.07E-10	4.13E-10	6.20E-10
1586	478197	3768785	2.00E-10	4.01E-10	6.01E-10
1587	478213.1	3768774	1.95E-10	3.89E-10	5.84E-10
1588	478229.2	3768763	1.89E-10	3.78E-10	5.67E-10
1589	478245.4	3768752	1.84E-10	3.68E-10	5.51E-10
1590	478261.5	3768740	1.79E-10	3.58E-10	5.37E-10
1591	478277.6	3768729	1.75E-10	3.50E-10	5.25E-10
1592	478293.7	3768718	1.71E-10	3.42E-10	5.14E-10
1593	478309.8	3768707	1.68E-10	3.36E-10	5.04E-10
1594	478325.9	3768696	1.65E-10	3.31E-10	4.96E-10
1595	478342	3768685	1.63E-10	3.27E-10	4.90E-10
1596	478358.1	3768674	1.62E-10	3.23E-10	4.85E-10
1597	478374.2	3768663	1.61E-10	3.21E-10	4.82E-10
1598	478390.3	3768652	1.60E-10	3.20E-10	4.80E-10
1599	478406.5	3768641	1.59E-10	3.19E-10	4.78E-10
1600	478422.6	3768630	1.59E-10	3.19E-10	4.78E-10
1601	478438.7	3768619	1.59E-10	3.19E-10	4.78E-10
1602	478454.8	3768608	1.60E-10	3.19E-10	4.79E-10
1603	478470.9	3768597	1.60E-10	3.20E-10	4.81E-10
1604	478487	3768586	1.61E-10	3.22E-10	4.82E-10
1605	478503.1	3768575	1.61E-10	3.22E-10	4.84E-10
1606	478519.2	3768563	1.62E-10	3.23E-10	4.85E-10
1607	478535.3	3768552	1.62E-10	3.24E-10	4.87E-10
1608	478551.5	3768541	1.63E-10	3.25E-10	4.88E-10

1609	478567.6	3768530	1.63E-10	3.26E-10	4.89E-10
1610	478583.7	3768519	1.63E-10	3.26E-10	4.89E-10
1611	478599.8	3768508	1.63E-10	3.26E-10	4.89E-10
1612	478615.9	3768497	1.63E-10	3.26E-10	4.88E-10
1613	478632	3768486	1.63E-10	3.25E-10	4.88E-10
1614	478648.1	3768475	1.62E-10	3.24E-10	4.87E-10
1615	478664.2	3768464	1.62E-10	3.23E-10	4.85E-10
1616	478680.3	3768453	1.61E-10	3.22E-10	4.83E-10
1617	478696.5	3768442	1.60E-10	3.21E-10	4.81E-10
1618	478712.6	3768431	1.60E-10	3.19E-10	4.79E-10
1619	478728.7	3768420	1.59E-10	3.18E-10	4.77E-10
1620	478744.8	3768409	1.58E-10	3.16E-10	4.75E-10
1621	478760.9	3768397	1.57E-10	3.15E-10	4.72E-10
1622	478777	3768386	1.56E-10	3.13E-10	4.69E-10
1623	478793.1	3768375	1.56E-10	3.11E-10	4.67E-10
1624	478809.2	3768364	1.55E-10	3.10E-10	4.65E-10
1625	478825.3	3768353	1.54E-10	3.08E-10	4.62E-10
1626	478841.5	3768342	1.53E-10	3.07E-10	4.60E-10
1627	478857.6	3768331	1.53E-10	3.06E-10	4.58E-10
1628	478873.7	3768320	1.52E-10	3.05E-10	4.57E-10
1629	478889.8	3768309	1.52E-10	3.04E-10	4.56E-10
1630	478905.9	3768298	1.52E-10	3.03E-10	4.55E-10
1631	478922	3768287	1.51E-10	3.03E-10	4.54E-10
1632	478938.1	3768276	1.51E-10	3.02E-10	4.53E-10
1633	478954.2	3768265	1.51E-10	3.02E-10	4.54E-10
1634	478970.3	3768254	1.51E-10	3.03E-10	4.54E-10
1635	478986.5	3768243	1.50E-10	3.00E-10	4.50E-10
1636	479002.6	3768231	1.50E-10	3.00E-10	4.50E-10
1637	479018.7	3768220	1.50E-10	3.01E-10	4.51E-10
1638	479034.8	3768209	1.51E-10	3.01E-10	4.52E-10
1639	479050.9	3768198	1.51E-10	3.03E-10	4.54E-10
1640	479067	3768187	1.52E-10	3.04E-10	4.55E-10
1641	479083.1	3768176	1.52E-10	3.04E-10	4.56E-10
1642	479099.2	3768165	1.52E-10	3.05E-10	4.57E-10
1643	479163.7	3768121	1.55E-10	3.09E-10	4.64E-10
1644	479179.8	3768110	1.55E-10	3.10E-10	4.65E-10
1645	479195.9	3768099	1.56E-10	3.12E-10	4.68E-10
1646	479212	3768088	1.57E-10	3.13E-10	4.70E-10
1647	479228.1	3768077	1.57E-10	3.15E-10	4.72E-10
1648	479244.2	3768065	1.58E-10	3.16E-10	4.74E-10
1649	479273.3	3768069	1.63E-10	3.27E-10	4.90E-10
1650	479286.2	3768084	1.68E-10	3.37E-10	5.05E-10
1651	479299.2	3768098	1.73E-10	3.46E-10	5.20E-10
1652	479312.1	3768113	1.78E-10	3.57E-10	5.35E-10
1653	479325.1	3768128	1.84E-10	3.67E-10	5.51E-10
1654	479338	3768142	1.89E-10	3.78E-10	5.67E-10
1655	479351	3768157	1.94E-10	3.89E-10	5.83E-10
1656	479363.9	3768172	2.00E-10	4.00E-10	6.00E-10
1657	479376.9	3768186	2.06E-10	4.12E-10	6.18E-10
1658	479389.8	3768201	2.12E-10	4.24E-10	6.35E-10
1659	479402.8	3768215	2.18E-10	4.36E-10	6.54E-10
1660	479415.7	3768230	2.24E-10	4.48E-10	6.73E-10

1661	479428.7	3768245	2.31E-10	4.61E-10	6.92E-10
1662	479441.6	3768259	2.37E-10	4.75E-10	7.12E-10
1663	479454.6	3768274	2.45E-10	4.89E-10	7.34E-10
1664	479467.5	3768289	2.52E-10	5.04E-10	7.56E-10
1665	479480.5	3768303	2.60E-10	5.19E-10	7.79E-10
1666	479493.4	3768318	2.68E-10	5.35E-10	8.03E-10
1667	479506.4	3768333	2.76E-10	5.53E-10	8.29E-10
1668	479519.3	3768347	2.85E-10	5.70E-10	8.55E-10
1669	479597	3768435	3.49E-10	6.98E-10	1.05E-09
1670	479610	3768450	3.62E-10	7.23E-10	1.08E-09
1671	479622.9	3768464	3.75E-10	7.50E-10	1.12E-09
1672	479635.9	3768479	3.88E-10	7.76E-10	1.16E-09
1673	479648.8	3768494	4.02E-10	8.04E-10	1.21E-09
1674	479661.8	3768508	4.17E-10	8.33E-10	1.25E-09
1675	479674.7	3768523	4.31E-10	8.63E-10	1.29E-09
1676	479687.7	3768538	4.47E-10	8.94E-10	1.34E-09
1677	479700.6	3768552	4.64E-10	9.28E-10	1.39E-09
1678	479713.6	3768567	4.81E-10	9.63E-10	1.44E-09
1679	479726.5	3768581	4.99E-10	9.98E-10	1.50E-09
1680	479739.5	3768596	5.17E-10	1.03E-09	1.55E-09
1681	479752.4	3768611	5.37E-10	1.07E-09	1.61E-09
1682	479765.4	3768625	5.58E-10	1.12E-09	1.67E-09
1683	479778.3	3768640	5.79E-10	1.16E-09	1.74E-09
1684	479791.3	3768655	6.02E-10	1.20E-09	1.81E-09
1685	479804.2	3768669	6.25E-10	1.25E-09	1.87E-09
1686	479817.2	3768684	6.48E-10	1.30E-09	1.94E-09
1687	479830.1	3768699	6.72E-10	1.34E-09	2.02E-09
1688	479843.1	3768713	6.96E-10	1.39E-09	2.09E-09
1689	479856	3768728	7.20E-10	1.44E-09	2.16E-09
1690	479869	3768742	7.44E-10	1.49E-09	2.23E-09
1691	479881.9	3768757	7.69E-10	1.54E-09	2.31E-09
1692	479894.9	3768772	7.94E-10	1.59E-09	2.38E-09
1693	479907.8	3768786	8.18E-10	1.64E-09	2.45E-09
1694	479920.8	3768801	8.42E-10	1.68E-09	2.53E-09
1695	479933.7	3768816	8.64E-10	1.73E-09	2.59E-09
1696	479946.7	3768830	8.86E-10	1.77E-09	2.66E-09
1697	479959.6	3768845	9.08E-10	1.82E-09	2.73E-09
1698	479972.6	3768860	9.29E-10	1.86E-09	2.79E-09
1699	479985.5	3768874	9.47E-10	1.89E-09	2.84E-09
1700	479998.5	3768889	9.66E-10	1.93E-09	2.90E-09
1701	480011.4	3768904	9.82E-10	1.96E-09	2.95E-09
1702	480024.4	3768918	9.97E-10	1.99E-09	2.99E-09
1703	480037.3	3768933	1.01E-09	2.02E-09	3.03E-09
1704	480050.3	3768947	1.02E-09	2.04E-09	3.06E-09
1705	480063.2	3768962	1.03E-09	2.06E-09	3.09E-09
1706	480076.2	3768977	1.04E-09	2.07E-09	3.11E-09
1707	480089.1	3768991	1.04E-09	2.08E-09	3.12E-09
1708	480102.1	3769006	1.04E-09	2.09E-09	3.13E-09
1709	480115	3769021	1.04E-09	2.09E-09	3.13E-09
1710	480128	3769035	1.04E-09	2.09E-09	3.13E-09
1711	480140.9	3769050	1.04E-09	2.08E-09	3.12E-09
1712	480153.9	3769065	1.03E-09	2.07E-09	3.10E-09

1713	480166.8	3769079	1.03E-09	2.05E-09	3.08E-09
1714	480179.8	3769094	1.01E-09	2.03E-09	3.04E-09
1715	480192.7	3769108	1.00E-09	2.01E-09	3.01E-09
1716	480205.7	3769123	9.90E-10	1.98E-09	2.97E-09
1717	480218.6	3769138	9.76E-10	1.95E-09	2.93E-09
1718	480231.6	3769152	9.60E-10	1.92E-09	2.88E-09
1719	480244.5	3769167	9.44E-10	1.89E-09	2.83E-09
1720	480257.5	3769182	9.26E-10	1.85E-09	2.78E-09
1721	480270.4	3769196	9.07E-10	1.81E-09	2.72E-09
1722	480283.4	3769211	8.88E-10	1.78E-09	2.66E-09
1723	477971.5	3768940	3.01E-10	6.03E-10	9.04E-10
1724	477966.7	3768959	3.18E-10	6.35E-10	9.53E-10
1725	477832.3	3768890	2.54E-10	5.08E-10	7.62E-10
1726	477848.4	3768879	2.48E-10	4.97E-10	7.45E-10
1727	477864.5	3768868	2.43E-10	4.86E-10	7.29E-10
1728	477880.6	3768857	2.38E-10	4.75E-10	7.13E-10
1729	477896.7	3768846	2.32E-10	4.64E-10	6.96E-10
1730	477912.7	3768835	2.27E-10	4.53E-10	6.80E-10
1731	477928.8	3768824	2.21E-10	4.42E-10	6.63E-10
1732	477944.9	3768813	2.16E-10	4.31E-10	6.47E-10
1733	477961	3768801	2.10E-10	4.20E-10	6.30E-10
1734	477977.1	3768790	2.05E-10	4.09E-10	6.14E-10
1735	477993.2	3768779	1.99E-10	3.98E-10	5.97E-10
1736	478009.2	3768768	1.94E-10	3.87E-10	5.81E-10
1737	478025.3	3768757	1.88E-10	3.76E-10	5.65E-10
1738	478041.4	3768746	1.83E-10	3.66E-10	5.49E-10
1739	478057.5	3768735	1.78E-10	3.56E-10	5.33E-10
1740	478073.6	3768724	1.73E-10	3.46E-10	5.19E-10
1741	478089.7	3768713	1.68E-10	3.36E-10	5.04E-10
1742	478105.7	3768702	1.63E-10	3.27E-10	4.90E-10
1743	478121.8	3768691	1.59E-10	3.18E-10	4.77E-10
1744	478137.9	3768680	1.55E-10	3.10E-10	4.65E-10
1745	478154	3768669	1.51E-10	3.03E-10	4.54E-10
1746	478170.1	3768658	1.48E-10	2.96E-10	4.44E-10
1747	478186.2	3768647	1.45E-10	2.90E-10	4.35E-10
1748	478202.2	3768636	1.42E-10	2.85E-10	4.27E-10
1749	478218.3	3768625	1.40E-10	2.80E-10	4.20E-10
1750	478234.4	3768614	1.38E-10	2.76E-10	4.14E-10
1751	478250.5	3768603	1.37E-10	2.73E-10	4.10E-10
1752	478266.6	3768592	1.35E-10	2.71E-10	4.06E-10
1753	478282.7	3768581	1.35E-10	2.69E-10	4.04E-10
1754	478298.7	3768569	1.34E-10	2.68E-10	4.02E-10
1755	478314.8	3768558	1.34E-10	2.67E-10	4.01E-10
1756	478330.9	3768547	1.34E-10	2.67E-10	4.01E-10
1757	478347	3768536	1.34E-10	2.67E-10	4.01E-10
1758	478363.1	3768525	1.34E-10	2.68E-10	4.02E-10
1759	478379.2	3768514	1.34E-10	2.69E-10	4.03E-10
1760	478395.3	3768503	1.35E-10	2.70E-10	4.04E-10
1761	478411.3	3768492	1.35E-10	2.70E-10	4.06E-10
1762	478427.4	3768481	1.36E-10	2.71E-10	4.07E-10
1763	478443.5	3768470	1.36E-10	2.72E-10	4.08E-10
1764	478459.6	3768459	1.37E-10	2.73E-10	4.10E-10

1765	478475.7	3768448	1.37E-10	2.74E-10	4.11E-10
1766	478491.8	3768437	1.37E-10	2.74E-10	4.12E-10
1767	478507.8	3768426	1.37E-10	2.75E-10	4.12E-10
1768	478523.9	3768415	1.38E-10	2.75E-10	4.13E-10
1769	478540	3768404	1.38E-10	2.75E-10	4.13E-10
1770	478556.1	3768393	1.38E-10	2.75E-10	4.13E-10
1771	478572.2	3768382	1.37E-10	2.75E-10	4.12E-10
1772	478588.3	3768371	1.37E-10	2.74E-10	4.12E-10
1773	478604.3	3768360	1.37E-10	2.74E-10	4.11E-10
1774	478620.4	3768349	1.36E-10	2.73E-10	4.09E-10
1775	478636.5	3768337	1.36E-10	2.72E-10	4.08E-10
1776	478652.6	3768326	1.36E-10	2.71E-10	4.07E-10
1777	478668.7	3768315	1.35E-10	2.70E-10	4.05E-10
1778	478684.8	3768304	1.34E-10	2.69E-10	4.03E-10
1779	478700.8	3768293	1.34E-10	2.68E-10	4.01E-10
1780	478716.9	3768282	1.33E-10	2.67E-10	4.00E-10
1781	478733	3768271	1.33E-10	2.65E-10	3.98E-10
1782	478749.1	3768260	1.32E-10	2.64E-10	3.96E-10
1783	478765.2	3768249	1.31E-10	2.63E-10	3.94E-10
1784	478781.3	3768238	1.31E-10	2.62E-10	3.93E-10
1785	478797.3	3768227	1.30E-10	2.61E-10	3.91E-10
1786	478813.4	3768216	1.30E-10	2.60E-10	3.90E-10
1787	478829.5	3768205	1.30E-10	2.59E-10	3.89E-10
1788	478845.6	3768194	1.29E-10	2.58E-10	3.88E-10
1789	478861.7	3768183	1.29E-10	2.58E-10	3.86E-10
1790	478877.8	3768172	1.29E-10	2.57E-10	3.86E-10
1791	478893.9	3768161	1.28E-10	2.55E-10	3.83E-10
1792	478909.9	3768150	1.27E-10	2.55E-10	3.82E-10
1793	478926	3768139	1.27E-10	2.54E-10	3.81E-10
1794	478942.1	3768128	1.27E-10	2.54E-10	3.81E-10
1795	478958.2	3768117	1.27E-10	2.54E-10	3.82E-10
1796	478974.3	3768106	1.27E-10	2.54E-10	3.81E-10
1797	478990.4	3768094	1.27E-10	2.54E-10	3.81E-10
1798	479006.4	3768083	1.27E-10	2.54E-10	3.81E-10
1799	479022.5	3768072	1.27E-10	2.54E-10	3.82E-10
1800	479038.6	3768061	1.28E-10	2.55E-10	3.83E-10
1801	479054.7	3768050	1.28E-10	2.56E-10	3.84E-10
1802	479070.8	3768039	1.28E-10	2.57E-10	3.85E-10
1803	479086.9	3768028	1.29E-10	2.58E-10	3.86E-10
1804	479102.9	3768017	1.29E-10	2.59E-10	3.88E-10
1805	479151.2	3767984	1.31E-10	2.63E-10	3.94E-10
1806	479167.3	3767973	1.32E-10	2.64E-10	3.96E-10
1807	479183.4	3767962	1.33E-10	2.66E-10	3.99E-10
1808	479199.4	3767951	1.34E-10	2.67E-10	4.01E-10
1809	479215.5	3767940	1.34E-10	2.69E-10	4.03E-10
1810	479231.6	3767929	1.35E-10	2.70E-10	4.05E-10
1811	479247.7	3767918	1.36E-10	2.71E-10	4.07E-10
1812	479263.8	3767907	1.36E-10	2.73E-10	4.09E-10
1813	479292.8	3767910	1.41E-10	2.82E-10	4.23E-10
1814	479305.7	3767925	1.45E-10	2.89E-10	4.34E-10
1815	479318.6	3767939	1.49E-10	2.97E-10	4.46E-10
1816	479331.6	3767954	1.53E-10	3.05E-10	4.58E-10

1817	479344.5	3767969	1.57E-10	3.13E-10	4.70E-10
1818	479357.4	3767983	1.61E-10	3.22E-10	4.82E-10
1819	479370.4	3767998	1.65E-10	3.30E-10	4.95E-10
1820	479383.3	3768013	1.69E-10	3.38E-10	5.08E-10
1821	479396.2	3768027	1.74E-10	3.47E-10	5.21E-10
1822	479409.1	3768042	1.78E-10	3.56E-10	5.34E-10
1823	479422.1	3768056	1.83E-10	3.65E-10	5.48E-10
1824	479435	3768071	1.87E-10	3.74E-10	5.62E-10
1825	479447.9	3768086	1.92E-10	3.84E-10	5.76E-10
1826	479460.9	3768100	1.97E-10	3.93E-10	5.90E-10
1827	479473.8	3768115	2.02E-10	4.03E-10	6.05E-10
1828	479486.7	3768129	2.07E-10	4.13E-10	6.20E-10
1829	479499.6	3768144	2.12E-10	4.24E-10	6.36E-10
1830	479512.6	3768159	2.17E-10	4.35E-10	6.52E-10
1831	479525.5	3768173	2.23E-10	4.46E-10	6.69E-10
1832	479538.4	3768188	2.29E-10	4.58E-10	6.87E-10
1833	479551.4	3768203	2.35E-10	4.70E-10	7.06E-10
1834	479564.3	3768217	2.42E-10	4.84E-10	7.25E-10
1835	479577.2	3768232	2.49E-10	4.98E-10	7.46E-10
1836	479590.1	3768246	2.56E-10	5.12E-10	7.68E-10
1837	479603.1	3768261	2.63E-10	5.27E-10	7.90E-10
1838	479616	3768276	2.71E-10	5.42E-10	8.14E-10
1839	479628.9	3768290	2.79E-10	5.59E-10	8.38E-10
1840	479641.8	3768305	2.88E-10	5.76E-10	8.64E-10
1841	479654.8	3768319	2.97E-10	5.93E-10	8.90E-10
1842	479667.7	3768334	3.06E-10	6.13E-10	9.19E-10
1843	479719.4	3768393	3.47E-10	6.94E-10	1.04E-09
1844	479732.3	3768407	3.58E-10	7.16E-10	1.07E-09
1845	479745.3	3768422	3.69E-10	7.38E-10	1.11E-09
1846	479758.2	3768436	3.80E-10	7.61E-10	1.14E-09
1847	479771.1	3768451	3.92E-10	7.85E-10	1.18E-09
1848	479784.1	3768466	4.05E-10	8.09E-10	1.21E-09
1849	479797	3768480	4.18E-10	8.36E-10	1.25E-09
1850	479809.9	3768495	4.32E-10	8.63E-10	1.29E-09
1851	479822.8	3768509	4.46E-10	8.91E-10	1.34E-09
1852	479835.8	3768524	4.60E-10	9.21E-10	1.38E-09
1853	479848.7	3768539	4.76E-10	9.52E-10	1.43E-09
1854	479861.6	3768553	4.92E-10	9.84E-10	1.48E-09
1855	479874.5	3768568	5.09E-10	1.02E-09	1.53E-09
1856	479887.5	3768583	5.26E-10	1.05E-09	1.58E-09
1857	479900.4	3768597	5.43E-10	1.09E-09	1.63E-09
1858	479913.3	3768612	5.62E-10	1.12E-09	1.68E-09
1859	479926.3	3768626	5.80E-10	1.16E-09	1.74E-09
1860	479939.2	3768641	5.98E-10	1.20E-09	1.79E-09
1861	479952.1	3768656	6.16E-10	1.23E-09	1.85E-09
1862	479965	3768670	6.35E-10	1.27E-09	1.90E-09
1863	479978	3768685	6.54E-10	1.31E-09	1.96E-09
1864	479990.9	3768699	6.72E-10	1.34E-09	2.02E-09
1865	480003.8	3768714	6.90E-10	1.38E-09	2.07E-09
1866	480016.8	3768729	7.08E-10	1.42E-09	2.13E-09
1867	480029.7	3768743	7.26E-10	1.45E-09	2.18E-09
1868	480042.6	3768758	7.44E-10	1.49E-09	2.23E-09

1869	480055.5	3768773	7.61E-10	1.52E-09	2.28E-09
1870	480068.5	3768787	7.77E-10	1.55E-09	2.33E-09
1871	480081.4	3768802	7.93E-10	1.59E-09	2.38E-09
1872	480094.3	3768816	8.08E-10	1.62E-09	2.42E-09
1873	480107.3	3768831	8.22E-10	1.64E-09	2.47E-09
1874	480120.2	3768846	8.35E-10	1.67E-09	2.50E-09
1875	480133.1	3768860	8.47E-10	1.69E-09	2.54E-09
1876	480146	3768875	8.57E-10	1.71E-09	2.57E-09
1877	480159	3768889	8.66E-10	1.73E-09	2.60E-09
1878	480171.9	3768904	8.73E-10	1.75E-09	2.62E-09
1879	480184.8	3768919	8.80E-10	1.76E-09	2.64E-09
1880	480197.7	3768933	8.85E-10	1.77E-09	2.65E-09
1881	480210.7	3768948	8.89E-10	1.78E-09	2.67E-09
1882	480223.6	3768963	8.91E-10	1.78E-09	2.67E-09
1883	480236.5	3768977	8.92E-10	1.78E-09	2.68E-09
1884	480249.5	3768992	8.91E-10	1.78E-09	2.67E-09
1885	480262.4	3769006	8.88E-10	1.78E-09	2.67E-09
1886	480275.3	3769021	8.84E-10	1.77E-09	2.65E-09
1887	480288.2	3769036	8.79E-10	1.76E-09	2.64E-09
1888	480301.2	3769050	8.73E-10	1.75E-09	2.62E-09
1889	480314.1	3769065	8.65E-10	1.73E-09	2.59E-09
1890	480327	3769079	8.56E-10	1.71E-09	2.57E-09
1891	480340	3769094	8.45E-10	1.69E-09	2.54E-09
1892	480352.9	3769109	8.35E-10	1.67E-09	2.50E-09
1893	480365.8	3769123	8.23E-10	1.65E-09	2.47E-09
1894	480378.7	3769138	8.10E-10	1.62E-09	2.43E-09
1895	480391.7	3769153	7.97E-10	1.59E-09	2.39E-09
1896	480404.6	3769167	7.83E-10	1.57E-09	2.35E-09
1897	480417.5	3769182	7.68E-10	1.54E-09	2.31E-09
1898	480430.4	3769196	7.54E-10	1.51E-09	2.26E-09
1899	480443.4	3769211	7.38E-10	1.48E-09	2.21E-09
1900	477816.2	3768901	2.60E-10	5.19E-10	7.79E-10
1901	477811.5	3768920	2.71E-10	5.43E-10	8.14E-10
1902	477677.1	3768851	2.22E-10	4.44E-10	6.67E-10
1903	477693.1	3768840	2.18E-10	4.36E-10	6.54E-10
1904	477709.2	3768829	2.14E-10	4.28E-10	6.42E-10
1905	477725.3	3768818	2.10E-10	4.20E-10	6.30E-10
1906	477741.3	3768807	2.06E-10	4.12E-10	6.18E-10
1907	477757.4	3768796	2.02E-10	4.03E-10	6.05E-10
1908	477773.4	3768785	1.98E-10	3.95E-10	5.93E-10
1909	477789.5	3768774	1.93E-10	3.87E-10	5.80E-10
1910	477805.6	3768763	1.89E-10	3.78E-10	5.68E-10
1911	477821.6	3768752	1.85E-10	3.70E-10	5.55E-10
1912	477837.7	3768741	1.81E-10	3.62E-10	5.43E-10
1913	477853.8	3768730	1.77E-10	3.53E-10	5.30E-10
1914	477869.8	3768719	1.72E-10	3.45E-10	5.17E-10
1915	477885.9	3768708	1.68E-10	3.36E-10	5.04E-10
1916	477901.9	3768697	1.64E-10	3.28E-10	4.92E-10
1917	477918	3768686	1.60E-10	3.20E-10	4.79E-10
1918	477934.1	3768675	1.56E-10	3.11E-10	4.67E-10
1919	477950.1	3768664	1.52E-10	3.03E-10	4.55E-10
1920	477966.2	3768653	1.48E-10	2.95E-10	4.43E-10

1921	477982.3	3768641	1.44E-10	2.88E-10	4.32E-10
1922	477998.3	3768630	1.40E-10	2.81E-10	4.21E-10
1923	478014.4	3768619	1.37E-10	2.74E-10	4.11E-10
1924	478030.4	3768608	1.34E-10	2.67E-10	4.01E-10
1925	478046.5	3768597	1.31E-10	2.61E-10	3.92E-10
1926	478062.6	3768586	1.28E-10	2.56E-10	3.83E-10
1927	478078.6	3768575	1.25E-10	2.51E-10	3.76E-10
1928	478094.7	3768564	1.23E-10	2.46E-10	3.69E-10
1929	478110.8	3768553	1.21E-10	2.42E-10	3.63E-10
1930	478126.8	3768542	1.19E-10	2.39E-10	3.58E-10
1931	478142.9	3768531	1.18E-10	2.36E-10	3.54E-10
1932	478158.9	3768520	1.17E-10	2.34E-10	3.50E-10
1933	478175	3768509	1.16E-10	2.32E-10	3.48E-10
1934	478191.1	3768498	1.15E-10	2.31E-10	3.46E-10
1935	478207.1	3768487	1.15E-10	2.30E-10	3.44E-10
1936	478223.2	3768476	1.15E-10	2.29E-10	3.44E-10
1937	478239.3	3768465	1.15E-10	2.29E-10	3.44E-10
1938	478255.3	3768454	1.15E-10	2.29E-10	3.44E-10
1939	478271.4	3768443	1.15E-10	2.30E-10	3.44E-10
1940	478287.4	3768432	1.15E-10	2.30E-10	3.45E-10
1941	478303.5	3768421	1.15E-10	2.31E-10	3.46E-10
1942	478319.6	3768410	1.16E-10	2.32E-10	3.48E-10
1943	478335.6	3768399	1.16E-10	2.33E-10	3.49E-10
1944	478351.7	3768388	1.17E-10	2.33E-10	3.50E-10
1945	478367.8	3768377	1.17E-10	2.34E-10	3.52E-10
1946	478383.8	3768366	1.18E-10	2.35E-10	3.53E-10
1947	478399.9	3768355	1.18E-10	2.36E-10	3.54E-10
1948	478415.9	3768344	1.18E-10	2.36E-10	3.54E-10
1949	478432	3768333	1.18E-10	2.37E-10	3.55E-10
1950	478448.1	3768322	1.19E-10	2.37E-10	3.56E-10
1951	478464.1	3768311	1.19E-10	2.37E-10	3.56E-10
1952	478480.2	3768299	1.19E-10	2.37E-10	3.56E-10
1953	478496.3	3768288	1.19E-10	2.37E-10	3.56E-10
1954	478512.3	3768277	1.19E-10	2.37E-10	3.56E-10
1955	478528.4	3768266	1.18E-10	2.37E-10	3.55E-10
1956	478544.4	3768255	1.18E-10	2.36E-10	3.55E-10
1957	478560.5	3768244	1.18E-10	2.36E-10	3.54E-10
1958	478576.6	3768233	1.18E-10	2.36E-10	3.53E-10
1959	478592.6	3768222	1.17E-10	2.35E-10	3.52E-10
1960	478608.7	3768211	1.17E-10	2.34E-10	3.51E-10
1961	478624.8	3768200	1.17E-10	2.33E-10	3.50E-10
1962	478640.8	3768189	1.16E-10	2.32E-10	3.48E-10
1963	478656.9	3768178	1.16E-10	2.31E-10	3.47E-10
1964	478673	3768167	1.15E-10	2.31E-10	3.46E-10
1965	478689	3768156	1.15E-10	2.30E-10	3.45E-10
1966	478705.1	3768145	1.14E-10	2.29E-10	3.43E-10
1967	478721.1	3768134	1.14E-10	2.28E-10	3.42E-10
1968	478737.2	3768123	1.13E-10	2.27E-10	3.40E-10
1969	478753.3	3768112	1.13E-10	2.26E-10	3.39E-10
1970	478769.3	3768101	1.13E-10	2.25E-10	3.38E-10
1971	478785.4	3768090	1.12E-10	2.24E-10	3.37E-10
1972	478801.5	3768079	1.12E-10	2.24E-10	3.36E-10

1973	478817.5	3768068	1.12E-10	2.23E-10	3.35E-10
1974	478833.6	3768057	1.11E-10	2.22E-10	3.33E-10
1975	478849.6	3768046	1.11E-10	2.21E-10	3.32E-10
1976	478865.7	3768035	1.10E-10	2.21E-10	3.31E-10
1977	478881.8	3768024	1.10E-10	2.21E-10	3.31E-10
1978	478897.8	3768013	1.10E-10	2.20E-10	3.30E-10
1979	478913.9	3768002	1.10E-10	2.20E-10	3.30E-10
1980	478930	3767991	1.10E-10	2.19E-10	3.29E-10
1981	478946	3767980	1.10E-10	2.19E-10	3.29E-10
1982	478962.1	3767968	1.09E-10	2.19E-10	3.28E-10
1983	478978.1	3767957	1.10E-10	2.19E-10	3.29E-10
1984	478994.2	3767946	1.10E-10	2.19E-10	3.29E-10
1985	479010.3	3767935	1.10E-10	2.20E-10	3.30E-10
1986	479026.3	3767924	1.10E-10	2.21E-10	3.31E-10
1987	479042.4	3767913	1.11E-10	2.21E-10	3.32E-10
1988	479058.5	3767902	1.11E-10	2.22E-10	3.33E-10
1989	479074.5	3767891	1.11E-10	2.23E-10	3.34E-10
1990	479090.6	3767880	1.12E-10	2.24E-10	3.36E-10
1991	479106.6	3767869	1.12E-10	2.25E-10	3.37E-10
1992	479154.8	3767836	1.14E-10	2.29E-10	3.43E-10
1993	479170.9	3767825	1.15E-10	2.30E-10	3.46E-10
1994	479187	3767814	1.16E-10	2.32E-10	3.48E-10
1995	479203	3767803	1.16E-10	2.33E-10	3.49E-10
1996	479219.1	3767792	1.17E-10	2.34E-10	3.52E-10
1997	479235.1	3767781	1.18E-10	2.36E-10	3.54E-10
1998	479251.2	3767770	1.19E-10	2.37E-10	3.56E-10
1999	479267.3	3767759	1.19E-10	2.39E-10	3.58E-10
2000	479283.3	3767748	1.20E-10	2.40E-10	3.60E-10
2001	479312.3	3767751	1.24E-10	2.47E-10	3.71E-10
2002	479325.2	3767766	1.27E-10	2.53E-10	3.80E-10
2003	479338.1	3767781	1.30E-10	2.60E-10	3.90E-10
2004	479351	3767795	1.33E-10	2.66E-10	3.99E-10
2005	479364	3767810	1.36E-10	2.73E-10	4.09E-10
2006	479376.9	3767824	1.40E-10	2.79E-10	4.19E-10
2007	479389.8	3767839	1.43E-10	2.86E-10	4.29E-10
2008	479402.7	3767854	1.46E-10	2.93E-10	4.39E-10
2009	479415.6	3767868	1.50E-10	3.00E-10	4.50E-10
2010	479428.5	3767883	1.53E-10	3.07E-10	4.60E-10
2011	479441.4	3767897	1.57E-10	3.14E-10	4.71E-10
2012	479454.3	3767912	1.61E-10	3.21E-10	4.82E-10
2013	479467.2	3767927	1.64E-10	3.28E-10	4.92E-10
2014	479480.1	3767941	1.68E-10	3.36E-10	5.03E-10
2015	479493.1	3767956	1.72E-10	3.43E-10	5.15E-10
2016	479506	3767970	1.75E-10	3.51E-10	5.26E-10
2017	479518.9	3767985	1.79E-10	3.58E-10	5.37E-10
2018	479531.8	3768000	1.83E-10	3.66E-10	5.49E-10
2019	479544.7	3768014	1.87E-10	3.74E-10	5.62E-10
2020	479557.6	3768029	1.91E-10	3.83E-10	5.74E-10
2021	479570.5	3768043	1.96E-10	3.92E-10	5.87E-10
2022	479583.4	3768058	2.00E-10	4.01E-10	6.01E-10
2023	479596.3	3768073	2.05E-10	4.10E-10	6.15E-10
2024	479609.3	3768087	2.10E-10	4.20E-10	6.30E-10

2025	479622.2	3768102	2.15E-10	4.30E-10	6.45E-10
2026	479635.1	3768116	2.20E-10	4.41E-10	6.61E-10
2027	479648	3768131	2.26E-10	4.52E-10	6.78E-10
2028	479660.9	3768145	2.32E-10	4.64E-10	6.95E-10
2029	479673.8	3768160	2.38E-10	4.76E-10	7.14E-10
2030	479686.7	3768175	2.44E-10	4.89E-10	7.33E-10
2031	479699.6	3768189	2.51E-10	5.02E-10	7.53E-10
2032	479712.5	3768204	2.58E-10	5.16E-10	7.73E-10
2033	479725.5	3768218	2.65E-10	5.29E-10	7.94E-10
2034	479738.4	3768233	2.72E-10	5.44E-10	8.16E-10
2035	479751.3	3768248	2.80E-10	5.59E-10	8.39E-10
2036	479764.2	3768262	2.88E-10	5.75E-10	8.63E-10
2037	479777.1	3768277	2.96E-10	5.91E-10	8.87E-10
2038	479790	3768291	3.04E-10	6.08E-10	9.12E-10
2039	479802.9	3768306	3.12E-10	6.25E-10	9.37E-10
2040	479815.8	3768321	3.21E-10	6.42E-10	9.63E-10
2041	479828.7	3768335	3.30E-10	6.60E-10	9.91E-10
2042	479880.4	3768394	3.69E-10	7.38E-10	1.11E-09
2043	479893.3	3768408	3.80E-10	7.60E-10	1.14E-09
2044	479906.2	3768423	3.91E-10	7.82E-10	1.17E-09
2045	479919.1	3768437	4.03E-10	8.06E-10	1.21E-09
2046	479932	3768452	4.15E-10	8.30E-10	1.25E-09
2047	479944.9	3768467	4.28E-10	8.55E-10	1.28E-09
2048	479957.9	3768481	4.41E-10	8.81E-10	1.32E-09
2049	479970.8	3768496	4.54E-10	9.08E-10	1.36E-09
2050	479983.7	3768510	4.68E-10	9.36E-10	1.40E-09
2051	479996.6	3768525	4.82E-10	9.64E-10	1.45E-09
2052	480009.5	3768540	4.96E-10	9.92E-10	1.49E-09
2053	480022.4	3768554	5.10E-10	1.02E-09	1.53E-09
2054	480035.3	3768569	5.25E-10	1.05E-09	1.57E-09
2055	480048.2	3768583	5.39E-10	1.08E-09	1.62E-09
2056	480061.1	3768598	5.54E-10	1.11E-09	1.66E-09
2057	480074	3768613	5.69E-10	1.14E-09	1.71E-09
2058	480087	3768627	5.84E-10	1.17E-09	1.75E-09
2059	480099.9	3768642	5.98E-10	1.20E-09	1.79E-09
2060	480112.8	3768656	6.12E-10	1.22E-09	1.84E-09
2061	480125.7	3768671	6.27E-10	1.25E-09	1.88E-09
2062	480138.6	3768686	6.41E-10	1.28E-09	1.92E-09
2063	480151.5	3768700	6.55E-10	1.31E-09	1.96E-09
2064	480164.4	3768715	6.68E-10	1.34E-09	2.00E-09
2065	480177.3	3768729	6.80E-10	1.36E-09	2.04E-09
2066	480190.2	3768744	6.92E-10	1.38E-09	2.08E-09
2067	480203.2	3768759	7.04E-10	1.41E-09	2.11E-09
2068	480216.1	3768773	7.15E-10	1.43E-09	2.15E-09
2069	480229	3768788	7.26E-10	1.45E-09	2.18E-09
2070	480241.9	3768802	7.36E-10	1.47E-09	2.21E-09
2071	480254.8	3768817	7.44E-10	1.49E-09	2.23E-09
2072	480267.7	3768831	7.52E-10	1.50E-09	2.26E-09
2073	480280.6	3768846	7.59E-10	1.52E-09	2.28E-09
2074	480293.5	3768861	7.65E-10	1.53E-09	2.30E-09
2075	480306.4	3768875	7.70E-10	1.54E-09	2.31E-09
2076	480319.4	3768890	7.74E-10	1.55E-09	2.32E-09

2077	480332.3	3768904	7.77E-10	1.55E-09	2.33E-09
2078	480345.2	3768919	7.79E-10	1.56E-09	2.34E-09
2079	480358.1	3768934	7.79E-10	1.56E-09	2.34E-09
2080	480371	3768948	7.79E-10	1.56E-09	2.34E-09
2081	480383.9	3768963	7.78E-10	1.56E-09	2.33E-09
2082	480396.8	3768977	7.75E-10	1.55E-09	2.33E-09
2083	480409.7	3768992	7.71E-10	1.54E-09	2.31E-09
2084	480422.6	3769007	7.67E-10	1.53E-09	2.30E-09
2085	480435.6	3769021	7.61E-10	1.52E-09	2.28E-09
2086	480448.5	3769036	7.55E-10	1.51E-09	2.26E-09
2087	480461.4	3769050	7.47E-10	1.49E-09	2.24E-09
2088	480474.3	3769065	7.39E-10	1.48E-09	2.22E-09
2089	480487.2	3769080	7.30E-10	1.46E-09	2.19E-09
2090	480500.1	3769094	7.21E-10	1.44E-09	2.16E-09
2091	480513	3769109	7.11E-10	1.42E-09	2.13E-09
2092	480525.9	3769123	7.01E-10	1.40E-09	2.10E-09
2093	480538.8	3769138	6.90E-10	1.38E-09	2.07E-09
2094	480551.8	3769153	6.78E-10	1.36E-09	2.03E-09
2095	480564.7	3769167	6.66E-10	1.33E-09	2.00E-09
2096	480577.6	3769182	6.54E-10	1.31E-09	1.96E-09
2097	480590.5	3769196	6.42E-10	1.28E-09	1.93E-09
2098	480603.4	3769211	6.30E-10	1.26E-09	1.89E-09
2099	477661	3768862	2.26E-10	4.53E-10	6.79E-10
2100	477656.3	3768881	2.35E-10	4.71E-10	7.06E-10
2101	478291.7	3768985	3.80E-10	7.60E-10	1.14E-09
2102	478139.1	3768937	3.13E-10	6.25E-10	9.38E-10
2103	477986.6	3768888	2.63E-10	5.27E-10	7.90E-10
2104	477834	3768840	2.26E-10	4.52E-10	6.78E-10
2105	477681.5	3768792	1.97E-10	3.94E-10	5.91E-10
2106	478850.2	3769100	1.02E-09	2.05E-09	3.07E-09
2107	478781.1	3769060	7.15E-10	1.43E-09	2.14E-09
2108	478573.8	3768939	3.46E-10	6.91E-10	1.04E-09
2109	478504.7	3768899	2.92E-10	5.83E-10	8.75E-10
2110	478228.2	3768738	1.78E-10	3.55E-10	5.33E-10
2111	478090	3768657	1.48E-10	2.95E-10	4.43E-10
2112	477951.8	3768577	1.26E-10	2.52E-10	3.78E-10
2113	477813.6	3768496	1.10E-10	2.19E-10	3.29E-10
2114	479064	3769252	1.28E-08	2.56E-08	3.84E-08
2115	479038.9	3769256	1.09E-08	2.17E-08	3.26E-08
2116	479021.2	3769247	8.00E-09	1.60E-08	2.40E-08
2117	479003.4	3769238	6.14E-09	1.23E-08	1.84E-08
2118	478840.5	3769118	1.10E-09	2.21E-09	3.31E-09
2119	478769.5	3769081	7.72E-10	1.54E-09	2.32E-09
2120	478698.5	3769044	5.81E-10	1.16E-09	1.74E-09
2121	478683.9	3769072	6.54E-10	1.31E-09	1.96E-09
2122	478612.9	3769035	5.16E-10	1.03E-09	1.55E-09
2123	478491.1	3768923	3.14E-10	6.27E-10	9.41E-10
2124	478478.2	3768947	3.40E-10	6.81E-10	1.02E-09
2125	478350.3	3768847	2.40E-10	4.79E-10	7.19E-10
2126	478336.2	3768874	2.60E-10	5.20E-10	7.79E-10
2127	478186.9	3768814	2.18E-10	4.35E-10	6.53E-10
2128	478066.5	3768700	1.63E-10	3.26E-10	4.89E-10

2129	478080.5	3768674	1.54E-10	3.07E-10	4.61E-10
2130	477923.9	3768627	1.40E-10	2.81E-10	4.21E-10
2131	477936.5	3768604	1.33E-10	2.67E-10	4.00E-10
2132	477910.2	3768653	1.49E-10	2.97E-10	4.46E-10
2133	477782.6	3768552	1.22E-10	2.44E-10	3.67E-10
2134	477796.8	3768526	1.16E-10	2.32E-10	3.49E-10
2135	477768.2	3768579	1.29E-10	2.58E-10	3.87E-10
2136	479051.7	3769274	1.75E-08	3.51E-08	5.26E-08
2137	479028.2	3769274	1.38E-08	2.75E-08	4.13E-08
2138	479011.2	3769263	9.66E-09	1.93E-08	2.90E-08
2139	478960.1	3769232	4.39E-09	8.77E-09	1.32E-08
2140	478755.6	3769106	8.62E-10	1.72E-09	2.59E-09
2141	479040.4	3769290	2.37E-08	4.74E-08	7.11E-08
2142	478985.8	3769262	7.92E-09	1.58E-08	2.37E-08
2143	478923	3769213	2.99E-09	5.99E-09	8.98E-09
2144	478592.4	3768921	3.31E-10	6.63E-10	9.94E-10
2145	478529.6	3768872	2.74E-10	5.48E-10	8.22E-10
2146	478278.3	3768674	1.56E-10	3.12E-10	4.67E-10
2147	478263.3	3768693	1.61E-10	3.22E-10	4.83E-10
2148	478152.6	3768575	1.26E-10	2.53E-10	3.79E-10
2149	478137.6	3768594	1.30E-10	2.61E-10	3.91E-10
2150	478027	3768475	1.06E-10	2.12E-10	3.18E-10
2151	478012	3768494	1.09E-10	2.17E-10	3.26E-10
2152	477901.3	3768376	9.06E-11	1.81E-10	2.72E-10
2153	477886.3	3768395	9.28E-11	1.86E-10	2.79E-10
2154	479026.7	3769306	3.35E-08	6.71E-08	1.01E-07
2155	479011.6	3769293	1.91E-08	3.82E-08	5.73E-08
2156	478996.6	3769280	1.21E-08	2.43E-08	3.64E-08
2157	478943.9	3769249	5.11E-09	1.02E-08	1.53E-08
2158	478416.4	3768759	1.95E-10	3.91E-10	5.86E-10
2159	478295.8	3768653	1.51E-10	3.03E-10	4.54E-10
2160	478175.3	3768548	1.22E-10	2.44E-10	3.67E-10
2161	478054.7	3768443	1.02E-10	2.04E-10	3.06E-10
2162	478039.7	3768460	1.04E-10	2.08E-10	3.12E-10
2163	477934.1	3768338	8.71E-11	1.74E-10	2.61E-10
2164	477919.1	3768355	8.85E-11	1.77E-10	2.66E-10
2165	479012.6	3769321	4.17E-08	8.33E-08	1.25E-07
2166	478998.9	3769306	2.34E-08	4.68E-08	7.02E-08
2167	478975.9	3769300	1.60E-08	3.20E-08	4.80E-08
2168	478971.5	3769277	9.51E-09	1.90E-08	2.85E-08
2169	478907.3	3769228	3.32E-09	6.64E-09	9.96E-09
2170	478879.9	3769199	2.24E-09	4.47E-09	6.71E-09
2171	478624.5	3768890	3.15E-10	6.29E-10	9.43E-10
2172	478605.8	3768907	3.23E-10	6.45E-10	9.68E-10
2173	478460	3768715	1.86E-10	3.73E-10	5.59E-10
2174	478441.3	3768732	1.89E-10	3.78E-10	5.68E-10
2175	478350.3	3768598	1.44E-10	2.88E-10	4.32E-10
2176	478331.7	3768616	1.46E-10	2.91E-10	4.37E-10
2177	478222	3768499	1.17E-10	2.35E-10	3.52E-10
2178	478131	3768365	9.75E-11	1.95E-10	2.92E-10
2179	478112.4	3768383	9.80E-11	1.96E-10	2.94E-10
2180	478021.4	3768249	8.35E-11	1.67E-10	2.50E-10

2181	478002.7	3768266	8.38E-11	1.68E-10	2.51E-10
2182	478995.9	3769336	4.47E-08	8.95E-08	1.34E-07
2183	478983.2	3769320	2.67E-08	5.34E-08	8.01E-08
2184	478961.2	3769312	1.78E-08	3.55E-08	5.33E-08
2185	478957.8	3769289	1.09E-08	2.19E-08	3.28E-08
2186	478923	3769266	5.94E-09	1.19E-08	1.78E-08
2187	478483.9	3768695	1.85E-10	3.70E-10	5.54E-10
2188	478382.2	3768571	1.43E-10	2.86E-10	4.30E-10
2189	478178.8	3768324	9.73E-11	1.95E-10	2.92E-10
2190	478160.1	3768340	9.73E-11	1.95E-10	2.92E-10
2191	478077	3768201	8.36E-11	1.67E-10	2.51E-10
2192	478058.4	3768216	8.34E-11	1.67E-10	2.50E-10
2193	478981.1	3769347	4.38E-08	8.76E-08	1.31E-07
2194	478651.5	3768870	3.11E-10	6.21E-10	9.32E-10
2195	478511.9	3768674	1.85E-10	3.69E-10	5.54E-10
2196	478418.9	3768544	1.44E-10	2.87E-10	4.31E-10
2197	478232.8	3768284	9.83E-11	1.97E-10	2.95E-10
2198	478139.7	3768154	8.46E-11	1.69E-10	2.54E-10
2199	478957.6	3769339	2.77E-08	5.54E-08	8.30E-08
2200	478946.3	3769322	1.85E-08	3.70E-08	5.55E-08
2201	478935	3769306	1.25E-08	2.51E-08	3.76E-08
2202	478889.8	3769240	3.60E-09	7.20E-09	1.08E-08
2203	478156.3	3768142	8.49E-11	1.70E-10	2.55E-10
2204	478957	3769362	4.07E-08	8.13E-08	1.22E-07
2205	478906.2	3769276	6.40E-09	1.28E-08	1.92E-08
2206	478676.8	3768854	3.11E-10	6.22E-10	9.33E-10
2207	478554.9	3768647	1.87E-10	3.73E-10	5.60E-10
2208	478473.7	3768510	1.46E-10	2.92E-10	4.37E-10
2209	478311.2	3768234	1.00E-10	2.00E-10	3.00E-10
2210	478229.9	3768096	8.63E-11	1.73E-10	2.59E-10
2211	478932.8	3769354	2.71E-08	5.41E-08	8.12E-08
2212	478922.4	3769337	1.89E-08	3.77E-08	5.66E-08
2213	478912	3769320	1.33E-08	2.66E-08	3.99E-08
2214	478870.2	3769251	3.88E-09	7.77E-09	1.17E-08
2215	478862.5	3769209	2.34E-09	4.69E-09	7.03E-09
2216	478807.6	3769149	1.24E-09	2.49E-09	3.73E-09
2217	478528.8	3768663	1.85E-10	3.70E-10	5.56E-10
2218	478452.4	3768522	1.45E-10	2.90E-10	4.34E-10
2219	478287.7	3768248	9.96E-11	1.99E-10	2.99E-10
2220	478265.3	3768262	9.90E-11	1.98E-10	2.97E-10
2221	478205.3	3768111	8.58E-11	1.72E-10	2.57E-10
2222	478181.8	3768125	8.54E-11	1.71E-10	2.56E-10
2223	478930.8	3769377	4.03E-08	8.06E-08	1.21E-07
2224	478886.1	3769287	6.90E-09	1.38E-08	2.07E-08
2225	478579.3	3768636	1.89E-10	3.77E-10	5.66E-10
2226	478507.7	3768493	1.48E-10	2.95E-10	4.43E-10
2227	478364.5	3768206	1.02E-10	2.03E-10	3.05E-10
2228	478292.9	3768063	8.74E-11	1.75E-10	2.62E-10
2229	478909.9	3769388	4.11E-08	8.23E-08	1.23E-07
2230	478910.9	3769365	2.71E-08	5.41E-08	8.12E-08
2231	478901.7	3769347	1.90E-08	3.79E-08	5.69E-08
2232	478892.5	3769329	1.36E-08	2.71E-08	4.07E-08

2233	478863.9	3769299	7.38E-09	1.48E-08	2.22E-08
2234	478845.5	3769263	4.19E-09	8.38E-09	1.26E-08
2235	478837.3	3769223	2.51E-09	5.02E-09	7.53E-09
2236	478808.7	3769192	1.75E-09	3.50E-09	5.25E-09
2237	478790.3	3769157	1.27E-09	2.54E-09	3.81E-09
2238	478340.7	3768218	1.01E-10	2.02E-10	3.03E-10
2239	478268.1	3768076	8.70E-11	1.74E-10	2.61E-10
2240	478248.5	3768086	8.67E-11	1.73E-10	2.60E-10
2241	478893.6	3769396	4.08E-08	8.16E-08	1.22E-07
2242	478884.5	3769378	2.79E-08	5.58E-08	8.37E-08
2243	478875.4	3769360	1.97E-08	3.93E-08	5.90E-08
2244	478866.3	3769343	1.42E-08	2.84E-08	4.26E-08
2245	478811.7	3769236	2.72E-09	5.44E-09	8.16E-09
2246	478739	3769093	7.82E-10	1.56E-09	2.35E-09
2247	478835.4	3769313	8.00E-09	1.60E-08	2.40E-08
2248	478817.8	3769277	4.60E-09	9.20E-09	1.38E-08
2249	478782.8	3769205	1.87E-09	3.74E-09	5.62E-09
2250	478675	3768946	3.93E-10	7.86E-10	1.18E-09
2251	478862.2	3769412	3.73E-08	7.46E-08	1.12E-07
2252	478868.3	3769386	2.79E-08	5.58E-08	8.37E-08
2253	478837.1	3769403	2.71E-08	5.42E-08	8.13E-08
2254	478858.8	3769368	2.00E-08	4.00E-08	6.01E-08
2255	478827.6	3769385	2.06E-08	4.11E-08	6.17E-08
2256	478849.3	3769351	1.46E-08	2.93E-08	4.39E-08
2257	478818.1	3769368	1.55E-08	3.11E-08	4.66E-08
2258	478814.8	3769324	8.54E-09	1.71E-08	2.56E-08
2259	478783.5	3769341	9.31E-09	1.86E-08	2.79E-08
2260	478795.8	3769289	5.00E-09	1.00E-08	1.50E-08
2261	478764.6	3769306	5.59E-09	1.12E-08	1.68E-08
2262	478792.4	3769245	2.90E-09	5.81E-09	8.71E-09
2263	478761.2	3769262	3.28E-09	6.57E-09	9.85E-09
2264	478757.8	3769218	2.04E-09	4.07E-09	6.11E-09
2265	478726.6	3769235	2.29E-09	4.58E-09	6.86E-09
2266	478707.6	3769200	1.59E-09	3.18E-09	4.77E-09
2267	478716.5	3769104	8.07E-10	1.61E-09	2.42E-09
2268	478650.3	3768959	3.95E-10	7.91E-10	1.19E-09
2269	478625	3768972	4.03E-10	8.06E-10	1.21E-09
2270	478593.8	3768989	4.18E-10	8.36E-10	1.25E-09
2271	478587	3768902	3.12E-10	6.23E-10	9.35E-10
2272	478555.8	3768918	3.19E-10	6.38E-10	9.57E-10
2273	478441.9	3768707	1.81E-10	3.63E-10	5.44E-10
2274	478397.2	3768549	1.42E-10	2.83E-10	4.25E-10
2275	478245.4	3768268	9.80E-11	1.96E-10	2.94E-10
2276	478214.2	3768285	9.70E-11	1.94E-10	2.91E-10
2277	478865.5	3769484	4.18E-08	8.36E-08	1.25E-07
2278	478897.4	3769485	5.17E-08	1.03E-07	1.55E-07
2279	478839.5	3769496	3.25E-08	6.51E-08	9.76E-08
2280	478865	3769504	3.37E-08	6.75E-08	1.01E-07
2281	478897	3769505	3.72E-08	7.43E-08	1.11E-07
2282	478837.2	3769515	2.71E-08	5.42E-08	8.12E-08
2283	478803	3769487	2.79E-08	5.58E-08	8.37E-08
2284	478815.6	3769518	2.44E-08	4.89E-08	7.33E-08

2285	478783	3769492	2.47E-08	4.94E-08	7.40E-08
2286	478800.6	3769419	2.39E-08	4.78E-08	7.18E-08
2287	478788.3	3769516	2.24E-08	4.48E-08	6.72E-08
2288	478764.6	3769497	2.21E-08	4.43E-08	6.64E-08
2289	478790.1	3769404	1.96E-08	3.93E-08	5.89E-08
2290	478738	3769516	1.84E-08	3.69E-08	5.53E-08
2291	478720.2	3769483	1.81E-08	3.63E-08	5.44E-08
2292	478745.5	3769426	1.77E-08	3.53E-08	5.30E-08
2293	478758.2	3769398	1.54E-08	3.07E-08	4.60E-08
2294	478770.9	3769369	1.23E-08	2.47E-08	3.70E-08
2295	478687.1	3769516	1.52E-08	3.03E-08	4.55E-08
2296	478681.3	3769492	1.52E-08	3.05E-08	4.57E-08
2297	478706.9	3769435	1.50E-08	3.00E-08	4.50E-08
2298	478719.7	3769406	1.34E-08	2.68E-08	4.02E-08
2299	478732.5	3769377	1.11E-08	2.23E-08	3.34E-08
2300	478745.3	3769349	8.70E-09	1.74E-08	2.61E-08
2301	478861.8	3769644	4.40E-09	8.80E-09	1.32E-08
2302	478893.8	3769645	4.15E-09	8.29E-09	1.24E-08
2303	478832.6	3769674	3.42E-09	6.83E-09	1.02E-08
2304	478808	3769654	4.54E-09	9.09E-09	1.36E-08
2305	478642.5	3769501	1.30E-08	2.61E-08	3.91E-08
2306	478681.1	3769415	1.18E-08	2.36E-08	3.54E-08
2307	478694	3769386	1.01E-08	2.02E-08	3.03E-08
2308	478706.9	3769357	8.13E-09	1.63E-08	2.44E-08
2309	478719.8	3769328	6.27E-09	1.25E-08	1.88E-08
2310	478732.7	3769299	4.70E-09	9.40E-09	1.41E-08
2311	478860.9	3769684	2.95E-09	5.91E-09	8.86E-09
2312	478892.8	3769685	2.89E-09	5.78E-09	8.66E-09
2313	478831.6	3769714	2.38E-09	4.75E-09	7.13E-09
2314	478807	3769694	2.97E-09	5.93E-09	8.90E-09
2315	478782.3	3769674	3.91E-09	7.81E-09	1.17E-08
2316	478757.6	3769654	5.25E-09	1.05E-08	1.57E-08
2317	478603.6	3769510	1.13E-08	2.26E-08	3.39E-08
2318	478642.5	3769423	1.05E-08	2.10E-08	3.15E-08
2319	478655.4	3769395	9.18E-09	1.84E-08	2.75E-08
2320	478668.3	3769366	7.61E-09	1.52E-08	2.28E-08
2321	478681.3	3769337	6.02E-09	1.20E-08	1.81E-08
2322	478694.2	3769308	4.62E-09	9.25E-09	1.39E-08
2323	478707.2	3769279	3.49E-09	6.97E-09	1.05E-08
2324	478860	3769724	2.15E-09	4.31E-09	6.46E-09
2325	478891.9	3769725	2.15E-09	4.30E-09	6.45E-09
2326	478830.7	3769754	1.78E-09	3.56E-09	5.34E-09
2327	478805.9	3769734	2.10E-09	4.20E-09	6.30E-09
2328	478781.2	3769714	2.61E-09	5.23E-09	7.84E-09
2329	478756.4	3769694	3.40E-09	6.81E-09	1.02E-08
2330	478731.6	3769674	4.51E-09	9.02E-09	1.35E-08
2331	478706.9	3769654	5.86E-09	1.17E-08	1.76E-08
2332	478564.7	3769520	9.96E-09	1.99E-08	2.99E-08
2333	478577.7	3769491	1.02E-08	2.04E-08	3.06E-08
2334	478603.7	3769432	9.37E-09	1.87E-08	2.81E-08
2335	478616.7	3769403	8.37E-09	1.67E-08	2.51E-08
2336	478629.7	3769374	7.11E-09	1.42E-08	2.13E-08

2337	478642.7	3769345	5.77E-09	1.15E-08	1.73E-08
2338	478655.7	3769316	4.53E-09	9.06E-09	1.36E-08
2339	478668.7	3769287	3.49E-09	6.97E-09	1.05E-08
2340	478681.6	3769258	2.66E-09	5.32E-09	7.99E-09
2341	478694.6	3769229	2.04E-09	4.08E-09	6.13E-09
2342	478859	3769764	1.67E-09	3.33E-09	5.00E-09
2343	478891	3769765	1.68E-09	3.36E-09	5.04E-09
2344	478829.2	3769834	1.15E-09	2.29E-09	3.44E-09
2345	478805.2	3769815	1.26E-09	2.52E-09	3.78E-09
2346	478781.1	3769795	1.42E-09	2.84E-09	4.26E-09
2347	478757.1	3769776	1.66E-09	3.32E-09	4.98E-09
2348	478733	3769757	2.03E-09	4.05E-09	6.08E-09
2349	478709	3769737	2.56E-09	5.11E-09	7.67E-09
2350	478684.9	3769718	3.27E-09	6.54E-09	9.81E-09
2351	478660.8	3769698	4.15E-09	8.31E-09	1.25E-08
2352	478636.8	3769679	5.13E-09	1.03E-08	1.54E-08
2353	478612.7	3769660	6.11E-09	1.22E-08	1.83E-08
2354	478588.7	3769640	6.98E-09	1.40E-08	2.09E-08
2355	478499.4	3769511	8.13E-09	1.63E-08	2.44E-08
2356	478537.2	3769426	7.13E-09	1.43E-08	2.14E-08
2357	478549.8	3769398	6.35E-09	1.27E-08	1.91E-08
2358	478562.4	3769369	5.45E-09	1.09E-08	1.64E-08
2359	478575.1	3769341	4.53E-09	9.07E-09	1.36E-08
2360	478587.7	3769313	3.67E-09	7.35E-09	1.10E-08
2361	478600.3	3769285	2.92E-09	5.85E-09	8.77E-09
2362	478612.9	3769257	2.31E-09	4.62E-09	6.93E-09
2363	478625.5	3769228	1.83E-09	3.66E-09	5.49E-09
2364	478638.1	3769200	1.46E-09	2.93E-09	4.39E-09
2365	478857.2	3769844	1.10E-09	2.21E-09	3.31E-09
2366	478889.2	3769845	1.12E-09	2.23E-09	3.35E-09
2367	478827.3	3769914	8.21E-10	1.64E-09	2.46E-09
2368	478803	3769895	8.79E-10	1.76E-09	2.64E-09
2369	478778.7	3769875	9.51E-10	1.90E-09	2.85E-09
2370	478754.5	3769855	1.05E-09	2.09E-09	3.14E-09
2371	478730.2	3769836	1.18E-09	2.36E-09	3.55E-09
2372	478706	3769816	1.38E-09	2.76E-09	4.14E-09
2373	478681.7	3769797	1.67E-09	3.34E-09	5.01E-09
2374	478657.4	3769777	2.08E-09	4.15E-09	6.23E-09
2375	478633.2	3769758	2.60E-09	5.21E-09	7.81E-09
2376	478608.9	3769738	3.25E-09	6.50E-09	9.75E-09
2377	478584.6	3769718	3.97E-09	7.95E-09	1.19E-08
2378	478560.4	3769699	4.72E-09	9.43E-09	1.41E-08
2379	478536.1	3769679	5.42E-09	1.08E-08	1.62E-08
2380	478511.9	3769660	6.00E-09	1.20E-08	1.80E-08
2381	478487.6	3769640	6.43E-09	1.29E-08	1.93E-08
2382	478421.8	3769529	6.69E-09	1.34E-08	2.01E-08
2383	478434.5	3769500	6.65E-09	1.33E-08	2.00E-08
2384	478472.7	3769415	5.51E-09	1.10E-08	1.65E-08
2385	478485.4	3769387	4.87E-09	9.74E-09	1.46E-08
2386	478498.1	3769358	4.18E-09	8.36E-09	1.25E-08
2387	478510.8	3769330	3.50E-09	6.99E-09	1.05E-08
2388	478523.6	3769301	2.87E-09	5.73E-09	8.60E-09

2389	478536.3	3769273	2.32E-09	4.64E-09	6.96E-09
2390	478549	3769244	1.88E-09	3.75E-09	5.63E-09
2391	478561.7	3769216	1.52E-09	3.03E-09	4.55E-09
2392	478574.5	3769187	1.24E-09	2.48E-09	3.71E-09
2393	478587.2	3769159	1.02E-09	2.04E-09	3.07E-09
2394	478599.9	3769130	8.56E-10	1.71E-09	2.57E-09
2395	478612.6	3769102	7.26E-10	1.45E-09	2.18E-09
2396	478855.4	3769924	7.98E-10	1.60E-09	2.39E-09
2397	478887.3	3769925	8.05E-10	1.61E-09	2.41E-09
2398	478825.4	3769994	6.25E-10	1.25E-09	1.87E-09
2399	478800.9	3769974	6.61E-10	1.32E-09	1.98E-09
2400	478776.5	3769955	7.02E-10	1.40E-09	2.11E-09
2401	478752.1	3769935	7.51E-10	1.50E-09	2.25E-09
2402	478727.7	3769915	8.13E-10	1.63E-09	2.44E-09
2403	478703.3	3769896	8.96E-10	1.79E-09	2.69E-09
2404	478678.9	3769876	1.01E-09	2.03E-09	3.04E-09
2405	478654.5	3769856	1.18E-09	2.36E-09	3.54E-09
2406	478630.1	3769837	1.42E-09	2.83E-09	4.25E-09
2407	478605.6	3769817	1.73E-09	3.47E-09	5.20E-09
2408	478581.2	3769797	2.14E-09	4.27E-09	6.41E-09
2409	478556.8	3769777	2.62E-09	5.25E-09	7.87E-09
2410	478532.4	3769758	3.18E-09	6.35E-09	9.52E-09
2411	478508	3769738	3.75E-09	7.51E-09	1.13E-08
2412	478483.6	3769718	4.32E-09	8.63E-09	1.29E-08
2413	478459.2	3769699	4.82E-09	9.64E-09	1.45E-08
2414	478434.7	3769679	5.22E-09	1.04E-08	1.57E-08
2415	478410.3	3769659	5.51E-09	1.10E-08	1.65E-08
2416	478385.9	3769639	5.65E-09	1.13E-08	1.69E-08
2417	478395.3	3769433	4.82E-09	9.64E-09	1.45E-08
2418	478408.1	3769404	4.35E-09	8.71E-09	1.31E-08
2419	478420.9	3769375	3.83E-09	7.66E-09	1.15E-08
2420	478433.7	3769347	3.30E-09	6.59E-09	9.89E-09
2421	478446.5	3769318	2.78E-09	5.56E-09	8.34E-09
2422	478459.3	3769289	2.31E-09	4.62E-09	6.93E-09
2423	478472.1	3769261	1.90E-09	3.80E-09	5.70E-09
2424	478484.9	3769232	1.56E-09	3.12E-09	4.68E-09
2425	478497.7	3769204	1.29E-09	2.57E-09	3.86E-09
2426	478523.3	3769146	8.98E-10	1.80E-09	2.70E-09
2427	478536.1	3769118	7.62E-10	1.52E-09	2.29E-09
2428	478548.9	3769089	6.53E-10	1.31E-09	1.96E-09
2429	478853.5	3770004	6.09E-10	1.22E-09	1.83E-09
2430	478885.5	3770005	6.12E-10	1.22E-09	1.84E-09
2431	478823.5	3770074	4.96E-10	9.91E-10	1.49E-09
2432	478798.9	3770054	5.21E-10	1.04E-09	1.56E-09
2433	478774.4	3770034	5.48E-10	1.10E-09	1.64E-09
2434	478749.9	3770015	5.78E-10	1.16E-09	1.74E-09
2435	478725.4	3769995	6.14E-10	1.23E-09	1.84E-09
2436	478700.8	3769975	6.56E-10	1.31E-09	1.97E-09
2437	478676.3	3769955	7.11E-10	1.42E-09	2.13E-09
2438	478651.8	3769936	7.85E-10	1.57E-09	2.35E-09
2439	478627.3	3769916	8.87E-10	1.77E-09	2.66E-09
2440	478602.7	3769896	1.03E-09	2.06E-09	3.09E-09

2441	478578.2	3769876	1.22E-09	2.44E-09	3.67E-09
2442	478553.7	3769856	1.48E-09	2.95E-09	4.43E-09
2443	478529.1	3769837	1.79E-09	3.59E-09	5.38E-09
2444	478504.6	3769817	2.17E-09	4.35E-09	6.52E-09
2445	478480.1	3769797	2.60E-09	5.20E-09	7.80E-09
2446	478455.6	3769777	3.05E-09	6.11E-09	9.16E-09
2447	478431	3769757	3.51E-09	7.02E-09	1.05E-08
2448	478406.5	3769738	3.93E-09	7.87E-09	1.18E-08
2449	478382	3769718	4.30E-09	8.60E-09	1.29E-08
2450	478357.5	3769698	4.59E-09	9.18E-09	1.38E-08
2451	478332.9	3769678	4.78E-09	9.56E-09	1.43E-08
2452	478308.4	3769658	4.87E-09	9.75E-09	1.46E-08
2453	478283.9	3769639	4.87E-09	9.73E-09	1.46E-08
2454	478330.7	3769422	3.91E-09	7.82E-09	1.17E-08
2455	478343.6	3769393	3.51E-09	7.03E-09	1.05E-08
2456	478356.4	3769364	3.09E-09	6.18E-09	9.27E-09
2457	478369.3	3769336	2.67E-09	5.33E-09	8.00E-09
2458	478382.2	3769307	2.27E-09	4.53E-09	6.80E-09
2459	478395	3769278	1.90E-09	3.80E-09	5.71E-09
2460	478407.9	3769249	1.59E-09	3.18E-09	4.76E-09
2461	478420.7	3769220	1.33E-09	2.65E-09	3.98E-09
2462	478433.6	3769192	1.11E-09	2.23E-09	3.34E-09
2463	478446.5	3769163	9.39E-10	1.88E-09	2.82E-09
2464	478459.3	3769134	8.00E-10	1.60E-09	2.40E-09
2465	478472.2	3769105	6.88E-10	1.38E-09	2.06E-09
2466	478485.1	3769077	5.96E-10	1.19E-09	1.79E-09
2467	478497.9	3769048	5.20E-10	1.04E-09	1.56E-09
2468	478536.5	3768962	3.65E-10	7.31E-10	1.10E-09
2469	478851.7	3770084	4.84E-10	9.69E-10	1.45E-09
2470	478883.7	3770085	4.86E-10	9.72E-10	1.46E-09
2471	478821.6	3770154	4.06E-10	8.12E-10	1.22E-09
2472	478797	3770134	4.24E-10	8.49E-10	1.27E-09
2473	478772.4	3770114	4.44E-10	8.88E-10	1.33E-09
2474	478747.7	3770094	4.65E-10	9.30E-10	1.40E-09
2475	478723.1	3770075	4.88E-10	9.77E-10	1.47E-09
2476	478698.5	3770055	5.15E-10	1.03E-09	1.54E-09
2477	478673.9	3770035	5.46E-10	1.09E-09	1.64E-09
2478	478649.3	3770015	5.84E-10	1.17E-09	1.75E-09
2479	478624.7	3769995	6.33E-10	1.27E-09	1.90E-09
2480	478600.1	3769975	6.99E-10	1.40E-09	2.10E-09
2481	478575.4	3769955	7.89E-10	1.58E-09	2.37E-09
2482	478550.8	3769935	9.10E-10	1.82E-09	2.73E-09
2483	478526.2	3769916	1.07E-09	2.14E-09	3.21E-09
2484	478501.6	3769896	1.28E-09	2.56E-09	3.83E-09
2485	478477	3769876	1.53E-09	3.06E-09	4.60E-09
2486	478452.4	3769856	1.83E-09	3.67E-09	5.50E-09
2487	478427.8	3769836	2.17E-09	4.35E-09	6.52E-09
2488	478403.1	3769816	2.54E-09	5.08E-09	7.62E-09
2489	478378.5	3769796	2.91E-09	5.82E-09	8.73E-09
2490	478353.9	3769777	3.27E-09	6.54E-09	9.80E-09
2491	478329.3	3769757	3.59E-09	7.18E-09	1.08E-08
2492	478304.7	3769737	3.86E-09	7.72E-09	1.16E-08

2493	478280.1	3769717	4.07E-09	8.14E-09	1.22E-08
2494	478255.5	3769697	4.20E-09	8.40E-09	1.26E-08
2495	478230.8	3769677	4.26E-09	8.52E-09	1.28E-08
2496	478206.2	3769657	4.24E-09	8.48E-09	1.27E-08
2497	478181.6	3769638	4.16E-09	8.32E-09	1.25E-08
2498	478253.2	3769440	3.52E-09	7.04E-09	1.06E-08
2499	478266.1	3769411	3.22E-09	6.43E-09	9.65E-09
2500	478279	3769382	2.88E-09	5.77E-09	8.65E-09
2501	478291.9	3769353	2.54E-09	5.07E-09	7.61E-09
2502	478304.8	3769324	2.20E-09	4.40E-09	6.60E-09
2503	478317.8	3769296	1.89E-09	3.77E-09	5.66E-09
2504	478330.7	3769267	1.60E-09	3.20E-09	4.80E-09
2505	478343.6	3769238	1.35E-09	2.71E-09	4.06E-09
2506	478356.5	3769209	1.15E-09	2.29E-09	3.44E-09
2507	478382.3	3769151	8.35E-10	1.67E-09	2.51E-09
2508	478395.2	3769122	7.21E-10	1.44E-09	2.16E-09
2509	478408.1	3769093	6.26E-10	1.25E-09	1.88E-09
2510	478433.9	3769036	4.83E-10	9.66E-10	1.45E-09
2511	478446.8	3769007	4.27E-10	8.54E-10	1.28E-09
2512	478459.8	3768978	3.80E-10	7.61E-10	1.14E-09
2513	478849.9	3770164	3.98E-10	7.96E-10	1.19E-09
2514	478881.8	3770165	3.98E-10	7.97E-10	1.19E-09
2515	478817.9	3770314	2.93E-10	5.86E-10	8.79E-10
2516	478793.1	3770294	3.04E-10	6.07E-10	9.11E-10
2517	478768.4	3770274	3.15E-10	6.29E-10	9.44E-10
2518	478743.6	3770254	3.27E-10	6.53E-10	9.80E-10
2519	478718.9	3770234	3.39E-10	6.79E-10	1.02E-09
2520	478694.1	3770214	3.53E-10	7.06E-10	1.06E-09
2521	478669.4	3770194	3.68E-10	7.36E-10	1.10E-09
2522	478644.7	3770174	3.85E-10	7.69E-10	1.15E-09
2523	478619.9	3770154	4.03E-10	8.05E-10	1.21E-09
2524	478595.2	3770134	4.24E-10	8.47E-10	1.27E-09
2525	478570.4	3770114	4.49E-10	8.98E-10	1.35E-09
2526	478545.7	3770094	4.81E-10	9.62E-10	1.44E-09
2527	478520.9	3770074	5.22E-10	1.04E-09	1.57E-09
2528	478496.2	3770054	5.75E-10	1.15E-09	1.73E-09
2529	478471.5	3770034	6.45E-10	1.29E-09	1.94E-09
2530	478446.7	3770014	7.36E-10	1.47E-09	2.21E-09
2531	478422	3769994	8.52E-10	1.70E-09	2.56E-09
2532	478397.2	3769974	9.94E-10	1.99E-09	2.98E-09
2533	478372.5	3769954	1.17E-09	2.33E-09	3.50E-09
2534	478347.8	3769935	1.37E-09	2.73E-09	4.10E-09
2535	478323	3769915	1.59E-09	3.18E-09	4.78E-09
2536	478298.3	3769895	1.84E-09	3.67E-09	5.51E-09
2537	478273.5	3769875	2.09E-09	4.18E-09	6.27E-09
2538	478248.8	3769855	2.34E-09	4.69E-09	7.03E-09
2539	478224	3769835	2.59E-09	5.18E-09	7.76E-09
2540	478199.3	3769815	2.81E-09	5.62E-09	8.43E-09
2541	478174.6	3769795	3.00E-09	6.00E-09	9.01E-09
2542	478149.8	3769775	3.15E-09	6.31E-09	9.46E-09
2543	478125.1	3769755	3.26E-09	6.53E-09	9.79E-09
2544	478100.3	3769735	3.33E-09	6.65E-09	9.98E-09

2545	478075.6	3769715	3.35E-09	6.69E-09	1.00E-08
2546	478050.8	3769695	3.32E-09	6.64E-09	9.96E-09
2547	478026.1	3769675	3.26E-09	6.52E-09	9.78E-09
2548	478085.1	3769505	3.06E-09	6.12E-09	9.17E-09
2549	478098.1	3769476	2.90E-09	5.80E-09	8.70E-09
2550	478111	3769447	2.71E-09	5.42E-09	8.13E-09
2551	478124	3769418	2.50E-09	4.99E-09	7.49E-09
2552	478137	3769389	2.27E-09	4.53E-09	6.80E-09
2553	478150	3769360	2.03E-09	4.06E-09	6.10E-09
2554	478163	3769331	1.80E-09	3.59E-09	5.39E-09
2555	478175.9	3769302	1.58E-09	3.15E-09	4.73E-09
2556	478188.9	3769273	1.37E-09	2.74E-09	4.11E-09
2557	478201.9	3769244	1.18E-09	2.37E-09	3.55E-09
2558	478214.9	3769215	1.02E-09	2.05E-09	3.07E-09
2559	478240.8	3769157	7.73E-10	1.55E-09	2.32E-09
2560	478253.8	3769128	6.77E-10	1.35E-09	2.03E-09
2561	478266.8	3769099	5.96E-10	1.19E-09	1.79E-09
2562	478279.7	3769070	5.29E-10	1.06E-09	1.59E-09
2563	478299.2	3769026	4.46E-10	8.93E-10	1.34E-09
2564	478331.6	3768954	3.41E-10	6.82E-10	1.02E-09
2565	478344.6	3768925	3.08E-10	6.16E-10	9.24E-10
2566	478357.6	3768896	2.79E-10	5.59E-10	8.38E-10
2567	478370.6	3768867	2.55E-10	5.09E-10	7.64E-10
2568	478383.5	3768838	2.34E-10	4.68E-10	7.03E-10
2569	478846.2	3770324	2.88E-10	5.76E-10	8.64E-10
2570	478878.2	3770325	2.88E-10	5.76E-10	8.64E-10
2571	478814.1	3770474	2.27E-10	4.53E-10	6.80E-10
2572	478789.3	3770454	2.33E-10	4.66E-10	6.99E-10
2573	478764.5	3770434	2.40E-10	4.80E-10	7.20E-10
2574	478739.6	3770414	2.47E-10	4.95E-10	7.42E-10
2575	478714.8	3770394	2.55E-10	5.10E-10	7.65E-10
2576	478690	3770374	2.64E-10	5.27E-10	7.91E-10
2577	478665.2	3770354	2.73E-10	5.46E-10	8.18E-10
2578	478640.3	3770334	2.82E-10	5.65E-10	8.47E-10
2579	478615.5	3770314	2.93E-10	5.86E-10	8.78E-10
2580	478590.7	3770293	3.04E-10	6.08E-10	9.12E-10
2581	478565.8	3770273	3.16E-10	6.32E-10	9.48E-10
2582	478541	3770253	3.29E-10	6.58E-10	9.87E-10
2583	478516.2	3770233	3.44E-10	6.88E-10	1.03E-09
2584	478491.3	3770213	3.62E-10	7.24E-10	1.09E-09
2585	478466.5	3770193	3.84E-10	7.68E-10	1.15E-09
2586	478441.7	3770173	4.11E-10	8.22E-10	1.23E-09
2587	478416.8	3770153	4.45E-10	8.90E-10	1.34E-09
2588	478392	3770133	4.89E-10	9.78E-10	1.47E-09
2589	478367.2	3770113	5.45E-10	1.09E-09	1.63E-09
2590	478342.4	3770093	6.15E-10	1.23E-09	1.84E-09
2591	478317.5	3770073	7.01E-10	1.40E-09	2.10E-09
2592	478292.7	3770053	8.04E-10	1.61E-09	2.41E-09
2593	478267.9	3770033	9.26E-10	1.85E-09	2.78E-09
2594	478243	3770013	1.07E-09	2.13E-09	3.20E-09
2595	478218.2	3769993	1.22E-09	2.45E-09	3.67E-09
2596	478193.4	3769973	1.39E-09	2.79E-09	4.18E-09

2597	478168.5	3769953	1.57E-09	3.15E-09	4.72E-09
2598	478143.7	3769933	1.76E-09	3.52E-09	5.28E-09
2599	478118.9	3769913	1.94E-09	3.89E-09	5.83E-09
2600	478094	3769893	2.12E-09	4.23E-09	6.35E-09
2601	478069.2	3769873	2.28E-09	4.56E-09	6.84E-09
2602	478044.4	3769853	2.42E-09	4.84E-09	7.26E-09
2603	478019.6	3769833	2.54E-09	5.07E-09	7.61E-09
2604	477994.7	3769813	2.63E-09	5.25E-09	7.88E-09
2605	477969.9	3769792	2.69E-09	5.38E-09	8.07E-09
2606	477945.1	3769772	2.72E-09	5.45E-09	8.17E-09
2607	477870.6	3769712	2.66E-09	5.31E-09	7.97E-09
2608	477864.7	3769688	2.65E-09	5.29E-09	7.94E-09
2609	477877.7	3769659	2.68E-09	5.35E-09	8.03E-09
2610	477890.7	3769629	2.68E-09	5.37E-09	8.05E-09
2611	477942.8	3769513	2.45E-09	4.89E-09	7.34E-09
2612	477955.8	3769484	2.32E-09	4.63E-09	6.95E-09
2613	477968.8	3769455	2.17E-09	4.35E-09	6.52E-09
2614	477981.9	3769426	2.01E-09	4.03E-09	6.04E-09
2615	477994.9	3769396	1.85E-09	3.69E-09	5.54E-09
2616	478007.9	3769367	1.67E-09	3.35E-09	5.02E-09
2617	478020.9	3769338	1.50E-09	3.01E-09	4.51E-09
2618	478034	3769309	1.34E-09	2.68E-09	4.02E-09
2619	478047	3769280	1.19E-09	2.37E-09	3.56E-09
2620	478060	3769251	1.04E-09	2.09E-09	3.13E-09
2621	478073	3769222	9.18E-10	1.84E-09	2.75E-09
2622	478086	3769193	8.08E-10	1.62E-09	2.42E-09
2623	478099.1	3769163	7.12E-10	1.43E-09	2.14E-09
2624	478112.1	3769134	6.32E-10	1.26E-09	1.90E-09
2625	478125.1	3769105	5.63E-10	1.13E-09	1.69E-09
2626	478138.1	3769076	5.05E-10	1.01E-09	1.51E-09
2627	478151.2	3769047	4.55E-10	9.10E-10	1.36E-09
2628	478164.2	3769018	4.12E-10	8.24E-10	1.24E-09
2629	478177.2	3768989	3.74E-10	7.47E-10	1.12E-09
2630	478190.2	3768959	3.40E-10	6.80E-10	1.02E-09
2631	478222.8	3768887	2.70E-10	5.40E-10	8.10E-10
2632	478235.8	3768858	2.47E-10	4.93E-10	7.40E-10
2633	478248.8	3768828	2.26E-10	4.52E-10	6.78E-10
2634	478261.8	3768799	2.08E-10	4.17E-10	6.25E-10
2635	478274.9	3768770	1.93E-10	3.86E-10	5.78E-10
2636	478313.9	3768683	1.61E-10	3.21E-10	4.82E-10
2637	478327	3768654	1.54E-10	3.07E-10	4.61E-10
2638	478359.5	3768581	1.42E-10	2.84E-10	4.26E-10
2639	478842.5	3770484	2.23E-10	4.47E-10	6.70E-10
2640	478874.5	3770485	2.23E-10	4.47E-10	6.70E-10
2641	478810.6	3770634	1.84E-10	3.67E-10	5.51E-10
2642	478785.9	3770614	1.88E-10	3.76E-10	5.64E-10
2643	478761.3	3770594	1.92E-10	3.85E-10	5.77E-10
2644	478736.7	3770574	1.97E-10	3.94E-10	5.91E-10
2645	478712.1	3770554	2.02E-10	4.04E-10	6.07E-10
2646	478687.5	3770535	2.08E-10	4.15E-10	6.23E-10
2647	478662.8	3770515	2.13E-10	4.27E-10	6.40E-10
2648	478638.2	3770495	2.20E-10	4.39E-10	6.59E-10

2649	478613.6	3770475	2.26E-10	4.53E-10	6.79E-10
2650	478589	3770455	2.34E-10	4.67E-10	7.01E-10
2651	478564.3	3770435	2.41E-10	4.82E-10	7.23E-10
2652	478539.7	3770415	2.49E-10	4.98E-10	7.47E-10
2653	478515.1	3770395	2.57E-10	5.15E-10	7.72E-10
2654	478490.5	3770376	2.66E-10	5.32E-10	7.99E-10
2655	478465.9	3770356	2.76E-10	5.51E-10	8.27E-10
2656	478441.2	3770336	2.86E-10	5.73E-10	8.59E-10
2657	478416.6	3770316	2.99E-10	5.98E-10	8.97E-10
2658	478392	3770296	3.14E-10	6.28E-10	9.42E-10
2659	478367.4	3770276	3.32E-10	6.64E-10	9.96E-10
2660	478342.8	3770256	3.54E-10	7.08E-10	1.06E-09
2661	478318.1	3770236	3.82E-10	7.63E-10	1.14E-09
2662	478293.5	3770217	4.16E-10	8.32E-10	1.25E-09
2663	478268.9	3770197	4.58E-10	9.16E-10	1.37E-09
2664	478244.3	3770177	5.10E-10	1.02E-09	1.53E-09
2665	478219.6	3770157	5.71E-10	1.14E-09	1.71E-09
2666	478195	3770137	6.45E-10	1.29E-09	1.93E-09
2667	478170.4	3770117	7.31E-10	1.46E-09	2.19E-09
2668	478145.8	3770097	8.29E-10	1.66E-09	2.49E-09
2669	478121.2	3770077	9.39E-10	1.88E-09	2.82E-09
2670	478096.5	3770058	1.06E-09	2.12E-09	3.17E-09
2671	478071.9	3770038	1.19E-09	2.37E-09	3.56E-09
2672	478047.3	3770018	1.32E-09	2.64E-09	3.97E-09
2673	478022.7	3769998	1.46E-09	2.92E-09	4.38E-09
2674	477998	3769978	1.60E-09	3.19E-09	4.79E-09
2675	477973.4	3769958	1.73E-09	3.46E-09	5.18E-09
2676	477948.8	3769938	1.85E-09	3.70E-09	5.55E-09
2677	477924.2	3769919	1.96E-09	3.93E-09	5.89E-09
2678	477899.6	3769899	2.06E-09	4.13E-09	6.19E-09
2679	477874.9	3769879	2.15E-09	4.29E-09	6.43E-09
2680	477850.3	3769859	2.21E-09	4.42E-09	6.63E-09
2681	477825.7	3769839	2.25E-09	4.51E-09	6.76E-09
2682	477776.4	3769799	2.28E-09	4.57E-09	6.85E-09
2683	477751.8	3769779	2.27E-09	4.54E-09	6.81E-09
2684	477727.2	3769760	2.24E-09	4.48E-09	6.72E-09
2685	477709	3769725	2.21E-09	4.42E-09	6.64E-09
2686	477721.9	3769696	2.24E-09	4.47E-09	6.71E-09
2687	477734.9	3769667	2.24E-09	4.48E-09	6.72E-09
2688	477747.8	3769639	2.23E-09	4.46E-09	6.69E-09
2689	477812.3	3769494	1.91E-09	3.81E-09	5.72E-09
2690	477825.2	3769465	1.80E-09	3.59E-09	5.39E-09
2691	477838.2	3769436	1.68E-09	3.36E-09	5.03E-09
2692	477851.1	3769407	1.55E-09	3.11E-09	4.66E-09
2693	477864	3769379	1.43E-09	2.85E-09	4.28E-09
2694	477876.9	3769350	1.30E-09	2.60E-09	3.90E-09
2695	477889.8	3769321	1.18E-09	2.35E-09	3.53E-09
2696	477902.7	3769292	1.06E-09	2.11E-09	3.17E-09
2697	477915.6	3769263	9.46E-10	1.89E-09	2.84E-09
2698	477928.6	3769234	8.45E-10	1.69E-09	2.54E-09
2699	477941.5	3769205	7.54E-10	1.51E-09	2.26E-09
2700	477967.3	3769148	6.04E-10	1.21E-09	1.81E-09

2701	477980.2	3769119	5.43E-10	1.09E-09	1.63E-09
2702	477993.1	3769090	4.90E-10	9.80E-10	1.47E-09
2703	478006	3769061	4.45E-10	8.90E-10	1.34E-09
2704	478018.9	3769032	4.06E-10	8.12E-10	1.22E-09
2705	478031.9	3769003	3.72E-10	7.44E-10	1.12E-09
2706	478044.8	3768974	3.41E-10	6.83E-10	1.02E-09
2707	478057.7	3768945	3.15E-10	6.29E-10	9.44E-10
2708	478070.6	3768916	2.90E-10	5.80E-10	8.70E-10
2709	478083.5	3768888	2.67E-10	5.35E-10	8.02E-10
2710	478115.8	3768815	2.19E-10	4.37E-10	6.56E-10
2711	478128.7	3768786	2.02E-10	4.04E-10	6.06E-10
2712	478141.6	3768758	1.87E-10	3.74E-10	5.61E-10
2713	478154.5	3768729	1.74E-10	3.47E-10	5.21E-10
2714	478167.4	3768700	1.62E-10	3.24E-10	4.86E-10
2715	478212.6	3768599	1.34E-10	2.68E-10	4.01E-10
2716	478225.5	3768570	1.29E-10	2.57E-10	3.86E-10
2717	478238.5	3768541	1.25E-10	2.49E-10	3.74E-10
2718	478251.4	3768512	1.21E-10	2.43E-10	3.64E-10
2719	478264.3	3768483	1.19E-10	2.37E-10	3.56E-10
2720	478838.9	3770644	1.82E-10	3.63E-10	5.45E-10
2721	478870.8	3770645	1.81E-10	3.63E-10	5.44E-10
2722	478806.9	3770794	1.54E-10	3.08E-10	4.62E-10
2723	478782.2	3770774	1.57E-10	3.14E-10	4.71E-10
2724	478757.5	3770754	1.60E-10	3.20E-10	4.80E-10
2725	478732.7	3770734	1.63E-10	3.27E-10	4.90E-10
2726	478708	3770714	1.67E-10	3.34E-10	5.01E-10
2727	478683.3	3770694	1.71E-10	3.41E-10	5.12E-10
2728	478658.6	3770674	1.75E-10	3.49E-10	5.24E-10
2729	478633.9	3770654	1.79E-10	3.58E-10	5.36E-10
2730	478609.2	3770634	1.83E-10	3.67E-10	5.50E-10
2731	478584.5	3770614	1.88E-10	3.77E-10	5.65E-10
2732	478559.8	3770594	1.93E-10	3.87E-10	5.80E-10
2733	478535.1	3770575	1.99E-10	3.98E-10	5.97E-10
2734	478510.4	3770555	2.05E-10	4.10E-10	6.14E-10
2735	478485.7	3770535	2.11E-10	4.22E-10	6.32E-10
2736	478461	3770515	2.17E-10	4.34E-10	6.51E-10
2737	478436.3	3770495	2.24E-10	4.47E-10	6.71E-10
2738	478411.6	3770475	2.30E-10	4.61E-10	6.91E-10
2739	478386.9	3770455	2.38E-10	4.76E-10	7.13E-10
2740	478362.2	3770435	2.46E-10	4.92E-10	7.38E-10
2741	478337.5	3770415	2.55E-10	5.11E-10	7.66E-10
2742	478312.8	3770395	2.67E-10	5.33E-10	8.00E-10
2743	478288.1	3770375	2.80E-10	5.59E-10	8.39E-10
2744	478263.4	3770355	2.95E-10	5.91E-10	8.86E-10
2745	478238.7	3770335	3.15E-10	6.29E-10	9.44E-10
2746	478214	3770315	3.38E-10	6.77E-10	1.02E-09
2747	478189.3	3770295	3.67E-10	7.34E-10	1.10E-09
2748	478164.6	3770275	4.02E-10	8.03E-10	1.20E-09
2749	478139.9	3770256	4.43E-10	8.85E-10	1.33E-09
2750	478115.2	3770236	4.92E-10	9.83E-10	1.48E-09
2751	478090.5	3770216	5.49E-10	1.10E-09	1.65E-09
2752	478065.8	3770196	6.14E-10	1.23E-09	1.84E-09

2753	478041.1	3770176	6.88E-10	1.38E-09	2.06E-09
2754	478016.4	3770156	7.71E-10	1.54E-09	2.31E-09
2755	477991.7	3770136	8.61E-10	1.72E-09	2.58E-09
2756	477967	3770116	9.58E-10	1.92E-09	2.88E-09
2757	477942.3	3770096	1.06E-09	2.12E-09	3.18E-09
2758	477917.5	3770076	1.17E-09	2.33E-09	3.50E-09
2759	477892.8	3770056	1.27E-09	2.55E-09	3.82E-09
2760	477868.1	3770036	1.38E-09	2.76E-09	4.14E-09
2761	477843.4	3770016	1.48E-09	2.96E-09	4.44E-09
2762	477818.7	3769996	1.58E-09	3.15E-09	4.73E-09
2763	477794	3769976	1.67E-09	3.33E-09	5.00E-09
2764	477769.3	3769956	1.74E-09	3.49E-09	5.23E-09
2765	477744.6	3769937	1.81E-09	3.62E-09	5.43E-09
2766	477670.5	3769877	1.93E-09	3.86E-09	5.79E-09
2767	477645.8	3769857	1.95E-09	3.89E-09	5.84E-09
2768	477621.1	3769837	1.94E-09	3.89E-09	5.83E-09
2769	477596.4	3769817	1.93E-09	3.87E-09	5.80E-09
2770	477571.7	3769797	1.91E-09	3.82E-09	5.72E-09
2771	477553.5	3769763	1.88E-09	3.77E-09	5.65E-09
2772	477566.4	3769734	1.90E-09	3.81E-09	5.71E-09
2773	477579.4	3769705	1.91E-09	3.82E-09	5.73E-09
2774	477592.3	3769676	1.90E-09	3.81E-09	5.71E-09
2775	477605.3	3769647	1.88E-09	3.77E-09	5.65E-09
2776	477670.1	3769502	1.60E-09	3.20E-09	4.80E-09
2777	477683	3769473	1.51E-09	3.03E-09	4.54E-09
2778	477696	3769444	1.42E-09	2.84E-09	4.26E-09
2779	477708.9	3769415	1.32E-09	2.64E-09	3.96E-09
2780	477721.9	3769386	1.22E-09	2.44E-09	3.67E-09
2781	477734.9	3769357	1.12E-09	2.24E-09	3.37E-09
2782	477747.8	3769328	1.02E-09	2.05E-09	3.07E-09
2783	477760.8	3769299	9.32E-10	1.86E-09	2.80E-09
2784	477773.7	3769270	8.43E-10	1.69E-09	2.53E-09
2785	477786.7	3769241	7.61E-10	1.52E-09	2.28E-09
2786	477799.6	3769212	6.86E-10	1.37E-09	2.06E-09
2787	477825.5	3769154	5.60E-10	1.12E-09	1.68E-09
2788	477838.5	3769125	5.07E-10	1.01E-09	1.52E-09
2789	477851.5	3769096	4.61E-10	9.23E-10	1.38E-09
2790	477864.4	3769067	4.21E-10	8.43E-10	1.26E-09
2791	477877.4	3769038	3.86E-10	7.73E-10	1.16E-09
2792	477890.3	3769009	3.56E-10	7.12E-10	1.07E-09
2793	477903.3	3768980	3.29E-10	6.59E-10	9.88E-10
2794	477916.2	3768951	3.05E-10	6.11E-10	9.16E-10
2795	477929.2	3768922	2.84E-10	5.67E-10	8.51E-10
2796	477942.1	3768893	2.64E-10	5.28E-10	7.92E-10
2797	477955.1	3768864	2.46E-10	4.91E-10	7.37E-10
2798	477968	3768835	2.29E-10	4.57E-10	6.86E-10
2799	478006.9	3768748	1.84E-10	3.68E-10	5.53E-10
2800	478019.9	3768719	1.71E-10	3.43E-10	5.14E-10
2801	478032.8	3768690	1.60E-10	3.20E-10	4.80E-10
2802	478045.8	3768661	1.50E-10	2.99E-10	4.49E-10
2803	478058.7	3768632	1.40E-10	2.80E-10	4.21E-10
2804	478071.7	3768603	1.32E-10	2.64E-10	3.96E-10

2805	478104.1	3768531	1.17E-10	2.33E-10	3.50E-10
2806	478117	3768502	1.12E-10	2.25E-10	3.37E-10
2807	478130	3768473	1.09E-10	2.18E-10	3.26E-10
2808	478142.9	3768444	1.06E-10	2.12E-10	3.17E-10
2809	478155.9	3768415	1.03E-10	2.07E-10	3.10E-10
2810	478168.9	3768386	1.02E-10	2.03E-10	3.05E-10
2811	478181.8	3768357	1.00E-10	2.00E-10	3.00E-10
2812	478201.2	3768314	9.81E-11	1.96E-10	2.94E-10
2813	478835.2	3770804	1.52E-10	3.05E-10	4.57E-10
2814	478867.1	3770805	1.52E-10	3.05E-10	4.57E-10
2815	478803.2	3770954	1.32E-10	2.65E-10	3.97E-10
2816	478778.4	3770934	1.35E-10	2.69E-10	4.04E-10
2817	478753.6	3770914	1.37E-10	2.74E-10	4.11E-10
2818	478728.9	3770894	1.39E-10	2.79E-10	4.18E-10
2819	478704.1	3770874	1.42E-10	2.83E-10	4.25E-10
2820	478679.3	3770854	1.44E-10	2.89E-10	4.33E-10
2821	478654.6	3770834	1.47E-10	2.94E-10	4.42E-10
2822	478629.8	3770814	1.50E-10	3.00E-10	4.51E-10
2823	478605	3770794	1.53E-10	3.07E-10	4.60E-10
2824	478580.3	3770774	1.57E-10	3.14E-10	4.71E-10
2825	478555.5	3770754	1.61E-10	3.21E-10	4.82E-10
2826	478530.7	3770734	1.64E-10	3.29E-10	4.93E-10
2827	478505.9	3770714	1.69E-10	3.37E-10	5.06E-10
2828	478481.2	3770694	1.73E-10	3.46E-10	5.19E-10
2829	478456.4	3770674	1.78E-10	3.55E-10	5.33E-10
2830	478431.6	3770654	1.82E-10	3.65E-10	5.47E-10
2831	478406.9	3770634	1.87E-10	3.74E-10	5.61E-10
2832	478382.1	3770614	1.92E-10	3.84E-10	5.76E-10
2833	478357.3	3770594	1.97E-10	3.95E-10	5.92E-10
2834	478332.6	3770574	2.03E-10	4.05E-10	6.08E-10
2835	478307.8	3770554	2.09E-10	4.17E-10	6.26E-10
2836	478283	3770534	2.15E-10	4.30E-10	6.45E-10
2837	478258.3	3770514	2.22E-10	4.45E-10	6.67E-10
2838	478233.5	3770494	2.31E-10	4.61E-10	6.92E-10
2839	478208.7	3770474	2.40E-10	4.81E-10	7.21E-10
2840	478184	3770454	2.52E-10	5.05E-10	7.57E-10
2841	478159.2	3770434	2.66E-10	5.33E-10	7.99E-10
2842	478134.4	3770414	2.83E-10	5.67E-10	8.50E-10
2843	478109.7	3770394	3.04E-10	6.07E-10	9.11E-10
2844	478084.9	3770374	3.28E-10	6.56E-10	9.83E-10
2845	478060.1	3770354	3.56E-10	7.13E-10	1.07E-09
2846	478035.4	3770334	3.90E-10	7.80E-10	1.17E-09
2847	478010.6	3770314	4.29E-10	8.59E-10	1.29E-09
2848	477985.8	3770294	4.74E-10	9.49E-10	1.42E-09
2849	477961.1	3770274	5.26E-10	1.05E-09	1.58E-09
2850	477936.3	3770254	5.83E-10	1.17E-09	1.75E-09
2851	477911.5	3770234	6.47E-10	1.29E-09	1.94E-09
2852	477886.8	3770214	7.17E-10	1.43E-09	2.15E-09
2853	477862	3770194	7.92E-10	1.58E-09	2.38E-09
2854	477837.2	3770174	8.71E-10	1.74E-09	2.61E-09
2855	477812.5	3770154	9.54E-10	1.91E-09	2.86E-09
2856	477787.7	3770134	1.04E-09	2.08E-09	3.12E-09

2857	477762.9	3770114	1.12E-09	2.25E-09	3.37E-09
2858	477738.2	3770094	1.21E-09	2.41E-09	3.62E-09
2859	477713.4	3770074	1.29E-09	2.57E-09	3.86E-09
2860	477688.6	3770054	1.36E-09	2.73E-09	4.09E-09
2861	477663.9	3770034	1.43E-09	2.87E-09	4.30E-09
2862	477639.1	3770014	1.50E-09	2.99E-09	4.49E-09
2863	477564.8	3769954	1.64E-09	3.27E-09	4.91E-09
2864	477540	3769934	1.66E-09	3.33E-09	4.99E-09
2865	477515.3	3769914	1.68E-09	3.36E-09	5.04E-09
2866	477490.5	3769894	1.69E-09	3.38E-09	5.06E-09
2867	477465.7	3769874	1.69E-09	3.37E-09	5.06E-09
2868	477441	3769854	1.67E-09	3.35E-09	5.02E-09
2869	477416.2	3769834	1.65E-09	3.30E-09	4.96E-09
2870	477397.9	3769800	1.63E-09	3.27E-09	4.90E-09
2871	477410.9	3769771	1.65E-09	3.30E-09	4.94E-09
2872	477423.9	3769742	1.65E-09	3.30E-09	4.96E-09
2873	477436.9	3769713	1.65E-09	3.30E-09	4.95E-09
2874	477449.9	3769684	1.64E-09	3.27E-09	4.91E-09
2875	477462.9	3769655	1.61E-09	3.23E-09	4.84E-09
2876	477527.8	3769509	1.37E-09	2.73E-09	4.10E-09
2877	477540.8	3769480	1.30E-09	2.59E-09	3.89E-09
2878	477553.8	3769451	1.22E-09	2.44E-09	3.66E-09
2879	477566.8	3769422	1.14E-09	2.28E-09	3.43E-09
2880	477579.8	3769393	1.06E-09	2.13E-09	3.19E-09
2881	477592.8	3769364	9.83E-10	1.97E-09	2.95E-09
2882	477605.7	3769335	9.05E-10	1.81E-09	2.71E-09
2883	477618.7	3769306	8.29E-10	1.66E-09	2.49E-09
2884	477631.7	3769277	7.57E-10	1.51E-09	2.27E-09
2885	477644.7	3769248	6.90E-10	1.38E-09	2.07E-09
2886	477657.7	3769219	6.27E-10	1.25E-09	1.88E-09
2887	477683.7	3769161	5.20E-10	1.04E-09	1.56E-09
2888	477696.7	3769132	4.74E-10	9.49E-10	1.42E-09
2889	477709.7	3769103	4.34E-10	8.68E-10	1.30E-09
2890	477722.6	3769073	3.98E-10	7.97E-10	1.20E-09
2891	477735.6	3769044	3.67E-10	7.34E-10	1.10E-09
2892	477748.6	3769015	3.40E-10	6.79E-10	1.02E-09
2893	477761.6	3768986	3.16E-10	6.31E-10	9.47E-10
2894	477774.6	3768957	2.94E-10	5.88E-10	8.82E-10
2895	477787.6	3768928	2.75E-10	5.49E-10	8.24E-10
2896	477807.1	3768885	2.49E-10	4.98E-10	7.47E-10
2897	477820.1	3768856	2.33E-10	4.67E-10	7.00E-10
2898	477839.5	3768812	2.12E-10	4.24E-10	6.36E-10
2899	477852.5	3768783	1.99E-10	3.98E-10	5.97E-10
2900	477865.5	3768754	1.86E-10	3.73E-10	5.59E-10
2901	477956.4	3768550	1.20E-10	2.40E-10	3.59E-10
2902	477969.4	3768521	1.13E-10	2.27E-10	3.40E-10
2903	477982.4	3768492	1.08E-10	2.16E-10	3.24E-10
2904	477995.4	3768463	1.04E-10	2.07E-10	3.11E-10
2905	478008.4	3768434	9.96E-11	1.99E-10	2.99E-10
2906	478021.4	3768405	9.64E-11	1.93E-10	2.89E-10
2907	478034.4	3768376	9.38E-11	1.88E-10	2.81E-10
2908	478047.4	3768347	9.17E-11	1.83E-10	2.75E-10

2909	478060.4	3768318	9.00E-11	1.80E-10	2.70E-10
2910	478073.3	3768289	8.86E-11	1.77E-10	2.66E-10
2911	478086.3	3768260	8.75E-11	1.75E-10	2.62E-10
2912	478099.3	3768231	8.64E-11	1.73E-10	2.59E-10
2913	478112.3	3768202	8.56E-11	1.71E-10	2.57E-10
2914	478125.3	3768173	8.48E-11	1.70E-10	2.54E-10
2915	478831.5	3770964	1.31E-10	2.62E-10	3.94E-10
2916	478863.5	3770965	1.31E-10	2.62E-10	3.93E-10
2917	478917.2	3769485	5.86E-08	1.17E-07	1.76E-07
2918	478936.6	3769485	6.51E-08	1.30E-07	1.95E-07
2919	478955.9	3769485	6.99E-08	1.40E-07	2.10E-07
2920	478975.3	3769485	7.27E-08	1.45E-07	2.18E-07
2921	478994.6	3769485	7.33E-08	1.47E-07	2.20E-07
2922	479014	3769485	7.13E-08	1.43E-07	2.14E-07
2923	479033.3	3769485	6.65E-08	1.33E-07	1.99E-07
2924	479052.7	3769485	6.00E-08	1.20E-07	1.80E-07
2925	478917.2	3769505	3.86E-08	7.72E-08	1.16E-07
2926	478936.6	3769505	3.90E-08	7.81E-08	1.17E-07
2927	478955.9	3769505	3.86E-08	7.73E-08	1.16E-07
2928	478975.3	3769505	3.80E-08	7.59E-08	1.14E-07
2929	478994.6	3769505	3.71E-08	7.41E-08	1.11E-07
2930	479014	3769505	3.60E-08	7.20E-08	1.08E-07
2931	479033.3	3769505	3.44E-08	6.88E-08	1.03E-07
2932	479052.7	3769505	3.22E-08	6.44E-08	9.65E-08
2933	478917.2	3769645	4.10E-09	8.19E-09	1.23E-08
2934	478936.6	3769645	4.11E-09	8.22E-09	1.23E-08
2935	478955.9	3769645	4.15E-09	8.30E-09	1.25E-08
2936	478975.3	3769645	4.20E-09	8.39E-09	1.26E-08
2937	478994.6	3769645	4.23E-09	8.45E-09	1.27E-08
2938	479014	3769645	4.23E-09	8.45E-09	1.27E-08
2939	479033.3	3769645	4.18E-09	8.36E-09	1.25E-08
2940	479052.7	3769645	4.10E-09	8.20E-09	1.23E-08
2941	478917.2	3769685	2.90E-09	5.80E-09	8.70E-09
2942	478936.6	3769685	2.92E-09	5.85E-09	8.77E-09
2943	478955.9	3769685	2.96E-09	5.92E-09	8.88E-09
2944	478975.3	3769685	2.99E-09	5.98E-09	8.97E-09
2945	478994.6	3769685	3.01E-09	6.01E-09	9.02E-09
2946	479014	3769685	3.00E-09	6.01E-09	9.01E-09
2947	479033.3	3769685	2.98E-09	5.97E-09	8.95E-09
2948	479052.7	3769685	2.94E-09	5.88E-09	8.83E-09
2949	478917.2	3769725	2.18E-09	4.36E-09	6.53E-09
2950	478936.6	3769725	2.20E-09	4.41E-09	6.61E-09
2951	478955.9	3769725	2.23E-09	4.46E-09	6.68E-09
2952	478975.3	3769725	2.25E-09	4.49E-09	6.74E-09
2953	478994.6	3769725	2.25E-09	4.49E-09	6.74E-09
2954	479014	3769725	2.24E-09	4.49E-09	6.73E-09
2955	479033.3	3769725	2.23E-09	4.46E-09	6.68E-09
2956	479052.7	3769725	2.20E-09	4.40E-09	6.60E-09
2957	478917.2	3769765	1.70E-09	3.40E-09	5.11E-09
2958	478936.6	3769765	1.72E-09	3.44E-09	5.16E-09
2959	478955.9	3769765	1.74E-09	3.47E-09	5.21E-09
2960	478975.3	3769765	1.75E-09	3.49E-09	5.24E-09

2961	478994.6	3769765	1.75E-09	3.50E-09	5.25E-09
2962	479014	3769765	1.74E-09	3.48E-09	5.23E-09
2963	479033.3	3769765	1.73E-09	3.46E-09	5.18E-09
2964	479052.7	3769765	1.71E-09	3.42E-09	5.13E-09
2965	479072	3769765	1.68E-09	3.37E-09	5.05E-09
2966	478917.2	3769845	1.13E-09	2.26E-09	3.39E-09
2967	478936.6	3769845	1.14E-09	2.28E-09	3.41E-09
2968	478955.9	3769845	1.14E-09	2.29E-09	3.43E-09
2969	478975.3	3769845	1.15E-09	2.29E-09	3.44E-09
2970	478994.6	3769845	1.15E-09	2.29E-09	3.44E-09
2971	479014	3769845	1.14E-09	2.28E-09	3.42E-09
2972	479033.3	3769845	1.13E-09	2.26E-09	3.39E-09
2973	479052.7	3769845	1.12E-09	2.24E-09	3.36E-09
2974	479072	3769845	1.11E-09	2.21E-09	3.32E-09
2975	478917.2	3769925	8.11E-10	1.62E-09	2.43E-09
2976	478936.6	3769925	8.14E-10	1.63E-09	2.44E-09
2977	478955.9	3769925	8.16E-10	1.63E-09	2.45E-09
2978	478975.3	3769925	8.16E-10	1.63E-09	2.45E-09
2979	478994.6	3769925	8.14E-10	1.63E-09	2.44E-09
2980	479014	3769925	8.11E-10	1.62E-09	2.43E-09
2981	479033.3	3769925	8.06E-10	1.61E-09	2.42E-09
2982	479052.7	3769925	7.97E-10	1.59E-09	2.39E-09
2983	479072	3769925	7.89E-10	1.58E-09	2.37E-09
2984	478917.2	3770005	6.15E-10	1.23E-09	1.85E-09
2985	478936.6	3770005	6.16E-10	1.23E-09	1.85E-09
2986	478955.9	3770005	6.17E-10	1.23E-09	1.85E-09
2987	478975.3	3770005	6.16E-10	1.23E-09	1.85E-09
2988	478994.6	3770005	6.14E-10	1.23E-09	1.84E-09
2989	479014	3770005	6.12E-10	1.22E-09	1.83E-09
2990	479033.3	3770005	6.08E-10	1.22E-09	1.82E-09
2991	479052.7	3770005	6.03E-10	1.21E-09	1.81E-09
2992	479072	3770005	5.97E-10	1.19E-09	1.79E-09
2993	478917.2	3770085	4.87E-10	9.74E-10	1.46E-09
2994	478936.6	3770085	4.87E-10	9.75E-10	1.46E-09
2995	478955.9	3770085	4.87E-10	9.74E-10	1.46E-09
2996	478975.3	3770085	4.86E-10	9.72E-10	1.46E-09
2997	478994.6	3770085	4.85E-10	9.70E-10	1.45E-09
2998	479014	3770085	4.83E-10	9.65E-10	1.45E-09
2999	479033.3	3770085	4.80E-10	9.60E-10	1.44E-09
3000	479052.7	3770085	4.76E-10	9.53E-10	1.43E-09
3001	479072	3770085	4.72E-10	9.45E-10	1.42E-09
3002	478917.2	3770165	3.99E-10	7.97E-10	1.20E-09
3003	478936.6	3770165	3.99E-10	7.97E-10	1.20E-09
3004	478955.9	3770165	3.98E-10	7.96E-10	1.19E-09
3005	478975.3	3770165	3.97E-10	7.95E-10	1.19E-09
3006	478994.6	3770165	3.96E-10	7.92E-10	1.19E-09
3007	479014	3770165	3.94E-10	7.89E-10	1.18E-09
3008	479033.3	3770165	3.92E-10	7.84E-10	1.18E-09
3009	479052.7	3770165	3.90E-10	7.79E-10	1.17E-09
3010	479072	3770165	3.87E-10	7.73E-10	1.16E-09
3011	478897.9	3770325	2.88E-10	5.76E-10	8.64E-10
3012	478917.2	3770325	2.88E-10	5.76E-10	8.64E-10

3013	478936.6	3770325	2.88E-10	5.75E-10	8.63E-10
3014	478955.9	3770325	2.87E-10	5.74E-10	8.61E-10
3015	478975.3	3770325	2.86E-10	5.73E-10	8.59E-10
3016	478994.6	3770325	2.85E-10	5.71E-10	8.56E-10
3017	479014	3770325	2.84E-10	5.69E-10	8.53E-10
3018	479033.3	3770325	2.83E-10	5.66E-10	8.49E-10
3019	479052.7	3770325	2.81E-10	5.62E-10	8.43E-10
3020	479072	3770325	2.79E-10	5.59E-10	8.38E-10
3021	478897.9	3770485	2.23E-10	4.46E-10	6.69E-10
3022	478917.2	3770485	2.23E-10	4.46E-10	6.69E-10
3023	478936.6	3770485	2.23E-10	4.45E-10	6.68E-10
3024	478955.9	3770485	2.22E-10	4.45E-10	6.67E-10
3025	478975.3	3770485	2.22E-10	4.44E-10	6.65E-10
3026	478994.6	3770485	2.21E-10	4.42E-10	6.63E-10
3027	479014	3770485	2.20E-10	4.40E-10	6.61E-10
3028	479033.3	3770485	2.19E-10	4.39E-10	6.58E-10
3029	479052.7	3770485	2.18E-10	4.36E-10	6.54E-10
3030	479072	3770485	2.17E-10	4.34E-10	6.51E-10
3031	478897.9	3770645	1.81E-10	3.62E-10	5.44E-10
3032	478917.2	3770645	1.81E-10	3.62E-10	5.43E-10
3033	478936.6	3770645	1.81E-10	3.62E-10	5.42E-10
3034	478955.9	3770645	1.80E-10	3.61E-10	5.41E-10
3035	478975.3	3770645	1.80E-10	3.60E-10	5.40E-10
3036	478994.6	3770645	1.80E-10	3.59E-10	5.39E-10
3037	479014	3770645	1.79E-10	3.58E-10	5.37E-10
3038	479033.3	3770645	1.78E-10	3.57E-10	5.35E-10
3039	479052.7	3770645	1.78E-10	3.55E-10	5.33E-10
3040	479072	3770645	1.77E-10	3.53E-10	5.30E-10
3041	478897.9	3770805	1.52E-10	3.04E-10	4.56E-10
3042	478917.2	3770805	1.52E-10	3.04E-10	4.56E-10
3043	478936.6	3770805	1.52E-10	3.04E-10	4.55E-10
3044	478955.9	3770805	1.52E-10	3.03E-10	4.55E-10
3045	478975.3	3770805	1.51E-10	3.02E-10	4.54E-10
3046	478994.6	3770805	1.51E-10	3.02E-10	4.53E-10
3047	479014	3770805	1.50E-10	3.01E-10	4.51E-10
3048	479033.3	3770805	1.50E-10	3.00E-10	4.50E-10
3049	479052.7	3770805	1.49E-10	2.99E-10	4.48E-10
3050	479072	3770805	1.49E-10	2.97E-10	4.46E-10
3051	478897.9	3770965	1.31E-10	2.62E-10	3.93E-10
3052	478917.2	3770965	1.31E-10	2.62E-10	3.93E-10
3053	478936.6	3770965	1.31E-10	2.61E-10	3.92E-10
3054	478955.9	3770965	1.30E-10	2.61E-10	3.91E-10
3055	478975.3	3770965	1.30E-10	2.60E-10	3.91E-10
3056	478994.6	3770965	1.30E-10	2.60E-10	3.90E-10
3057	479014	3770965	1.30E-10	2.59E-10	3.89E-10
3058	479033.3	3770965	1.29E-10	2.58E-10	3.88E-10
3059	479052.7	3770965	1.29E-10	2.58E-10	3.86E-10
3060	479072	3770965	1.28E-10	2.57E-10	3.85E-10
3061	479200.2	3769494	1.58E-08	3.16E-08	4.74E-08
3062	479246.1	3769481	1.38E-08	2.76E-08	4.14E-08
3063	479252.2	3769451	1.79E-08	3.58E-08	5.36E-08
3064	479286.1	3769481	1.06E-08	2.12E-08	3.18E-08

3065	479170.6	3769645	3.14E-09	6.29E-09	9.43E-09
3066	479292.2	3769451	1.30E-08	2.60E-08	3.90E-08
3067	479366.1	3769482	6.68E-09	1.34E-08	2.00E-08
3068	479289.2	3769664	2.05E-09	4.10E-09	6.15E-09
3069	479269.2	3769684	1.89E-09	3.78E-09	5.67E-09
3070	479241.1	3769696	1.87E-09	3.75E-09	5.62E-09
3071	479212.9	3769707	1.86E-09	3.73E-09	5.59E-09
3072	479184.7	3769719	1.85E-09	3.70E-09	5.55E-09
3073	479156.6	3769730	1.83E-09	3.66E-09	5.50E-09
3074	479100.2	3769754	1.74E-09	3.48E-09	5.23E-09
3075	479372.1	3769452	7.81E-09	1.56E-08	2.34E-08
3076	479446.1	3769482	4.58E-09	9.16E-09	1.37E-08
3077	479434.3	3769510	4.11E-09	8.22E-09	1.23E-08
3078	479375.2	3769651	1.89E-09	3.79E-09	5.68E-09
3079	479345.6	3769721	1.33E-09	2.65E-09	3.98E-09
3080	479325.6	3769741	1.24E-09	2.48E-09	3.72E-09
3081	479297.4	3769752	1.24E-09	2.48E-09	3.72E-09
3082	479269.2	3769764	1.23E-09	2.47E-09	3.70E-09
3083	479241.1	3769776	1.22E-09	2.45E-09	3.67E-09
3084	479212.9	3769787	1.22E-09	2.43E-09	3.65E-09
3085	479184.7	3769799	1.20E-09	2.41E-09	3.61E-09
3086	479156.6	3769810	1.19E-09	2.37E-09	3.56E-09
3087	479100.2	3769834	1.14E-09	2.27E-09	3.41E-09
3088	479452.1	3769452	5.16E-09	1.03E-08	1.55E-08
3089	479452.4	3769421	5.84E-09	1.17E-08	1.75E-08
3090	479526.1	3769483	3.33E-09	6.66E-09	9.99E-09
3091	479514.3	3769511	3.06E-09	6.12E-09	9.18E-09
3092	479455.2	3769651	1.62E-09	3.24E-09	4.86E-09
3093	479443.3	3769679	1.41E-09	2.82E-09	4.22E-09
3094	479431.5	3769708	1.24E-09	2.47E-09	3.71E-09
3095	479401.9	3769778	9.27E-10	1.85E-09	2.78E-09
3096	479381.9	3769798	8.86E-10	1.77E-09	2.66E-09
3097	479353.8	3769809	8.79E-10	1.76E-09	2.64E-09
3098	479325.6	3769821	8.74E-10	1.75E-09	2.62E-09
3099	479297.4	3769832	8.73E-10	1.75E-09	2.62E-09
3100	479269.2	3769844	8.67E-10	1.73E-09	2.60E-09
3101	479241.1	3769856	8.64E-10	1.73E-09	2.59E-09
3102	479212.9	3769867	8.57E-10	1.71E-09	2.57E-09
3103	479184.7	3769879	8.49E-10	1.70E-09	2.55E-09
3104	479100.2	3769914	8.09E-10	1.62E-09	2.43E-09
3105	479532.1	3769453	3.66E-09	7.31E-09	1.10E-08
3106	479532.4	3769422	4.04E-09	8.09E-09	1.21E-08
3107	479606.1	3769483	2.51E-09	5.02E-09	7.53E-09
3108	479594.3	3769512	2.35E-09	4.69E-09	7.04E-09
3109	479535.2	3769652	1.40E-09	2.79E-09	4.19E-09
3110	479523.3	3769680	1.23E-09	2.47E-09	3.70E-09
3111	479511.5	3769708	1.09E-09	2.19E-09	3.28E-09
3112	479499.7	3769736	9.71E-10	1.94E-09	2.91E-09
3113	479487.8	3769764	8.74E-10	1.75E-09	2.62E-09
3114	479458.3	3769835	6.88E-10	1.38E-09	2.06E-09
3115	479438.3	3769854	6.57E-10	1.31E-09	1.97E-09
3116	479410.1	3769866	6.61E-10	1.32E-09	1.98E-09

3117	479381.9	3769878	6.58E-10	1.32E-09	1.97E-09
3118	479353.8	3769889	6.56E-10	1.31E-09	1.97E-09
3119	479325.6	3769901	6.56E-10	1.31E-09	1.97E-09
3120	479297.4	3769912	6.53E-10	1.31E-09	1.96E-09
3121	479269.2	3769924	6.51E-10	1.30E-09	1.95E-09
3122	479241.1	3769936	6.49E-10	1.30E-09	1.95E-09
3123	479212.9	3769947	6.44E-10	1.29E-09	1.93E-09
3124	479184.7	3769959	6.36E-10	1.27E-09	1.91E-09
3125	479100.2	3769994	6.09E-10	1.22E-09	1.83E-09
3126	479612.1	3769454	2.73E-09	5.45E-09	8.18E-09
3127	479612.4	3769422	2.98E-09	5.96E-09	8.94E-09
3128	479686.1	3769484	1.95E-09	3.90E-09	5.84E-09
3129	479674.3	3769512	1.83E-09	3.66E-09	5.49E-09
3130	479627	3769625	1.33E-09	2.66E-09	4.00E-09
3131	479615.1	3769653	1.21E-09	2.41E-09	3.62E-09
3132	479603.3	3769681	1.08E-09	2.16E-09	3.25E-09
3133	479591.5	3769709	9.70E-10	1.94E-09	2.91E-09
3134	479579.7	3769737	8.73E-10	1.75E-09	2.62E-09
3135	479567.8	3769765	7.88E-10	1.58E-09	2.37E-09
3136	479556	3769793	7.15E-10	1.43E-09	2.14E-09
3137	479544.2	3769821	6.51E-10	1.30E-09	1.95E-09
3138	479514.6	3769891	5.34E-10	1.07E-09	1.60E-09
3139	479494.6	3769911	5.16E-10	1.03E-09	1.55E-09
3140	479466.5	3769923	5.14E-10	1.03E-09	1.54E-09
3141	479438.3	3769934	5.12E-10	1.02E-09	1.54E-09
3142	479410.1	3769946	5.16E-10	1.03E-09	1.55E-09
3143	479381.9	3769958	5.14E-10	1.03E-09	1.54E-09
3144	479353.8	3769969	5.15E-10	1.03E-09	1.54E-09
3145	479325.6	3769981	5.13E-10	1.03E-09	1.54E-09
3146	479297.4	3769992	5.12E-10	1.02E-09	1.54E-09
3147	479269.2	3770004	5.09E-10	1.02E-09	1.53E-09
3148	479241.1	3770016	5.07E-10	1.01E-09	1.52E-09
3149	479212.9	3770027	5.03E-10	1.01E-09	1.51E-09
3150	479184.7	3770039	4.98E-10	9.95E-10	1.49E-09
3151	479100.2	3770074	4.80E-10	9.60E-10	1.44E-09
3152	479692.1	3769454	2.10E-09	4.20E-09	6.30E-09
3153	479692.4	3769423	2.29E-09	4.57E-09	6.86E-09
3154	479765.9	3769485	1.58E-09	3.17E-09	4.75E-09
3155	479753.8	3769514	1.50E-09	2.99E-09	4.49E-09
3156	479705.1	3769630	1.11E-09	2.22E-09	3.33E-09
3157	479692.9	3769659	1.02E-09	2.04E-09	3.06E-09
3158	479680.7	3769688	9.31E-10	1.86E-09	2.79E-09
3159	479668.5	3769716	8.47E-10	1.69E-09	2.54E-09
3160	479656.4	3769745	7.69E-10	1.54E-09	2.31E-09
3161	479644.2	3769774	6.97E-10	1.39E-09	2.09E-09
3162	479632	3769803	6.34E-10	1.27E-09	1.90E-09
3163	479619.8	3769832	5.79E-10	1.16E-09	1.74E-09
3164	479607.7	3769861	5.33E-10	1.07E-09	1.60E-09
3165	479595.5	3769890	4.94E-10	9.88E-10	1.48E-09
3166	479571.2	3769948	4.30E-10	8.60E-10	1.29E-09
3167	479550.6	3769968	4.17E-10	8.34E-10	1.25E-09
3168	479521.6	3769980	4.18E-10	8.35E-10	1.25E-09

3169	479492.6	3769992	4.17E-10	8.33E-10	1.25E-09
3170	479463.6	3770004	4.16E-10	8.33E-10	1.25E-09
3171	479434.6	3770016	4.19E-10	8.38E-10	1.26E-09
3172	479405.6	3770028	4.18E-10	8.36E-10	1.25E-09
3173	479376.6	3770040	4.19E-10	8.37E-10	1.26E-09
3174	479347.6	3770052	4.17E-10	8.34E-10	1.25E-09
3175	479318.6	3770064	4.15E-10	8.30E-10	1.25E-09
3176	479289.5	3770076	4.14E-10	8.29E-10	1.24E-09
3177	479260.5	3770088	4.11E-10	8.23E-10	1.23E-09
3178	479231.5	3770100	4.10E-10	8.20E-10	1.23E-09
3179	479202.5	3770111	4.06E-10	8.12E-10	1.22E-09
3180	479173.5	3770123	4.02E-10	8.05E-10	1.21E-09
3181	479772.1	3769455	1.69E-09	3.38E-09	5.07E-09
3182	479772.4	3769424	1.82E-09	3.64E-09	5.46E-09
3183	479926	3769486	1.13E-09	2.27E-09	3.40E-09
3184	479865.4	3769630	8.59E-10	1.72E-09	2.58E-09
3185	479853.3	3769659	8.03E-10	1.61E-09	2.41E-09
3186	479841.2	3769688	7.48E-10	1.50E-09	2.24E-09
3187	479829.1	3769716	6.93E-10	1.39E-09	2.08E-09
3188	479817	3769745	6.42E-10	1.28E-09	1.93E-09
3189	479804.9	3769774	5.92E-10	1.18E-09	1.78E-09
3190	479792.8	3769803	5.46E-10	1.09E-09	1.64E-09
3191	479780.7	3769831	5.04E-10	1.01E-09	1.51E-09
3192	479768.6	3769860	4.66E-10	9.33E-10	1.40E-09
3193	479756.5	3769889	4.32E-10	8.64E-10	1.30E-09
3194	479744.3	3769918	4.03E-10	8.06E-10	1.21E-09
3195	479732.2	3769946	3.78E-10	7.56E-10	1.13E-09
3196	479720.1	3769975	3.55E-10	7.10E-10	1.07E-09
3197	479708	3770004	3.35E-10	6.71E-10	1.01E-09
3198	479683.8	3770061	3.04E-10	6.07E-10	9.11E-10
3199	479663.3	3770082	2.96E-10	5.92E-10	8.89E-10
3200	479634.5	3770094	2.96E-10	5.93E-10	8.89E-10
3201	479605.6	3770105	2.96E-10	5.93E-10	8.89E-10
3202	479576.8	3770117	2.97E-10	5.94E-10	8.90E-10
3203	479548	3770129	2.97E-10	5.95E-10	8.92E-10
3204	479519.1	3770141	2.97E-10	5.94E-10	8.92E-10
3205	479490.3	3770153	2.97E-10	5.94E-10	8.91E-10
3206	479461.4	3770165	2.97E-10	5.95E-10	8.92E-10
3207	479432.6	3770177	2.98E-10	5.96E-10	8.94E-10
3208	479403.7	3770189	2.97E-10	5.95E-10	8.92E-10
3209	479374.9	3770200	2.97E-10	5.94E-10	8.91E-10
3210	479346.1	3770212	2.96E-10	5.92E-10	8.88E-10
3211	479317.2	3770224	2.95E-10	5.89E-10	8.84E-10
3212	479288.4	3770236	2.94E-10	5.88E-10	8.82E-10
3213	479259.5	3770248	2.92E-10	5.84E-10	8.77E-10
3214	479230.7	3770260	2.91E-10	5.81E-10	8.72E-10
3215	479201.8	3770272	2.89E-10	5.79E-10	8.68E-10
3216	479173	3770284	2.87E-10	5.75E-10	8.62E-10
3217	479932.1	3769456	1.19E-09	2.39E-09	3.58E-09
3218	479932.4	3769425	1.27E-09	2.53E-09	3.80E-09
3219	480086	3769488	8.65E-10	1.73E-09	2.60E-09
3220	480025.7	3769631	6.92E-10	1.38E-09	2.08E-09

3221	480013.6	3769659	6.55E-10	1.31E-09	1.96E-09
3222	480001.5	3769688	6.18E-10	1.24E-09	1.85E-09
3223	479989.5	3769717	5.82E-10	1.16E-09	1.75E-09
3224	479977.4	3769745	5.47E-10	1.09E-09	1.64E-09
3225	479965.4	3769774	5.12E-10	1.02E-09	1.54E-09
3226	479953.3	3769803	4.79E-10	9.59E-10	1.44E-09
3227	479941.2	3769831	4.48E-10	8.96E-10	1.34E-09
3228	479929.2	3769860	4.18E-10	8.36E-10	1.25E-09
3229	479917.1	3769889	3.90E-10	7.80E-10	1.17E-09
3230	479905	3769917	3.65E-10	7.29E-10	1.09E-09
3231	479893	3769946	3.42E-10	6.84E-10	1.03E-09
3232	479880.9	3769974	3.22E-10	6.45E-10	9.67E-10
3233	479868.9	3770003	3.04E-10	6.08E-10	9.12E-10
3234	479856.8	3770032	2.88E-10	5.76E-10	8.64E-10
3235	479844.7	3770060	2.74E-10	5.48E-10	8.22E-10
3236	479832.7	3770089	2.62E-10	5.23E-10	7.85E-10
3237	479820.6	3770118	2.50E-10	5.01E-10	7.51E-10
3238	479796.5	3770175	2.31E-10	4.63E-10	6.94E-10
3239	479776.1	3770195	2.27E-10	4.55E-10	6.82E-10
3240	479747.3	3770207	2.28E-10	4.55E-10	6.83E-10
3241	479718.6	3770219	2.27E-10	4.55E-10	6.82E-10
3242	479689.9	3770231	2.27E-10	4.55E-10	6.82E-10
3243	479661.1	3770243	2.28E-10	4.55E-10	6.83E-10
3244	479632.4	3770254	2.28E-10	4.55E-10	6.83E-10
3245	479603.7	3770266	2.28E-10	4.55E-10	6.83E-10
3246	479574.9	3770278	2.28E-10	4.56E-10	6.84E-10
3247	479546.2	3770290	2.28E-10	4.57E-10	6.85E-10
3248	479517.5	3770302	2.28E-10	4.56E-10	6.85E-10
3249	479488.7	3770314	2.28E-10	4.56E-10	6.84E-10
3250	479460	3770325	2.29E-10	4.58E-10	6.86E-10
3251	479431.2	3770337	2.28E-10	4.56E-10	6.85E-10
3252	479402.5	3770349	2.28E-10	4.55E-10	6.83E-10
3253	479373.8	3770361	2.27E-10	4.55E-10	6.82E-10
3254	479345	3770373	2.27E-10	4.53E-10	6.80E-10
3255	479316.3	3770385	2.26E-10	4.51E-10	6.77E-10
3256	479287.6	3770396	2.25E-10	4.49E-10	6.74E-10
3257	479258.8	3770408	2.24E-10	4.49E-10	6.73E-10
3258	479230.1	3770420	2.23E-10	4.46E-10	6.69E-10
3259	479201.3	3770432	2.22E-10	4.44E-10	6.66E-10
3260	479100.8	3770473	2.18E-10	4.36E-10	6.55E-10
3261	480092.1	3769457	9.04E-10	1.81E-09	2.71E-09
3262	480092.4	3769426	9.53E-10	1.91E-09	2.86E-09
3263	480246	3769489	6.94E-10	1.39E-09	2.08E-09
3264	480185.8	3769632	5.73E-10	1.15E-09	1.72E-09
3265	480173.8	3769660	5.47E-10	1.09E-09	1.64E-09
3266	480161.8	3769689	5.22E-10	1.04E-09	1.57E-09
3267	480149.7	3769717	4.97E-10	9.94E-10	1.49E-09
3268	480137.7	3769746	4.72E-10	9.44E-10	1.42E-09
3269	480125.7	3769774	4.47E-10	8.95E-10	1.34E-09
3270	480113.7	3769803	4.24E-10	8.47E-10	1.27E-09
3271	480101.6	3769832	4.00E-10	8.01E-10	1.20E-09
3272	480089.6	3769860	3.78E-10	7.55E-10	1.13E-09

3273	480077.6	3769889	3.56E-10	7.12E-10	1.07E-09
3274	480065.5	3769917	3.35E-10	6.71E-10	1.01E-09
3275	480053.5	3769946	3.16E-10	6.32E-10	9.48E-10
3276	480041.5	3769974	2.98E-10	5.96E-10	8.94E-10
3277	480029.5	3770003	2.82E-10	5.64E-10	8.46E-10
3278	480017.4	3770032	2.67E-10	5.35E-10	8.02E-10
3279	480005.4	3770060	2.54E-10	5.08E-10	7.62E-10
3280	479993.4	3770089	2.42E-10	4.84E-10	7.25E-10
3281	479981.3	3770117	2.31E-10	4.62E-10	6.93E-10
3282	479969.3	3770146	2.22E-10	4.44E-10	6.65E-10
3283	479957.3	3770174	2.13E-10	4.26E-10	6.39E-10
3284	479945.2	3770203	2.05E-10	4.10E-10	6.16E-10
3285	479933.2	3770231	1.98E-10	3.97E-10	5.95E-10
3286	479909.2	3770289	1.86E-10	3.73E-10	5.59E-10
3287	479888.8	3770309	1.83E-10	3.67E-10	5.50E-10
3288	479860.2	3770321	1.84E-10	3.67E-10	5.51E-10
3289	479831.5	3770332	1.84E-10	3.67E-10	5.51E-10
3290	479802.8	3770344	1.84E-10	3.68E-10	5.51E-10
3291	479774.2	3770356	1.84E-10	3.68E-10	5.51E-10
3292	479745.5	3770368	1.84E-10	3.68E-10	5.52E-10
3293	479716.9	3770380	1.84E-10	3.68E-10	5.52E-10
3294	479688.2	3770391	1.84E-10	3.68E-10	5.52E-10
3295	479659.5	3770403	1.84E-10	3.68E-10	5.52E-10
3296	479630.9	3770415	1.84E-10	3.68E-10	5.52E-10
3297	479602.2	3770427	1.84E-10	3.68E-10	5.52E-10
3298	479573.6	3770439	1.84E-10	3.69E-10	5.53E-10
3299	479544.9	3770450	1.84E-10	3.69E-10	5.53E-10
3300	479516.2	3770462	1.84E-10	3.68E-10	5.53E-10
3301	479487.6	3770474	1.84E-10	3.68E-10	5.52E-10
3302	479458.9	3770486	1.84E-10	3.69E-10	5.53E-10
3303	479430.3	3770498	1.84E-10	3.68E-10	5.52E-10
3304	479401.6	3770509	1.84E-10	3.67E-10	5.51E-10
3305	479373	3770521	1.83E-10	3.67E-10	5.50E-10
3306	479344.3	3770533	1.83E-10	3.65E-10	5.48E-10
3307	479315.6	3770545	1.82E-10	3.64E-10	5.46E-10
3308	479272.6	3770563	1.82E-10	3.63E-10	5.45E-10
3309	479100.7	3770633	1.78E-10	3.55E-10	5.33E-10
3310	480252.1	3769459	7.22E-10	1.44E-09	2.17E-09
3311	480252.4	3769427	7.56E-10	1.51E-09	2.27E-09
3312	480405.9	3769490	5.77E-10	1.15E-09	1.73E-09
3313	480357.1	3769606	5.04E-10	1.01E-09	1.51E-09
3314	480345	3769635	4.85E-10	9.71E-10	1.46E-09
3315	480332.8	3769664	4.67E-10	9.34E-10	1.40E-09
3316	480320.6	3769693	4.48E-10	8.96E-10	1.34E-09
3317	480308.4	3769722	4.29E-10	8.59E-10	1.29E-09
3318	480296.2	3769751	4.11E-10	8.21E-10	1.23E-09
3319	480284	3769780	3.92E-10	7.84E-10	1.18E-09
3320	480271.8	3769809	3.74E-10	7.48E-10	1.12E-09
3321	480259.6	3769838	3.57E-10	7.13E-10	1.07E-09
3322	480247.4	3769866	3.39E-10	6.79E-10	1.02E-09
3323	480235.2	3769895	3.22E-10	6.45E-10	9.67E-10
3324	480223.1	3769924	3.06E-10	6.12E-10	9.18E-10

3325	480210.9	3769953	2.90E-10	5.80E-10	8.70E-10
3326	480198.7	3769982	2.75E-10	5.50E-10	8.25E-10
3327	480186.5	3770011	2.61E-10	5.22E-10	7.83E-10
3328	480174.3	3770040	2.48E-10	4.96E-10	7.44E-10
3329	480162.1	3770069	2.36E-10	4.72E-10	7.08E-10
3330	480149.9	3770098	2.25E-10	4.50E-10	6.75E-10
3331	480137.7	3770127	2.15E-10	4.29E-10	6.44E-10
3332	480125.5	3770156	2.06E-10	4.11E-10	6.17E-10
3333	480113.4	3770185	1.98E-10	3.95E-10	5.93E-10
3334	480101.2	3770214	1.90E-10	3.80E-10	5.70E-10
3335	480089	3770243	1.83E-10	3.66E-10	5.49E-10
3336	480076.8	3770272	1.77E-10	3.54E-10	5.31E-10
3337	480064.6	3770301	1.71E-10	3.43E-10	5.14E-10
3338	480052.4	3770330	1.66E-10	3.33E-10	4.99E-10
3339	480021.9	3770402	1.56E-10	3.11E-10	4.67E-10
3340	480001.3	3770422	1.54E-10	3.07E-10	4.61E-10
3341	479972.3	3770434	1.54E-10	3.08E-10	4.61E-10
3342	479943.2	3770446	1.54E-10	3.08E-10	4.62E-10
3343	479914.2	3770458	1.54E-10	3.08E-10	4.62E-10
3344	479885.2	3770470	1.54E-10	3.08E-10	4.62E-10
3345	479856.1	3770482	1.54E-10	3.08E-10	4.62E-10
3346	479827.1	3770494	1.54E-10	3.08E-10	4.62E-10
3347	479798	3770506	1.54E-10	3.08E-10	4.62E-10
3348	479769	3770518	1.54E-10	3.08E-10	4.62E-10
3349	479740	3770530	1.54E-10	3.08E-10	4.62E-10
3350	479710.9	3770542	1.54E-10	3.08E-10	4.62E-10
3351	479681.9	3770554	1.54E-10	3.08E-10	4.62E-10
3352	479652.8	3770566	1.54E-10	3.08E-10	4.62E-10
3353	479623.8	3770578	1.54E-10	3.08E-10	4.63E-10
3354	479594.8	3770590	1.54E-10	3.08E-10	4.62E-10
3355	479565.7	3770602	1.54E-10	3.09E-10	4.63E-10
3356	479536.7	3770614	1.54E-10	3.09E-10	4.63E-10
3357	479507.6	3770626	1.54E-10	3.08E-10	4.62E-10
3358	479478.6	3770638	1.54E-10	3.08E-10	4.62E-10
3359	479449.6	3770650	1.54E-10	3.08E-10	4.62E-10
3360	479420.5	3770662	1.54E-10	3.08E-10	4.62E-10
3361	479391.5	3770674	1.54E-10	3.07E-10	4.61E-10
3362	479347.9	3770692	1.53E-10	3.06E-10	4.59E-10
3363	479101.1	3770793	1.50E-10	2.99E-10	4.49E-10
3364	480412.1	3769460	5.99E-10	1.20E-09	1.80E-09
3365	480412.4	3769429	6.25E-10	1.25E-09	1.87E-09
3366	480565.9	3769491	4.94E-10	9.88E-10	1.48E-09
3367	480553.8	3769520	4.81E-10	9.62E-10	1.44E-09
3368	480505.2	3769636	4.24E-10	8.48E-10	1.27E-09
3369	480493	3769665	4.09E-10	8.18E-10	1.23E-09
3370	480480.9	3769693	3.95E-10	7.90E-10	1.18E-09
3371	480468.7	3769722	3.80E-10	7.60E-10	1.14E-09
3372	480456.6	3769751	3.65E-10	7.31E-10	1.10E-09
3373	480444.4	3769780	3.51E-10	7.02E-10	1.05E-09
3374	480432.3	3769809	3.38E-10	6.75E-10	1.01E-09
3375	480420.1	3769838	3.24E-10	6.47E-10	9.71E-10
3376	480408	3769866	3.10E-10	6.20E-10	9.31E-10

3377	480395.8	3769895	2.97E-10	5.94E-10	8.91E-10
3378	480383.7	3769924	2.84E-10	5.68E-10	8.52E-10
3379	480371.5	3769953	2.71E-10	5.42E-10	8.14E-10
3380	480359.4	3769982	2.59E-10	5.18E-10	7.77E-10
3381	480347.2	3770011	2.47E-10	4.95E-10	7.42E-10
3382	480335.1	3770040	2.36E-10	4.72E-10	7.08E-10
3383	480322.9	3770068	2.25E-10	4.50E-10	6.75E-10
3384	480310.8	3770097	2.15E-10	4.30E-10	6.45E-10
3385	480298.6	3770126	2.06E-10	4.11E-10	6.17E-10
3386	480286.5	3770155	1.97E-10	3.94E-10	5.91E-10
3387	480274.3	3770184	1.89E-10	3.78E-10	5.67E-10
3388	480262.2	3770213	1.82E-10	3.63E-10	5.45E-10
3389	480250	3770242	1.75E-10	3.50E-10	5.25E-10
3390	480237.9	3770270	1.69E-10	3.38E-10	5.06E-10
3391	480225.7	3770299	1.63E-10	3.26E-10	4.90E-10
3392	480213.6	3770328	1.58E-10	3.16E-10	4.74E-10
3393	480201.4	3770357	1.53E-10	3.07E-10	4.60E-10
3394	480189.3	3770386	1.49E-10	2.98E-10	4.47E-10
3395	480177.1	3770415	1.45E-10	2.90E-10	4.35E-10
3396	480165	3770443	1.41E-10	2.83E-10	4.24E-10
3397	480140.7	3770501	1.35E-10	2.70E-10	4.05E-10
3398	480114.1	3770536	1.32E-10	2.64E-10	3.96E-10
3399	480085.1	3770548	1.32E-10	2.65E-10	3.97E-10
3400	480056.2	3770560	1.32E-10	2.65E-10	3.97E-10
3401	480027.2	3770572	1.33E-10	2.65E-10	3.98E-10
3402	479998.3	3770584	1.33E-10	2.65E-10	3.98E-10
3403	479969.3	3770596	1.33E-10	2.65E-10	3.98E-10
3404	479940.4	3770608	1.33E-10	2.65E-10	3.98E-10
3405	479911.4	3770619	1.33E-10	2.65E-10	3.98E-10
3406	479882.5	3770631	1.33E-10	2.65E-10	3.98E-10
3407	479853.6	3770643	1.33E-10	2.65E-10	3.98E-10
3408	479824.6	3770655	1.33E-10	2.65E-10	3.98E-10
3409	479795.7	3770667	1.33E-10	2.65E-10	3.98E-10
3410	479766.7	3770679	1.33E-10	2.65E-10	3.98E-10
3411	479737.8	3770691	1.33E-10	2.65E-10	3.98E-10
3412	479708.8	3770703	1.33E-10	2.65E-10	3.98E-10
3413	479679.9	3770715	1.33E-10	2.65E-10	3.98E-10
3414	479650.9	3770727	1.33E-10	2.66E-10	3.98E-10
3415	479622	3770739	1.33E-10	2.65E-10	3.98E-10
3416	479593	3770751	1.33E-10	2.65E-10	3.98E-10
3417	479564.1	3770763	1.33E-10	2.65E-10	3.98E-10
3418	479535.2	3770774	1.33E-10	2.65E-10	3.98E-10
3419	479506.2	3770786	1.33E-10	2.65E-10	3.98E-10
3420	479477.3	3770798	1.33E-10	2.65E-10	3.98E-10
3421	479448.3	3770810	1.32E-10	2.65E-10	3.97E-10
3422	479390.4	3770834	1.32E-10	2.64E-10	3.96E-10
3423	479173.3	3770923	1.30E-10	2.60E-10	3.90E-10
3424	480572.1	3769461	5.11E-10	1.02E-09	1.53E-09
3425	480572.4	3769430	5.31E-10	1.06E-09	1.59E-09

			T2	
			1	479085.48
			2.00E-02	4.00E-02
			Yr 1	Yr 2
1	479085.5	3769433	2.00E-02	4.00E-02
2	479102.3	3769437	1.20E-02	2.41E-02
3	479086.1	3769453	1.12E-02	2.25E-02
4	479103	3769457	7.11E-03	1.42E-02
5	479103.7	3769477	4.04E-03	8.07E-03
6	479075.1	3769498	2.76E-03	5.52E-03
7	479104.3	3769497	2.36E-03	4.73E-03
8	479079.7	3769638	3.27E-04	6.53E-04
9	479081	3769678	2.34E-04	4.67E-04
10	479082.4	3769718	1.74E-04	3.48E-04
11	479085	3769798	1.07E-04	2.14E-04
12	479087.7	3769878	7.31E-05	1.46E-04
13	479090.4	3769958	5.36E-05	1.07E-04
14	479093	3770038	4.13E-05	8.27E-05
15	479095.7	3770118	3.32E-05	6.64E-05
16	479101	3770278	2.33E-05	4.67E-05
17	479156.3	3769397	7.41E-03	1.48E-02
18	479156.3	3769378	8.06E-03	1.61E-02
19	479156.3	3769359	8.56E-03	1.71E-02
20	479156.3	3769340	8.72E-03	1.74E-02
21	479156.3	3769321	7.85E-03	1.57E-02
22	479156.3	3769302	6.05E-03	1.21E-02
23	479156.3	3769283	4.14E-03	8.29E-03
24	479156.3	3769264	2.71E-03	5.42E-03
25	479156.3	3769245	1.79E-03	3.59E-03
26	479156.3	3769226	1.23E-03	2.46E-03
27	479170.7	3769430	4.16E-03	8.33E-03
28	479176.3	3769397	5.19E-03	1.04E-02
29	479176.3	3769378	5.66E-03	1.13E-02
30	479176.3	3769359	5.93E-03	1.19E-02
31	479176.3	3769340	5.91E-03	1.18E-02
32	479176.3	3769321	5.38E-03	1.08E-02
33	479176.3	3769302	4.44E-03	8.89E-03
34	479176.3	3769283	3.38E-03	6.75E-03
35	479176.3	3769264	2.44E-03	4.89E-03
36	479176.3	3769245	1.74E-03	3.48E-03
37	479176.3	3769226	1.25E-03	2.50E-03
38	479190.7	3769430	3.16E-03	6.32E-03
39	479179.4	3769458	2.51E-03	5.01E-03
40	479160.1	3769478	2.18E-03	4.36E-03
41	479196.3	3769397	3.88E-03	7.76E-03
42	479196.3	3769378	4.21E-03	8.43E-03
43	479196.3	3769359	4.37E-03	8.73E-03
44	479196.3	3769340	4.30E-03	8.60E-03
45	479196.3	3769321	3.97E-03	7.93E-03
46	479196.3	3769302	3.41E-03	6.83E-03
47	479196.3	3769283	2.76E-03	5.52E-03
48	479196.3	3769264	2.13E-03	4.27E-03

49	479196.3	3769245	1.61E-03	3.22E-03
50	479196.3	3769226	1.21E-03	2.42E-03
51	479209.3	3769434	2.45E-03	4.89E-03
52	479202.2	3769451	2.16E-03	4.33E-03
53	479195.2	3769469	1.84E-03	3.68E-03
54	479171	3769494	1.51E-03	3.01E-03
55	479153.9	3769501	1.51E-03	3.01E-03
56	479216.3	3769417	2.64E-03	5.28E-03
57	479216.3	3769397	2.99E-03	5.97E-03
58	479216.3	3769378	3.22E-03	6.44E-03
59	479216.3	3769359	3.33E-03	6.66E-03
60	479216.3	3769340	3.28E-03	6.56E-03
61	479216.3	3769321	3.08E-03	6.15E-03
62	479216.3	3769302	2.73E-03	5.47E-03
63	479216.3	3769283	2.30E-03	4.61E-03
64	479216.3	3769264	1.87E-03	3.74E-03
65	479216.3	3769245	1.48E-03	2.95E-03
66	479216.3	3769226	1.15E-03	2.31E-03
67	479249.7	3769433	1.65E-03	3.29E-03
68	479236.6	3769465	1.36E-03	2.72E-03
69	479223.5	3769498	1.01E-03	2.02E-03
70	479256.3	3769397	1.93E-03	3.86E-03
71	479256.3	3769378	2.06E-03	4.13E-03
72	479256.3	3769359	2.13E-03	4.25E-03
73	479256.3	3769340	2.11E-03	4.22E-03
74	479256.3	3769321	2.02E-03	4.03E-03
75	479256.3	3769302	1.86E-03	3.71E-03
76	479256.3	3769283	1.65E-03	3.30E-03
77	479256.3	3769264	1.42E-03	2.85E-03
78	479256.3	3769245	1.20E-03	2.40E-03
79	479256.3	3769226	1.00E-03	2.01E-03
80	479290	3769432	1.18E-03	2.35E-03
81	479277.3	3769463	1.02E-03	2.03E-03
82	479264.7	3769495	8.15E-04	1.63E-03
83	479296.3	3769397	1.33E-03	2.67E-03
84	479296.3	3769378	1.42E-03	2.84E-03
85	479296.3	3769359	1.47E-03	2.94E-03
86	479296.3	3769340	1.47E-03	2.94E-03
87	479296.3	3769321	1.43E-03	2.86E-03
88	479296.3	3769302	1.35E-03	2.70E-03
89	479296.3	3769283	1.24E-03	2.48E-03
90	479296.3	3769264	1.11E-03	2.23E-03
91	479296.3	3769245	9.79E-04	1.96E-03
92	479296.3	3769226	8.48E-04	1.70E-03
93	479329.4	3769434	8.74E-04	1.75E-03
94	479322.6	3769451	8.24E-04	1.65E-03
95	479315.7	3769468	7.63E-04	1.53E-03
96	479308.8	3769485	6.95E-04	1.39E-03
97	479301.9	3769502	6.20E-04	1.24E-03
98	479336.3	3769417	9.09E-04	1.82E-03
99	479336.3	3769397	9.83E-04	1.97E-03
100	479336.3	3769378	1.04E-03	2.07E-03

101	479336.3	3769359	1.07E-03	2.13E-03
102	479336.3	3769340	1.07E-03	2.15E-03
103	479336.3	3769321	1.06E-03	2.12E-03
104	479336.3	3769302	1.02E-03	2.04E-03
105	479336.3	3769283	9.57E-04	1.91E-03
106	479336.3	3769264	8.84E-04	1.77E-03
107	479336.3	3769245	8.03E-04	1.61E-03
108	479336.3	3769226	7.17E-04	1.43E-03
109	479369.7	3769433	6.76E-04	1.35E-03
110	479356.4	3769466	6.06E-04	1.21E-03
111	479343.1	3769499	5.13E-04	1.03E-03
112	479222.2	3769633	2.32E-04	4.64E-04
113	479189.8	3769648	2.25E-04	4.50E-04
114	479157.4	3769662	2.24E-04	4.47E-04
115	479376.3	3769397	7.46E-04	1.49E-03
116	479376.3	3769378	7.87E-04	1.57E-03
117	479376.3	3769359	8.13E-04	1.63E-03
118	479376.3	3769340	8.22E-04	1.64E-03
119	479376.3	3769321	8.15E-04	1.63E-03
120	479376.3	3769302	7.93E-04	1.59E-03
121	479376.3	3769283	7.57E-04	1.51E-03
122	479376.3	3769264	7.12E-04	1.42E-03
123	479376.3	3769245	6.60E-04	1.32E-03
124	479376.3	3769226	6.03E-04	1.21E-03
125	479409.3	3769434	5.37E-04	1.07E-03
126	479402.2	3769451	5.15E-04	1.03E-03
127	479395.2	3769469	4.85E-04	9.70E-04
128	479388.2	3769486	4.50E-04	9.00E-04
129	479381.2	3769503	4.15E-04	8.30E-04
130	479314.8	3769633	1.88E-04	3.76E-04
131	479297.7	3769640	1.85E-04	3.69E-04
132	479280.5	3769648	1.81E-04	3.63E-04
133	479263.4	3769656	1.79E-04	3.58E-04
134	479246.2	3769663	1.77E-04	3.53E-04
135	479229.1	3769671	1.74E-04	3.49E-04
136	479212	3769678	1.72E-04	3.44E-04
137	479194.8	3769686	1.71E-04	3.42E-04
138	479177.7	3769694	1.70E-04	3.39E-04
139	479160.6	3769701	1.69E-04	3.37E-04
140	479416.3	3769417	5.54E-04	1.11E-03
141	479416.3	3769397	5.88E-04	1.18E-03
142	479416.3	3769378	6.15E-04	1.23E-03
143	479416.3	3769359	6.35E-04	1.27E-03
144	479416.3	3769340	6.47E-04	1.29E-03
145	479416.3	3769321	6.46E-04	1.29E-03
146	479416.3	3769302	6.34E-04	1.27E-03
147	479416.3	3769283	6.13E-04	1.23E-03
148	479416.3	3769264	5.85E-04	1.17E-03
149	479416.3	3769245	5.51E-04	1.10E-03
150	479416.3	3769226	5.13E-04	1.03E-03
151	479489.2	3769434	3.62E-04	7.24E-04
152	479482.1	3769452	3.49E-04	6.99E-04

153	479474.9	3769469	3.34E-04	6.68E-04
154	479467.8	3769487	3.16E-04	6.32E-04
155	479460.7	3769505	2.97E-04	5.94E-04
156	479403.7	3769646	1.43E-04	2.87E-04
157	479396.6	3769663	1.30E-04	2.60E-04
158	479372.1	3769688	1.17E-04	2.34E-04
159	479354.7	3769696	1.16E-04	2.32E-04
160	479337.3	3769704	1.14E-04	2.29E-04
161	479320	3769712	1.13E-04	2.26E-04
162	479302.6	3769719	1.12E-04	2.24E-04
163	479285.2	3769727	1.12E-04	2.24E-04
164	479267.9	3769735	1.11E-04	2.22E-04
165	479250.5	3769742	1.10E-04	2.20E-04
166	479233.1	3769750	1.09E-04	2.18E-04
167	479215.8	3769758	1.08E-04	2.16E-04
168	479198.4	3769766	1.07E-04	2.15E-04
169	479181	3769773	1.06E-04	2.13E-04
170	479163.7	3769781	1.05E-04	2.10E-04
171	479496.3	3769417	3.72E-04	7.43E-04
172	479496.3	3769397	3.93E-04	7.86E-04
173	479496.3	3769378	4.09E-04	8.18E-04
174	479496.3	3769359	4.21E-04	8.42E-04
175	479496.3	3769340	4.29E-04	8.58E-04
176	479496.3	3769321	4.32E-04	8.63E-04
177	479496.3	3769302	4.29E-04	8.59E-04
178	479496.3	3769283	4.22E-04	8.45E-04
179	479496.3	3769264	4.11E-04	8.22E-04
180	479496.3	3769245	3.96E-04	7.92E-04
181	479496.3	3769226	3.78E-04	7.56E-04
182	479569.5	3769433	2.62E-04	5.24E-04
183	479562.7	3769450	2.55E-04	5.09E-04
184	479555.9	3769467	2.46E-04	4.92E-04
185	479549.1	3769484	2.36E-04	4.71E-04
186	479542.3	3769501	2.25E-04	4.51E-04
187	479481	3769652	1.19E-04	2.38E-04
188	479474.2	3769669	1.10E-04	2.20E-04
189	479467.4	3769686	1.01E-04	2.03E-04
190	479460.6	3769703	9.36E-05	1.87E-04
191	479453.7	3769720	8.71E-05	1.74E-04
192	479430.3	3769744	8.05E-05	1.61E-04
193	479413.7	3769751	7.95E-05	1.59E-04
194	479397.1	3769758	7.87E-05	1.57E-04
195	479380.5	3769766	7.81E-05	1.56E-04
196	479364	3769773	7.77E-05	1.55E-04
197	479347.4	3769781	7.76E-05	1.55E-04
198	479330.8	3769788	7.70E-05	1.54E-04
199	479314.2	3769795	7.66E-05	1.53E-04
200	479297.6	3769803	7.64E-05	1.53E-04
201	479281	3769810	7.60E-05	1.52E-04
202	479264.4	3769817	7.55E-05	1.51E-04
203	479247.8	3769825	7.50E-05	1.50E-04
204	479231.2	3769832	7.46E-05	1.49E-04

205	479214.6	3769839	7.42E-05	1.48E-04
206	479198	3769847	7.35E-05	1.47E-04
207	479181.4	3769854	7.31E-05	1.46E-04
208	479164.8	3769862	7.24E-05	1.45E-04
209	479576.3	3769417	2.67E-04	5.35E-04
210	479576.3	3769397	2.80E-04	5.59E-04
211	479576.3	3769378	2.90E-04	5.80E-04
212	479576.3	3769359	2.99E-04	5.97E-04
213	479576.3	3769340	3.05E-04	6.09E-04
214	479576.3	3769321	3.08E-04	6.17E-04
215	479576.3	3769302	3.09E-04	6.18E-04
216	479576.3	3769283	3.07E-04	6.15E-04
217	479576.3	3769264	3.03E-04	6.06E-04
218	479576.3	3769245	2.96E-04	5.93E-04
219	479576.3	3769226	2.88E-04	5.76E-04
220	479649.4	3769434	1.98E-04	3.95E-04
221	479642.5	3769451	1.92E-04	3.85E-04
222	479635.6	3769468	1.87E-04	3.73E-04
223	479628.7	3769485	1.80E-04	3.60E-04
224	479621.8	3769502	1.73E-04	3.46E-04
225	479566.6	3769638	1.09E-04	2.18E-04
226	479559.7	3769655	1.02E-04	2.04E-04
227	479552.8	3769673	9.47E-05	1.89E-04
228	479545.9	3769690	8.81E-05	1.76E-04
229	479539	3769707	8.20E-05	1.64E-04
230	479532	3769724	7.64E-05	1.53E-04
231	479525.1	3769741	7.13E-05	1.43E-04
232	479518.2	3769758	6.67E-05	1.33E-04
233	479511.3	3769775	6.28E-05	1.26E-04
234	479487.6	3769799	5.88E-05	1.18E-04
235	479470.8	3769807	5.82E-05	1.16E-04
236	479454	3769814	5.77E-05	1.15E-04
237	479437.1	3769822	5.73E-05	1.15E-04
238	479420.3	3769829	5.70E-05	1.14E-04
239	479403.5	3769837	5.68E-05	1.14E-04
240	479386.7	3769844	5.69E-05	1.14E-04
241	479369.8	3769852	5.66E-05	1.13E-04
242	479353	3769859	5.63E-05	1.13E-04
243	479336.2	3769867	5.62E-05	1.12E-04
244	479319.3	3769874	5.61E-05	1.12E-04
245	479302.5	3769882	5.58E-05	1.12E-04
246	479285.7	3769889	5.55E-05	1.11E-04
247	479268.9	3769897	5.54E-05	1.11E-04
248	479252	3769904	5.51E-05	1.10E-04
249	479235.2	3769911	5.48E-05	1.10E-04
250	479218.4	3769919	5.45E-05	1.09E-04
251	479201.6	3769926	5.41E-05	1.08E-04
252	479184.7	3769934	5.36E-05	1.07E-04
253	479656.3	3769417	2.02E-04	4.03E-04
254	479656.3	3769397	2.10E-04	4.20E-04
255	479656.3	3769378	2.17E-04	4.35E-04
256	479656.3	3769359	2.24E-04	4.47E-04

257	479656.3	3769340	2.28E-04	4.57E-04
258	479656.3	3769321	2.32E-04	4.64E-04
259	479656.3	3769302	2.34E-04	4.67E-04
260	479656.3	3769283	2.34E-04	4.68E-04
261	479656.3	3769264	2.33E-04	4.65E-04
262	479656.3	3769245	2.30E-04	4.60E-04
263	479656.3	3769226	2.26E-04	4.52E-04
264	479729.3	3769434	1.54E-04	3.09E-04
265	479722.4	3769451	1.51E-04	3.01E-04
266	479715.4	3769468	1.46E-04	2.92E-04
267	479708.4	3769486	1.41E-04	2.82E-04
268	479701.4	3769503	1.36E-04	2.73E-04
269	479652.6	3769623	9.80E-05	1.96E-04
270	479645.6	3769641	9.29E-05	1.86E-04
271	479638.7	3769658	8.74E-05	1.75E-04
272	479631.7	3769675	8.21E-05	1.64E-04
273	479624.7	3769692	7.71E-05	1.54E-04
274	479617.7	3769710	7.23E-05	1.45E-04
275	479610.8	3769727	6.78E-05	1.36E-04
276	479603.8	3769744	6.35E-05	1.27E-04
277	479596.8	3769761	5.97E-05	1.19E-04
278	479589.8	3769779	5.64E-05	1.13E-04
279	479582.9	3769796	5.32E-05	1.06E-04
280	479575.9	3769813	5.03E-05	1.01E-04
281	479568.9	3769830	4.76E-05	9.51E-05
282	479544.9	3769855	4.48E-05	8.95E-05
283	479527.9	3769863	4.44E-05	8.89E-05
284	479510.9	3769870	4.43E-05	8.87E-05
285	479493.9	3769878	4.42E-05	8.84E-05
286	479476.9	3769885	4.40E-05	8.80E-05
287	479459.9	3769893	4.38E-05	8.75E-05
288	479442.9	3769900	4.36E-05	8.72E-05
289	479425.9	3769908	4.35E-05	8.71E-05
290	479408.9	3769916	4.37E-05	8.74E-05
291	479391.9	3769923	4.35E-05	8.71E-05
292	479374.9	3769931	4.34E-05	8.69E-05
293	479357.9	3769938	4.34E-05	8.68E-05
294	479340.9	3769946	4.33E-05	8.66E-05
295	479323.9	3769953	4.31E-05	8.62E-05
296	479306.9	3769961	4.30E-05	8.60E-05
297	479289.9	3769968	4.29E-05	8.58E-05
298	479272.9	3769976	4.27E-05	8.53E-05
299	479255.9	3769983	4.24E-05	8.48E-05
300	479238.9	3769991	4.23E-05	8.45E-05
301	479221.9	3769999	4.20E-05	8.40E-05
302	479204.9	3770006	4.17E-05	8.34E-05
303	479187.9	3770014	4.13E-05	8.27E-05
304	479736.3	3769417	1.58E-04	3.15E-04
305	479736.3	3769397	1.64E-04	3.28E-04
306	479736.3	3769378	1.70E-04	3.39E-04
307	479736.3	3769359	1.75E-04	3.49E-04
308	479736.3	3769340	1.79E-04	3.57E-04

309	479736.3	3769321	1.82E-04	3.63E-04
310	479736.3	3769302	1.84E-04	3.67E-04
311	479736.3	3769283	1.85E-04	3.70E-04
312	479736.3	3769264	1.85E-04	3.70E-04
313	479736.3	3769245	1.84E-04	3.68E-04
314	479736.3	3769226	1.82E-04	3.64E-04
315	479809.3	3769434	1.26E-04	2.51E-04
316	479802.2	3769451	1.23E-04	2.46E-04
317	479795.2	3769469	1.20E-04	2.39E-04
318	479788.2	3769486	1.16E-04	2.32E-04
319	479781.2	3769503	1.12E-04	2.25E-04
320	479731.9	3769625	8.36E-05	1.67E-04
321	479724.9	3769643	7.93E-05	1.59E-04
322	479717.9	3769660	7.53E-05	1.51E-04
323	479710.8	3769677	7.14E-05	1.43E-04
324	479703.8	3769695	6.77E-05	1.35E-04
325	479696.8	3769712	6.41E-05	1.28E-04
326	479689.7	3769729	6.07E-05	1.21E-04
327	479682.7	3769747	5.73E-05	1.15E-04
328	479675.7	3769764	5.41E-05	1.08E-04
329	479668.7	3769782	5.11E-05	1.02E-04
330	479661.6	3769799	4.84E-05	9.67E-05
331	479654.6	3769816	4.58E-05	9.17E-05
332	479647.6	3769834	4.35E-05	8.70E-05
333	479640.5	3769851	4.13E-05	8.26E-05
334	479633.5	3769868	3.93E-05	7.87E-05
335	479626.5	3769886	3.75E-05	7.51E-05
336	479602.3	3769911	3.57E-05	7.15E-05
337	479585.2	3769918	3.56E-05	7.12E-05
338	479568	3769926	3.54E-05	7.08E-05
339	479550.9	3769934	3.52E-05	7.04E-05
340	479533.7	3769941	3.51E-05	7.02E-05
341	479516.6	3769949	3.51E-05	7.02E-05
342	479499.5	3769956	3.51E-05	7.01E-05
343	479482.3	3769964	3.50E-05	6.99E-05
344	479465.2	3769972	3.49E-05	6.98E-05
345	479448.1	3769979	3.49E-05	6.98E-05
346	479430.9	3769987	3.50E-05	7.00E-05
347	479413.8	3769995	3.49E-05	6.98E-05
348	479396.6	3770002	3.48E-05	6.96E-05
349	479379.5	3770010	3.48E-05	6.95E-05
350	479362.4	3770017	3.47E-05	6.94E-05
351	479345.2	3770025	3.46E-05	6.92E-05
352	479328.1	3770033	3.45E-05	6.89E-05
353	479311	3770040	3.43E-05	6.87E-05
354	479293.8	3770048	3.43E-05	6.85E-05
355	479276.7	3770055	3.41E-05	6.82E-05
356	479259.5	3770063	3.39E-05	6.78E-05
357	479242.4	3770071	3.38E-05	6.76E-05
358	479225.3	3770078	3.36E-05	6.73E-05
359	479208.1	3770086	3.34E-05	6.68E-05
360	479191	3770093	3.32E-05	6.63E-05

361	479173.8	3770101	3.29E-05	6.58E-05
362	479816.3	3769417	1.28E-04	2.56E-04
363	479816.3	3769397	1.33E-04	2.66E-04
364	479816.3	3769378	1.37E-04	2.74E-04
365	479816.3	3769359	1.41E-04	2.82E-04
366	479816.3	3769340	1.44E-04	2.88E-04
367	479816.3	3769321	1.47E-04	2.93E-04
368	479816.3	3769302	1.49E-04	2.97E-04
369	479816.3	3769283	1.50E-04	3.00E-04
370	479816.3	3769264	1.51E-04	3.02E-04
371	479816.3	3769245	1.51E-04	3.02E-04
372	479816.3	3769226	1.50E-04	3.01E-04
373	479969.2	3769434	8.98E-05	1.80E-04
374	479962.1	3769452	8.81E-05	1.76E-04
375	479955	3769469	8.62E-05	1.72E-04
376	479947.9	3769487	8.42E-05	1.68E-04
377	479940.7	3769504	8.20E-05	1.64E-04
378	479898.1	3769610	6.72E-05	1.34E-04
379	479890.9	3769628	6.47E-05	1.29E-04
380	479883.8	3769645	6.22E-05	1.24E-04
381	479876.7	3769663	5.96E-05	1.19E-04
382	479869.6	3769680	5.72E-05	1.14E-04
383	479862.5	3769698	5.47E-05	1.09E-04
384	479855.4	3769716	5.23E-05	1.05E-04
385	479848.3	3769733	4.99E-05	9.98E-05
386	479841.1	3769751	4.76E-05	9.52E-05
387	479834	3769768	4.54E-05	9.08E-05
388	479826.9	3769786	4.33E-05	8.65E-05
389	479819.8	3769803	4.12E-05	8.24E-05
390	479812.7	3769821	3.92E-05	7.85E-05
391	479805.6	3769839	3.75E-05	7.49E-05
392	479798.5	3769856	3.58E-05	7.16E-05
393	479791.3	3769874	3.42E-05	6.83E-05
394	479784.2	3769891	3.26E-05	6.53E-05
395	479777.1	3769909	3.12E-05	6.25E-05
396	479770	3769927	2.99E-05	5.99E-05
397	479762.9	3769944	2.88E-05	5.75E-05
398	479755.8	3769962	2.77E-05	5.54E-05
399	479748.7	3769979	2.67E-05	5.34E-05
400	479741.6	3769997	2.58E-05	5.16E-05
401	479717.1	3770022	2.48E-05	4.96E-05
402	479699.8	3770030	2.47E-05	4.95E-05
403	479682.4	3770038	2.47E-05	4.94E-05
404	479665.1	3770045	2.46E-05	4.92E-05
405	479647.7	3770053	2.45E-05	4.91E-05
406	479630.4	3770061	2.45E-05	4.90E-05
407	479613.1	3770068	2.45E-05	4.90E-05
408	479595.7	3770076	2.44E-05	4.89E-05
409	479578.4	3770084	2.44E-05	4.88E-05
410	479561	3770091	2.44E-05	4.87E-05
411	479543.7	3770099	2.44E-05	4.88E-05
412	479526.4	3770107	2.44E-05	4.88E-05

413	479509	3770115	2.44E-05	4.88E-05
414	479491.7	3770122	2.43E-05	4.87E-05
415	479474.3	3770130	2.43E-05	4.86E-05
416	479457	3770138	2.43E-05	4.86E-05
417	479439.7	3770145	2.44E-05	4.87E-05
418	479422.3	3770153	2.43E-05	4.86E-05
419	479405	3770161	2.43E-05	4.85E-05
420	479387.6	3770168	2.42E-05	4.85E-05
421	479370.3	3770176	2.42E-05	4.84E-05
422	479353	3770184	2.41E-05	4.82E-05
423	479335.6	3770191	2.40E-05	4.80E-05
424	479318.3	3770199	2.39E-05	4.78E-05
425	479300.9	3770207	2.39E-05	4.77E-05
426	479283.6	3770215	2.38E-05	4.76E-05
427	479266.3	3770222	2.37E-05	4.73E-05
428	479248.9	3770230	2.36E-05	4.72E-05
429	479231.6	3770238	2.35E-05	4.70E-05
430	479214.2	3770245	2.34E-05	4.68E-05
431	479196.9	3770253	2.33E-05	4.65E-05
432	479179.6	3770261	2.31E-05	4.63E-05
433	479976.3	3769417	9.14E-05	1.83E-04
434	479976.3	3769397	9.42E-05	1.88E-04
435	479976.3	3769378	9.68E-05	1.94E-04
436	479976.3	3769359	9.93E-05	1.99E-04
437	479976.3	3769340	1.01E-04	2.03E-04
438	479976.3	3769321	1.04E-04	2.07E-04
439	479976.3	3769302	1.05E-04	2.11E-04
440	479976.3	3769283	1.07E-04	2.13E-04
441	479976.3	3769264	1.08E-04	2.15E-04
442	479976.3	3769245	1.08E-04	2.17E-04
443	479976.3	3769226	1.09E-04	2.18E-04
444	480129.3	3769434	6.88E-05	1.38E-04
445	480122.3	3769451	6.76E-05	1.35E-04
446	480115.3	3769468	6.63E-05	1.33E-04
447	480108.3	3769486	6.50E-05	1.30E-04
448	480101.3	3769503	6.36E-05	1.27E-04
449	480059.3	3769607	5.43E-05	1.09E-04
450	480052.3	3769624	5.27E-05	1.05E-04
451	480045.3	3769641	5.10E-05	1.02E-04
452	480038.4	3769659	4.94E-05	9.87E-05
453	480031.4	3769676	4.77E-05	9.54E-05
454	480024.4	3769693	4.61E-05	9.21E-05
455	480017.4	3769711	4.45E-05	8.89E-05
456	480010.4	3769728	4.29E-05	8.59E-05
457	480003.4	3769745	4.13E-05	8.27E-05
458	479996.4	3769762	3.98E-05	7.96E-05
459	479989.4	3769780	3.83E-05	7.65E-05
460	479982.4	3769797	3.68E-05	7.35E-05
461	479975.4	3769814	3.53E-05	7.06E-05
462	479968.4	3769832	3.39E-05	6.79E-05
463	479961.4	3769849	3.26E-05	6.52E-05
464	479954.4	3769866	3.13E-05	6.26E-05

465	479947.4	3769884	3.01E-05	6.02E-05
466	479940.4	3769901	2.89E-05	5.78E-05
467	479933.4	3769918	2.78E-05	5.55E-05
468	479926.4	3769935	2.67E-05	5.34E-05
469	479919.4	3769953	2.57E-05	5.14E-05
470	479912.4	3769970	2.48E-05	4.96E-05
471	479905.4	3769987	2.39E-05	4.78E-05
472	479898.4	3770005	2.31E-05	4.62E-05
473	479891.4	3770022	2.24E-05	4.47E-05
474	479884.4	3770039	2.17E-05	4.33E-05
475	479877.4	3770057	2.10E-05	4.20E-05
476	479870.4	3770074	2.04E-05	4.08E-05
477	479863.4	3770091	1.98E-05	3.96E-05
478	479856.4	3770108	1.93E-05	3.86E-05
479	479832.4	3770133	1.88E-05	3.75E-05
480	479815.3	3770141	1.87E-05	3.74E-05
481	479798.3	3770148	1.87E-05	3.73E-05
482	479781.2	3770156	1.86E-05	3.73E-05
483	479764.2	3770164	1.86E-05	3.72E-05
484	479747.1	3770171	1.86E-05	3.72E-05
485	479730.1	3770179	1.86E-05	3.72E-05
486	479713	3770186	1.86E-05	3.71E-05
487	479696	3770194	1.85E-05	3.71E-05
488	479678.9	3770201	1.85E-05	3.70E-05
489	479661.8	3770209	1.85E-05	3.70E-05
490	479644.8	3770217	1.85E-05	3.70E-05
491	479627.7	3770224	1.85E-05	3.70E-05
492	479610.7	3770232	1.85E-05	3.70E-05
493	479593.6	3770239	1.85E-05	3.69E-05
494	479576.6	3770247	1.85E-05	3.70E-05
495	479559.5	3770254	1.85E-05	3.70E-05
496	479542.5	3770262	1.85E-05	3.70E-05
497	479525.4	3770270	1.85E-05	3.69E-05
498	479508.4	3770277	1.84E-05	3.69E-05
499	479491.3	3770285	1.84E-05	3.68E-05
500	479474.2	3770292	1.84E-05	3.68E-05
501	479457.2	3770300	1.84E-05	3.69E-05
502	479440.1	3770307	1.84E-05	3.68E-05
503	479423.1	3770315	1.84E-05	3.67E-05
504	479406	3770322	1.83E-05	3.66E-05
505	479389	3770330	1.83E-05	3.66E-05
506	479371.9	3770338	1.83E-05	3.65E-05
507	479354.9	3770345	1.82E-05	3.64E-05
508	479337.8	3770353	1.81E-05	3.63E-05
509	479320.8	3770360	1.81E-05	3.62E-05
510	479303.7	3770368	1.80E-05	3.60E-05
511	479286.6	3770375	1.80E-05	3.59E-05
512	479269.6	3770383	1.79E-05	3.59E-05
513	479252.5	3770391	1.79E-05	3.58E-05
514	479235.5	3770398	1.78E-05	3.56E-05
515	479218.4	3770406	1.77E-05	3.55E-05
516	479201.4	3770413	1.77E-05	3.53E-05

517	479184.3	3770421	1.76E-05	3.53E-05
518	479167.3	3770428	1.76E-05	3.52E-05
519	480136.3	3769417	6.99E-05	1.40E-04
520	480136.3	3769397	7.18E-05	1.44E-04
521	480136.3	3769378	7.38E-05	1.48E-04
522	480136.3	3769359	7.55E-05	1.51E-04
523	480136.3	3769340	7.71E-05	1.54E-04
524	480136.3	3769321	7.86E-05	1.57E-04
525	480136.3	3769302	8.00E-05	1.60E-04
526	480136.3	3769283	8.12E-05	1.62E-04
527	480136.3	3769264	8.22E-05	1.64E-04
528	480136.3	3769245	8.30E-05	1.66E-04
529	480136.3	3769226	8.36E-05	1.67E-04
530	480289.2	3769434	5.53E-05	1.11E-04
531	480282.2	3769451	5.44E-05	1.09E-04
532	480275.1	3769469	5.34E-05	1.07E-04
533	480268.1	3769486	5.25E-05	1.05E-04
534	480261	3769504	5.14E-05	1.03E-04
535	480218.6	3769609	4.48E-05	8.95E-05
536	480211.6	3769626	4.37E-05	8.73E-05
537	480204.5	3769643	4.25E-05	8.50E-05
538	480197.5	3769661	4.13E-05	8.27E-05
539	480190.4	3769678	4.02E-05	8.03E-05
540	480183.3	3769696	3.90E-05	7.80E-05
541	480176.3	3769713	3.79E-05	7.57E-05
542	480169.2	3769731	3.67E-05	7.35E-05
543	480162.1	3769748	3.56E-05	7.12E-05
544	480155.1	3769766	3.45E-05	6.90E-05
545	480148	3769783	3.34E-05	6.68E-05
546	480141	3769801	3.23E-05	6.46E-05
547	480133.9	3769818	3.12E-05	6.25E-05
548	480126.8	3769835	3.02E-05	6.04E-05
549	480119.8	3769853	2.92E-05	5.83E-05
550	480112.7	3769870	2.82E-05	5.63E-05
551	480105.7	3769888	2.72E-05	5.44E-05
552	480098.6	3769905	2.63E-05	5.25E-05
553	480091.5	3769923	2.53E-05	5.07E-05
554	480084.5	3769940	2.44E-05	4.89E-05
555	480077.4	3769958	2.36E-05	4.72E-05
556	480070.4	3769975	2.28E-05	4.56E-05
557	480063.3	3769993	2.20E-05	4.40E-05
558	480056.2	3770010	2.13E-05	4.25E-05
559	480049.2	3770028	2.06E-05	4.12E-05
560	480042.1	3770045	1.99E-05	3.99E-05
561	480035.1	3770062	1.93E-05	3.86E-05
562	480028	3770080	1.88E-05	3.75E-05
563	480020.9	3770097	1.82E-05	3.65E-05
564	480013.9	3770115	1.77E-05	3.55E-05
565	480006.8	3770132	1.73E-05	3.45E-05
566	479999.7	3770150	1.68E-05	3.37E-05
567	479992.7	3770167	1.64E-05	3.29E-05
568	479985.6	3770185	1.60E-05	3.21E-05

569	479978.6	3770202	1.57E-05	3.14E-05
570	479971.5	3770220	1.53E-05	3.07E-05
571	479947.2	3770245	1.50E-05	2.99E-05
572	479930	3770252	1.50E-05	2.99E-05
573	479912.8	3770260	1.49E-05	2.99E-05
574	479895.6	3770268	1.49E-05	2.98E-05
575	479878.4	3770275	1.49E-05	2.98E-05
576	479861.2	3770283	1.49E-05	2.98E-05
577	479844	3770290	1.49E-05	2.98E-05
578	479826.8	3770298	1.49E-05	2.97E-05
579	479809.5	3770306	1.49E-05	2.97E-05
580	479792.3	3770313	1.49E-05	2.97E-05
581	479775.1	3770321	1.48E-05	2.97E-05
582	479757.9	3770329	1.48E-05	2.97E-05
583	479740.7	3770336	1.48E-05	2.97E-05
584	479723.5	3770344	1.48E-05	2.97E-05
585	479706.3	3770352	1.48E-05	2.96E-05
586	479689.1	3770359	1.48E-05	2.96E-05
587	479671.9	3770367	1.48E-05	2.96E-05
588	479654.6	3770374	1.48E-05	2.96E-05
589	479637.4	3770382	1.48E-05	2.96E-05
590	479620.2	3770390	1.48E-05	2.96E-05
591	479603	3770397	1.48E-05	2.95E-05
592	479585.8	3770405	1.48E-05	2.95E-05
593	479568.6	3770413	1.48E-05	2.95E-05
594	479551.4	3770420	1.48E-05	2.95E-05
595	479534.2	3770428	1.48E-05	2.95E-05
596	479517	3770436	1.47E-05	2.95E-05
597	479499.7	3770443	1.47E-05	2.94E-05
598	479482.5	3770451	1.47E-05	2.94E-05
599	479465.3	3770458	1.47E-05	2.95E-05
600	479448.1	3770466	1.47E-05	2.94E-05
601	479430.9	3770474	1.47E-05	2.93E-05
602	479413.7	3770481	1.46E-05	2.93E-05
603	479396.5	3770489	1.46E-05	2.92E-05
604	479379.3	3770497	1.46E-05	2.92E-05
605	479362.1	3770504	1.46E-05	2.91E-05
606	479344.8	3770512	1.45E-05	2.90E-05
607	479327.6	3770520	1.45E-05	2.90E-05
608	479310.4	3770527	1.44E-05	2.89E-05
609	479293.2	3770535	1.44E-05	2.89E-05
610	479276	3770542	1.44E-05	2.88E-05
611	479258.8	3770550	1.43E-05	2.87E-05
612	479241.6	3770558	1.43E-05	2.86E-05
613	479224.4	3770565	1.43E-05	2.85E-05
614	479207.2	3770573	1.42E-05	2.85E-05
615	479189.9	3770581	1.42E-05	2.84E-05
616	479172.7	3770588	1.42E-05	2.83E-05
617	480296.3	3769417	5.62E-05	1.12E-04
618	480296.3	3769397	5.76E-05	1.15E-04
619	480296.3	3769378	5.90E-05	1.18E-04
620	480296.3	3769359	6.03E-05	1.21E-04

621	480296.3	3769340	6.16E-05	1.23E-04
622	480296.3	3769321	6.27E-05	1.26E-04
623	480296.3	3769302	6.38E-05	1.28E-04
624	480296.3	3769283	6.49E-05	1.30E-04
625	480296.3	3769264	6.58E-05	1.32E-04
626	480296.3	3769245	6.66E-05	1.33E-04
627	480296.3	3769226	6.72E-05	1.34E-04
628	480449.2	3769434	4.62E-05	9.23E-05
629	480442.1	3769452	4.54E-05	9.09E-05
630	480435	3769469	4.47E-05	8.94E-05
631	480427.9	3769487	4.39E-05	8.78E-05
632	480420.8	3769504	4.31E-05	8.62E-05
633	480378.1	3769610	3.80E-05	7.60E-05
634	480371	3769628	3.72E-05	7.43E-05
635	480363.9	3769645	3.63E-05	7.26E-05
636	480356.8	3769663	3.55E-05	7.10E-05
637	480349.6	3769680	3.46E-05	6.93E-05
638	480342.5	3769698	3.38E-05	6.75E-05
639	480335.4	3769715	3.29E-05	6.58E-05
640	480328.3	3769733	3.20E-05	6.41E-05
641	480321.2	3769751	3.12E-05	6.24E-05
642	480314.1	3769768	3.04E-05	6.07E-05
643	480307	3769786	2.95E-05	5.91E-05
644	480299.9	3769803	2.87E-05	5.74E-05
645	480292.8	3769821	2.79E-05	5.58E-05
646	480285.7	3769838	2.71E-05	5.42E-05
647	480278.5	3769856	2.63E-05	5.26E-05
648	480271.4	3769874	2.55E-05	5.11E-05
649	480264.3	3769891	2.48E-05	4.96E-05
650	480257.2	3769909	2.40E-05	4.81E-05
651	480250.1	3769926	2.33E-05	4.66E-05
652	480243	3769944	2.26E-05	4.52E-05
653	480235.9	3769961	2.19E-05	4.38E-05
654	480228.8	3769979	2.12E-05	4.24E-05
655	480221.7	3769997	2.05E-05	4.11E-05
656	480214.5	3770014	1.99E-05	3.98E-05
657	480207.4	3770032	1.93E-05	3.86E-05
658	480200.3	3770049	1.87E-05	3.74E-05
659	480193.2	3770067	1.82E-05	3.64E-05
660	480186.1	3770085	1.77E-05	3.53E-05
661	480179	3770102	1.72E-05	3.43E-05
662	480171.9	3770120	1.67E-05	3.34E-05
663	480164.8	3770137	1.62E-05	3.24E-05
664	480157.7	3770155	1.58E-05	3.16E-05
665	480150.6	3770172	1.54E-05	3.08E-05
666	480143.4	3770190	1.50E-05	3.01E-05
667	480136.3	3770208	1.47E-05	2.94E-05
668	480129.2	3770225	1.43E-05	2.87E-05
669	480122.1	3770243	1.40E-05	2.81E-05
670	480115	3770260	1.37E-05	2.74E-05
671	480107.9	3770278	1.34E-05	2.69E-05
672	480100.8	3770295	1.32E-05	2.63E-05

673	480093.7	3770313	1.29E-05	2.59E-05
674	480086.6	3770331	1.27E-05	2.54E-05
675	480062.1	3770356	1.25E-05	2.49E-05
676	480044.8	3770364	1.24E-05	2.49E-05
677	480027.5	3770371	1.24E-05	2.49E-05
678	480010.1	3770379	1.24E-05	2.48E-05
679	479992.8	3770387	1.24E-05	2.48E-05
680	479975.5	3770394	1.24E-05	2.48E-05
681	479958.1	3770402	1.24E-05	2.48E-05
682	479940.8	3770410	1.24E-05	2.48E-05
683	479923.5	3770417	1.24E-05	2.48E-05
684	479906.1	3770425	1.24E-05	2.48E-05
685	479888.8	3770433	1.24E-05	2.48E-05
686	479871.5	3770440	1.24E-05	2.47E-05
687	479854.1	3770448	1.24E-05	2.47E-05
688	479836.8	3770456	1.24E-05	2.47E-05
689	479819.5	3770464	1.23E-05	2.47E-05
690	479802.1	3770471	1.23E-05	2.47E-05
691	479784.8	3770479	1.23E-05	2.47E-05
692	479767.5	3770487	1.23E-05	2.47E-05
693	479750.1	3770494	1.23E-05	2.46E-05
694	479732.8	3770502	1.23E-05	2.46E-05
695	479715.5	3770510	1.23E-05	2.46E-05
696	479698.1	3770517	1.23E-05	2.46E-05
697	479680.8	3770525	1.23E-05	2.46E-05
698	479663.5	3770533	1.23E-05	2.46E-05
699	479646.1	3770540	1.23E-05	2.46E-05
700	479628.8	3770548	1.23E-05	2.46E-05
701	479611.5	3770556	1.23E-05	2.46E-05
702	479594.1	3770564	1.23E-05	2.45E-05
703	479576.8	3770571	1.23E-05	2.45E-05
704	479559.5	3770579	1.23E-05	2.46E-05
705	479542.2	3770587	1.23E-05	2.45E-05
706	479524.8	3770594	1.22E-05	2.45E-05
707	479507.5	3770602	1.22E-05	2.45E-05
708	479490.2	3770610	1.22E-05	2.44E-05
709	479472.8	3770617	1.22E-05	2.45E-05
710	479455.5	3770625	1.22E-05	2.44E-05
711	479438.2	3770633	1.22E-05	2.44E-05
712	479420.8	3770640	1.22E-05	2.44E-05
713	479403.5	3770648	1.22E-05	2.43E-05
714	479386.2	3770656	1.21E-05	2.43E-05
715	479368.8	3770664	1.21E-05	2.42E-05
716	479351.5	3770671	1.21E-05	2.42E-05
717	479334.2	3770679	1.21E-05	2.41E-05
718	479316.8	3770687	1.21E-05	2.41E-05
719	479299.5	3770694	1.20E-05	2.40E-05
720	479282.2	3770702	1.20E-05	2.40E-05
721	479264.8	3770710	1.20E-05	2.39E-05
722	479247.5	3770717	1.19E-05	2.39E-05
723	479230.2	3770725	1.19E-05	2.39E-05
724	479212.8	3770733	1.19E-05	2.38E-05

725	479195.5	3770740	1.19E-05	2.37E-05
726	479178.2	3770748	1.19E-05	2.37E-05
727	480456.3	3769417	4.69E-05	9.38E-05
728	480456.3	3769397	4.80E-05	9.60E-05
729	480456.3	3769378	4.91E-05	9.81E-05
730	480456.3	3769359	5.01E-05	1.00E-04
731	480456.3	3769340	5.11E-05	1.02E-04
732	480456.3	3769321	5.21E-05	1.04E-04
733	480456.3	3769302	5.30E-05	1.06E-04
734	480456.3	3769283	5.38E-05	1.08E-04
735	480456.3	3769264	5.46E-05	1.09E-04
736	480456.3	3769245	5.53E-05	1.11E-04
737	480456.3	3769226	5.59E-05	1.12E-04
738	480609.2	3769434	3.95E-05	7.90E-05
739	480602	3769452	3.89E-05	7.79E-05
740	480594.9	3769470	3.83E-05	7.67E-05
741	480587.7	3769487	3.77E-05	7.54E-05
742	480580.6	3769505	3.71E-05	7.42E-05
743	480573.4	3769523	3.65E-05	7.29E-05
744	480523.4	3769646	3.19E-05	6.37E-05
745	480516.2	3769664	3.12E-05	6.23E-05
746	480509.1	3769682	3.05E-05	6.10E-05
747	480501.9	3769699	2.98E-05	5.96E-05
748	480494.8	3769717	2.91E-05	5.83E-05
749	480487.6	3769735	2.85E-05	5.69E-05
750	480480.5	3769752	2.78E-05	5.56E-05
751	480473.3	3769770	2.71E-05	5.42E-05
752	480466.2	3769788	2.65E-05	5.29E-05
753	480459	3769805	2.58E-05	5.16E-05
754	480451.9	3769823	2.52E-05	5.04E-05
755	480444.7	3769841	2.46E-05	4.91E-05
756	480437.6	3769858	2.40E-05	4.79E-05
757	480430.4	3769876	2.34E-05	4.67E-05
758	480423.3	3769894	2.27E-05	4.55E-05
759	480416.1	3769911	2.21E-05	4.43E-05
760	480409	3769929	2.16E-05	4.31E-05
761	480401.8	3769947	2.10E-05	4.19E-05
762	480394.7	3769965	2.04E-05	4.08E-05
763	480387.5	3769982	1.98E-05	3.97E-05
764	480380.4	3770000	1.93E-05	3.85E-05
765	480373.2	3770018	1.87E-05	3.75E-05
766	480366.1	3770035	1.82E-05	3.64E-05
767	480358.9	3770053	1.77E-05	3.54E-05
768	480351.8	3770071	1.72E-05	3.44E-05
769	480344.6	3770088	1.67E-05	3.35E-05
770	480337.5	3770106	1.63E-05	3.26E-05
771	480330.3	3770124	1.58E-05	3.17E-05
772	480323.2	3770141	1.54E-05	3.09E-05
773	480316	3770159	1.50E-05	3.01E-05
774	480308.9	3770177	1.47E-05	2.93E-05
775	480301.7	3770194	1.43E-05	2.86E-05
776	480294.6	3770212	1.40E-05	2.79E-05

777	480287.4	3770230	1.37E-05	2.73E-05
778	480280.3	3770247	1.33E-05	2.67E-05
779	480273.1	3770265	1.30E-05	2.61E-05
780	480265.9	3770283	1.28E-05	2.55E-05
781	480258.8	3770300	1.25E-05	2.50E-05
782	480251.6	3770318	1.22E-05	2.45E-05
783	480244.5	3770336	1.20E-05	2.40E-05
784	480237.3	3770353	1.18E-05	2.36E-05
785	480230.2	3770371	1.16E-05	2.32E-05
786	480223	3770389	1.14E-05	2.28E-05
787	480215.9	3770406	1.12E-05	2.24E-05
788	480208.7	3770424	1.10E-05	2.20E-05
789	480201.6	3770442	1.08E-05	2.17E-05
790	480177	3770467	1.07E-05	2.13E-05
791	480159.6	3770475	1.06E-05	2.13E-05
792	480142.2	3770483	1.06E-05	2.13E-05
793	480124.7	3770490	1.06E-05	2.13E-05
794	480107.3	3770498	1.06E-05	2.12E-05
795	480089.9	3770506	1.06E-05	2.12E-05
796	480072.4	3770514	1.06E-05	2.12E-05
797	480055	3770521	1.06E-05	2.12E-05
798	480037.6	3770529	1.06E-05	2.12E-05
799	480020.2	3770537	1.06E-05	2.12E-05
800	480002.7	3770545	1.06E-05	2.12E-05
801	479985.3	3770552	1.06E-05	2.12E-05
802	479967.9	3770560	1.06E-05	2.12E-05
803	479950.4	3770568	1.06E-05	2.12E-05
804	479933	3770575	1.06E-05	2.12E-05
805	479915.6	3770583	1.06E-05	2.12E-05
806	479898.2	3770591	1.06E-05	2.12E-05
807	479880.7	3770599	1.06E-05	2.12E-05
808	479863.3	3770606	1.06E-05	2.11E-05
809	479845.9	3770614	1.06E-05	2.11E-05
810	479828.4	3770622	1.06E-05	2.11E-05
811	479811	3770630	1.06E-05	2.11E-05
812	479793.6	3770637	1.06E-05	2.11E-05
813	479776.2	3770645	1.05E-05	2.11E-05
814	479758.7	3770653	1.05E-05	2.11E-05
815	479741.3	3770661	1.05E-05	2.11E-05
816	479723.9	3770668	1.05E-05	2.11E-05
817	479706.4	3770676	1.05E-05	2.11E-05
818	479689	3770684	1.05E-05	2.10E-05
819	479671.6	3770691	1.05E-05	2.10E-05
820	479654.2	3770699	1.05E-05	2.10E-05
821	479636.7	3770707	1.05E-05	2.10E-05
822	479619.3	3770715	1.05E-05	2.10E-05
823	479601.9	3770722	1.05E-05	2.10E-05
824	479584.4	3770730	1.05E-05	2.10E-05
825	479567	3770738	1.05E-05	2.10E-05
826	479549.6	3770746	1.05E-05	2.10E-05
827	479532.2	3770753	1.05E-05	2.09E-05
828	479514.7	3770761	1.05E-05	2.09E-05

829	479497.3	3770769	1.05E-05	2.09E-05
830	479479.9	3770777	1.05E-05	2.09E-05
831	479462.4	3770784	1.05E-05	2.09E-05
832	479445	3770792	1.04E-05	2.09E-05
833	479427.6	3770800	1.04E-05	2.08E-05
834	479410.2	3770807	1.04E-05	2.08E-05
835	479392.7	3770815	1.04E-05	2.08E-05
836	479375.3	3770823	1.04E-05	2.07E-05
837	479357.9	3770831	1.04E-05	2.07E-05
838	479340.4	3770838	1.03E-05	2.07E-05
839	479323	3770846	1.03E-05	2.06E-05
840	479305.6	3770854	1.03E-05	2.06E-05
841	479288.2	3770862	1.03E-05	2.06E-05
842	479270.7	3770869	1.03E-05	2.05E-05
843	479253.3	3770877	1.03E-05	2.05E-05
844	479235.9	3770885	1.02E-05	2.05E-05
845	479218.4	3770893	1.02E-05	2.04E-05
846	479201	3770900	1.02E-05	2.04E-05
847	479183.6	3770908	1.02E-05	2.04E-05
848	480616.3	3769417	4.01E-05	8.02E-05
849	480616.3	3769397	4.10E-05	8.20E-05
850	480616.3	3769378	4.19E-05	8.38E-05
851	480616.3	3769359	4.27E-05	8.55E-05
852	480616.3	3769340	4.36E-05	8.72E-05
853	480616.3	3769321	4.44E-05	8.88E-05
854	480616.3	3769302	4.52E-05	9.03E-05
855	480616.3	3769283	4.59E-05	9.17E-05
856	480616.3	3769264	4.66E-05	9.31E-05
857	480616.3	3769245	4.72E-05	9.44E-05
858	480616.3	3769226	4.78E-05	9.56E-05
859	479077.5	3769216	6.17E-04	1.23E-03
860	479072.7	3769235	8.03E-04	1.61E-03
861	479084.3	3769193	4.70E-04	9.39E-04
862	479155.2	3769202	8.08E-04	1.62E-03
863	479058.1	3769211	4.95E-04	9.90E-04
864	479053.3	3769230	6.23E-04	1.25E-03
865	479038.7	3769206	4.07E-04	8.13E-04
866	479033.9	3769225	5.00E-04	1.00E-03
867	479081.7	3769158	3.05E-04	6.10E-04
868	479191.2	3769197	8.10E-04	1.62E-03
869	479019.3	3769201	3.38E-04	6.76E-04
870	479014.5	3769220	4.08E-04	8.17E-04
871	479026.4	3769160	2.32E-04	4.65E-04
872	479041.6	3769150	2.27E-04	4.55E-04
873	479056.9	3769139	2.22E-04	4.43E-04
874	479072.2	3769129	2.16E-04	4.32E-04
875	479087.5	3769118	2.10E-04	4.19E-04
876	479102.8	3769108	2.02E-04	4.05E-04
877	479170.3	3769128	3.23E-04	6.46E-04
878	479182.6	3769142	3.92E-04	7.84E-04
879	479194.8	3769156	4.76E-04	9.52E-04
880	479231.7	3769198	7.91E-04	1.58E-03

881	479244	3769212	9.05E-04	1.81E-03
882	478980.5	3769192	2.45E-04	4.90E-04
883	478975.7	3769211	2.90E-04	5.79E-04
884	478987	3769151	1.77E-04	3.54E-04
885	479002.2	3769140	1.75E-04	3.49E-04
886	479017.3	3769130	1.71E-04	3.43E-04
887	479032.4	3769120	1.68E-04	3.36E-04
888	479047.5	3769109	1.65E-04	3.29E-04
889	479062.7	3769099	1.61E-04	3.22E-04
890	479077.8	3769088	1.57E-04	3.14E-04
891	479092.9	3769078	1.53E-04	3.05E-04
892	479108	3769068	1.48E-04	2.96E-04
893	479174.7	3769088	2.20E-04	4.40E-04
894	479186.9	3769102	2.59E-04	5.19E-04
895	479199.1	3769116	3.07E-04	6.14E-04
896	479211.2	3769129	3.62E-04	7.24E-04
897	479223.4	3769143	4.25E-04	8.49E-04
898	479235.5	3769157	4.96E-04	9.92E-04
899	479272	3769198	7.27E-04	1.45E-03
900	479284.1	3769212	7.93E-04	1.59E-03
901	478936.9	3769201	2.19E-04	4.37E-04
902	478934.9	3769150	1.42E-04	2.84E-04
903	478950.9	3769139	1.40E-04	2.79E-04
904	478966.9	3769128	1.37E-04	2.75E-04
905	478983	3769117	1.35E-04	2.71E-04
906	478999	3769106	1.33E-04	2.67E-04
907	479015	3769095	1.31E-04	2.62E-04
908	479031	3769084	1.28E-04	2.56E-04
909	479047	3769073	1.26E-04	2.51E-04
910	479063.1	3769062	1.23E-04	2.46E-04
911	479079.1	3769051	1.20E-04	2.40E-04
912	479095.1	3769040	1.17E-04	2.34E-04
913	479111.1	3769029	1.14E-04	2.28E-04
914	479181.8	3769051	1.64E-04	3.28E-04
915	479194.7	3769065	1.91E-04	3.82E-04
916	479207.5	3769080	2.24E-04	4.47E-04
917	479220.4	3769095	2.62E-04	5.25E-04
918	479233.3	3769109	3.06E-04	6.12E-04
919	479246.2	3769124	3.55E-04	7.11E-04
920	479259	3769138	4.12E-04	8.24E-04
921	479271.9	3769153	4.70E-04	9.39E-04
922	479310.6	3769196	6.39E-04	1.28E-03
923	479323.4	3769211	6.84E-04	1.37E-03
924	478898.1	3769191	1.72E-04	3.45E-04
925	478879.8	3769152	1.19E-04	2.38E-04
926	478895.6	3769141	1.16E-04	2.32E-04
927	478911.4	3769130	1.14E-04	2.27E-04
928	478927.2	3769119	1.12E-04	2.24E-04
929	478942.9	3769108	1.10E-04	2.21E-04
930	478958.7	3769098	1.09E-04	2.18E-04
931	478974.5	3769087	1.07E-04	2.15E-04
932	478990.3	3769076	1.06E-04	2.12E-04

933	479006	3769065	1.04E-04	2.08E-04
934	479021.8	3769054	1.02E-04	2.04E-04
935	479037.6	3769043	1.00E-04	2.01E-04
936	479053.4	3769033	9.84E-05	1.97E-04
937	479069.2	3769022	9.64E-05	1.93E-04
938	479084.9	3769011	9.41E-05	1.88E-04
939	479100.7	3769000	9.22E-05	1.84E-04
940	479198.8	3769025	1.41E-04	2.82E-04
941	479211.4	3769039	1.62E-04	3.23E-04
942	479224.1	3769054	1.86E-04	3.72E-04
943	479236.8	3769068	2.14E-04	4.28E-04
944	479249.5	3769082	2.45E-04	4.91E-04
945	479262.2	3769097	2.81E-04	5.61E-04
946	479274.9	3769111	3.20E-04	6.40E-04
947	479287.5	3769125	3.61E-04	7.21E-04
948	479300.2	3769140	4.05E-04	8.10E-04
949	479312.9	3769154	4.50E-04	9.00E-04
950	479350.9	3769197	5.65E-04	1.13E-03
951	479363.6	3769211	5.88E-04	1.18E-03
952	478840.8	3769142	9.96E-05	1.99E-04
953	478856.5	3769131	9.69E-05	1.94E-04
954	478872.1	3769121	9.48E-05	1.90E-04
955	478887.7	3769110	9.31E-05	1.86E-04
956	478903.3	3769099	9.17E-05	1.83E-04
957	478918.9	3769089	9.06E-05	1.81E-04
958	478934.5	3769078	8.95E-05	1.79E-04
959	478950.1	3769067	8.85E-05	1.77E-04
960	478965.7	3769056	8.74E-05	1.75E-04
961	478981.3	3769046	8.62E-05	1.72E-04
962	478996.9	3769035	8.48E-05	1.70E-04
963	479012.5	3769024	8.35E-05	1.67E-04
964	479028.1	3769014	8.21E-05	1.64E-04
965	479043.7	3769003	8.08E-05	1.62E-04
966	479059.3	3768992	7.93E-05	1.59E-04
967	479074.9	3768981	7.78E-05	1.56E-04
968	479090.5	3768971	7.64E-05	1.53E-04
969	479106.1	3768960	7.51E-05	1.50E-04
970	479137.3	3768939	7.25E-05	1.45E-04
971	479165.5	3768942	7.87E-05	1.57E-04
972	479203.1	3768985	1.09E-04	2.18E-04
973	479215.6	3768999	1.23E-04	2.45E-04
974	479228.2	3769013	1.39E-04	2.77E-04
975	479240.7	3769027	1.57E-04	3.14E-04
976	479253.3	3769041	1.77E-04	3.54E-04
977	479265.8	3769055	2.01E-04	4.02E-04
978	479278.3	3769070	2.28E-04	4.56E-04
979	479290.9	3769084	2.58E-04	5.15E-04
980	479303.4	3769098	2.88E-04	5.77E-04
981	479316	3769112	3.21E-04	6.41E-04
982	479328.5	3769126	3.55E-04	7.09E-04
983	479341.1	3769141	3.89E-04	7.77E-04
984	479353.6	3769155	4.21E-04	8.41E-04

985	479391.2	3769197	4.91E-04	9.83E-04
986	479403.8	3769211	5.06E-04	1.01E-03
987	478825.2	3769153	1.03E-04	2.06E-04
988	478763.6	3769123	7.45E-05	1.49E-04
989	478779.6	3769112	7.18E-05	1.44E-04
990	478795.5	3769101	6.98E-05	1.40E-04
991	478811.5	3769090	6.82E-05	1.36E-04
992	478827.4	3769079	6.69E-05	1.34E-04
993	478843.4	3769068	6.60E-05	1.32E-04
994	478859.4	3769057	6.52E-05	1.30E-04
995	478875.3	3769046	6.45E-05	1.29E-04
996	478891.3	3769035	6.40E-05	1.28E-04
997	478907.3	3769024	6.34E-05	1.27E-04
998	478923.2	3769013	6.27E-05	1.25E-04
999	478939.2	3769002	6.20E-05	1.24E-04
1000	478955.2	3768991	6.13E-05	1.23E-04
1001	478971.1	3768980	6.05E-05	1.21E-04
1002	478987.1	3768969	5.96E-05	1.19E-04
1003	479003	3768958	5.88E-05	1.18E-04
1004	479019	3768947	5.81E-05	1.16E-04
1005	479035	3768936	5.73E-05	1.15E-04
1006	479050.9	3768925	5.64E-05	1.13E-04
1007	479066.9	3768914	5.56E-05	1.11E-04
1008	479082.9	3768903	5.49E-05	1.10E-04
1009	479098.8	3768892	5.42E-05	1.08E-04
1010	479146.7	3768859	5.22E-05	1.04E-04
1011	479175.5	3768863	5.57E-05	1.11E-04
1012	479226.8	3768921	8.02E-05	1.60E-04
1013	479239.7	3768935	8.85E-05	1.77E-04
1014	479252.5	3768950	9.77E-05	1.95E-04
1015	479265.3	3768964	1.08E-04	2.17E-04
1016	479278.2	3768979	1.21E-04	2.42E-04
1017	479291	3768993	1.35E-04	2.69E-04
1018	479303.8	3769008	1.50E-04	3.00E-04
1019	479316.7	3769022	1.66E-04	3.33E-04
1020	479329.5	3769037	1.85E-04	3.70E-04
1021	479342.3	3769052	2.05E-04	4.10E-04
1022	479355.2	3769066	2.26E-04	4.52E-04
1023	479368	3769081	2.47E-04	4.94E-04
1024	479380.8	3769095	2.68E-04	5.37E-04
1025	479393.7	3769110	2.90E-04	5.80E-04
1026	479406.5	3769124	3.11E-04	6.22E-04
1027	479419.3	3769139	3.29E-04	6.59E-04
1028	479432.1	3769153	3.47E-04	6.93E-04
1029	479470.6	3769197	3.75E-04	7.51E-04
1030	479483.5	3769211	3.79E-04	7.57E-04
1031	478747.6	3769134	7.79E-05	1.56E-04
1032	478742.9	3769153	8.82E-05	1.76E-04
1033	478685.7	3769103	6.01E-05	1.20E-04
1034	478701.4	3769093	5.75E-05	1.15E-04
1035	478717.1	3769082	5.53E-05	1.11E-04
1036	478732.8	3769071	5.35E-05	1.07E-04

1037	478748.5	3769060	5.21E-05	1.04E-04
1038	478764.2	3769049	5.11E-05	1.02E-04
1039	478779.9	3769039	5.03E-05	1.01E-04
1040	478795.6	3769028	4.97E-05	9.93E-05
1041	478811.3	3769017	4.92E-05	9.84E-05
1042	478827	3769006	4.88E-05	9.77E-05
1043	478842.7	3768995	4.85E-05	9.71E-05
1044	478858.4	3768985	4.82E-05	9.64E-05
1045	478874.1	3768974	4.79E-05	9.57E-05
1046	478889.8	3768963	4.75E-05	9.50E-05
1047	478905.5	3768952	4.71E-05	9.41E-05
1048	478921.2	3768942	4.66E-05	9.32E-05
1049	478936.9	3768931	4.61E-05	9.23E-05
1050	478952.6	3768920	4.56E-05	9.12E-05
1051	478968.3	3768909	4.51E-05	9.01E-05
1052	478984	3768898	4.46E-05	8.91E-05
1053	478999.7	3768888	4.41E-05	8.82E-05
1054	479015.4	3768877	4.36E-05	8.72E-05
1055	479031.1	3768866	4.31E-05	8.62E-05
1056	479046.8	3768855	4.27E-05	8.53E-05
1057	479062.5	3768845	4.23E-05	8.46E-05
1058	479078.2	3768834	4.19E-05	8.38E-05
1059	479093.9	3768823	4.16E-05	8.31E-05
1060	479109.6	3768812	4.11E-05	8.23E-05
1061	479141.1	3768791	4.03E-05	8.06E-05
1062	479156.8	3768780	3.99E-05	7.98E-05
1063	479185.1	3768783	4.22E-05	8.43E-05
1064	479197.7	3768798	4.51E-05	9.02E-05
1065	479248.2	3768855	6.08E-05	1.22E-04
1066	479260.8	3768869	6.60E-05	1.32E-04
1067	479273.4	3768883	7.18E-05	1.44E-04
1068	479286	3768897	7.81E-05	1.56E-04
1069	479298.7	3768912	8.53E-05	1.71E-04
1070	479311.3	3768926	9.34E-05	1.87E-04
1071	479323.9	3768940	1.02E-04	2.05E-04
1072	479336.5	3768955	1.12E-04	2.25E-04
1073	479349.1	3768969	1.23E-04	2.46E-04
1074	479361.8	3768983	1.34E-04	2.69E-04
1075	479374.4	3768997	1.47E-04	2.93E-04
1076	479387	3769012	1.60E-04	3.20E-04
1077	479399.6	3769026	1.74E-04	3.48E-04
1078	479412.2	3769040	1.88E-04	3.76E-04
1079	479424.9	3769054	2.02E-04	4.04E-04
1080	479437.5	3769069	2.16E-04	4.32E-04
1081	479450.1	3769083	2.30E-04	4.60E-04
1082	479462.7	3769097	2.44E-04	4.87E-04
1083	479475.3	3769111	2.56E-04	5.12E-04
1084	479488	3769126	2.67E-04	5.35E-04
1085	479500.6	3769140	2.77E-04	5.53E-04
1086	479538.4	3769183	2.92E-04	5.85E-04
1087	479551.1	3769197	2.93E-04	5.85E-04
1088	479563.7	3769211	2.91E-04	5.82E-04

1089	478670	3769114	6.31E-05	1.26E-04
1090	478665.3	3769133	7.08E-05	1.42E-04
1091	478608.3	3769084	5.07E-05	1.01E-04
1092	478624.3	3769073	4.83E-05	9.66E-05
1093	478640.2	3769062	4.62E-05	9.24E-05
1094	478656.2	3769051	4.44E-05	8.88E-05
1095	478672.1	3769040	4.29E-05	8.57E-05
1096	478688	3769029	4.16E-05	8.32E-05
1097	478704	3769018	4.06E-05	8.13E-05
1098	478719.9	3769007	3.99E-05	7.98E-05
1099	478735.9	3768996	3.94E-05	7.87E-05
1100	478751.8	3768985	3.90E-05	7.79E-05
1101	478767.7	3768974	3.87E-05	7.74E-05
1102	478783.7	3768963	3.85E-05	7.70E-05
1103	478799.6	3768952	3.83E-05	7.66E-05
1104	478815.6	3768941	3.82E-05	7.63E-05
1105	478831.5	3768931	3.80E-05	7.60E-05
1106	478847.5	3768920	3.78E-05	7.55E-05
1107	478863.4	3768909	3.75E-05	7.50E-05
1108	478879.3	3768898	3.72E-05	7.44E-05
1109	478895.3	3768887	3.69E-05	7.38E-05
1110	478911.2	3768876	3.65E-05	7.31E-05
1111	478927.2	3768865	3.61E-05	7.23E-05
1112	478943.1	3768854	3.58E-05	7.16E-05
1113	478959	3768843	3.54E-05	7.09E-05
1114	478975	3768832	3.51E-05	7.02E-05
1115	478990.9	3768821	3.48E-05	6.96E-05
1116	479006.9	3768810	3.45E-05	6.89E-05
1117	479022.8	3768799	3.42E-05	6.84E-05
1118	479038.7	3768788	3.39E-05	6.79E-05
1119	479054.7	3768777	3.37E-05	6.75E-05
1120	479070.6	3768766	3.34E-05	6.69E-05
1121	479086.6	3768755	3.32E-05	6.64E-05
1122	479102.5	3768744	3.30E-05	6.60E-05
1123	479150.3	3768712	3.23E-05	6.46E-05
1124	479166.3	3768701	3.21E-05	6.43E-05
1125	479195	3768704	3.38E-05	6.76E-05
1126	479207.8	3768719	3.58E-05	7.16E-05
1127	479220.7	3768733	3.80E-05	7.60E-05
1128	479259.1	3768777	4.60E-05	9.19E-05
1129	479271.9	3768791	4.92E-05	9.85E-05
1130	479284.7	3768806	5.28E-05	1.06E-04
1131	479297.5	3768820	5.68E-05	1.14E-04
1132	479310.3	3768834	6.12E-05	1.22E-04
1133	479323.2	3768849	6.59E-05	1.32E-04
1134	479336	3768863	7.13E-05	1.43E-04
1135	479348.8	3768878	7.72E-05	1.54E-04
1136	479361.6	3768892	8.37E-05	1.67E-04
1137	479374.4	3768907	9.08E-05	1.82E-04
1138	479387.2	3768921	9.83E-05	1.97E-04
1139	479400	3768936	1.07E-04	2.13E-04
1140	479412.9	3768950	1.16E-04	2.31E-04

1141	479425.7	3768965	1.25E-04	2.49E-04
1142	479438.5	3768979	1.34E-04	2.68E-04
1143	479451.3	3768994	1.44E-04	2.88E-04
1144	479464.1	3769008	1.55E-04	3.09E-04
1145	479476.9	3769023	1.65E-04	3.30E-04
1146	479489.7	3769037	1.76E-04	3.51E-04
1147	479502.5	3769052	1.86E-04	3.72E-04
1148	479515.4	3769066	1.95E-04	3.90E-04
1149	479528.2	3769081	2.04E-04	4.07E-04
1150	479541	3769095	2.12E-04	4.24E-04
1151	479553.8	3769110	2.19E-04	4.38E-04
1152	479566.6	3769124	2.25E-04	4.50E-04
1153	479579.4	3769139	2.30E-04	4.60E-04
1154	479592.2	3769153	2.33E-04	4.66E-04
1155	479617.9	3769182	2.35E-04	4.70E-04
1156	479630.7	3769197	2.33E-04	4.66E-04
1157	479643.5	3769211	2.30E-04	4.60E-04
1158	478592.4	3769095	5.34E-05	1.07E-04
1159	478587.6	3769114	5.94E-05	1.19E-04
1160	478530.9	3769064	4.41E-05	8.82E-05
1161	478547	3769053	4.20E-05	8.41E-05
1162	478563.2	3769042	4.01E-05	8.03E-05
1163	478579.3	3769031	3.84E-05	7.68E-05
1164	478595.4	3769020	3.69E-05	7.37E-05
1165	478611.5	3769009	3.55E-05	7.11E-05
1166	478627.6	3768998	3.44E-05	6.89E-05
1167	478643.8	3768987	3.35E-05	6.70E-05
1168	478659.9	3768976	3.28E-05	6.56E-05
1169	478676	3768965	3.23E-05	6.45E-05
1170	478692.1	3768954	3.19E-05	6.37E-05
1171	478708.3	3768942	3.16E-05	6.32E-05
1172	478724.4	3768931	3.14E-05	6.29E-05
1173	478740.5	3768920	3.13E-05	6.27E-05
1174	478756.6	3768909	3.13E-05	6.25E-05
1175	478772.8	3768898	3.12E-05	6.24E-05
1176	478788.9	3768887	3.11E-05	6.22E-05
1177	478805	3768876	3.10E-05	6.20E-05
1178	478821.1	3768865	3.09E-05	6.17E-05
1179	478837.3	3768854	3.07E-05	6.14E-05
1180	478853.4	3768843	3.05E-05	6.09E-05
1181	478869.5	3768832	3.02E-05	6.04E-05
1182	478885.6	3768821	3.00E-05	5.99E-05
1183	478901.8	3768810	2.97E-05	5.93E-05
1184	478917.9	3768798	2.94E-05	5.88E-05
1185	478934	3768787	2.92E-05	5.83E-05
1186	478950.1	3768776	2.89E-05	5.78E-05
1187	478966.2	3768765	2.86E-05	5.72E-05
1188	478982.4	3768754	2.84E-05	5.69E-05
1189	478998.5	3768743	2.82E-05	5.65E-05
1190	479014.6	3768732	2.81E-05	5.62E-05
1191	479030.7	3768721	2.79E-05	5.58E-05
1192	479046.9	3768710	2.77E-05	5.55E-05

1193	479063	3768699	2.76E-05	5.52E-05
1194	479079.1	3768688	2.75E-05	5.50E-05
1195	479095.2	3768677	2.74E-05	5.47E-05
1196	479111.4	3768666	2.72E-05	5.45E-05
1197	479143.6	3768643	2.70E-05	5.41E-05
1198	479159.7	3768632	2.69E-05	5.39E-05
1199	479175.9	3768621	2.68E-05	5.37E-05
1200	479204.9	3768625	2.80E-05	5.61E-05
1201	479217.9	3768640	2.95E-05	5.90E-05
1202	479230.9	3768654	3.11E-05	6.21E-05
1203	479243.8	3768669	3.28E-05	6.55E-05
1204	479282.7	3768713	3.89E-05	7.77E-05
1205	479295.7	3768727	4.13E-05	8.26E-05
1206	479308.6	3768742	4.39E-05	8.77E-05
1207	479321.6	3768757	4.68E-05	9.35E-05
1208	479334.5	3768771	4.99E-05	9.97E-05
1209	479347.5	3768786	5.32E-05	1.06E-04
1210	479360.5	3768801	5.69E-05	1.14E-04
1211	479373.4	3768815	6.10E-05	1.22E-04
1212	479386.4	3768830	6.54E-05	1.31E-04
1213	479399.3	3768845	7.03E-05	1.41E-04
1214	479412.3	3768859	7.55E-05	1.51E-04
1215	479425.3	3768874	8.12E-05	1.62E-04
1216	479438.2	3768889	8.72E-05	1.74E-04
1217	479451.2	3768903	9.37E-05	1.87E-04
1218	479464.1	3768918	1.01E-04	2.01E-04
1219	479477.1	3768933	1.08E-04	2.15E-04
1220	479490.1	3768947	1.15E-04	2.30E-04
1221	479503	3768962	1.23E-04	2.46E-04
1222	479516	3768977	1.30E-04	2.61E-04
1223	479528.9	3768991	1.38E-04	2.76E-04
1224	479541.9	3769006	1.46E-04	2.91E-04
1225	479554.9	3769020	1.53E-04	3.07E-04
1226	479567.8	3769035	1.61E-04	3.22E-04
1227	479580.8	3769050	1.68E-04	3.35E-04
1228	479593.7	3769064	1.74E-04	3.48E-04
1229	479606.7	3769079	1.79E-04	3.58E-04
1230	479619.7	3769094	1.84E-04	3.67E-04
1231	479632.6	3769108	1.88E-04	3.75E-04
1232	479645.6	3769123	1.90E-04	3.81E-04
1233	479658.5	3769138	1.92E-04	3.85E-04
1234	479671.5	3769152	1.93E-04	3.86E-04
1235	479697.4	3769182	1.92E-04	3.84E-04
1236	479710.4	3769196	1.90E-04	3.79E-04
1237	479723.3	3769211	1.86E-04	3.73E-04
1238	478514.8	3769075	4.64E-05	9.28E-05
1239	478510	3769094	5.11E-05	1.02E-04
1240	478453.1	3769045	3.92E-05	7.84E-05
1241	478469	3769034	3.75E-05	7.49E-05
1242	478484.9	3769023	3.58E-05	7.16E-05
1243	478500.9	3769012	3.43E-05	6.86E-05
1244	478516.8	3769001	3.29E-05	6.58E-05

1245	478532.7	3768990	3.16E-05	6.32E-05
1246	478548.7	3768979	3.04E-05	6.09E-05
1247	478564.6	3768968	2.94E-05	5.89E-05
1248	478580.5	3768958	2.86E-05	5.72E-05
1249	478596.5	3768947	2.79E-05	5.58E-05
1250	478612.4	3768936	2.73E-05	5.47E-05
1251	478628.3	3768925	2.69E-05	5.38E-05
1252	478644.2	3768914	2.66E-05	5.32E-05
1253	478660.2	3768903	2.64E-05	5.28E-05
1254	478676.1	3768892	2.63E-05	5.25E-05
1255	478692	3768881	2.62E-05	5.24E-05
1256	478708	3768870	2.62E-05	5.23E-05
1257	478723.9	3768859	2.61E-05	5.23E-05
1258	478739.8	3768848	2.61E-05	5.22E-05
1259	478755.7	3768837	2.61E-05	5.22E-05
1260	478771.7	3768826	2.60E-05	5.21E-05
1261	478787.6	3768815	2.60E-05	5.19E-05
1262	478803.5	3768804	2.58E-05	5.17E-05
1263	478819.5	3768793	2.57E-05	5.14E-05
1264	478835.4	3768782	2.55E-05	5.11E-05
1265	478851.3	3768772	2.53E-05	5.07E-05
1266	478867.2	3768761	2.51E-05	5.03E-05
1267	478883.2	3768750	2.49E-05	4.99E-05
1268	478899.1	3768739	2.47E-05	4.95E-05
1269	478915	3768728	2.45E-05	4.91E-05
1270	478931	3768717	2.43E-05	4.87E-05
1271	478946.9	3768706	2.41E-05	4.83E-05
1272	478962.8	3768695	2.40E-05	4.80E-05
1273	478978.7	3768684	2.39E-05	4.78E-05
1274	478994.7	3768673	2.38E-05	4.75E-05
1275	479010.6	3768662	2.36E-05	4.72E-05
1276	479026.5	3768651	2.35E-05	4.71E-05
1277	479042.5	3768640	2.35E-05	4.69E-05
1278	479058.4	3768629	2.34E-05	4.67E-05
1279	479074.3	3768618	2.33E-05	4.66E-05
1280	479090.2	3768607	2.33E-05	4.65E-05
1281	479106.2	3768596	2.32E-05	4.64E-05
1282	479138	3768575	2.31E-05	4.62E-05
1283	479154	3768564	2.30E-05	4.61E-05
1284	479169.9	3768553	2.30E-05	4.60E-05
1285	479185.8	3768542	2.29E-05	4.59E-05
1286	479214.6	3768545	2.40E-05	4.79E-05
1287	479227.4	3768560	2.50E-05	5.00E-05
1288	479240.2	3768574	2.62E-05	5.25E-05
1289	479253	3768589	2.75E-05	5.49E-05
1290	479265.8	3768603	2.88E-05	5.76E-05
1291	479317	3768661	3.51E-05	7.02E-05
1292	479329.8	3768676	3.70E-05	7.40E-05
1293	479342.6	3768690	3.91E-05	7.81E-05
1294	479355.4	3768705	4.13E-05	8.26E-05
1295	479368.2	3768719	4.37E-05	8.74E-05
1296	479381	3768733	4.64E-05	9.27E-05

1297	479393.8	3768748	4.92E-05	9.83E-05
1298	479406.6	3768762	5.22E-05	1.05E-04
1299	479419.4	3768777	5.55E-05	1.11E-04
1300	479432.2	3768791	5.90E-05	1.18E-04
1301	479445	3768806	6.27E-05	1.25E-04
1302	479457.8	3768820	6.67E-05	1.33E-04
1303	479470.6	3768835	7.11E-05	1.42E-04
1304	479483.4	3768849	7.57E-05	1.51E-04
1305	479496.2	3768864	8.06E-05	1.61E-04
1306	479509	3768878	8.58E-05	1.72E-04
1307	479521.8	3768893	9.12E-05	1.82E-04
1308	479534.6	3768907	9.68E-05	1.94E-04
1309	479547.4	3768922	1.03E-04	2.05E-04
1310	479560.2	3768936	1.09E-04	2.17E-04
1311	479573	3768951	1.15E-04	2.29E-04
1312	479585.8	3768965	1.21E-04	2.41E-04
1313	479598.6	3768980	1.26E-04	2.52E-04
1314	479611.5	3768994	1.32E-04	2.63E-04
1315	479624.3	3769008	1.37E-04	2.74E-04
1316	479637.1	3769023	1.42E-04	2.84E-04
1317	479649.9	3769037	1.47E-04	2.94E-04
1318	479662.7	3769052	1.51E-04	3.02E-04
1319	479675.5	3769066	1.55E-04	3.10E-04
1320	479688.3	3769081	1.58E-04	3.16E-04
1321	479701.1	3769095	1.60E-04	3.20E-04
1322	479713.9	3769110	1.62E-04	3.23E-04
1323	479726.7	3769124	1.63E-04	3.25E-04
1324	479739.5	3769139	1.63E-04	3.26E-04
1325	479790.7	3769197	1.57E-04	3.13E-04
1326	479803.5	3769211	1.54E-04	3.07E-04
1327	478437.2	3769056	4.10E-05	8.21E-05
1328	478432.4	3769075	4.48E-05	8.96E-05
1329	478297.9	3769006	3.19E-05	6.39E-05
1330	478313.8	3768995	3.07E-05	6.15E-05
1331	478329.7	3768984	2.96E-05	5.91E-05
1332	478345.6	3768973	2.84E-05	5.69E-05
1333	478361.5	3768963	2.74E-05	5.47E-05
1334	478377.5	3768952	2.63E-05	5.27E-05
1335	478393.4	3768941	2.53E-05	5.07E-05
1336	478409.3	3768930	2.44E-05	4.88E-05
1337	478425.2	3768919	2.35E-05	4.71E-05
1338	478441.1	3768908	2.27E-05	4.55E-05
1339	478457.1	3768897	2.20E-05	4.41E-05
1340	478473	3768886	2.14E-05	4.28E-05
1341	478488.9	3768875	2.09E-05	4.18E-05
1342	478504.8	3768864	2.04E-05	4.09E-05
1343	478520.7	3768853	2.01E-05	4.02E-05
1344	478536.7	3768842	1.98E-05	3.96E-05
1345	478552.6	3768831	1.96E-05	3.92E-05
1346	478568.5	3768820	1.95E-05	3.89E-05
1347	478584.4	3768809	1.94E-05	3.88E-05
1348	478600.4	3768799	1.94E-05	3.87E-05

1349	478616.3	3768788	1.94E-05	3.87E-05
1350	478632.2	3768777	1.94E-05	3.88E-05
1351	478648.1	3768766	1.94E-05	3.88E-05
1352	478664	3768755	1.94E-05	3.89E-05
1353	478680	3768744	1.95E-05	3.89E-05
1354	478695.9	3768733	1.95E-05	3.89E-05
1355	478711.8	3768722	1.95E-05	3.89E-05
1356	478727.7	3768711	1.94E-05	3.88E-05
1357	478743.6	3768700	1.94E-05	3.87E-05
1358	478759.6	3768689	1.93E-05	3.86E-05
1359	478775.5	3768678	1.92E-05	3.84E-05
1360	478791.4	3768667	1.91E-05	3.82E-05
1361	478807.3	3768656	1.90E-05	3.79E-05
1362	478823.2	3768645	1.88E-05	3.77E-05
1363	478839.2	3768634	1.87E-05	3.74E-05
1364	478855.1	3768624	1.86E-05	3.71E-05
1365	478871	3768613	1.84E-05	3.69E-05
1366	478886.9	3768602	1.83E-05	3.67E-05
1367	478902.9	3768591	1.82E-05	3.64E-05
1368	478918.8	3768580	1.81E-05	3.62E-05
1369	478934.7	3768569	1.80E-05	3.60E-05
1370	478950.6	3768558	1.79E-05	3.59E-05
1371	478966.5	3768547	1.79E-05	3.58E-05
1372	478982.5	3768536	1.78E-05	3.57E-05
1373	478998.4	3768525	1.78E-05	3.56E-05
1374	479014.3	3768514	1.78E-05	3.55E-05
1375	479030.2	3768503	1.78E-05	3.55E-05
1376	479046.1	3768492	1.78E-05	3.55E-05
1377	479062.1	3768481	1.78E-05	3.55E-05
1378	479078	3768470	1.77E-05	3.55E-05
1379	479093.9	3768459	1.77E-05	3.55E-05
1380	479109.8	3768449	1.78E-05	3.55E-05
1381	479157.6	3768416	1.78E-05	3.55E-05
1382	479173.5	3768405	1.78E-05	3.56E-05
1383	479189.4	3768394	1.78E-05	3.56E-05
1384	479205.4	3768383	1.78E-05	3.56E-05
1385	479234.1	3768386	1.85E-05	3.70E-05
1386	479246.9	3768401	1.92E-05	3.84E-05
1387	479259.7	3768415	1.99E-05	3.98E-05
1388	479272.5	3768430	2.07E-05	4.14E-05
1389	479285.3	3768444	2.15E-05	4.29E-05
1390	479298.1	3768459	2.23E-05	4.46E-05
1391	479310.9	3768473	2.32E-05	4.64E-05
1392	479323.7	3768488	2.41E-05	4.83E-05
1393	479336.5	3768502	2.51E-05	5.02E-05
1394	479349.2	3768517	2.61E-05	5.23E-05
1395	479387.6	3768560	2.96E-05	5.93E-05
1396	479400.4	3768575	3.10E-05	6.19E-05
1397	479413.2	3768589	3.24E-05	6.47E-05
1398	479426	3768603	3.39E-05	6.77E-05
1399	479438.8	3768618	3.55E-05	7.10E-05
1400	479451.6	3768632	3.72E-05	7.43E-05

1401	479464.4	3768647	3.89E-05	7.79E-05
1402	479477.2	3768661	4.09E-05	8.17E-05
1403	479490	3768676	4.29E-05	8.59E-05
1404	479502.8	3768690	4.51E-05	9.02E-05
1405	479515.6	3768705	4.74E-05	9.49E-05
1406	479528.4	3768719	4.99E-05	9.98E-05
1407	479541.2	3768734	5.25E-05	1.05E-04
1408	479554	3768748	5.53E-05	1.11E-04
1409	479566.8	3768763	5.82E-05	1.16E-04
1410	479579.6	3768777	6.12E-05	1.22E-04
1411	479592.4	3768792	6.44E-05	1.29E-04
1412	479605.2	3768806	6.77E-05	1.35E-04
1413	479618	3768821	7.12E-05	1.42E-04
1414	479630.8	3768835	7.48E-05	1.50E-04
1415	479643.6	3768849	7.85E-05	1.57E-04
1416	479656.4	3768864	8.23E-05	1.65E-04
1417	479669.2	3768878	8.61E-05	1.72E-04
1418	479682	3768893	8.99E-05	1.80E-04
1419	479694.8	3768907	9.35E-05	1.87E-04
1420	479707.6	3768922	9.71E-05	1.94E-04
1421	479720.4	3768936	1.00E-04	2.01E-04
1422	479733.2	3768951	1.04E-04	2.08E-04
1423	479746	3768965	1.07E-04	2.14E-04
1424	479758.8	3768980	1.10E-04	2.20E-04
1425	479771.6	3768994	1.13E-04	2.26E-04
1426	479784.3	3769009	1.15E-04	2.31E-04
1427	479797.1	3769023	1.18E-04	2.35E-04
1428	479809.9	3769038	1.19E-04	2.38E-04
1429	479822.7	3769052	1.21E-04	2.41E-04
1430	479835.5	3769066	1.22E-04	2.43E-04
1431	479848.3	3769081	1.22E-04	2.45E-04
1432	479861.1	3769095	1.22E-04	2.45E-04
1433	479873.9	3769110	1.22E-04	2.45E-04
1434	479886.7	3769124	1.22E-04	2.44E-04
1435	479899.5	3769139	1.21E-04	2.42E-04
1436	479937.9	3769182	1.16E-04	2.32E-04
1437	479950.7	3769197	1.14E-04	2.27E-04
1438	479963.5	3769211	1.11E-04	2.23E-04
1439	478281.9	3769017	3.32E-05	6.63E-05
1440	478277.2	3769036	3.56E-05	7.13E-05
1441	478142.8	3768967	2.67E-05	5.34E-05
1442	478159	3768956	2.59E-05	5.17E-05
1443	478175.1	3768945	2.50E-05	5.01E-05
1444	478191.3	3768934	2.42E-05	4.84E-05
1445	478207.4	3768923	2.34E-05	4.69E-05
1446	478223.6	3768912	2.26E-05	4.53E-05
1447	478239.7	3768901	2.19E-05	4.38E-05
1448	478255.9	3768890	2.11E-05	4.22E-05
1449	478272	3768879	2.04E-05	4.08E-05
1450	478288.2	3768868	1.97E-05	3.94E-05
1451	478304.3	3768856	1.90E-05	3.81E-05
1452	478320.5	3768845	1.84E-05	3.68E-05

1453	478336.6	3768834	1.78E-05	3.57E-05
1454	478352.7	3768823	1.73E-05	3.46E-05
1455	478368.9	3768812	1.69E-05	3.37E-05
1456	478385	3768801	1.65E-05	3.29E-05
1457	478401.2	3768790	1.61E-05	3.22E-05
1458	478417.3	3768779	1.58E-05	3.16E-05
1459	478433.5	3768768	1.56E-05	3.12E-05
1460	478449.6	3768757	1.54E-05	3.08E-05
1461	478465.8	3768746	1.53E-05	3.06E-05
1462	478481.9	3768734	1.52E-05	3.04E-05
1463	478498.1	3768723	1.52E-05	3.03E-05
1464	478514.2	3768712	1.51E-05	3.03E-05
1465	478530.4	3768701	1.52E-05	3.03E-05
1466	478546.5	3768690	1.52E-05	3.04E-05
1467	478562.7	3768679	1.52E-05	3.05E-05
1468	478578.8	3768668	1.53E-05	3.05E-05
1469	478594.9	3768657	1.53E-05	3.06E-05
1470	478611.1	3768646	1.53E-05	3.07E-05
1471	478627.2	3768635	1.54E-05	3.07E-05
1472	478643.4	3768624	1.54E-05	3.07E-05
1473	478659.5	3768612	1.54E-05	3.07E-05
1474	478675.7	3768601	1.53E-05	3.07E-05
1475	478691.8	3768590	1.53E-05	3.06E-05
1476	478708	3768579	1.53E-05	3.05E-05
1477	478724.1	3768568	1.52E-05	3.04E-05
1478	478740.3	3768557	1.51E-05	3.03E-05
1479	478756.4	3768546	1.50E-05	3.01E-05
1480	478772.6	3768535	1.50E-05	2.99E-05
1481	478788.7	3768524	1.49E-05	2.97E-05
1482	478804.9	3768513	1.48E-05	2.96E-05
1483	478821	3768502	1.47E-05	2.94E-05
1484	478837.1	3768490	1.46E-05	2.92E-05
1485	478853.3	3768479	1.45E-05	2.90E-05
1486	478869.4	3768468	1.44E-05	2.89E-05
1487	478885.6	3768457	1.44E-05	2.88E-05
1488	478901.7	3768446	1.43E-05	2.87E-05
1489	478917.9	3768435	1.43E-05	2.85E-05
1490	478934	3768424	1.42E-05	2.84E-05
1491	478950.2	3768413	1.42E-05	2.84E-05
1492	478966.3	3768402	1.42E-05	2.84E-05
1493	478982.5	3768391	1.42E-05	2.84E-05
1494	478998.6	3768380	1.42E-05	2.84E-05
1495	479014.8	3768368	1.42E-05	2.83E-05
1496	479030.9	3768357	1.42E-05	2.84E-05
1497	479047	3768346	1.42E-05	2.84E-05
1498	479063.2	3768335	1.41E-05	2.83E-05
1499	479079.3	3768324	1.42E-05	2.83E-05
1500	479095.5	3768313	1.42E-05	2.84E-05
1501	479111.6	3768302	1.42E-05	2.85E-05
1502	479160.1	3768269	1.43E-05	2.87E-05
1503	479176.2	3768258	1.44E-05	2.87E-05
1504	479192.4	3768246	1.44E-05	2.88E-05

1505	479208.5	3768235	1.45E-05	2.89E-05
1506	479224.7	3768224	1.45E-05	2.90E-05
1507	479253.8	3768228	1.50E-05	3.01E-05
1508	479266.8	3768243	1.55E-05	3.11E-05
1509	479279.7	3768257	1.61E-05	3.21E-05
1510	479292.7	3768272	1.66E-05	3.32E-05
1511	479305.7	3768287	1.71E-05	3.43E-05
1512	479318.7	3768301	1.77E-05	3.54E-05
1513	479331.7	3768316	1.83E-05	3.66E-05
1514	479344.6	3768331	1.89E-05	3.78E-05
1515	479357.6	3768345	1.96E-05	3.91E-05
1516	479370.6	3768360	2.02E-05	4.04E-05
1517	479383.6	3768375	2.09E-05	4.19E-05
1518	479396.5	3768389	2.16E-05	4.33E-05
1519	479409.5	3768404	2.24E-05	4.48E-05
1520	479422.5	3768419	2.32E-05	4.64E-05
1521	479487.4	3768492	2.79E-05	5.58E-05
1522	479500.4	3768507	2.90E-05	5.80E-05
1523	479513.3	3768521	3.02E-05	6.04E-05
1524	479526.3	3768536	3.14E-05	6.29E-05
1525	479539.3	3768551	3.28E-05	6.55E-05
1526	479552.3	3768565	3.41E-05	6.83E-05
1527	479565.3	3768580	3.55E-05	7.11E-05
1528	479578.2	3768595	3.71E-05	7.41E-05
1529	479591.2	3768609	3.87E-05	7.73E-05
1530	479604.2	3768624	4.04E-05	8.07E-05
1531	479617.2	3768639	4.21E-05	8.43E-05
1532	479630.2	3768653	4.40E-05	8.79E-05
1533	479643.1	3768668	4.58E-05	9.17E-05
1534	479656.1	3768683	4.79E-05	9.58E-05
1535	479669.1	3768697	5.00E-05	1.00E-04
1536	479682.1	3768712	5.22E-05	1.04E-04
1537	479695	3768727	5.46E-05	1.09E-04
1538	479708	3768741	5.70E-05	1.14E-04
1539	479721	3768756	5.94E-05	1.19E-04
1540	479734	3768771	6.20E-05	1.24E-04
1541	479747	3768785	6.46E-05	1.29E-04
1542	479759.9	3768800	6.72E-05	1.34E-04
1543	479772.9	3768815	6.98E-05	1.40E-04
1544	479785.9	3768829	7.24E-05	1.45E-04
1545	479798.9	3768844	7.49E-05	1.50E-04
1546	479811.8	3768859	7.75E-05	1.55E-04
1547	479824.8	3768873	8.00E-05	1.60E-04
1548	479837.8	3768888	8.24E-05	1.65E-04
1549	479850.8	3768903	8.47E-05	1.69E-04
1550	479863.8	3768917	8.69E-05	1.74E-04
1551	479876.7	3768932	8.88E-05	1.78E-04
1552	479889.7	3768947	9.06E-05	1.81E-04
1553	479902.7	3768961	9.22E-05	1.84E-04
1554	479915.7	3768976	9.37E-05	1.87E-04
1555	479928.7	3768991	9.50E-05	1.90E-04
1556	479941.6	3769006	9.60E-05	1.92E-04

1557	479954.6	3769020	9.68E-05	1.94E-04
1558	479967.6	3769035	9.73E-05	1.95E-04
1559	479980.6	3769050	9.76E-05	1.95E-04
1560	479993.5	3769064	9.75E-05	1.95E-04
1561	480006.5	3769079	9.72E-05	1.94E-04
1562	480019.5	3769094	9.67E-05	1.93E-04
1563	480032.5	3769108	9.60E-05	1.92E-04
1564	480045.5	3769123	9.50E-05	1.90E-04
1565	480058.4	3769138	9.39E-05	1.88E-04
1566	480071.4	3769152	9.26E-05	1.85E-04
1567	480084.4	3769167	9.10E-05	1.82E-04
1568	480097.4	3769182	8.93E-05	1.79E-04
1569	480110.3	3769196	8.75E-05	1.75E-04
1570	480123.3	3769211	8.56E-05	1.71E-04
1571	478126.7	3768978	2.75E-05	5.51E-05
1572	478121.9	3768997	2.93E-05	5.85E-05
1573	477987.6	3768929	2.27E-05	4.55E-05
1574	478003.7	3768918	2.22E-05	4.43E-05
1575	478019.8	3768906	2.16E-05	4.31E-05
1576	478035.9	3768895	2.10E-05	4.20E-05
1577	478052	3768884	2.04E-05	4.08E-05
1578	478068.1	3768873	1.98E-05	3.97E-05
1579	478084.2	3768862	1.93E-05	3.85E-05
1580	478100.4	3768851	1.87E-05	3.74E-05
1581	478116.5	3768840	1.81E-05	3.63E-05
1582	478132.6	3768829	1.76E-05	3.52E-05
1583	478148.7	3768818	1.70E-05	3.41E-05
1584	478164.8	3768807	1.65E-05	3.30E-05
1585	478180.9	3768796	1.60E-05	3.20E-05
1586	478197	3768785	1.55E-05	3.10E-05
1587	478213.1	3768774	1.51E-05	3.01E-05
1588	478229.2	3768763	1.46E-05	2.93E-05
1589	478245.4	3768752	1.42E-05	2.85E-05
1590	478261.5	3768740	1.39E-05	2.77E-05
1591	478277.6	3768729	1.35E-05	2.71E-05
1592	478293.7	3768718	1.33E-05	2.65E-05
1593	478309.8	3768707	1.30E-05	2.60E-05
1594	478325.9	3768696	1.28E-05	2.56E-05
1595	478342	3768685	1.26E-05	2.53E-05
1596	478358.1	3768674	1.25E-05	2.50E-05
1597	478374.2	3768663	1.24E-05	2.49E-05
1598	478390.3	3768652	1.24E-05	2.48E-05
1599	478406.5	3768641	1.23E-05	2.47E-05
1600	478422.6	3768630	1.23E-05	2.47E-05
1601	478438.7	3768619	1.23E-05	2.47E-05
1602	478454.8	3768608	1.24E-05	2.47E-05
1603	478470.9	3768597	1.24E-05	2.48E-05
1604	478487	3768586	1.24E-05	2.49E-05
1605	478503.1	3768575	1.25E-05	2.50E-05
1606	478519.2	3768563	1.25E-05	2.50E-05
1607	478535.3	3768552	1.26E-05	2.51E-05
1608	478551.5	3768541	1.26E-05	2.52E-05

1609	478567.6	3768530	1.26E-05	2.52E-05
1610	478583.7	3768519	1.26E-05	2.52E-05
1611	478599.8	3768508	1.26E-05	2.52E-05
1612	478615.9	3768497	1.26E-05	2.52E-05
1613	478632	3768486	1.26E-05	2.52E-05
1614	478648.1	3768475	1.26E-05	2.51E-05
1615	478664.2	3768464	1.25E-05	2.50E-05
1616	478680.3	3768453	1.25E-05	2.49E-05
1617	478696.5	3768442	1.24E-05	2.48E-05
1618	478712.6	3768431	1.24E-05	2.47E-05
1619	478728.7	3768420	1.23E-05	2.46E-05
1620	478744.8	3768409	1.23E-05	2.45E-05
1621	478760.9	3768397	1.22E-05	2.44E-05
1622	478777	3768386	1.21E-05	2.42E-05
1623	478793.1	3768375	1.21E-05	2.41E-05
1624	478809.2	3768364	1.20E-05	2.40E-05
1625	478825.3	3768353	1.19E-05	2.39E-05
1626	478841.5	3768342	1.19E-05	2.37E-05
1627	478857.6	3768331	1.18E-05	2.37E-05
1628	478873.7	3768320	1.18E-05	2.36E-05
1629	478889.8	3768309	1.18E-05	2.35E-05
1630	478905.9	3768298	1.17E-05	2.35E-05
1631	478922	3768287	1.17E-05	2.34E-05
1632	478938.1	3768276	1.17E-05	2.34E-05
1633	478954.2	3768265	1.17E-05	2.34E-05
1634	478970.3	3768254	1.17E-05	2.34E-05
1635	478986.5	3768243	1.16E-05	2.32E-05
1636	479002.6	3768231	1.16E-05	2.32E-05
1637	479018.7	3768220	1.16E-05	2.33E-05
1638	479034.8	3768209	1.17E-05	2.33E-05
1639	479050.9	3768198	1.17E-05	2.34E-05
1640	479067	3768187	1.18E-05	2.35E-05
1641	479083.1	3768176	1.18E-05	2.35E-05
1642	479099.2	3768165	1.18E-05	2.36E-05
1643	479163.7	3768121	1.20E-05	2.39E-05
1644	479179.8	3768110	1.20E-05	2.40E-05
1645	479195.9	3768099	1.21E-05	2.41E-05
1646	479212	3768088	1.21E-05	2.43E-05
1647	479228.1	3768077	1.22E-05	2.44E-05
1648	479244.2	3768065	1.22E-05	2.45E-05
1649	479273.3	3768069	1.27E-05	2.53E-05
1650	479286.2	3768084	1.30E-05	2.61E-05
1651	479299.2	3768098	1.34E-05	2.68E-05
1652	479312.1	3768113	1.38E-05	2.76E-05
1653	479325.1	3768128	1.42E-05	2.84E-05
1654	479338	3768142	1.46E-05	2.93E-05
1655	479351	3768157	1.51E-05	3.01E-05
1656	479363.9	3768172	1.55E-05	3.10E-05
1657	479376.9	3768186	1.59E-05	3.19E-05
1658	479389.8	3768201	1.64E-05	3.28E-05
1659	479402.8	3768215	1.69E-05	3.37E-05
1660	479415.7	3768230	1.74E-05	3.47E-05

1661	479428.7	3768245	1.79E-05	3.57E-05
1662	479441.6	3768259	1.84E-05	3.68E-05
1663	479454.6	3768274	1.89E-05	3.79E-05
1664	479467.5	3768289	1.95E-05	3.90E-05
1665	479480.5	3768303	2.01E-05	4.02E-05
1666	479493.4	3768318	2.07E-05	4.15E-05
1667	479506.4	3768333	2.14E-05	4.28E-05
1668	479519.3	3768347	2.21E-05	4.42E-05
1669	479597	3768435	2.70E-05	5.41E-05
1670	479610	3768450	2.80E-05	5.60E-05
1671	479622.9	3768464	2.90E-05	5.80E-05
1672	479635.9	3768479	3.00E-05	6.01E-05
1673	479648.8	3768494	3.11E-05	6.22E-05
1674	479661.8	3768508	3.22E-05	6.45E-05
1675	479674.7	3768523	3.34E-05	6.68E-05
1676	479687.7	3768538	3.46E-05	6.92E-05
1677	479700.6	3768552	3.59E-05	7.18E-05
1678	479713.6	3768567	3.73E-05	7.45E-05
1679	479726.5	3768581	3.86E-05	7.73E-05
1680	479739.5	3768596	4.01E-05	8.01E-05
1681	479752.4	3768611	4.16E-05	8.32E-05
1682	479765.4	3768625	4.32E-05	8.64E-05
1683	479778.3	3768640	4.49E-05	8.97E-05
1684	479791.3	3768655	4.66E-05	9.32E-05
1685	479804.2	3768669	4.84E-05	9.67E-05
1686	479817.2	3768684	5.02E-05	1.00E-04
1687	479830.1	3768699	5.20E-05	1.04E-04
1688	479843.1	3768713	5.39E-05	1.08E-04
1689	479856	3768728	5.57E-05	1.11E-04
1690	479869	3768742	5.76E-05	1.15E-04
1691	479881.9	3768757	5.96E-05	1.19E-04
1692	479894.9	3768772	6.15E-05	1.23E-04
1693	479907.8	3768786	6.33E-05	1.27E-04
1694	479920.8	3768801	6.52E-05	1.30E-04
1695	479933.7	3768816	6.69E-05	1.34E-04
1696	479946.7	3768830	6.86E-05	1.37E-04
1697	479959.6	3768845	7.03E-05	1.41E-04
1698	479972.6	3768860	7.19E-05	1.44E-04
1699	479985.5	3768874	7.34E-05	1.47E-04
1700	479998.5	3768889	7.48E-05	1.50E-04
1701	480011.4	3768904	7.60E-05	1.52E-04
1702	480024.4	3768918	7.72E-05	1.54E-04
1703	480037.3	3768933	7.82E-05	1.56E-04
1704	480050.3	3768947	7.90E-05	1.58E-04
1705	480063.2	3768962	7.97E-05	1.59E-04
1706	480076.2	3768977	8.02E-05	1.60E-04
1707	480089.1	3768991	8.06E-05	1.61E-04
1708	480102.1	3769006	8.08E-05	1.62E-04
1709	480115	3769021	8.09E-05	1.62E-04
1710	480128	3769035	8.07E-05	1.61E-04
1711	480140.9	3769050	8.05E-05	1.61E-04
1712	480153.9	3769065	8.00E-05	1.60E-04

1713	480166.8	3769079	7.94E-05	1.59E-04
1714	480179.8	3769094	7.86E-05	1.57E-04
1715	480192.7	3769108	7.77E-05	1.55E-04
1716	480205.7	3769123	7.67E-05	1.53E-04
1717	480218.6	3769138	7.55E-05	1.51E-04
1718	480231.6	3769152	7.43E-05	1.49E-04
1719	480244.5	3769167	7.31E-05	1.46E-04
1720	480257.5	3769182	7.17E-05	1.43E-04
1721	480270.4	3769196	7.02E-05	1.40E-04
1722	480283.4	3769211	6.87E-05	1.37E-04
1723	477971.5	3768940	2.33E-05	4.67E-05
1724	477966.7	3768959	2.46E-05	4.92E-05
1725	477832.3	3768890	1.97E-05	3.93E-05
1726	477848.4	3768879	1.92E-05	3.85E-05
1727	477864.5	3768868	1.88E-05	3.76E-05
1728	477880.6	3768857	1.84E-05	3.68E-05
1729	477896.7	3768846	1.80E-05	3.59E-05
1730	477912.7	3768835	1.75E-05	3.51E-05
1731	477928.8	3768824	1.71E-05	3.42E-05
1732	477944.9	3768813	1.67E-05	3.34E-05
1733	477961	3768801	1.63E-05	3.25E-05
1734	477977.1	3768790	1.58E-05	3.17E-05
1735	477993.2	3768779	1.54E-05	3.08E-05
1736	478009.2	3768768	1.50E-05	3.00E-05
1737	478025.3	3768757	1.46E-05	2.91E-05
1738	478041.4	3768746	1.42E-05	2.83E-05
1739	478057.5	3768735	1.38E-05	2.75E-05
1740	478073.6	3768724	1.34E-05	2.68E-05
1741	478089.7	3768713	1.30E-05	2.60E-05
1742	478105.7	3768702	1.27E-05	2.53E-05
1743	478121.8	3768691	1.23E-05	2.46E-05
1744	478137.9	3768680	1.20E-05	2.40E-05
1745	478154	3768669	1.17E-05	2.34E-05
1746	478170.1	3768658	1.15E-05	2.29E-05
1747	478186.2	3768647	1.12E-05	2.24E-05
1748	478202.2	3768636	1.10E-05	2.20E-05
1749	478218.3	3768625	1.08E-05	2.17E-05
1750	478234.4	3768614	1.07E-05	2.14E-05
1751	478250.5	3768603	1.06E-05	2.12E-05
1752	478266.6	3768592	1.05E-05	2.10E-05
1753	478282.7	3768581	1.04E-05	2.08E-05
1754	478298.7	3768569	1.04E-05	2.07E-05
1755	478314.8	3768558	1.03E-05	2.07E-05
1756	478330.9	3768547	1.03E-05	2.07E-05
1757	478347	3768536	1.03E-05	2.07E-05
1758	478363.1	3768525	1.04E-05	2.07E-05
1759	478379.2	3768514	1.04E-05	2.08E-05
1760	478395.3	3768503	1.04E-05	2.09E-05
1761	478411.3	3768492	1.05E-05	2.09E-05
1762	478427.4	3768481	1.05E-05	2.10E-05
1763	478443.5	3768470	1.05E-05	2.11E-05
1764	478459.6	3768459	1.06E-05	2.11E-05

1765	478475.7	3768448	1.06E-05	2.12E-05
1766	478491.8	3768437	1.06E-05	2.13E-05
1767	478507.8	3768426	1.06E-05	2.13E-05
1768	478523.9	3768415	1.07E-05	2.13E-05
1769	478540	3768404	1.07E-05	2.13E-05
1770	478556.1	3768393	1.06E-05	2.13E-05
1771	478572.2	3768382	1.06E-05	2.13E-05
1772	478588.3	3768371	1.06E-05	2.13E-05
1773	478604.3	3768360	1.06E-05	2.12E-05
1774	478620.4	3768349	1.06E-05	2.11E-05
1775	478636.5	3768337	1.05E-05	2.11E-05
1776	478652.6	3768326	1.05E-05	2.10E-05
1777	478668.7	3768315	1.05E-05	2.09E-05
1778	478684.8	3768304	1.04E-05	2.08E-05
1779	478700.8	3768293	1.04E-05	2.07E-05
1780	478716.9	3768282	1.03E-05	2.06E-05
1781	478733	3768271	1.03E-05	2.05E-05
1782	478749.1	3768260	1.02E-05	2.05E-05
1783	478765.2	3768249	1.02E-05	2.03E-05
1784	478781.3	3768238	1.01E-05	2.03E-05
1785	478797.3	3768227	1.01E-05	2.02E-05
1786	478813.4	3768216	1.01E-05	2.01E-05
1787	478829.5	3768205	1.00E-05	2.01E-05
1788	478845.6	3768194	1.00E-05	2.00E-05
1789	478861.7	3768183	9.97E-06	1.99E-05
1790	478877.8	3768172	9.95E-06	1.99E-05
1791	478893.9	3768161	9.88E-06	1.98E-05
1792	478909.9	3768150	9.85E-06	1.97E-05
1793	478926	3768139	9.84E-06	1.97E-05
1794	478942.1	3768128	9.84E-06	1.97E-05
1795	478958.2	3768117	9.85E-06	1.97E-05
1796	478974.3	3768106	9.84E-06	1.97E-05
1797	478990.4	3768094	9.84E-06	1.97E-05
1798	479006.4	3768083	9.82E-06	1.96E-05
1799	479022.5	3768072	9.85E-06	1.97E-05
1800	479038.6	3768061	9.88E-06	1.98E-05
1801	479054.7	3768050	9.91E-06	1.98E-05
1802	479070.8	3768039	9.93E-06	1.99E-05
1803	479086.9	3768028	9.97E-06	1.99E-05
1804	479102.9	3768017	1.00E-05	2.00E-05
1805	479151.2	3767984	1.02E-05	2.04E-05
1806	479167.3	3767973	1.02E-05	2.05E-05
1807	479183.4	3767962	1.03E-05	2.06E-05
1808	479199.4	3767951	1.03E-05	2.07E-05
1809	479215.5	3767940	1.04E-05	2.08E-05
1810	479231.6	3767929	1.05E-05	2.09E-05
1811	479247.7	3767918	1.05E-05	2.10E-05
1812	479263.8	3767907	1.06E-05	2.11E-05
1813	479292.8	3767910	1.09E-05	2.18E-05
1814	479305.7	3767925	1.12E-05	2.24E-05
1815	479318.6	3767939	1.15E-05	2.30E-05
1816	479331.6	3767954	1.18E-05	2.36E-05

1817	479344.5	3767969	1.21E-05	2.43E-05
1818	479357.4	3767983	1.24E-05	2.49E-05
1819	479370.4	3767998	1.28E-05	2.55E-05
1820	479383.3	3768013	1.31E-05	2.62E-05
1821	479396.2	3768027	1.34E-05	2.69E-05
1822	479409.1	3768042	1.38E-05	2.76E-05
1823	479422.1	3768056	1.41E-05	2.83E-05
1824	479435	3768071	1.45E-05	2.90E-05
1825	479447.9	3768086	1.49E-05	2.97E-05
1826	479460.9	3768100	1.52E-05	3.04E-05
1827	479473.8	3768115	1.56E-05	3.12E-05
1828	479486.7	3768129	1.60E-05	3.20E-05
1829	479499.6	3768144	1.64E-05	3.28E-05
1830	479512.6	3768159	1.68E-05	3.37E-05
1831	479525.5	3768173	1.73E-05	3.45E-05
1832	479538.4	3768188	1.77E-05	3.55E-05
1833	479551.4	3768203	1.82E-05	3.64E-05
1834	479564.3	3768217	1.87E-05	3.74E-05
1835	479577.2	3768232	1.93E-05	3.85E-05
1836	479590.1	3768246	1.98E-05	3.96E-05
1837	479603.1	3768261	2.04E-05	4.08E-05
1838	479616	3768276	2.10E-05	4.20E-05
1839	479628.9	3768290	2.16E-05	4.33E-05
1840	479641.8	3768305	2.23E-05	4.46E-05
1841	479654.8	3768319	2.30E-05	4.59E-05
1842	479667.7	3768334	2.37E-05	4.74E-05
1843	479719.4	3768393	2.69E-05	5.37E-05
1844	479732.3	3768407	2.77E-05	5.54E-05
1845	479745.3	3768422	2.86E-05	5.71E-05
1846	479758.2	3768436	2.94E-05	5.89E-05
1847	479771.1	3768451	3.04E-05	6.08E-05
1848	479784.1	3768466	3.13E-05	6.27E-05
1849	479797	3768480	3.24E-05	6.47E-05
1850	479809.9	3768495	3.34E-05	6.68E-05
1851	479822.8	3768509	3.45E-05	6.90E-05
1852	479835.8	3768524	3.56E-05	7.13E-05
1853	479848.7	3768539	3.68E-05	7.37E-05
1854	479861.6	3768553	3.81E-05	7.62E-05
1855	479874.5	3768568	3.94E-05	7.88E-05
1856	479887.5	3768583	4.07E-05	8.14E-05
1857	479900.4	3768597	4.21E-05	8.42E-05
1858	479913.3	3768612	4.35E-05	8.70E-05
1859	479926.3	3768626	4.49E-05	8.98E-05
1860	479939.2	3768641	4.63E-05	9.26E-05
1861	479952.1	3768656	4.77E-05	9.54E-05
1862	479965	3768670	4.92E-05	9.83E-05
1863	479978	3768685	5.06E-05	1.01E-04
1864	479990.9	3768699	5.20E-05	1.04E-04
1865	480003.8	3768714	5.34E-05	1.07E-04
1866	480016.8	3768729	5.48E-05	1.10E-04
1867	480029.7	3768743	5.62E-05	1.12E-04
1868	480042.6	3768758	5.76E-05	1.15E-04

1869	480055.5	3768773	5.89E-05	1.18E-04
1870	480068.5	3768787	6.02E-05	1.20E-04
1871	480081.4	3768802	6.14E-05	1.23E-04
1872	480094.3	3768816	6.26E-05	1.25E-04
1873	480107.3	3768831	6.36E-05	1.27E-04
1874	480120.2	3768846	6.46E-05	1.29E-04
1875	480133.1	3768860	6.56E-05	1.31E-04
1876	480146	3768875	6.64E-05	1.33E-04
1877	480159	3768889	6.70E-05	1.34E-04
1878	480171.9	3768904	6.76E-05	1.35E-04
1879	480184.8	3768919	6.81E-05	1.36E-04
1880	480197.7	3768933	6.85E-05	1.37E-04
1881	480210.7	3768948	6.88E-05	1.38E-04
1882	480223.6	3768963	6.90E-05	1.38E-04
1883	480236.5	3768977	6.90E-05	1.38E-04
1884	480249.5	3768992	6.90E-05	1.38E-04
1885	480262.4	3769006	6.88E-05	1.38E-04
1886	480275.3	3769021	6.85E-05	1.37E-04
1887	480288.2	3769036	6.80E-05	1.36E-04
1888	480301.2	3769050	6.76E-05	1.35E-04
1889	480314.1	3769065	6.70E-05	1.34E-04
1890	480327	3769079	6.62E-05	1.32E-04
1891	480340	3769094	6.54E-05	1.31E-04
1892	480352.9	3769109	6.46E-05	1.29E-04
1893	480365.8	3769123	6.37E-05	1.27E-04
1894	480378.7	3769138	6.27E-05	1.25E-04
1895	480391.7	3769153	6.17E-05	1.23E-04
1896	480404.6	3769167	6.06E-05	1.21E-04
1897	480417.5	3769182	5.95E-05	1.19E-04
1898	480430.4	3769196	5.84E-05	1.17E-04
1899	480443.4	3769211	5.72E-05	1.14E-04
1900	477816.2	3768901	2.01E-05	4.02E-05
1901	477811.5	3768920	2.10E-05	4.20E-05
1902	477677.1	3768851	1.72E-05	3.44E-05
1903	477693.1	3768840	1.69E-05	3.38E-05
1904	477709.2	3768829	1.66E-05	3.31E-05
1905	477725.3	3768818	1.63E-05	3.25E-05
1906	477741.3	3768807	1.59E-05	3.19E-05
1907	477757.4	3768796	1.56E-05	3.12E-05
1908	477773.4	3768785	1.53E-05	3.06E-05
1909	477789.5	3768774	1.50E-05	2.99E-05
1910	477805.6	3768763	1.46E-05	2.93E-05
1911	477821.6	3768752	1.43E-05	2.87E-05
1912	477837.7	3768741	1.40E-05	2.80E-05
1913	477853.8	3768730	1.37E-05	2.73E-05
1914	477869.8	3768719	1.33E-05	2.67E-05
1915	477885.9	3768708	1.30E-05	2.60E-05
1916	477901.9	3768697	1.27E-05	2.54E-05
1917	477918	3768686	1.24E-05	2.47E-05
1918	477934.1	3768675	1.21E-05	2.41E-05
1919	477950.1	3768664	1.17E-05	2.35E-05
1920	477966.2	3768653	1.14E-05	2.29E-05

1921	477982.3	3768641	1.11E-05	2.23E-05
1922	477998.3	3768630	1.09E-05	2.17E-05
1923	478014.4	3768619	1.06E-05	2.12E-05
1924	478030.4	3768608	1.03E-05	2.07E-05
1925	478046.5	3768597	1.01E-05	2.02E-05
1926	478062.6	3768586	9.89E-06	1.98E-05
1927	478078.6	3768575	9.71E-06	1.94E-05
1928	478094.7	3768564	9.53E-06	1.91E-05
1929	478110.8	3768553	9.38E-06	1.88E-05
1930	478126.8	3768542	9.24E-06	1.85E-05
1931	478142.9	3768531	9.13E-06	1.83E-05
1932	478158.9	3768520	9.05E-06	1.81E-05
1933	478175	3768509	8.98E-06	1.80E-05
1934	478191.1	3768498	8.92E-06	1.78E-05
1935	478207.1	3768487	8.89E-06	1.78E-05
1936	478223.2	3768476	8.87E-06	1.77E-05
1937	478239.3	3768465	8.87E-06	1.77E-05
1938	478255.3	3768454	8.88E-06	1.78E-05
1939	478271.4	3768443	8.89E-06	1.78E-05
1940	478287.4	3768432	8.91E-06	1.78E-05
1941	478303.5	3768421	8.94E-06	1.79E-05
1942	478319.6	3768410	8.97E-06	1.79E-05
1943	478335.6	3768399	9.01E-06	1.80E-05
1944	478351.7	3768388	9.04E-06	1.81E-05
1945	478367.8	3768377	9.07E-06	1.81E-05
1946	478383.8	3768366	9.10E-06	1.82E-05
1947	478399.9	3768355	9.13E-06	1.83E-05
1948	478415.9	3768344	9.15E-06	1.83E-05
1949	478432	3768333	9.17E-06	1.83E-05
1950	478448.1	3768322	9.18E-06	1.84E-05
1951	478464.1	3768311	9.19E-06	1.84E-05
1952	478480.2	3768299	9.19E-06	1.84E-05
1953	478496.3	3768288	9.19E-06	1.84E-05
1954	478512.3	3768277	9.18E-06	1.84E-05
1955	478528.4	3768266	9.17E-06	1.83E-05
1956	478544.4	3768255	9.15E-06	1.83E-05
1957	478560.5	3768244	9.13E-06	1.83E-05
1958	478576.6	3768233	9.12E-06	1.82E-05
1959	478592.6	3768222	9.09E-06	1.82E-05
1960	478608.7	3768211	9.06E-06	1.81E-05
1961	478624.8	3768200	9.03E-06	1.81E-05
1962	478640.8	3768189	8.99E-06	1.80E-05
1963	478656.9	3768178	8.96E-06	1.79E-05
1964	478673	3768167	8.93E-06	1.79E-05
1965	478689	3768156	8.89E-06	1.78E-05
1966	478705.1	3768145	8.85E-06	1.77E-05
1967	478721.1	3768134	8.82E-06	1.76E-05
1968	478737.2	3768123	8.78E-06	1.76E-05
1969	478753.3	3768112	8.76E-06	1.75E-05
1970	478769.3	3768101	8.72E-06	1.74E-05
1971	478785.4	3768090	8.69E-06	1.74E-05
1972	478801.5	3768079	8.67E-06	1.73E-05

1973	478817.5	3768068	8.65E-06	1.73E-05
1974	478833.6	3768057	8.59E-06	1.72E-05
1975	478849.6	3768046	8.57E-06	1.71E-05
1976	478865.7	3768035	8.55E-06	1.71E-05
1977	478881.8	3768024	8.54E-06	1.71E-05
1978	478897.8	3768013	8.52E-06	1.70E-05
1979	478913.9	3768002	8.51E-06	1.70E-05
1980	478930	3767991	8.48E-06	1.70E-05
1981	478946	3767980	8.48E-06	1.70E-05
1982	478962.1	3767968	8.47E-06	1.69E-05
1983	478978.1	3767957	8.48E-06	1.70E-05
1984	478994.2	3767946	8.50E-06	1.70E-05
1985	479010.3	3767935	8.52E-06	1.70E-05
1986	479026.3	3767924	8.55E-06	1.71E-05
1987	479042.4	3767913	8.57E-06	1.71E-05
1988	479058.5	3767902	8.59E-06	1.72E-05
1989	479074.5	3767891	8.63E-06	1.73E-05
1990	479090.6	3767880	8.67E-06	1.73E-05
1991	479106.6	3767869	8.70E-06	1.74E-05
1992	479154.8	3767836	8.86E-06	1.77E-05
1993	479170.9	3767825	8.92E-06	1.78E-05
1994	479187	3767814	8.97E-06	1.79E-05
1995	479203	3767803	9.02E-06	1.80E-05
1996	479219.1	3767792	9.08E-06	1.82E-05
1997	479235.1	3767781	9.13E-06	1.83E-05
1998	479251.2	3767770	9.19E-06	1.84E-05
1999	479267.3	3767759	9.24E-06	1.85E-05
2000	479283.3	3767748	9.29E-06	1.86E-05
2001	479312.3	3767751	9.58E-06	1.92E-05
2002	479325.2	3767766	9.81E-06	1.96E-05
2003	479338.1	3767781	1.01E-05	2.01E-05
2004	479351	3767795	1.03E-05	2.06E-05
2005	479364	3767810	1.06E-05	2.11E-05
2006	479376.9	3767824	1.08E-05	2.16E-05
2007	479389.8	3767839	1.11E-05	2.22E-05
2008	479402.7	3767854	1.13E-05	2.27E-05
2009	479415.6	3767868	1.16E-05	2.32E-05
2010	479428.5	3767883	1.19E-05	2.38E-05
2011	479441.4	3767897	1.22E-05	2.43E-05
2012	479454.3	3767912	1.24E-05	2.49E-05
2013	479467.2	3767927	1.27E-05	2.54E-05
2014	479480.1	3767941	1.30E-05	2.60E-05
2015	479493.1	3767956	1.33E-05	2.66E-05
2016	479506	3767970	1.36E-05	2.71E-05
2017	479518.9	3767985	1.39E-05	2.77E-05
2018	479531.8	3768000	1.42E-05	2.84E-05
2019	479544.7	3768014	1.45E-05	2.90E-05
2020	479557.6	3768029	1.48E-05	2.96E-05
2021	479570.5	3768043	1.52E-05	3.03E-05
2022	479583.4	3768058	1.55E-05	3.10E-05
2023	479596.3	3768073	1.59E-05	3.17E-05
2024	479609.3	3768087	1.63E-05	3.25E-05

2025	479622.2	3768102	1.66E-05	3.33E-05
2026	479635.1	3768116	1.71E-05	3.41E-05
2027	479648	3768131	1.75E-05	3.50E-05
2028	479660.9	3768145	1.79E-05	3.59E-05
2029	479673.8	3768160	1.84E-05	3.69E-05
2030	479686.7	3768175	1.89E-05	3.78E-05
2031	479699.6	3768189	1.94E-05	3.89E-05
2032	479712.5	3768204	2.00E-05	3.99E-05
2033	479725.5	3768218	2.05E-05	4.10E-05
2034	479738.4	3768233	2.11E-05	4.21E-05
2035	479751.3	3768248	2.17E-05	4.33E-05
2036	479764.2	3768262	2.23E-05	4.45E-05
2037	479777.1	3768277	2.29E-05	4.58E-05
2038	479790	3768291	2.35E-05	4.71E-05
2039	479802.9	3768306	2.42E-05	4.84E-05
2040	479815.8	3768321	2.49E-05	4.97E-05
2041	479828.7	3768335	2.56E-05	5.11E-05
2042	479880.4	3768394	2.86E-05	5.71E-05
2043	479893.3	3768408	2.94E-05	5.88E-05
2044	479906.2	3768423	3.03E-05	6.06E-05
2045	479919.1	3768437	3.12E-05	6.24E-05
2046	479932	3768452	3.21E-05	6.43E-05
2047	479944.9	3768467	3.31E-05	6.62E-05
2048	479957.9	3768481	3.41E-05	6.82E-05
2049	479970.8	3768496	3.52E-05	7.03E-05
2050	479983.7	3768510	3.62E-05	7.24E-05
2051	479996.6	3768525	3.73E-05	7.46E-05
2052	480009.5	3768540	3.84E-05	7.68E-05
2053	480022.4	3768554	3.95E-05	7.90E-05
2054	480035.3	3768569	4.06E-05	8.12E-05
2055	480048.2	3768583	4.18E-05	8.35E-05
2056	480061.1	3768598	4.29E-05	8.58E-05
2057	480074	3768613	4.41E-05	8.81E-05
2058	480087	3768627	4.52E-05	9.04E-05
2059	480099.9	3768642	4.63E-05	9.26E-05
2060	480112.8	3768656	4.74E-05	9.48E-05
2061	480125.7	3768671	4.85E-05	9.71E-05
2062	480138.6	3768686	4.96E-05	9.92E-05
2063	480151.5	3768700	5.07E-05	1.01E-04
2064	480164.4	3768715	5.17E-05	1.03E-04
2065	480177.3	3768729	5.27E-05	1.05E-04
2066	480190.2	3768744	5.36E-05	1.07E-04
2067	480203.2	3768759	5.45E-05	1.09E-04
2068	480216.1	3768773	5.54E-05	1.11E-04
2069	480229	3768788	5.62E-05	1.12E-04
2070	480241.9	3768802	5.70E-05	1.14E-04
2071	480254.8	3768817	5.76E-05	1.15E-04
2072	480267.7	3768831	5.82E-05	1.16E-04
2073	480280.6	3768846	5.88E-05	1.18E-04
2074	480293.5	3768861	5.92E-05	1.18E-04
2075	480306.4	3768875	5.96E-05	1.19E-04
2076	480319.4	3768890	5.99E-05	1.20E-04

2077	480332.3	3768904	6.01E-05	1.20E-04
2078	480345.2	3768919	6.03E-05	1.21E-04
2079	480358.1	3768934	6.03E-05	1.21E-04
2080	480371	3768948	6.03E-05	1.21E-04
2081	480383.9	3768963	6.02E-05	1.20E-04
2082	480396.8	3768977	6.00E-05	1.20E-04
2083	480409.7	3768992	5.97E-05	1.19E-04
2084	480422.6	3769007	5.93E-05	1.19E-04
2085	480435.6	3769021	5.89E-05	1.18E-04
2086	480448.5	3769036	5.84E-05	1.17E-04
2087	480461.4	3769050	5.79E-05	1.16E-04
2088	480474.3	3769065	5.72E-05	1.14E-04
2089	480487.2	3769080	5.65E-05	1.13E-04
2090	480500.1	3769094	5.58E-05	1.12E-04
2091	480513	3769109	5.51E-05	1.10E-04
2092	480525.9	3769123	5.43E-05	1.09E-04
2093	480538.8	3769138	5.34E-05	1.07E-04
2094	480551.8	3769153	5.25E-05	1.05E-04
2095	480564.7	3769167	5.16E-05	1.03E-04
2096	480577.6	3769182	5.07E-05	1.01E-04
2097	480590.5	3769196	4.97E-05	9.95E-05
2098	480603.4	3769211	4.88E-05	9.76E-05
2099	477661	3768862	1.75E-05	3.51E-05
2100	477656.3	3768881	1.82E-05	3.65E-05
2101	478291.7	3768985	2.94E-05	5.89E-05
2102	478139.1	3768937	2.42E-05	4.84E-05
2103	477986.6	3768888	2.04E-05	4.08E-05
2104	477834	3768840	1.75E-05	3.50E-05
2105	477681.5	3768792	1.52E-05	3.05E-05
2106	478850.2	3769100	7.93E-05	1.59E-04
2107	478781.1	3769060	5.54E-05	1.11E-04
2108	478573.8	3768939	2.68E-05	5.35E-05
2109	478504.7	3768899	2.26E-05	4.52E-05
2110	478228.2	3768738	1.37E-05	2.75E-05
2111	478090	3768657	1.14E-05	2.29E-05
2112	477951.8	3768577	9.76E-06	1.95E-05
2113	477813.6	3768496	8.49E-06	1.70E-05
2114	479064	3769252	9.90E-04	1.98E-03
2115	479038.9	3769256	8.40E-04	1.68E-03
2116	479021.2	3769247	6.19E-04	1.24E-03
2117	479003.4	3769238	4.75E-04	9.51E-04
2118	478840.5	3769118	8.54E-05	1.71E-04
2119	478769.5	3769081	5.98E-05	1.20E-04
2120	478698.5	3769044	4.50E-05	9.00E-05
2121	478683.9	3769072	5.06E-05	1.01E-04
2122	478612.9	3769035	3.99E-05	7.98E-05
2123	478491.1	3768923	2.43E-05	4.86E-05
2124	478478.2	3768947	2.63E-05	5.27E-05
2125	478350.3	3768847	1.86E-05	3.71E-05
2126	478336.2	3768874	2.01E-05	4.02E-05
2127	478186.9	3768814	1.68E-05	3.37E-05
2128	478066.5	3768700	1.26E-05	2.52E-05

2129	478080.5	3768674	1.19E-05	2.38E-05
2130	477923.9	3768627	1.09E-05	2.17E-05
2131	477936.5	3768604	1.03E-05	2.07E-05
2132	477910.2	3768653	1.15E-05	2.30E-05
2133	477782.6	3768552	9.46E-06	1.89E-05
2134	477796.8	3768526	9.00E-06	1.80E-05
2135	477768.2	3768579	9.99E-06	2.00E-05
2136	479051.7	3769274	1.36E-03	2.72E-03
2137	479028.2	3769274	1.06E-03	2.13E-03
2138	479011.2	3769263	7.48E-04	1.50E-03
2139	478960.1	3769232	3.40E-04	6.79E-04
2140	478755.6	3769106	6.67E-05	1.33E-04
2141	479040.4	3769290	1.84E-03	3.67E-03
2142	478985.8	3769262	6.13E-04	1.23E-03
2143	478923	3769213	2.32E-04	4.64E-04
2144	478592.4	3768921	2.57E-05	5.13E-05
2145	478529.6	3768872	2.12E-05	4.24E-05
2146	478278.3	3768674	1.21E-05	2.41E-05
2147	478263.3	3768693	1.25E-05	2.49E-05
2148	478152.6	3768575	9.79E-06	1.96E-05
2149	478137.6	3768594	1.01E-05	2.02E-05
2150	478027	3768475	8.20E-06	1.64E-05
2151	478012	3768494	8.42E-06	1.68E-05
2152	477901.3	3768376	7.01E-06	1.40E-05
2153	477886.3	3768395	7.19E-06	1.44E-05
2154	479026.7	3769306	2.60E-03	5.19E-03
2155	479011.6	3769293	1.48E-03	2.96E-03
2156	478996.6	3769280	9.39E-04	1.88E-03
2157	478943.9	3769249	3.95E-04	7.91E-04
2158	478416.4	3768759	1.51E-05	3.03E-05
2159	478295.8	3768653	1.17E-05	2.34E-05
2160	478175.3	3768548	9.46E-06	1.89E-05
2161	478054.7	3768443	7.89E-06	1.58E-05
2162	478039.7	3768460	8.04E-06	1.61E-05
2163	477934.1	3768338	6.75E-06	1.35E-05
2164	477919.1	3768355	6.85E-06	1.37E-05
2165	479012.6	3769321	3.22E-03	6.45E-03
2166	478998.9	3769306	1.81E-03	3.62E-03
2167	478975.9	3769300	1.24E-03	2.48E-03
2168	478971.5	3769277	7.36E-04	1.47E-03
2169	478907.3	3769228	2.57E-04	5.14E-04
2170	478879.9	3769199	1.73E-04	3.46E-04
2171	478624.5	3768890	2.44E-05	4.87E-05
2172	478605.8	3768907	2.50E-05	5.00E-05
2173	478460	3768715	1.44E-05	2.89E-05
2174	478441.3	3768732	1.46E-05	2.93E-05
2175	478350.3	3768598	1.12E-05	2.23E-05
2176	478331.7	3768616	1.13E-05	2.26E-05
2177	478222	3768499	9.09E-06	1.82E-05
2178	478131	3768365	7.55E-06	1.51E-05
2179	478112.4	3768383	7.59E-06	1.52E-05
2180	478021.4	3768249	6.46E-06	1.29E-05

2181	478002.7	3768266	6.49E-06	1.30E-05
2182	478995.9	3769336	3.46E-03	6.93E-03
2183	478983.2	3769320	2.07E-03	4.13E-03
2184	478961.2	3769312	1.38E-03	2.75E-03
2185	478957.8	3769289	8.46E-04	1.69E-03
2186	478923	3769266	4.60E-04	9.20E-04
2187	478483.9	3768695	1.43E-05	2.86E-05
2188	478382.2	3768571	1.11E-05	2.22E-05
2189	478178.8	3768324	7.54E-06	1.51E-05
2190	478160.1	3768340	7.53E-06	1.51E-05
2191	478077	3768201	6.47E-06	1.29E-05
2192	478058.4	3768216	6.46E-06	1.29E-05
2193	478981.1	3769347	3.39E-03	6.78E-03
2194	478651.5	3768870	2.40E-05	4.81E-05
2195	478511.9	3768674	1.43E-05	2.86E-05
2196	478418.9	3768544	1.11E-05	2.22E-05
2197	478232.8	3768284	7.61E-06	1.52E-05
2198	478139.7	3768154	6.55E-06	1.31E-05
2199	478957.6	3769339	2.14E-03	4.29E-03
2200	478946.3	3769322	1.43E-03	2.86E-03
2201	478935	3769306	9.71E-04	1.94E-03
2202	478889.8	3769240	2.79E-04	5.58E-04
2203	478156.3	3768142	6.57E-06	1.31E-05
2204	478957	3769362	3.15E-03	6.30E-03
2205	478906.2	3769276	4.96E-04	9.91E-04
2206	478676.8	3768854	2.41E-05	4.82E-05
2207	478554.9	3768647	1.45E-05	2.89E-05
2208	478473.7	3768510	1.13E-05	2.26E-05
2209	478311.2	3768234	7.75E-06	1.55E-05
2210	478229.9	3768096	6.68E-06	1.34E-05
2211	478932.8	3769354	2.10E-03	4.19E-03
2212	478922.4	3769337	1.46E-03	2.92E-03
2213	478912	3769320	1.03E-03	2.06E-03
2214	478870.2	3769251	3.01E-04	6.01E-04
2215	478862.5	3769209	1.82E-04	3.63E-04
2216	478807.6	3769149	9.62E-05	1.92E-04
2217	478528.8	3768663	1.43E-05	2.87E-05
2218	478452.4	3768522	1.12E-05	2.24E-05
2219	478287.7	3768248	7.71E-06	1.54E-05
2220	478265.3	3768262	7.66E-06	1.53E-05
2221	478205.3	3768111	6.64E-06	1.33E-05
2222	478181.8	3768125	6.61E-06	1.32E-05
2223	478930.8	3769377	3.12E-03	6.24E-03
2224	478886.1	3769287	5.34E-04	1.07E-03
2225	478579.3	3768636	1.46E-05	2.92E-05
2226	478507.7	3768493	1.14E-05	2.29E-05
2227	478364.5	3768206	7.87E-06	1.57E-05
2228	478292.9	3768063	6.77E-06	1.35E-05
2229	478909.9	3769388	3.18E-03	6.37E-03
2230	478910.9	3769365	2.10E-03	4.19E-03
2231	478901.7	3769347	1.47E-03	2.94E-03
2232	478892.5	3769329	1.05E-03	2.10E-03

2233	478863.9	3769299	5.72E-04	1.14E-03
2234	478845.5	3769263	3.24E-04	6.49E-04
2235	478837.3	3769223	1.94E-04	3.89E-04
2236	478808.7	3769192	1.35E-04	2.71E-04
2237	478790.3	3769157	9.82E-05	1.96E-04
2238	478340.7	3768218	7.82E-06	1.56E-05
2239	478268.1	3768076	6.74E-06	1.35E-05
2240	478248.5	3768086	6.71E-06	1.34E-05
2241	478893.6	3769396	3.16E-03	6.32E-03
2242	478884.5	3769378	2.16E-03	4.32E-03
2243	478875.4	3769360	1.52E-03	3.05E-03
2244	478866.3	3769343	1.10E-03	2.20E-03
2245	478811.7	3769236	2.11E-04	4.21E-04
2246	478739	3769093	6.05E-05	1.21E-04
2247	478835.4	3769313	6.19E-04	1.24E-03
2248	478817.8	3769277	3.56E-04	7.12E-04
2249	478782.8	3769205	1.45E-04	2.90E-04
2250	478675	3768946	3.04E-05	6.08E-05
2251	478862.2	3769412	2.89E-03	5.77E-03
2252	478868.3	3769386	2.16E-03	4.32E-03
2253	478837.1	3769403	2.10E-03	4.19E-03
2254	478858.8	3769368	1.55E-03	3.10E-03
2255	478827.6	3769385	1.59E-03	3.19E-03
2256	478849.3	3769351	1.13E-03	2.27E-03
2257	478818.1	3769368	1.20E-03	2.41E-03
2258	478814.8	3769324	6.61E-04	1.32E-03
2259	478783.5	3769341	7.21E-04	1.44E-03
2260	478795.8	3769289	3.87E-04	7.74E-04
2261	478764.6	3769306	4.33E-04	8.66E-04
2262	478792.4	3769245	2.25E-04	4.50E-04
2263	478761.2	3769262	2.54E-04	5.09E-04
2264	478757.8	3769218	1.58E-04	3.15E-04
2265	478726.6	3769235	1.77E-04	3.54E-04
2266	478707.6	3769200	1.23E-04	2.46E-04
2267	478716.5	3769104	6.25E-05	1.25E-04
2268	478650.3	3768959	3.06E-05	6.12E-05
2269	478625	3768972	3.12E-05	6.24E-05
2270	478593.8	3768989	3.24E-05	6.48E-05
2271	478587	3768902	2.41E-05	4.83E-05
2272	478555.8	3768918	2.47E-05	4.94E-05
2273	478441.9	3768707	1.40E-05	2.81E-05
2274	478397.2	3768549	1.10E-05	2.19E-05
2275	478245.4	3768268	7.59E-06	1.52E-05
2276	478214.2	3768285	7.51E-06	1.50E-05
2277	478865.5	3769484	3.24E-03	6.47E-03
2278	478897.4	3769485	4.00E-03	8.00E-03
2279	478839.5	3769496	2.52E-03	5.04E-03
2280	478865	3769504	2.61E-03	5.22E-03
2281	478897	3769505	2.88E-03	5.75E-03
2282	478837.2	3769515	2.10E-03	4.19E-03
2283	478803	3769487	2.16E-03	4.32E-03
2284	478815.6	3769518	1.89E-03	3.78E-03

2285	478783	3769492	1.91E-03	3.82E-03
2286	478800.6	3769419	1.85E-03	3.70E-03
2287	478788.3	3769516	1.74E-03	3.47E-03
2288	478764.6	3769497	1.71E-03	3.43E-03
2289	478790.1	3769404	1.52E-03	3.04E-03
2290	478738	3769516	1.43E-03	2.85E-03
2291	478720.2	3769483	1.40E-03	2.81E-03
2292	478745.5	3769426	1.37E-03	2.73E-03
2293	478758.2	3769398	1.19E-03	2.38E-03
2294	478770.9	3769369	9.55E-04	1.91E-03
2295	478687.1	3769516	1.17E-03	2.35E-03
2296	478681.3	3769492	1.18E-03	2.36E-03
2297	478706.9	3769435	1.16E-03	2.32E-03
2298	478719.7	3769406	1.04E-03	2.08E-03
2299	478732.5	3769377	8.61E-04	1.72E-03
2300	478745.3	3769349	6.73E-04	1.35E-03
2301	478861.8	3769644	3.41E-04	6.82E-04
2302	478893.8	3769645	3.21E-04	6.42E-04
2303	478832.6	3769674	2.64E-04	5.29E-04
2304	478808	3769654	3.52E-04	7.03E-04
2305	478642.5	3769501	1.01E-03	2.02E-03
2306	478681.1	3769415	9.15E-04	1.83E-03
2307	478694	3769386	7.81E-04	1.56E-03
2308	478706.9	3769357	6.30E-04	1.26E-03
2309	478719.8	3769328	4.86E-04	9.72E-04
2310	478732.7	3769299	3.64E-04	7.28E-04
2311	478860.9	3769684	2.29E-04	4.58E-04
2312	478892.8	3769685	2.24E-04	4.47E-04
2313	478831.6	3769714	1.84E-04	3.68E-04
2314	478807	3769694	2.30E-04	4.59E-04
2315	478782.3	3769674	3.02E-04	6.05E-04
2316	478757.6	3769654	4.06E-04	8.13E-04
2317	478603.6	3769510	8.76E-04	1.75E-03
2318	478642.5	3769423	8.13E-04	1.63E-03
2319	478655.4	3769395	7.11E-04	1.42E-03
2320	478668.3	3769366	5.89E-04	1.18E-03
2321	478681.3	3769337	4.66E-04	9.32E-04
2322	478694.2	3769308	3.58E-04	7.16E-04
2323	478707.2	3769279	2.70E-04	5.40E-04
2324	478860	3769724	1.67E-04	3.34E-04
2325	478891.9	3769725	1.67E-04	3.33E-04
2326	478830.7	3769754	1.38E-04	2.76E-04
2327	478805.9	3769734	1.63E-04	3.25E-04
2328	478781.2	3769714	2.02E-04	4.05E-04
2329	478756.4	3769694	2.64E-04	5.27E-04
2330	478731.6	3769674	3.49E-04	6.98E-04
2331	478706.9	3769654	4.54E-04	9.08E-04
2332	478564.7	3769520	7.71E-04	1.54E-03
2333	478577.7	3769491	7.89E-04	1.58E-03
2334	478603.7	3769432	7.26E-04	1.45E-03
2335	478616.7	3769403	6.48E-04	1.30E-03
2336	478629.7	3769374	5.50E-04	1.10E-03

2337	478642.7	3769345	4.47E-04	8.94E-04
2338	478655.7	3769316	3.51E-04	7.01E-04
2339	478668.7	3769287	2.70E-04	5.40E-04
2340	478681.6	3769258	2.06E-04	4.12E-04
2341	478694.6	3769229	1.58E-04	3.16E-04
2342	478859	3769764	1.29E-04	2.58E-04
2343	478891	3769765	1.30E-04	2.60E-04
2344	478829.2	3769834	8.87E-05	1.77E-04
2345	478805.2	3769815	9.75E-05	1.95E-04
2346	478781.1	3769795	1.10E-04	2.20E-04
2347	478757.1	3769776	1.29E-04	2.57E-04
2348	478733	3769757	1.57E-04	3.14E-04
2349	478709	3769737	1.98E-04	3.96E-04
2350	478684.9	3769718	2.53E-04	5.07E-04
2351	478660.8	3769698	3.22E-04	6.43E-04
2352	478636.8	3769679	3.97E-04	7.95E-04
2353	478612.7	3769660	4.73E-04	9.47E-04
2354	478588.7	3769640	5.41E-04	1.08E-03
2355	478499.4	3769511	6.29E-04	1.26E-03
2356	478537.2	3769426	5.52E-04	1.10E-03
2357	478549.8	3769398	4.92E-04	9.84E-04
2358	478562.4	3769369	4.22E-04	8.44E-04
2359	478575.1	3769341	3.51E-04	7.02E-04
2360	478587.7	3769313	2.84E-04	5.69E-04
2361	478600.3	3769285	2.26E-04	4.53E-04
2362	478612.9	3769257	1.79E-04	3.58E-04
2363	478625.5	3769228	1.42E-04	2.84E-04
2364	478638.1	3769200	1.13E-04	2.27E-04
2365	478857.2	3769844	8.55E-05	1.71E-04
2366	478889.2	3769845	8.65E-05	1.73E-04
2367	478827.3	3769914	6.36E-05	1.27E-04
2368	478803	3769895	6.81E-05	1.36E-04
2369	478778.7	3769875	7.36E-05	1.47E-04
2370	478754.5	3769855	8.10E-05	1.62E-04
2371	478730.2	3769836	9.15E-05	1.83E-04
2372	478706	3769816	1.07E-04	2.14E-04
2373	478681.7	3769797	1.29E-04	2.59E-04
2374	478657.4	3769777	1.61E-04	3.22E-04
2375	478633.2	3769758	2.02E-04	4.03E-04
2376	478608.9	3769738	2.52E-04	5.03E-04
2377	478584.6	3769718	3.08E-04	6.15E-04
2378	478560.4	3769699	3.65E-04	7.30E-04
2379	478536.1	3769679	4.19E-04	8.39E-04
2380	478511.9	3769660	4.65E-04	9.29E-04
2381	478487.6	3769640	4.97E-04	9.95E-04
2382	478421.8	3769529	5.18E-04	1.04E-03
2383	478434.5	3769500	5.15E-04	1.03E-03
2384	478472.7	3769415	4.27E-04	8.54E-04
2385	478485.4	3769387	3.77E-04	7.54E-04
2386	478498.1	3769358	3.24E-04	6.47E-04
2387	478510.8	3769330	2.71E-04	5.41E-04
2388	478523.6	3769301	2.22E-04	4.44E-04

2389	478536.3	3769273	1.80E-04	3.59E-04
2390	478549	3769244	1.45E-04	2.90E-04
2391	478561.7	3769216	1.17E-04	2.35E-04
2392	478574.5	3769187	9.58E-05	1.92E-04
2393	478587.2	3769159	7.92E-05	1.58E-04
2394	478599.9	3769130	6.63E-05	1.33E-04
2395	478612.6	3769102	5.62E-05	1.12E-04
2396	478855.4	3769924	6.18E-05	1.24E-04
2397	478887.3	3769925	6.23E-05	1.25E-04
2398	478825.4	3769994	4.84E-05	9.67E-05
2399	478800.9	3769974	5.12E-05	1.02E-04
2400	478776.5	3769955	5.44E-05	1.09E-04
2401	478752.1	3769935	5.81E-05	1.16E-04
2402	478727.7	3769915	6.29E-05	1.26E-04
2403	478703.3	3769896	6.94E-05	1.39E-04
2404	478678.9	3769876	7.85E-05	1.57E-04
2405	478654.5	3769856	9.14E-05	1.83E-04
2406	478630.1	3769837	1.10E-04	2.19E-04
2407	478605.6	3769817	1.34E-04	2.68E-04
2408	478581.2	3769797	1.65E-04	3.31E-04
2409	478556.8	3769777	2.03E-04	4.06E-04
2410	478532.4	3769758	2.46E-04	4.92E-04
2411	478508	3769738	2.91E-04	5.81E-04
2412	478483.6	3769718	3.34E-04	6.68E-04
2413	478459.2	3769699	3.73E-04	7.46E-04
2414	478434.7	3769679	4.05E-04	8.09E-04
2415	478410.3	3769659	4.26E-04	8.53E-04
2416	478385.9	3769639	4.37E-04	8.75E-04
2417	478395.3	3769433	3.73E-04	7.47E-04
2418	478408.1	3769404	3.37E-04	6.74E-04
2419	478420.9	3769375	2.97E-04	5.93E-04
2420	478433.7	3769347	2.55E-04	5.11E-04
2421	478446.5	3769318	2.15E-04	4.31E-04
2422	478459.3	3769289	1.79E-04	3.58E-04
2423	478472.1	3769261	1.47E-04	2.94E-04
2424	478484.9	3769232	1.21E-04	2.42E-04
2425	478497.7	3769204	9.96E-05	1.99E-04
2426	478523.3	3769146	6.96E-05	1.39E-04
2427	478536.1	3769118	5.90E-05	1.18E-04
2428	478548.9	3769089	5.06E-05	1.01E-04
2429	478853.5	3770004	4.72E-05	9.44E-05
2430	478885.5	3770005	4.74E-05	9.48E-05
2431	478823.5	3770074	3.84E-05	7.67E-05
2432	478798.9	3770054	4.03E-05	8.06E-05
2433	478774.4	3770034	4.24E-05	8.49E-05
2434	478749.9	3770015	4.48E-05	8.96E-05
2435	478725.4	3769995	4.75E-05	9.50E-05
2436	478700.8	3769975	5.08E-05	1.02E-04
2437	478676.3	3769955	5.51E-05	1.10E-04
2438	478651.8	3769936	6.08E-05	1.22E-04
2439	478627.3	3769916	6.87E-05	1.37E-04
2440	478602.7	3769896	7.97E-05	1.59E-04

2441	478578.2	3769876	9.46E-05	1.89E-04
2442	478553.7	3769856	1.14E-04	2.28E-04
2443	478529.1	3769837	1.39E-04	2.78E-04
2444	478504.6	3769817	1.68E-04	3.37E-04
2445	478480.1	3769797	2.01E-04	4.02E-04
2446	478455.6	3769777	2.36E-04	4.73E-04
2447	478431	3769757	2.72E-04	5.43E-04
2448	478406.5	3769738	3.05E-04	6.09E-04
2449	478382	3769718	3.33E-04	6.66E-04
2450	478357.5	3769698	3.56E-04	7.11E-04
2451	478332.9	3769678	3.70E-04	7.40E-04
2452	478308.4	3769658	3.77E-04	7.55E-04
2453	478283.9	3769639	3.77E-04	7.53E-04
2454	478330.7	3769422	3.03E-04	6.06E-04
2455	478343.6	3769393	2.72E-04	5.44E-04
2456	478356.4	3769364	2.39E-04	4.79E-04
2457	478369.3	3769336	2.06E-04	4.13E-04
2458	478382.2	3769307	1.75E-04	3.51E-04
2459	478395	3769278	1.47E-04	2.95E-04
2460	478407.9	3769249	1.23E-04	2.46E-04
2461	478420.7	3769220	1.03E-04	2.06E-04
2462	478433.6	3769192	8.61E-05	1.72E-04
2463	478446.5	3769163	7.27E-05	1.45E-04
2464	478459.3	3769134	6.20E-05	1.24E-04
2465	478472.2	3769105	5.33E-05	1.07E-04
2466	478485.1	3769077	4.61E-05	9.23E-05
2467	478497.9	3769048	4.03E-05	8.05E-05
2468	478536.5	3768962	2.83E-05	5.66E-05
2469	478851.7	3770084	3.75E-05	7.50E-05
2470	478883.7	3770085	3.76E-05	7.52E-05
2471	478821.6	3770154	3.14E-05	6.29E-05
2472	478797	3770134	3.29E-05	6.57E-05
2473	478772.4	3770114	3.44E-05	6.87E-05
2474	478747.7	3770094	3.60E-05	7.20E-05
2475	478723.1	3770075	3.78E-05	7.56E-05
2476	478698.5	3770055	3.98E-05	7.97E-05
2477	478673.9	3770035	4.22E-05	8.45E-05
2478	478649.3	3770015	4.52E-05	9.04E-05
2479	478624.7	3769995	4.90E-05	9.81E-05
2480	478600.1	3769975	5.41E-05	1.08E-04
2481	478575.4	3769955	6.11E-05	1.22E-04
2482	478550.8	3769935	7.05E-05	1.41E-04
2483	478526.2	3769916	8.30E-05	1.66E-04
2484	478501.6	3769896	9.89E-05	1.98E-04
2485	478477	3769876	1.19E-04	2.37E-04
2486	478452.4	3769856	1.42E-04	2.84E-04
2487	478427.8	3769836	1.68E-04	3.37E-04
2488	478403.1	3769816	1.97E-04	3.93E-04
2489	478378.5	3769796	2.25E-04	4.51E-04
2490	478353.9	3769777	2.53E-04	5.06E-04
2491	478329.3	3769757	2.78E-04	5.56E-04
2492	478304.7	3769737	2.99E-04	5.98E-04

2493	478280.1	3769717	3.15E-04	6.30E-04
2494	478255.5	3769697	3.25E-04	6.50E-04
2495	478230.8	3769677	3.30E-04	6.59E-04
2496	478206.2	3769657	3.28E-04	6.57E-04
2497	478181.6	3769638	3.22E-04	6.45E-04
2498	478253.2	3769440	2.73E-04	5.45E-04
2499	478266.1	3769411	2.49E-04	4.98E-04
2500	478279	3769382	2.23E-04	4.46E-04
2501	478291.9	3769353	1.96E-04	3.93E-04
2502	478304.8	3769324	1.70E-04	3.41E-04
2503	478317.8	3769296	1.46E-04	2.92E-04
2504	478330.7	3769267	1.24E-04	2.48E-04
2505	478343.6	3769238	1.05E-04	2.10E-04
2506	478356.5	3769209	8.87E-05	1.77E-04
2507	478382.3	3769151	6.47E-05	1.29E-04
2508	478395.2	3769122	5.58E-05	1.12E-04
2509	478408.1	3769093	4.85E-05	9.70E-05
2510	478433.9	3769036	3.74E-05	7.48E-05
2511	478446.8	3769007	3.31E-05	6.62E-05
2512	478459.8	3768978	2.94E-05	5.89E-05
2513	478849.9	3770164	3.08E-05	6.16E-05
2514	478881.8	3770165	3.08E-05	6.17E-05
2515	478817.9	3770314	2.27E-05	4.54E-05
2516	478793.1	3770294	2.35E-05	4.70E-05
2517	478768.4	3770274	2.44E-05	4.87E-05
2518	478743.6	3770254	2.53E-05	5.06E-05
2519	478718.9	3770234	2.63E-05	5.26E-05
2520	478694.1	3770214	2.73E-05	5.47E-05
2521	478669.4	3770194	2.85E-05	5.70E-05
2522	478644.7	3770174	2.98E-05	5.95E-05
2523	478619.9	3770154	3.12E-05	6.24E-05
2524	478595.2	3770134	3.28E-05	6.56E-05
2525	478570.4	3770114	3.48E-05	6.95E-05
2526	478545.7	3770094	3.72E-05	7.45E-05
2527	478520.9	3770074	4.04E-05	8.08E-05
2528	478496.2	3770054	4.45E-05	8.91E-05
2529	478471.5	3770034	5.00E-05	9.99E-05
2530	478446.7	3770014	5.70E-05	1.14E-04
2531	478422	3769994	6.60E-05	1.32E-04
2532	478397.2	3769974	7.70E-05	1.54E-04
2533	478372.5	3769954	9.03E-05	1.81E-04
2534	478347.8	3769935	1.06E-04	2.12E-04
2535	478323	3769915	1.23E-04	2.47E-04
2536	478298.3	3769895	1.42E-04	2.84E-04
2537	478273.5	3769875	1.62E-04	3.23E-04
2538	478248.8	3769855	1.81E-04	3.63E-04
2539	478224	3769835	2.00E-04	4.01E-04
2540	478199.3	3769815	2.18E-04	4.35E-04
2541	478174.6	3769795	2.32E-04	4.65E-04
2542	478149.8	3769775	2.44E-04	4.88E-04
2543	478125.1	3769755	2.53E-04	5.05E-04
2544	478100.3	3769735	2.58E-04	5.15E-04

2545	478075.6	3769715	2.59E-04	5.18E-04
2546	478050.8	3769695	2.57E-04	5.14E-04
2547	478026.1	3769675	2.52E-04	5.05E-04
2548	478085.1	3769505	2.37E-04	4.74E-04
2549	478098.1	3769476	2.25E-04	4.49E-04
2550	478111	3769447	2.10E-04	4.20E-04
2551	478124	3769418	1.93E-04	3.87E-04
2552	478137	3769389	1.76E-04	3.51E-04
2553	478150	3769360	1.57E-04	3.15E-04
2554	478163	3769331	1.39E-04	2.78E-04
2555	478175.9	3769302	1.22E-04	2.44E-04
2556	478188.9	3769273	1.06E-04	2.12E-04
2557	478201.9	3769244	9.17E-05	1.83E-04
2558	478214.9	3769215	7.93E-05	1.59E-04
2559	478240.8	3769157	5.98E-05	1.20E-04
2560	478253.8	3769128	5.24E-05	1.05E-04
2561	478266.8	3769099	4.62E-05	9.24E-05
2562	478279.7	3769070	4.10E-05	8.19E-05
2563	478299.2	3769026	3.46E-05	6.91E-05
2564	478331.6	3768954	2.64E-05	5.28E-05
2565	478344.6	3768925	2.38E-05	4.77E-05
2566	478357.6	3768896	2.16E-05	4.32E-05
2567	478370.6	3768867	1.97E-05	3.94E-05
2568	478383.5	3768838	1.81E-05	3.63E-05
2569	478846.2	3770324	2.23E-05	4.46E-05
2570	478878.2	3770325	2.23E-05	4.46E-05
2571	478814.1	3770474	1.75E-05	3.51E-05
2572	478789.3	3770454	1.80E-05	3.61E-05
2573	478764.5	3770434	1.86E-05	3.72E-05
2574	478739.6	3770414	1.91E-05	3.83E-05
2575	478714.8	3770394	1.98E-05	3.95E-05
2576	478690	3770374	2.04E-05	4.08E-05
2577	478665.2	3770354	2.11E-05	4.22E-05
2578	478640.3	3770334	2.19E-05	4.37E-05
2579	478615.5	3770314	2.27E-05	4.53E-05
2580	478590.7	3770293	2.35E-05	4.71E-05
2581	478565.8	3770273	2.45E-05	4.89E-05
2582	478541	3770253	2.55E-05	5.10E-05
2583	478516.2	3770233	2.66E-05	5.33E-05
2584	478491.3	3770213	2.80E-05	5.61E-05
2585	478466.5	3770193	2.97E-05	5.94E-05
2586	478441.7	3770173	3.18E-05	6.36E-05
2587	478416.8	3770153	3.45E-05	6.89E-05
2588	478392	3770133	3.79E-05	7.57E-05
2589	478367.2	3770113	4.22E-05	8.44E-05
2590	478342.4	3770093	4.76E-05	9.52E-05
2591	478317.5	3770073	5.42E-05	1.08E-04
2592	478292.7	3770053	6.22E-05	1.24E-04
2593	478267.9	3770033	7.17E-05	1.43E-04
2594	478243	3770013	8.26E-05	1.65E-04
2595	478218.2	3769993	9.48E-05	1.90E-04
2596	478193.4	3769973	1.08E-04	2.16E-04

2597	478168.5	3769953	1.22E-04	2.44E-04
2598	478143.7	3769933	1.36E-04	2.73E-04
2599	478118.9	3769913	1.51E-04	3.01E-04
2600	478094	3769893	1.64E-04	3.28E-04
2601	478069.2	3769873	1.76E-04	3.53E-04
2602	478044.4	3769853	1.87E-04	3.75E-04
2603	478019.6	3769833	1.96E-04	3.93E-04
2604	477994.7	3769813	2.03E-04	4.07E-04
2605	477969.9	3769792	2.08E-04	4.16E-04
2606	477945.1	3769772	2.11E-04	4.22E-04
2607	477870.6	3769712	2.06E-04	4.11E-04
2608	477864.7	3769688	2.05E-04	4.10E-04
2609	477877.7	3769659	2.07E-04	4.14E-04
2610	477890.7	3769629	2.08E-04	4.16E-04
2611	477942.8	3769513	1.89E-04	3.79E-04
2612	477955.8	3769484	1.79E-04	3.59E-04
2613	477968.8	3769455	1.68E-04	3.37E-04
2614	477981.9	3769426	1.56E-04	3.12E-04
2615	477994.9	3769396	1.43E-04	2.86E-04
2616	478007.9	3769367	1.30E-04	2.59E-04
2617	478020.9	3769338	1.16E-04	2.33E-04
2618	478034	3769309	1.04E-04	2.07E-04
2619	478047	3769280	9.18E-05	1.84E-04
2620	478060	3769251	8.09E-05	1.62E-04
2621	478073	3769222	7.11E-05	1.42E-04
2622	478086	3769193	6.25E-05	1.25E-04
2623	478099.1	3769163	5.52E-05	1.10E-04
2624	478112.1	3769134	4.89E-05	9.78E-05
2625	478125.1	3769105	4.36E-05	8.72E-05
2626	478138.1	3769076	3.91E-05	7.81E-05
2627	478151.2	3769047	3.52E-05	7.05E-05
2628	478164.2	3769018	3.19E-05	6.38E-05
2629	478177.2	3768989	2.89E-05	5.79E-05
2630	478190.2	3768959	2.63E-05	5.26E-05
2631	478222.8	3768887	2.09E-05	4.18E-05
2632	478235.8	3768858	1.91E-05	3.82E-05
2633	478248.8	3768828	1.75E-05	3.50E-05
2634	478261.8	3768799	1.61E-05	3.23E-05
2635	478274.9	3768770	1.49E-05	2.99E-05
2636	478313.9	3768683	1.24E-05	2.49E-05
2637	478327	3768654	1.19E-05	2.38E-05
2638	478359.5	3768581	1.10E-05	2.20E-05
2639	478842.5	3770484	1.73E-05	3.46E-05
2640	478874.5	3770485	1.73E-05	3.46E-05
2641	478810.6	3770634	1.42E-05	2.84E-05
2642	478785.9	3770614	1.45E-05	2.91E-05
2643	478761.3	3770594	1.49E-05	2.98E-05
2644	478736.7	3770574	1.53E-05	3.05E-05
2645	478712.1	3770554	1.57E-05	3.13E-05
2646	478687.5	3770535	1.61E-05	3.22E-05
2647	478662.8	3770515	1.65E-05	3.30E-05
2648	478638.2	3770495	1.70E-05	3.40E-05

2649	478613.6	3770475	1.75E-05	3.51E-05
2650	478589	3770455	1.81E-05	3.62E-05
2651	478564.3	3770435	1.87E-05	3.73E-05
2652	478539.7	3770415	1.93E-05	3.85E-05
2653	478515.1	3770395	1.99E-05	3.98E-05
2654	478490.5	3770376	2.06E-05	4.12E-05
2655	478465.9	3770356	2.14E-05	4.27E-05
2656	478441.2	3770336	2.22E-05	4.44E-05
2657	478416.6	3770316	2.32E-05	4.63E-05
2658	478392	3770296	2.43E-05	4.86E-05
2659	478367.4	3770276	2.57E-05	5.14E-05
2660	478342.8	3770256	2.74E-05	5.48E-05
2661	478318.1	3770236	2.95E-05	5.91E-05
2662	478293.5	3770217	3.22E-05	6.44E-05
2663	478268.9	3770197	3.55E-05	7.09E-05
2664	478244.3	3770177	3.95E-05	7.89E-05
2665	478219.6	3770157	4.42E-05	8.85E-05
2666	478195	3770137	4.99E-05	9.98E-05
2667	478170.4	3770117	5.66E-05	1.13E-04
2668	478145.8	3770097	6.42E-05	1.28E-04
2669	478121.2	3770077	7.27E-05	1.45E-04
2670	478096.5	3770058	8.19E-05	1.64E-04
2671	478071.9	3770038	9.19E-05	1.84E-04
2672	478047.3	3770018	1.02E-04	2.05E-04
2673	478022.7	3769998	1.13E-04	2.26E-04
2674	477998	3769978	1.24E-04	2.47E-04
2675	477973.4	3769958	1.34E-04	2.68E-04
2676	477948.8	3769938	1.43E-04	2.87E-04
2677	477924.2	3769919	1.52E-04	3.04E-04
2678	477899.6	3769899	1.60E-04	3.19E-04
2679	477874.9	3769879	1.66E-04	3.32E-04
2680	477850.3	3769859	1.71E-04	3.42E-04
2681	477825.7	3769839	1.74E-04	3.49E-04
2682	477776.4	3769799	1.77E-04	3.54E-04
2683	477751.8	3769779	1.76E-04	3.52E-04
2684	477727.2	3769760	1.73E-04	3.47E-04
2685	477709	3769725	1.71E-04	3.43E-04
2686	477721.9	3769696	1.73E-04	3.46E-04
2687	477734.9	3769667	1.74E-04	3.47E-04
2688	477747.8	3769639	1.73E-04	3.45E-04
2689	477812.3	3769494	1.48E-04	2.95E-04
2690	477825.2	3769465	1.39E-04	2.78E-04
2691	477838.2	3769436	1.30E-04	2.60E-04
2692	477851.1	3769407	1.20E-04	2.41E-04
2693	477864	3769379	1.11E-04	2.21E-04
2694	477876.9	3769350	1.01E-04	2.01E-04
2695	477889.8	3769321	9.11E-05	1.82E-04
2696	477902.7	3769292	8.18E-05	1.64E-04
2697	477915.6	3769263	7.33E-05	1.47E-04
2698	477928.6	3769234	6.54E-05	1.31E-04
2699	477941.5	3769205	5.84E-05	1.17E-04
2700	477967.3	3769148	4.67E-05	9.35E-05

2701	477980.2	3769119	4.20E-05	8.40E-05
2702	477993.1	3769090	3.79E-05	7.59E-05
2703	478006	3769061	3.45E-05	6.89E-05
2704	478018.9	3769032	3.14E-05	6.29E-05
2705	478031.9	3769003	2.88E-05	5.76E-05
2706	478044.8	3768974	2.64E-05	5.29E-05
2707	478057.7	3768945	2.44E-05	4.87E-05
2708	478070.6	3768916	2.24E-05	4.49E-05
2709	478083.5	3768888	2.07E-05	4.14E-05
2710	478115.8	3768815	1.69E-05	3.39E-05
2711	478128.7	3768786	1.56E-05	3.13E-05
2712	478141.6	3768758	1.45E-05	2.90E-05
2713	478154.5	3768729	1.35E-05	2.69E-05
2714	478167.4	3768700	1.26E-05	2.51E-05
2715	478212.6	3768599	1.04E-05	2.07E-05
2716	478225.5	3768570	9.96E-06	1.99E-05
2717	478238.5	3768541	9.65E-06	1.93E-05
2718	478251.4	3768512	9.40E-06	1.88E-05
2719	478264.3	3768483	9.19E-06	1.84E-05
2720	478838.9	3770644	1.41E-05	2.81E-05
2721	478870.8	3770645	1.40E-05	2.81E-05
2722	478806.9	3770794	1.19E-05	2.38E-05
2723	478782.2	3770774	1.22E-05	2.43E-05
2724	478757.5	3770754	1.24E-05	2.48E-05
2725	478732.7	3770734	1.27E-05	2.53E-05
2726	478708	3770714	1.29E-05	2.58E-05
2727	478683.3	3770694	1.32E-05	2.64E-05
2728	478658.6	3770674	1.35E-05	2.70E-05
2729	478633.9	3770654	1.38E-05	2.77E-05
2730	478609.2	3770634	1.42E-05	2.84E-05
2731	478584.5	3770614	1.46E-05	2.92E-05
2732	478559.8	3770594	1.50E-05	3.00E-05
2733	478535.1	3770575	1.54E-05	3.08E-05
2734	478510.4	3770555	1.59E-05	3.17E-05
2735	478485.7	3770535	1.63E-05	3.26E-05
2736	478461	3770515	1.68E-05	3.36E-05
2737	478436.3	3770495	1.73E-05	3.46E-05
2738	478411.6	3770475	1.78E-05	3.57E-05
2739	478386.9	3770455	1.84E-05	3.68E-05
2740	478362.2	3770435	1.90E-05	3.81E-05
2741	478337.5	3770415	1.98E-05	3.96E-05
2742	478312.8	3770395	2.06E-05	4.13E-05
2743	478288.1	3770375	2.16E-05	4.33E-05
2744	478263.4	3770355	2.29E-05	4.57E-05
2745	478238.7	3770335	2.44E-05	4.87E-05
2746	478214	3770315	2.62E-05	5.24E-05
2747	478189.3	3770295	2.84E-05	5.68E-05
2748	478164.6	3770275	3.11E-05	6.22E-05
2749	478139.9	3770256	3.43E-05	6.86E-05
2750	478115.2	3770236	3.81E-05	7.61E-05
2751	478090.5	3770216	4.25E-05	8.50E-05
2752	478065.8	3770196	4.76E-05	9.51E-05

2753	478041.1	3770176	5.33E-05	1.07E-04
2754	478016.4	3770156	5.97E-05	1.19E-04
2755	477991.7	3770136	6.67E-05	1.33E-04
2756	477967	3770116	7.42E-05	1.48E-04
2757	477942.3	3770096	8.22E-05	1.64E-04
2758	477917.5	3770076	9.03E-05	1.81E-04
2759	477892.8	3770056	9.86E-05	1.97E-04
2760	477868.1	3770036	1.07E-04	2.14E-04
2761	477843.4	3770016	1.15E-04	2.29E-04
2762	477818.7	3769996	1.22E-04	2.44E-04
2763	477794	3769976	1.29E-04	2.58E-04
2764	477769.3	3769956	1.35E-04	2.70E-04
2765	477744.6	3769937	1.40E-04	2.80E-04
2766	477670.5	3769877	1.49E-04	2.99E-04
2767	477645.8	3769857	1.51E-04	3.01E-04
2768	477621.1	3769837	1.51E-04	3.01E-04
2769	477596.4	3769817	1.50E-04	2.99E-04
2770	477571.7	3769797	1.48E-04	2.95E-04
2771	477553.5	3769763	1.46E-04	2.92E-04
2772	477566.4	3769734	1.47E-04	2.95E-04
2773	477579.4	3769705	1.48E-04	2.96E-04
2774	477592.3	3769676	1.47E-04	2.95E-04
2775	477605.3	3769647	1.46E-04	2.92E-04
2776	477670.1	3769502	1.24E-04	2.48E-04
2777	477683	3769473	1.17E-04	2.34E-04
2778	477696	3769444	1.10E-04	2.20E-04
2779	477708.9	3769415	1.02E-04	2.05E-04
2780	477721.9	3769386	9.46E-05	1.89E-04
2781	477734.9	3769357	8.69E-05	1.74E-04
2782	477747.8	3769328	7.93E-05	1.59E-04
2783	477760.8	3769299	7.22E-05	1.44E-04
2784	477773.7	3769270	6.53E-05	1.31E-04
2785	477786.7	3769241	5.89E-05	1.18E-04
2786	477799.6	3769212	5.31E-05	1.06E-04
2787	477825.5	3769154	4.33E-05	8.67E-05
2788	477838.5	3769125	3.93E-05	7.85E-05
2789	477851.5	3769096	3.57E-05	7.15E-05
2790	477864.4	3769067	3.26E-05	6.52E-05
2791	477877.4	3769038	2.99E-05	5.98E-05
2792	477890.3	3769009	2.76E-05	5.52E-05
2793	477903.3	3768980	2.55E-05	5.10E-05
2794	477916.2	3768951	2.36E-05	4.73E-05
2795	477929.2	3768922	2.20E-05	4.39E-05
2796	477942.1	3768893	2.04E-05	4.09E-05
2797	477955.1	3768864	1.90E-05	3.80E-05
2798	477968	3768835	1.77E-05	3.54E-05
2799	478006.9	3768748	1.43E-05	2.85E-05
2800	478019.9	3768719	1.33E-05	2.66E-05
2801	478032.8	3768690	1.24E-05	2.48E-05
2802	478045.8	3768661	1.16E-05	2.32E-05
2803	478058.7	3768632	1.09E-05	2.17E-05
2804	478071.7	3768603	1.02E-05	2.05E-05

2805	478104.1	3768531	9.04E-06	1.81E-05
2806	478117	3768502	8.69E-06	1.74E-05
2807	478130	3768473	8.42E-06	1.68E-05
2808	478142.9	3768444	8.19E-06	1.64E-05
2809	478155.9	3768415	8.01E-06	1.60E-05
2810	478168.9	3768386	7.87E-06	1.57E-05
2811	478181.8	3768357	7.75E-06	1.55E-05
2812	478201.2	3768314	7.59E-06	1.52E-05
2813	478835.2	3770804	1.18E-05	2.36E-05
2814	478867.1	3770805	1.18E-05	2.36E-05
2815	478803.2	3770954	1.02E-05	2.05E-05
2816	478778.4	3770934	1.04E-05	2.08E-05
2817	478753.6	3770914	1.06E-05	2.12E-05
2818	478728.9	3770894	1.08E-05	2.16E-05
2819	478704.1	3770874	1.10E-05	2.19E-05
2820	478679.3	3770854	1.12E-05	2.24E-05
2821	478654.6	3770834	1.14E-05	2.28E-05
2822	478629.8	3770814	1.16E-05	2.33E-05
2823	478605	3770794	1.19E-05	2.38E-05
2824	478580.3	3770774	1.21E-05	2.43E-05
2825	478555.5	3770754	1.24E-05	2.49E-05
2826	478530.7	3770734	1.27E-05	2.55E-05
2827	478505.9	3770714	1.31E-05	2.61E-05
2828	478481.2	3770694	1.34E-05	2.68E-05
2829	478456.4	3770674	1.38E-05	2.75E-05
2830	478431.6	3770654	1.41E-05	2.82E-05
2831	478406.9	3770634	1.45E-05	2.90E-05
2832	478382.1	3770614	1.49E-05	2.97E-05
2833	478357.3	3770594	1.53E-05	3.05E-05
2834	478332.6	3770574	1.57E-05	3.14E-05
2835	478307.8	3770554	1.61E-05	3.23E-05
2836	478283	3770534	1.66E-05	3.33E-05
2837	478258.3	3770514	1.72E-05	3.44E-05
2838	478233.5	3770494	1.79E-05	3.57E-05
2839	478208.7	3770474	1.86E-05	3.72E-05
2840	478184	3770454	1.95E-05	3.91E-05
2841	478159.2	3770434	2.06E-05	4.13E-05
2842	478134.4	3770414	2.19E-05	4.39E-05
2843	478109.7	3770394	2.35E-05	4.70E-05
2844	478084.9	3770374	2.54E-05	5.08E-05
2845	478060.1	3770354	2.76E-05	5.52E-05
2846	478035.4	3770334	3.02E-05	6.04E-05
2847	478010.6	3770314	3.32E-05	6.65E-05
2848	477985.8	3770294	3.67E-05	7.35E-05
2849	477961.1	3770274	4.07E-05	8.14E-05
2850	477936.3	3770254	4.52E-05	9.03E-05
2851	477911.5	3770234	5.01E-05	1.00E-04
2852	477886.8	3770214	5.55E-05	1.11E-04
2853	477862	3770194	6.13E-05	1.23E-04
2854	477837.2	3770174	6.74E-05	1.35E-04
2855	477812.5	3770154	7.38E-05	1.48E-04
2856	477787.7	3770134	8.04E-05	1.61E-04

2857	477762.9	3770114	8.69E-05	1.74E-04
2858	477738.2	3770094	9.34E-05	1.87E-04
2859	477713.4	3770074	9.96E-05	1.99E-04
2860	477688.6	3770054	1.06E-04	2.11E-04
2861	477663.9	3770034	1.11E-04	2.22E-04
2862	477639.1	3770014	1.16E-04	2.32E-04
2863	477564.8	3769954	1.27E-04	2.53E-04
2864	477540	3769934	1.29E-04	2.58E-04
2865	477515.3	3769914	1.30E-04	2.60E-04
2866	477490.5	3769894	1.31E-04	2.61E-04
2867	477465.7	3769874	1.31E-04	2.61E-04
2868	477441	3769854	1.30E-04	2.59E-04
2869	477416.2	3769834	1.28E-04	2.56E-04
2870	477397.9	3769800	1.27E-04	2.53E-04
2871	477410.9	3769771	1.28E-04	2.55E-04
2872	477423.9	3769742	1.28E-04	2.56E-04
2873	477436.9	3769713	1.28E-04	2.55E-04
2874	477449.9	3769684	1.27E-04	2.53E-04
2875	477462.9	3769655	1.25E-04	2.50E-04
2876	477527.8	3769509	1.06E-04	2.12E-04
2877	477540.8	3769480	1.00E-04	2.01E-04
2878	477553.8	3769451	9.45E-05	1.89E-04
2879	477566.8	3769422	8.84E-05	1.77E-04
2880	477579.8	3769393	8.23E-05	1.65E-04
2881	477592.8	3769364	7.61E-05	1.52E-04
2882	477605.7	3769335	7.01E-05	1.40E-04
2883	477618.7	3769306	6.42E-05	1.28E-04
2884	477631.7	3769277	5.86E-05	1.17E-04
2885	477644.7	3769248	5.34E-05	1.07E-04
2886	477657.7	3769219	4.86E-05	9.72E-05
2887	477683.7	3769161	4.03E-05	8.05E-05
2888	477696.7	3769132	3.67E-05	7.34E-05
2889	477709.7	3769103	3.36E-05	6.72E-05
2890	477722.6	3769073	3.09E-05	6.17E-05
2891	477735.6	3769044	2.84E-05	5.69E-05
2892	477748.6	3769015	2.63E-05	5.26E-05
2893	477761.6	3768986	2.44E-05	4.89E-05
2894	477774.6	3768957	2.28E-05	4.55E-05
2895	477787.6	3768928	2.13E-05	4.25E-05
2896	477807.1	3768885	1.93E-05	3.86E-05
2897	477820.1	3768856	1.81E-05	3.61E-05
2898	477839.5	3768812	1.64E-05	3.28E-05
2899	477852.5	3768783	1.54E-05	3.08E-05
2900	477865.5	3768754	1.44E-05	2.89E-05
2901	477956.4	3768550	9.27E-06	1.85E-05
2902	477969.4	3768521	8.79E-06	1.76E-05
2903	477982.4	3768492	8.37E-06	1.67E-05
2904	477995.4	3768463	8.01E-06	1.60E-05
2905	478008.4	3768434	7.71E-06	1.54E-05
2906	478021.4	3768405	7.46E-06	1.49E-05
2907	478034.4	3768376	7.26E-06	1.45E-05
2908	478047.4	3768347	7.10E-06	1.42E-05

2909	478060.4	3768318	6.96E-06	1.39E-05
2910	478073.3	3768289	6.86E-06	1.37E-05
2911	478086.3	3768260	6.77E-06	1.35E-05
2912	478099.3	3768231	6.69E-06	1.34E-05
2913	478112.3	3768202	6.63E-06	1.33E-05
2914	478125.3	3768173	6.56E-06	1.31E-05
2915	478831.5	3770964	1.02E-05	2.03E-05
2916	478863.5	3770965	1.02E-05	2.03E-05
2917	478917.2	3769485	4.54E-03	9.07E-03
2918	478936.6	3769485	5.04E-03	1.01E-02
2919	478955.9	3769485	5.41E-03	1.08E-02
2920	478975.3	3769485	5.63E-03	1.13E-02
2921	478994.6	3769485	5.67E-03	1.13E-02
2922	479014	3769485	5.52E-03	1.10E-02
2923	479033.3	3769485	5.15E-03	1.03E-02
2924	479052.7	3769485	4.65E-03	9.29E-03
2925	478917.2	3769505	2.99E-03	5.98E-03
2926	478936.6	3769505	3.02E-03	6.04E-03
2927	478955.9	3769505	2.99E-03	5.98E-03
2928	478975.3	3769505	2.94E-03	5.88E-03
2929	478994.6	3769505	2.87E-03	5.74E-03
2930	479014	3769505	2.79E-03	5.57E-03
2931	479033.3	3769505	2.66E-03	5.32E-03
2932	479052.7	3769505	2.49E-03	4.98E-03
2933	478917.2	3769645	3.17E-04	6.34E-04
2934	478936.6	3769645	3.18E-04	6.36E-04
2935	478955.9	3769645	3.21E-04	6.43E-04
2936	478975.3	3769645	3.25E-04	6.50E-04
2937	478994.6	3769645	3.27E-04	6.54E-04
2938	479014	3769645	3.27E-04	6.55E-04
2939	479033.3	3769645	3.24E-04	6.48E-04
2940	479052.7	3769645	3.17E-04	6.35E-04
2941	478917.2	3769685	2.25E-04	4.49E-04
2942	478936.6	3769685	2.26E-04	4.53E-04
2943	478955.9	3769685	2.29E-04	4.58E-04
2944	478975.3	3769685	2.31E-04	4.63E-04
2945	478994.6	3769685	2.33E-04	4.65E-04
2946	479014	3769685	2.33E-04	4.65E-04
2947	479033.3	3769685	2.31E-04	4.62E-04
2948	479052.7	3769685	2.28E-04	4.56E-04
2949	478917.2	3769725	1.69E-04	3.37E-04
2950	478936.6	3769725	1.71E-04	3.41E-04
2951	478955.9	3769725	1.73E-04	3.45E-04
2952	478975.3	3769725	1.74E-04	3.48E-04
2953	478994.6	3769725	1.74E-04	3.48E-04
2954	479014	3769725	1.74E-04	3.47E-04
2955	479033.3	3769725	1.72E-04	3.45E-04
2956	479052.7	3769725	1.70E-04	3.41E-04
2957	478917.2	3769765	1.32E-04	2.64E-04
2958	478936.6	3769765	1.33E-04	2.66E-04
2959	478955.9	3769765	1.34E-04	2.69E-04
2960	478975.3	3769765	1.35E-04	2.70E-04

2961	478994.6	3769765	1.35E-04	2.71E-04
2962	479014	3769765	1.35E-04	2.70E-04
2963	479033.3	3769765	1.34E-04	2.68E-04
2964	479052.7	3769765	1.32E-04	2.65E-04
2965	479072	3769765	1.30E-04	2.61E-04
2966	478917.2	3769845	8.75E-05	1.75E-04
2967	478936.6	3769845	8.81E-05	1.76E-04
2968	478955.9	3769845	8.85E-05	1.77E-04
2969	478975.3	3769845	8.87E-05	1.77E-04
2970	478994.6	3769845	8.87E-05	1.77E-04
2971	479014	3769845	8.83E-05	1.77E-04
2972	479033.3	3769845	8.76E-05	1.75E-04
2973	479052.7	3769845	8.68E-05	1.74E-04
2974	479072	3769845	8.57E-05	1.71E-04
2975	478917.2	3769925	6.28E-05	1.26E-04
2976	478936.6	3769925	6.30E-05	1.26E-04
2977	478955.9	3769925	6.32E-05	1.26E-04
2978	478975.3	3769925	6.32E-05	1.26E-04
2979	478994.6	3769925	6.30E-05	1.26E-04
2980	479014	3769925	6.28E-05	1.26E-04
2981	479033.3	3769925	6.24E-05	1.25E-04
2982	479052.7	3769925	6.17E-05	1.23E-04
2983	479072	3769925	6.11E-05	1.22E-04
2984	478917.2	3770005	4.76E-05	9.53E-05
2985	478936.6	3770005	4.77E-05	9.54E-05
2986	478955.9	3770005	4.77E-05	9.55E-05
2987	478975.3	3770005	4.77E-05	9.54E-05
2988	478994.6	3770005	4.76E-05	9.51E-05
2989	479014	3770005	4.74E-05	9.47E-05
2990	479033.3	3770005	4.71E-05	9.41E-05
2991	479052.7	3770005	4.67E-05	9.34E-05
2992	479072	3770005	4.62E-05	9.25E-05
2993	478917.2	3770085	3.77E-05	7.54E-05
2994	478936.6	3770085	3.77E-05	7.55E-05
2995	478955.9	3770085	3.77E-05	7.54E-05
2996	478975.3	3770085	3.76E-05	7.53E-05
2997	478994.6	3770085	3.75E-05	7.51E-05
2998	479014	3770085	3.74E-05	7.47E-05
2999	479033.3	3770085	3.72E-05	7.43E-05
3000	479052.7	3770085	3.69E-05	7.38E-05
3001	479072	3770085	3.66E-05	7.31E-05
3002	478917.2	3770165	3.09E-05	6.17E-05
3003	478936.6	3770165	3.09E-05	6.17E-05
3004	478955.9	3770165	3.08E-05	6.17E-05
3005	478975.3	3770165	3.08E-05	6.15E-05
3006	478994.6	3770165	3.07E-05	6.13E-05
3007	479014	3770165	3.05E-05	6.11E-05
3008	479033.3	3770165	3.04E-05	6.07E-05
3009	479052.7	3770165	3.02E-05	6.03E-05
3010	479072	3770165	2.99E-05	5.99E-05
3011	478897.9	3770325	2.23E-05	4.46E-05
3012	478917.2	3770325	2.23E-05	4.46E-05

3013	478936.6	3770325	2.23E-05	4.45E-05
3014	478955.9	3770325	2.22E-05	4.45E-05
3015	478975.3	3770325	2.22E-05	4.44E-05
3016	478994.6	3770325	2.21E-05	4.42E-05
3017	479014	3770325	2.20E-05	4.40E-05
3018	479033.3	3770325	2.19E-05	4.38E-05
3019	479052.7	3770325	2.18E-05	4.35E-05
3020	479072	3770325	2.16E-05	4.32E-05
3021	478897.9	3770485	1.73E-05	3.46E-05
3022	478917.2	3770485	1.73E-05	3.45E-05
3023	478936.6	3770485	1.72E-05	3.45E-05
3024	478955.9	3770485	1.72E-05	3.44E-05
3025	478975.3	3770485	1.72E-05	3.43E-05
3026	478994.6	3770485	1.71E-05	3.42E-05
3027	479014	3770485	1.71E-05	3.41E-05
3028	479033.3	3770485	1.70E-05	3.40E-05
3029	479052.7	3770485	1.69E-05	3.38E-05
3030	479072	3770485	1.68E-05	3.36E-05
3031	478897.9	3770645	1.40E-05	2.81E-05
3032	478917.2	3770645	1.40E-05	2.80E-05
3033	478936.6	3770645	1.40E-05	2.80E-05
3034	478955.9	3770645	1.40E-05	2.79E-05
3035	478975.3	3770645	1.39E-05	2.79E-05
3036	478994.6	3770645	1.39E-05	2.78E-05
3037	479014	3770645	1.39E-05	2.77E-05
3038	479033.3	3770645	1.38E-05	2.76E-05
3039	479052.7	3770645	1.37E-05	2.75E-05
3040	479072	3770645	1.37E-05	2.74E-05
3041	478897.9	3770805	1.18E-05	2.36E-05
3042	478917.2	3770805	1.18E-05	2.35E-05
3043	478936.6	3770805	1.18E-05	2.35E-05
3044	478955.9	3770805	1.17E-05	2.35E-05
3045	478975.3	3770805	1.17E-05	2.34E-05
3046	478994.6	3770805	1.17E-05	2.34E-05
3047	479014	3770805	1.16E-05	2.33E-05
3048	479033.3	3770805	1.16E-05	2.32E-05
3049	479052.7	3770805	1.16E-05	2.31E-05
3050	479072	3770805	1.15E-05	2.30E-05
3051	478897.9	3770965	1.01E-05	2.03E-05
3052	478917.2	3770965	1.01E-05	2.03E-05
3053	478936.6	3770965	1.01E-05	2.02E-05
3054	478955.9	3770965	1.01E-05	2.02E-05
3055	478975.3	3770965	1.01E-05	2.02E-05
3056	478994.6	3770965	1.01E-05	2.01E-05
3057	479014	3770965	1.00E-05	2.01E-05
3058	479033.3	3770965	1.00E-05	2.00E-05
3059	479052.7	3770965	9.97E-06	1.99E-05
3060	479072	3770965	9.94E-06	1.99E-05
3061	479200.2	3769494	1.22E-03	2.45E-03
3062	479246.1	3769481	1.07E-03	2.14E-03
3063	479252.2	3769451	1.38E-03	2.77E-03
3064	479286.1	3769481	8.21E-04	1.64E-03

3065	479170.6	3769645	2.43E-04	4.87E-04
3066	479292.2	3769451	1.01E-03	2.02E-03
3067	479366.1	3769482	5.17E-04	1.03E-03
3068	479289.2	3769664	1.59E-04	3.17E-04
3069	479269.2	3769684	1.46E-04	2.93E-04
3070	479241.1	3769696	1.45E-04	2.90E-04
3071	479212.9	3769707	1.44E-04	2.88E-04
3072	479184.7	3769719	1.43E-04	2.86E-04
3073	479156.6	3769730	1.42E-04	2.84E-04
3074	479100.2	3769754	1.35E-04	2.70E-04
3075	479372.1	3769452	6.04E-04	1.21E-03
3076	479446.1	3769482	3.55E-04	7.10E-04
3077	479434.3	3769510	3.18E-04	6.37E-04
3078	479375.2	3769651	1.47E-04	2.93E-04
3079	479345.6	3769721	1.03E-04	2.05E-04
3080	479325.6	3769741	9.61E-05	1.92E-04
3081	479297.4	3769752	9.59E-05	1.92E-04
3082	479269.2	3769764	9.55E-05	1.91E-04
3083	479241.1	3769776	9.48E-05	1.90E-04
3084	479212.9	3769787	9.41E-05	1.88E-04
3085	479184.7	3769799	9.31E-05	1.86E-04
3086	479156.6	3769810	9.18E-05	1.84E-04
3087	479100.2	3769834	8.80E-05	1.76E-04
3088	479452.1	3769452	4.00E-04	7.99E-04
3089	479452.4	3769421	4.52E-04	9.04E-04
3090	479526.1	3769483	2.58E-04	5.16E-04
3091	479514.3	3769511	2.37E-04	4.74E-04
3092	479455.2	3769651	1.26E-04	2.51E-04
3093	479443.3	3769679	1.09E-04	2.18E-04
3094	479431.5	3769708	9.57E-05	1.91E-04
3095	479401.9	3769778	7.18E-05	1.44E-04
3096	479381.9	3769798	6.86E-05	1.37E-04
3097	479353.8	3769809	6.81E-05	1.36E-04
3098	479325.6	3769821	6.77E-05	1.35E-04
3099	479297.4	3769832	6.76E-05	1.35E-04
3100	479269.2	3769844	6.72E-05	1.34E-04
3101	479241.1	3769856	6.69E-05	1.34E-04
3102	479212.9	3769867	6.64E-05	1.33E-04
3103	479184.7	3769879	6.58E-05	1.32E-04
3104	479100.2	3769914	6.27E-05	1.25E-04
3105	479532.1	3769453	2.83E-04	5.66E-04
3106	479532.4	3769422	3.13E-04	6.26E-04
3107	479606.1	3769483	1.94E-04	3.89E-04
3108	479594.3	3769512	1.82E-04	3.63E-04
3109	479535.2	3769652	1.08E-04	2.16E-04
3110	479523.3	3769680	9.56E-05	1.91E-04
3111	479511.5	3769708	8.46E-05	1.69E-04
3112	479499.7	3769736	7.52E-05	1.50E-04
3113	479487.8	3769764	6.76E-05	1.35E-04
3114	479458.3	3769835	5.33E-05	1.07E-04
3115	479438.3	3769854	5.09E-05	1.02E-04
3116	479410.1	3769866	5.11E-05	1.02E-04

3117	479381.9	3769878	5.09E-05	1.02E-04
3118	479353.8	3769889	5.08E-05	1.02E-04
3119	479325.6	3769901	5.08E-05	1.02E-04
3120	479297.4	3769912	5.06E-05	1.01E-04
3121	479269.2	3769924	5.04E-05	1.01E-04
3122	479241.1	3769936	5.02E-05	1.00E-04
3123	479212.9	3769947	4.98E-05	9.97E-05
3124	479184.7	3769959	4.92E-05	9.85E-05
3125	479100.2	3769994	4.72E-05	9.43E-05
3126	479612.1	3769454	2.11E-04	4.22E-04
3127	479612.4	3769422	2.31E-04	4.61E-04
3128	479686.1	3769484	1.51E-04	3.02E-04
3129	479674.3	3769512	1.42E-04	2.83E-04
3130	479627	3769625	1.03E-04	2.06E-04
3131	479615.1	3769653	9.33E-05	1.87E-04
3132	479603.3	3769681	8.38E-05	1.68E-04
3133	479591.5	3769709	7.51E-05	1.50E-04
3134	479579.7	3769737	6.76E-05	1.35E-04
3135	479567.8	3769765	6.10E-05	1.22E-04
3136	479556	3769793	5.53E-05	1.11E-04
3137	479544.2	3769821	5.04E-05	1.01E-04
3138	479514.6	3769891	4.13E-05	8.27E-05
3139	479494.6	3769911	3.99E-05	7.99E-05
3140	479466.5	3769923	3.98E-05	7.95E-05
3141	479438.3	3769934	3.97E-05	7.93E-05
3142	479410.1	3769946	3.99E-05	7.98E-05
3143	479381.9	3769958	3.98E-05	7.96E-05
3144	479353.8	3769969	3.99E-05	7.97E-05
3145	479325.6	3769981	3.97E-05	7.94E-05
3146	479297.4	3769992	3.97E-05	7.93E-05
3147	479269.2	3770004	3.94E-05	7.89E-05
3148	479241.1	3770016	3.92E-05	7.85E-05
3149	479212.9	3770027	3.89E-05	7.79E-05
3150	479184.7	3770039	3.85E-05	7.71E-05
3151	479100.2	3770074	3.72E-05	7.43E-05
3152	479692.1	3769454	1.63E-04	3.25E-04
3153	479692.4	3769423	1.77E-04	3.54E-04
3154	479765.9	3769485	1.23E-04	2.45E-04
3155	479753.8	3769514	1.16E-04	2.32E-04
3156	479705.1	3769630	8.60E-05	1.72E-04
3157	479692.9	3769659	7.90E-05	1.58E-04
3158	479680.7	3769688	7.21E-05	1.44E-04
3159	479668.5	3769716	6.56E-05	1.31E-04
3160	479656.4	3769745	5.95E-05	1.19E-04
3161	479644.2	3769774	5.40E-05	1.08E-04
3162	479632	3769803	4.91E-05	9.82E-05
3163	479619.8	3769832	4.48E-05	8.96E-05
3164	479607.7	3769861	4.13E-05	8.26E-05
3165	479595.5	3769890	3.82E-05	7.65E-05
3166	479571.2	3769948	3.33E-05	6.66E-05
3167	479550.6	3769968	3.23E-05	6.46E-05
3168	479521.6	3769980	3.23E-05	6.47E-05

3169	479492.6	3769992	3.23E-05	6.45E-05
3170	479463.6	3770004	3.22E-05	6.45E-05
3171	479434.6	3770016	3.24E-05	6.48E-05
3172	479405.6	3770028	3.24E-05	6.47E-05
3173	479376.6	3770040	3.24E-05	6.48E-05
3174	479347.6	3770052	3.23E-05	6.46E-05
3175	479318.6	3770064	3.21E-05	6.43E-05
3176	479289.5	3770076	3.21E-05	6.41E-05
3177	479260.5	3770088	3.19E-05	6.37E-05
3178	479231.5	3770100	3.17E-05	6.35E-05
3179	479202.5	3770111	3.15E-05	6.29E-05
3180	479173.5	3770123	3.11E-05	6.23E-05
3181	479772.1	3769455	1.31E-04	2.62E-04
3182	479772.4	3769424	1.41E-04	2.82E-04
3183	479926	3769486	8.77E-05	1.75E-04
3184	479865.4	3769630	6.65E-05	1.33E-04
3185	479853.3	3769659	6.22E-05	1.24E-04
3186	479841.2	3769688	5.79E-05	1.16E-04
3187	479829.1	3769716	5.37E-05	1.07E-04
3188	479817	3769745	4.97E-05	9.94E-05
3189	479804.9	3769774	4.58E-05	9.16E-05
3190	479792.8	3769803	4.22E-05	8.45E-05
3191	479780.7	3769831	3.90E-05	7.81E-05
3192	479768.6	3769860	3.61E-05	7.22E-05
3193	479756.5	3769889	3.35E-05	6.69E-05
3194	479744.3	3769918	3.12E-05	6.24E-05
3195	479732.2	3769946	2.93E-05	5.85E-05
3196	479720.1	3769975	2.75E-05	5.50E-05
3197	479708	3770004	2.60E-05	5.19E-05
3198	479683.8	3770061	2.35E-05	4.70E-05
3199	479663.3	3770082	2.29E-05	4.59E-05
3200	479634.5	3770094	2.29E-05	4.59E-05
3201	479605.6	3770105	2.29E-05	4.59E-05
3202	479576.8	3770117	2.30E-05	4.60E-05
3203	479548	3770129	2.30E-05	4.60E-05
3204	479519.1	3770141	2.30E-05	4.60E-05
3205	479490.3	3770153	2.30E-05	4.60E-05
3206	479461.4	3770165	2.30E-05	4.60E-05
3207	479432.6	3770177	2.31E-05	4.61E-05
3208	479403.7	3770189	2.30E-05	4.61E-05
3209	479374.9	3770200	2.30E-05	4.60E-05
3210	479346.1	3770212	2.29E-05	4.58E-05
3211	479317.2	3770224	2.28E-05	4.56E-05
3212	479288.4	3770236	2.28E-05	4.55E-05
3213	479259.5	3770248	2.26E-05	4.53E-05
3214	479230.7	3770260	2.25E-05	4.50E-05
3215	479201.8	3770272	2.24E-05	4.48E-05
3216	479173	3770284	2.23E-05	4.45E-05
3217	479932.1	3769456	9.25E-05	1.85E-04
3218	479932.4	3769425	9.81E-05	1.96E-04
3219	480086	3769488	6.70E-05	1.34E-04
3220	480025.7	3769631	5.36E-05	1.07E-04

3221	480013.6	3769659	5.07E-05	1.01E-04
3222	480001.5	3769688	4.79E-05	9.57E-05
3223	479989.5	3769717	4.51E-05	9.02E-05
3224	479977.4	3769745	4.23E-05	8.46E-05
3225	479965.4	3769774	3.97E-05	7.93E-05
3226	479953.3	3769803	3.71E-05	7.42E-05
3227	479941.2	3769831	3.47E-05	6.93E-05
3228	479929.2	3769860	3.24E-05	6.47E-05
3229	479917.1	3769889	3.02E-05	6.04E-05
3230	479905	3769917	2.82E-05	5.65E-05
3231	479893	3769946	2.65E-05	5.30E-05
3232	479880.9	3769974	2.50E-05	4.99E-05
3233	479868.9	3770003	2.35E-05	4.71E-05
3234	479856.8	3770032	2.23E-05	4.46E-05
3235	479844.7	3770060	2.12E-05	4.24E-05
3236	479832.7	3770089	2.03E-05	4.05E-05
3237	479820.6	3770118	1.94E-05	3.88E-05
3238	479796.5	3770175	1.79E-05	3.58E-05
3239	479776.1	3770195	1.76E-05	3.52E-05
3240	479747.3	3770207	1.76E-05	3.52E-05
3241	479718.6	3770219	1.76E-05	3.52E-05
3242	479689.9	3770231	1.76E-05	3.52E-05
3243	479661.1	3770243	1.76E-05	3.52E-05
3244	479632.4	3770254	1.76E-05	3.53E-05
3245	479603.7	3770266	1.76E-05	3.52E-05
3246	479574.9	3770278	1.77E-05	3.53E-05
3247	479546.2	3770290	1.77E-05	3.54E-05
3248	479517.5	3770302	1.77E-05	3.53E-05
3249	479488.7	3770314	1.77E-05	3.53E-05
3250	479460	3770325	1.77E-05	3.54E-05
3251	479431.2	3770337	1.77E-05	3.53E-05
3252	479402.5	3770349	1.76E-05	3.53E-05
3253	479373.8	3770361	1.76E-05	3.52E-05
3254	479345	3770373	1.75E-05	3.51E-05
3255	479316.3	3770385	1.75E-05	3.49E-05
3256	479287.6	3770396	1.74E-05	3.48E-05
3257	479258.8	3770408	1.74E-05	3.47E-05
3258	479230.1	3770420	1.73E-05	3.46E-05
3259	479201.3	3770432	1.72E-05	3.44E-05
3260	479100.8	3770473	1.69E-05	3.38E-05
3261	480092.1	3769457	7.00E-05	1.40E-04
3262	480092.4	3769426	7.38E-05	1.48E-04
3263	480246	3769489	5.37E-05	1.07E-04
3264	480185.8	3769632	4.44E-05	8.87E-05
3265	480173.8	3769660	4.24E-05	8.47E-05
3266	480161.8	3769689	4.04E-05	8.09E-05
3267	480149.7	3769717	3.85E-05	7.70E-05
3268	480137.7	3769746	3.65E-05	7.31E-05
3269	480125.7	3769774	3.46E-05	6.93E-05
3270	480113.7	3769803	3.28E-05	6.56E-05
3271	480101.6	3769832	3.10E-05	6.20E-05
3272	480089.6	3769860	2.92E-05	5.85E-05

3273	480077.6	3769889	2.76E-05	5.51E-05
3274	480065.5	3769917	2.60E-05	5.19E-05
3275	480053.5	3769946	2.45E-05	4.89E-05
3276	480041.5	3769974	2.31E-05	4.61E-05
3277	480029.5	3770003	2.18E-05	4.36E-05
3278	480017.4	3770032	2.07E-05	4.14E-05
3279	480005.4	3770060	1.97E-05	3.93E-05
3280	479993.4	3770089	1.87E-05	3.74E-05
3281	479981.3	3770117	1.79E-05	3.58E-05
3282	479969.3	3770146	1.72E-05	3.43E-05
3283	479957.3	3770174	1.65E-05	3.30E-05
3284	479945.2	3770203	1.59E-05	3.18E-05
3285	479933.2	3770231	1.54E-05	3.07E-05
3286	479909.2	3770289	1.44E-05	2.88E-05
3287	479888.8	3770309	1.42E-05	2.84E-05
3288	479860.2	3770321	1.42E-05	2.84E-05
3289	479831.5	3770332	1.42E-05	2.84E-05
3290	479802.8	3770344	1.42E-05	2.85E-05
3291	479774.2	3770356	1.42E-05	2.85E-05
3292	479745.5	3770368	1.42E-05	2.85E-05
3293	479716.9	3770380	1.42E-05	2.85E-05
3294	479688.2	3770391	1.42E-05	2.85E-05
3295	479659.5	3770403	1.42E-05	2.85E-05
3296	479630.9	3770415	1.43E-05	2.85E-05
3297	479602.2	3770427	1.42E-05	2.85E-05
3298	479573.6	3770439	1.43E-05	2.85E-05
3299	479544.9	3770450	1.43E-05	2.86E-05
3300	479516.2	3770462	1.43E-05	2.85E-05
3301	479487.6	3770474	1.43E-05	2.85E-05
3302	479458.9	3770486	1.43E-05	2.86E-05
3303	479430.3	3770498	1.42E-05	2.85E-05
3304	479401.6	3770509	1.42E-05	2.84E-05
3305	479373	3770521	1.42E-05	2.84E-05
3306	479344.3	3770533	1.41E-05	2.83E-05
3307	479315.6	3770545	1.41E-05	2.82E-05
3308	479272.6	3770563	1.41E-05	2.81E-05
3309	479100.7	3770633	1.38E-05	2.75E-05
3310	480252.1	3769459	5.59E-05	1.12E-04
3311	480252.4	3769427	5.85E-05	1.17E-04
3312	480405.9	3769490	4.47E-05	8.93E-05
3313	480357.1	3769606	3.90E-05	7.81E-05
3314	480345	3769635	3.76E-05	7.52E-05
3315	480332.8	3769664	3.62E-05	7.23E-05
3316	480320.6	3769693	3.47E-05	6.94E-05
3317	480308.4	3769722	3.33E-05	6.65E-05
3318	480296.2	3769751	3.18E-05	6.36E-05
3319	480284	3769780	3.04E-05	6.07E-05
3320	480271.8	3769809	2.90E-05	5.79E-05
3321	480259.6	3769838	2.76E-05	5.52E-05
3322	480247.4	3769866	2.63E-05	5.26E-05
3323	480235.2	3769895	2.50E-05	4.99E-05
3324	480223.1	3769924	2.37E-05	4.74E-05

3325	480210.9	3769953	2.25E-05	4.49E-05
3326	480198.7	3769982	2.13E-05	4.26E-05
3327	480186.5	3770011	2.02E-05	4.04E-05
3328	480174.3	3770040	1.92E-05	3.84E-05
3329	480162.1	3770069	1.83E-05	3.66E-05
3330	480149.9	3770098	1.74E-05	3.48E-05
3331	480137.7	3770127	1.66E-05	3.33E-05
3332	480125.5	3770156	1.59E-05	3.19E-05
3333	480113.4	3770185	1.53E-05	3.06E-05
3334	480101.2	3770214	1.47E-05	2.94E-05
3335	480089	3770243	1.42E-05	2.84E-05
3336	480076.8	3770272	1.37E-05	2.74E-05
3337	480064.6	3770301	1.33E-05	2.65E-05
3338	480052.4	3770330	1.29E-05	2.58E-05
3339	480021.9	3770402	1.21E-05	2.41E-05
3340	480001.3	3770422	1.19E-05	2.38E-05
3341	479972.3	3770434	1.19E-05	2.38E-05
3342	479943.2	3770446	1.19E-05	2.38E-05
3343	479914.2	3770458	1.19E-05	2.39E-05
3344	479885.2	3770470	1.19E-05	2.39E-05
3345	479856.1	3770482	1.19E-05	2.39E-05
3346	479827.1	3770494	1.19E-05	2.39E-05
3347	479798	3770506	1.19E-05	2.39E-05
3348	479769	3770518	1.19E-05	2.39E-05
3349	479740	3770530	1.19E-05	2.39E-05
3350	479710.9	3770542	1.19E-05	2.39E-05
3351	479681.9	3770554	1.19E-05	2.39E-05
3352	479652.8	3770566	1.19E-05	2.39E-05
3353	479623.8	3770578	1.19E-05	2.39E-05
3354	479594.8	3770590	1.19E-05	2.39E-05
3355	479565.7	3770602	1.20E-05	2.39E-05
3356	479536.7	3770614	1.19E-05	2.39E-05
3357	479507.6	3770626	1.19E-05	2.39E-05
3358	479478.6	3770638	1.19E-05	2.39E-05
3359	479449.6	3770650	1.19E-05	2.39E-05
3360	479420.5	3770662	1.19E-05	2.38E-05
3361	479391.5	3770674	1.19E-05	2.38E-05
3362	479347.9	3770692	1.18E-05	2.37E-05
3363	479101.1	3770793	1.16E-05	2.32E-05
3364	480412.1	3769460	4.64E-05	9.27E-05
3365	480412.4	3769429	4.84E-05	9.67E-05
3366	480565.9	3769491	3.83E-05	7.65E-05
3367	480553.8	3769520	3.72E-05	7.45E-05
3368	480505.2	3769636	3.28E-05	6.57E-05
3369	480493	3769665	3.17E-05	6.34E-05
3370	480480.9	3769693	3.06E-05	6.11E-05
3371	480468.7	3769722	2.94E-05	5.88E-05
3372	480456.6	3769751	2.83E-05	5.66E-05
3373	480444.4	3769780	2.72E-05	5.44E-05
3374	480432.3	3769809	2.61E-05	5.23E-05
3375	480420.1	3769838	2.51E-05	5.01E-05
3376	480408	3769866	2.40E-05	4.80E-05

3377	480395.8	3769895	2.30E-05	4.60E-05
3378	480383.7	3769924	2.20E-05	4.40E-05
3379	480371.5	3769953	2.10E-05	4.20E-05
3380	480359.4	3769982	2.01E-05	4.01E-05
3381	480347.2	3770011	1.91E-05	3.83E-05
3382	480335.1	3770040	1.83E-05	3.65E-05
3383	480322.9	3770068	1.74E-05	3.49E-05
3384	480310.8	3770097	1.66E-05	3.33E-05
3385	480298.6	3770126	1.59E-05	3.18E-05
3386	480286.5	3770155	1.53E-05	3.05E-05
3387	480274.3	3770184	1.46E-05	2.93E-05
3388	480262.2	3770213	1.41E-05	2.81E-05
3389	480250	3770242	1.35E-05	2.71E-05
3390	480237.9	3770270	1.31E-05	2.61E-05
3391	480225.7	3770299	1.26E-05	2.53E-05
3392	480213.6	3770328	1.22E-05	2.45E-05
3393	480201.4	3770357	1.19E-05	2.37E-05
3394	480189.3	3770386	1.15E-05	2.31E-05
3395	480177.1	3770415	1.12E-05	2.25E-05
3396	480165	3770443	1.09E-05	2.19E-05
3397	480140.7	3770501	1.05E-05	2.09E-05
3398	480114.1	3770536	1.02E-05	2.05E-05
3399	480085.1	3770548	1.02E-05	2.05E-05
3400	480056.2	3770560	1.03E-05	2.05E-05
3401	480027.2	3770572	1.03E-05	2.05E-05
3402	479998.3	3770584	1.03E-05	2.05E-05
3403	479969.3	3770596	1.03E-05	2.05E-05
3404	479940.4	3770608	1.03E-05	2.05E-05
3405	479911.4	3770619	1.03E-05	2.05E-05
3406	479882.5	3770631	1.03E-05	2.05E-05
3407	479853.6	3770643	1.03E-05	2.05E-05
3408	479824.6	3770655	1.03E-05	2.05E-05
3409	479795.7	3770667	1.03E-05	2.05E-05
3410	479766.7	3770679	1.03E-05	2.05E-05
3411	479737.8	3770691	1.03E-05	2.05E-05
3412	479708.8	3770703	1.03E-05	2.05E-05
3413	479679.9	3770715	1.03E-05	2.05E-05
3414	479650.9	3770727	1.03E-05	2.06E-05
3415	479622	3770739	1.03E-05	2.05E-05
3416	479593	3770751	1.03E-05	2.05E-05
3417	479564.1	3770763	1.03E-05	2.06E-05
3418	479535.2	3770774	1.03E-05	2.05E-05
3419	479506.2	3770786	1.03E-05	2.05E-05
3420	479477.3	3770798	1.03E-05	2.06E-05
3421	479448.3	3770810	1.03E-05	2.05E-05
3422	479390.4	3770834	1.02E-05	2.04E-05
3423	479173.3	3770923	1.01E-05	2.01E-05
3424	480572.1	3769461	3.96E-05	7.91E-05
3425	480572.4	3769430	4.11E-05	8.22E-05

T2

876

9.73E-08

3769149.65

Yr 1

Yr 2

Total

1	479085.48	3769432.66	2.85E-06	5.71E-06	8.56E-06
2	479102.33	3769437.04	1.72E-06	3.43E-06	5.15E-06
3	479086.14	3769452.65	1.60E-06	3.21E-06	4.81E-06
4	479103	3769457.02	1.01E-06	2.03E-06	3.04E-06
5	479103.66	3769477.01	5.76E-07	1.15E-06	1.73E-06
6	479075.06	3769497.98	3.94E-07	7.87E-07	1.18E-06
7	479104.33	3769497	3.37E-07	6.74E-07	1.01E-06
8	479079.71	3769637.9	4.66E-08	9.32E-08	1.40E-07
9	479081.04	3769677.88	3.33E-08	6.67E-08	1.00E-07
10	479082.37	3769717.85	2.48E-08	4.96E-08	7.44E-08
11	479085.03	3769797.81	1.53E-08	3.06E-08	4.59E-08
12	479087.69	3769877.77	1.04E-08	2.09E-08	3.13E-08
13	479090.35	3769957.72	7.64E-09	1.53E-08	2.29E-08
14	479093.01	3770037.68	5.89E-09	1.18E-08	1.77E-08
15	479095.67	3770117.63	4.73E-09	9.46E-09	1.42E-08
16	479100.99	3770277.54	3.33E-09	6.66E-09	9.99E-09
17	479156.3	3769397.46	1.06E-06	2.11E-06	3.17E-06
18	479156.3	3769378.36	1.15E-06	2.30E-06	3.45E-06
19	479156.3	3769359.27	1.22E-06	2.44E-06	3.66E-06
20	479156.3	3769340.17	1.24E-06	2.49E-06	3.73E-06
21	479156.3	3769321.07	1.12E-06	2.24E-06	3.36E-06
22	479156.3	3769301.97	8.63E-07	1.73E-06	2.59E-06
23	479156.3	3769282.87	5.91E-07	1.18E-06	1.77E-06
24	479156.3	3769263.78	3.87E-07	7.73E-07	1.16E-06
25	479156.3	3769244.68	2.56E-07	5.11E-07	7.67E-07
26	479156.3	3769225.58	1.75E-07	3.50E-07	5.26E-07
27	479170.68	3769430.47	5.94E-07	1.19E-06	1.78E-06
28	479176.3	3769397.46	7.40E-07	1.48E-06	2.22E-06
29	479176.3	3769378.36	8.08E-07	1.62E-06	2.42E-06
30	479176.3	3769359.27	8.45E-07	1.69E-06	2.54E-06
31	479176.3	3769340.17	8.43E-07	1.69E-06	2.53E-06
32	479176.3	3769321.07	7.68E-07	1.54E-06	2.30E-06
33	479176.3	3769301.97	6.34E-07	1.27E-06	1.90E-06
34	479176.3	3769282.87	4.82E-07	9.63E-07	1.44E-06
35	479176.3	3769263.78	3.48E-07	6.97E-07	1.05E-06
36	479176.3	3769244.68	2.48E-07	4.96E-07	7.44E-07
37	479176.3	3769225.58	1.78E-07	3.56E-07	5.35E-07
38	479190.68	3769430.47	4.51E-07	9.01E-07	1.35E-06
39	479179.43	3769458.28	3.57E-07	7.15E-07	1.07E-06
40	479160.09	3769478.26	3.11E-07	6.21E-07	9.32E-07
41	479196.3	3769397.46	5.53E-07	1.11E-06	1.66E-06
42	479196.3	3769378.36	6.01E-07	1.20E-06	1.80E-06
43	479196.3	3769359.27	6.23E-07	1.25E-06	1.87E-06
44	479196.3	3769340.17	6.13E-07	1.23E-06	1.84E-06
45	479196.3	3769321.07	5.66E-07	1.13E-06	1.70E-06
46	479196.3	3769301.97	4.87E-07	9.74E-07	1.46E-06
47	479196.3	3769282.87	3.93E-07	7.87E-07	1.18E-06
48	479196.3	3769263.78	3.04E-07	6.08E-07	9.13E-07

49	479196.3	3769244.68	2.30E-07	4.59E-07	6.89E-07
50	479196.3	3769225.58	1.73E-07	3.45E-07	5.18E-07
51	479209.27	3769433.94	3.49E-07	6.98E-07	1.05E-06
52	479202.24	3769451.32	3.09E-07	6.17E-07	9.26E-07
53	479195.21	3769468.7	2.62E-07	5.25E-07	7.87E-07
54	479171.04	3769493.69	2.15E-07	4.30E-07	6.44E-07
55	479153.9	3769501.3	2.15E-07	4.30E-07	6.45E-07
56	479216.3	3769416.56	3.76E-07	7.53E-07	1.13E-06
57	479216.3	3769397.46	4.26E-07	8.52E-07	1.28E-06
58	479216.3	3769378.36	4.60E-07	9.19E-07	1.38E-06
59	479216.3	3769359.27	4.75E-07	9.49E-07	1.42E-06
60	479216.3	3769340.17	4.67E-07	9.35E-07	1.40E-06
61	479216.3	3769321.07	4.39E-07	8.77E-07	1.32E-06
62	479216.3	3769301.97	3.90E-07	7.80E-07	1.17E-06
63	479216.3	3769282.87	3.29E-07	6.57E-07	9.86E-07
64	479216.3	3769263.78	2.66E-07	5.33E-07	7.99E-07
65	479216.3	3769244.68	2.11E-07	4.21E-07	6.32E-07
66	479216.3	3769225.58	1.65E-07	3.29E-07	4.94E-07
67	479249.74	3769432.78	2.35E-07	4.70E-07	7.04E-07
68	479236.61	3769465.23	1.94E-07	3.88E-07	5.82E-07
69	479223.49	3769497.67	1.44E-07	2.88E-07	4.32E-07
70	479256.3	3769397.46	2.75E-07	5.51E-07	8.26E-07
71	479256.3	3769378.36	2.94E-07	5.88E-07	8.82E-07
72	479256.3	3769359.27	3.03E-07	6.06E-07	9.09E-07
73	479256.3	3769340.17	3.01E-07	6.02E-07	9.03E-07
74	479256.3	3769321.07	2.88E-07	5.75E-07	8.63E-07
75	479256.3	3769301.97	2.65E-07	5.30E-07	7.95E-07
76	479256.3	3769282.87	2.35E-07	4.71E-07	7.06E-07
77	479256.3	3769263.78	2.03E-07	4.06E-07	6.09E-07
78	479256.3	3769244.68	1.71E-07	3.43E-07	5.14E-07
79	479256.3	3769225.58	1.43E-07	2.86E-07	4.30E-07
80	479289.97	3769432.2	1.68E-07	3.35E-07	5.03E-07
81	479277.32	3769463.49	1.45E-07	2.90E-07	4.35E-07
82	479264.66	3769494.78	1.16E-07	2.33E-07	3.49E-07
83	479296.3	3769397.46	1.90E-07	3.81E-07	5.71E-07
84	479296.3	3769378.36	2.03E-07	4.06E-07	6.09E-07
85	479296.3	3769359.27	2.10E-07	4.19E-07	6.29E-07
86	479296.3	3769340.17	2.10E-07	4.19E-07	6.29E-07
87	479296.3	3769321.07	2.04E-07	4.08E-07	6.12E-07
88	479296.3	3769301.97	1.93E-07	3.85E-07	5.78E-07
89	479296.3	3769282.87	1.77E-07	3.54E-07	5.31E-07
90	479296.3	3769263.78	1.59E-07	3.18E-07	4.76E-07
91	479296.3	3769244.68	1.40E-07	2.79E-07	4.19E-07
92	479296.3	3769225.58	1.21E-07	2.42E-07	3.63E-07
93	479329.43	3769433.56	1.25E-07	2.49E-07	3.74E-07
94	479322.55	3769450.55	1.17E-07	2.35E-07	3.52E-07
95	479315.68	3769467.55	1.09E-07	2.18E-07	3.26E-07
96	479308.8	3769484.54	9.92E-08	1.98E-07	2.98E-07
97	479301.93	3769501.54	8.85E-08	1.77E-07	2.65E-07
98	479336.3	3769416.56	1.30E-07	2.59E-07	3.89E-07
99	479336.3	3769397.46	1.40E-07	2.80E-07	4.20E-07
100	479336.3	3769378.36	1.48E-07	2.96E-07	4.43E-07

101	479336.3	3769359.27	1.52E-07	3.04E-07	4.57E-07
102	479336.3	3769340.17	1.53E-07	3.06E-07	4.59E-07
103	479336.3	3769321.07	1.51E-07	3.02E-07	4.53E-07
104	479336.3	3769301.97	1.45E-07	2.90E-07	4.36E-07
105	479336.3	3769282.87	1.36E-07	2.73E-07	4.09E-07
106	479336.3	3769263.78	1.26E-07	2.52E-07	3.78E-07
107	479336.3	3769244.68	1.15E-07	2.29E-07	3.44E-07
108	479336.3	3769225.58	1.02E-07	2.05E-07	3.07E-07
109	479369.65	3769432.99	9.63E-08	1.93E-07	2.89E-07
110	479356.36	3769465.86	8.65E-08	1.73E-07	2.59E-07
111	479343.06	3769498.73	7.32E-08	1.46E-07	2.20E-07
112	479222.16	3769633.28	3.31E-08	6.61E-08	9.92E-08
113	479189.76	3769647.66	3.21E-08	6.42E-08	9.64E-08
114	479157.35	3769662.04	3.19E-08	6.38E-08	9.56E-08
115	479376.3	3769397.46	1.06E-07	2.13E-07	3.19E-07
116	479376.3	3769378.36	1.12E-07	2.24E-07	3.37E-07
117	479376.3	3769359.27	1.16E-07	2.32E-07	3.48E-07
118	479376.3	3769340.17	1.17E-07	2.34E-07	3.52E-07
119	479376.3	3769321.07	1.16E-07	2.32E-07	3.49E-07
120	479376.3	3769301.97	1.13E-07	2.26E-07	3.39E-07
121	479376.3	3769282.87	1.08E-07	2.16E-07	3.24E-07
122	479376.3	3769263.78	1.02E-07	2.03E-07	3.05E-07
123	479376.3	3769244.68	9.41E-08	1.88E-07	2.82E-07
124	479376.3	3769225.58	8.60E-08	1.72E-07	2.58E-07
125	479409.27	3769433.94	7.66E-08	1.53E-07	2.30E-07
126	479402.24	3769451.32	7.34E-08	1.47E-07	2.20E-07
127	479395.21	3769468.7	6.92E-08	1.38E-07	2.07E-07
128	479388.18	3769486.09	6.42E-08	1.28E-07	1.93E-07
129	479381.15	3769503.47	5.92E-08	1.18E-07	1.77E-07
130	479314.79	3769632.74	2.68E-08	5.37E-08	8.05E-08
131	479297.65	3769640.35	2.63E-08	5.27E-08	7.90E-08
132	479280.51	3769647.95	2.59E-08	5.18E-08	7.76E-08
133	479263.38	3769655.56	2.56E-08	5.11E-08	7.67E-08
134	479246.24	3769663.16	2.52E-08	5.04E-08	7.56E-08
135	479229.1	3769670.77	2.49E-08	4.98E-08	7.46E-08
136	479211.96	3769678.37	2.46E-08	4.91E-08	7.37E-08
137	479194.82	3769685.98	2.44E-08	4.88E-08	7.32E-08
138	479177.69	3769693.58	2.42E-08	4.84E-08	7.26E-08
139	479160.55	3769701.18	2.40E-08	4.81E-08	7.21E-08
140	479416.3	3769416.56	7.90E-08	1.58E-07	2.37E-07
141	479416.3	3769397.46	8.39E-08	1.68E-07	2.52E-07
142	479416.3	3769378.36	8.78E-08	1.76E-07	2.63E-07
143	479416.3	3769359.27	9.06E-08	1.81E-07	2.72E-07
144	479416.3	3769340.17	9.22E-08	1.84E-07	2.77E-07
145	479416.3	3769321.07	9.21E-08	1.84E-07	2.76E-07
146	479416.3	3769301.97	9.04E-08	1.81E-07	2.71E-07
147	479416.3	3769282.87	8.75E-08	1.75E-07	2.62E-07
148	479416.3	3769263.78	8.34E-08	1.67E-07	2.50E-07
149	479416.3	3769244.68	7.85E-08	1.57E-07	2.36E-07
150	479416.3	3769225.58	7.31E-08	1.46E-07	2.19E-07
151	479489.18	3769434.17	5.16E-08	1.03E-07	1.55E-07
152	479482.05	3769451.79	4.98E-08	9.96E-08	1.49E-07

153	479474.93	3769469.4	4.76E-08	9.52E-08	1.43E-07
154	479467.8	3769487.01	4.51E-08	9.02E-08	1.35E-07
155	479460.68	3769504.63	4.23E-08	8.47E-08	1.27E-07
156	479403.68	3769645.53	2.05E-08	4.09E-08	6.14E-08
157	479396.55	3769663.14	1.86E-08	3.71E-08	5.57E-08
158	479372.06	3769688.46	1.67E-08	3.33E-08	5.00E-08
159	479354.7	3769696.17	1.65E-08	3.30E-08	4.96E-08
160	479337.33	3769703.88	1.63E-08	3.27E-08	4.90E-08
161	479319.96	3769711.58	1.61E-08	3.22E-08	4.83E-08
162	479302.6	3769719.29	1.60E-08	3.20E-08	4.79E-08
163	479285.23	3769726.99	1.60E-08	3.19E-08	4.79E-08
164	479267.86	3769734.7	1.58E-08	3.16E-08	4.74E-08
165	479250.5	3769742.41	1.57E-08	3.14E-08	4.71E-08
166	479233.13	3769750.11	1.56E-08	3.11E-08	4.67E-08
167	479215.76	3769757.82	1.54E-08	3.09E-08	4.63E-08
168	479198.4	3769765.53	1.53E-08	3.06E-08	4.59E-08
169	479181.03	3769773.23	1.52E-08	3.03E-08	4.55E-08
170	479163.66	3769780.94	1.50E-08	3.00E-08	4.50E-08
171	479496.3	3769416.56	5.30E-08	1.06E-07	1.59E-07
172	479496.3	3769397.46	5.60E-08	1.12E-07	1.68E-07
173	479496.3	3769378.36	5.83E-08	1.17E-07	1.75E-07
174	479496.3	3769359.27	6.01E-08	1.20E-07	1.80E-07
175	479496.3	3769340.17	6.12E-08	1.22E-07	1.83E-07
176	479496.3	3769321.07	6.16E-08	1.23E-07	1.85E-07
177	479496.3	3769301.97	6.12E-08	1.22E-07	1.84E-07
178	479496.3	3769282.87	6.03E-08	1.21E-07	1.81E-07
179	479496.3	3769263.78	5.86E-08	1.17E-07	1.76E-07
180	479496.3	3769244.68	5.65E-08	1.13E-07	1.69E-07
181	479496.3	3769225.58	5.39E-08	1.08E-07	1.62E-07
182	479569.49	3769433.39	3.73E-08	7.47E-08	1.12E-07
183	479562.68	3769450.23	3.63E-08	7.27E-08	1.09E-07
184	479555.87	3769467.06	3.51E-08	7.01E-08	1.05E-07
185	479549.06	3769483.89	3.36E-08	6.72E-08	1.01E-07
186	479542.26	3769500.72	3.21E-08	6.43E-08	9.64E-08
187	479480.98	3769652.22	1.70E-08	3.40E-08	5.10E-08
188	479474.17	3769669.05	1.57E-08	3.13E-08	4.70E-08
189	479467.36	3769685.88	1.44E-08	2.89E-08	4.33E-08
190	479460.55	3769702.71	1.34E-08	2.67E-08	4.01E-08
191	479453.74	3769719.55	1.24E-08	2.49E-08	3.73E-08
192	479430.33	3769743.74	1.15E-08	2.30E-08	3.44E-08
193	479413.74	3769751.11	1.13E-08	2.27E-08	3.40E-08
194	479397.14	3769758.47	1.12E-08	2.24E-08	3.37E-08
195	479380.54	3769765.84	1.11E-08	2.23E-08	3.34E-08
196	479363.95	3769773.2	1.11E-08	2.22E-08	3.32E-08
197	479347.35	3769780.57	1.11E-08	2.21E-08	3.32E-08
198	479330.75	3769787.93	1.10E-08	2.20E-08	3.30E-08
199	479314.16	3769795.29	1.09E-08	2.18E-08	3.28E-08
200	479297.56	3769802.66	1.09E-08	2.18E-08	3.27E-08
201	479280.96	3769810.02	1.08E-08	2.17E-08	3.25E-08
202	479264.37	3769817.39	1.08E-08	2.15E-08	3.23E-08
203	479247.77	3769824.75	1.07E-08	2.14E-08	3.21E-08
204	479231.17	3769832.12	1.06E-08	2.13E-08	3.19E-08

205	479214.57	3769839.48	1.06E-08	2.12E-08	3.17E-08
206	479197.98	3769846.85	1.05E-08	2.10E-08	3.15E-08
207	479181.38	3769854.21	1.04E-08	2.08E-08	3.13E-08
208	479164.78	3769861.58	1.03E-08	2.07E-08	3.10E-08
209	479576.3	3769416.56	3.81E-08	7.63E-08	1.14E-07
210	479576.3	3769397.46	3.99E-08	7.98E-08	1.20E-07
211	479576.3	3769378.36	4.14E-08	8.28E-08	1.24E-07
212	479576.3	3769359.27	4.26E-08	8.52E-08	1.28E-07
213	479576.3	3769340.17	4.35E-08	8.69E-08	1.30E-07
214	479576.3	3769321.07	4.40E-08	8.79E-08	1.32E-07
215	479576.3	3769301.97	4.41E-08	8.82E-08	1.32E-07
216	479576.3	3769282.87	4.38E-08	8.77E-08	1.32E-07
217	479576.3	3769263.78	4.32E-08	8.65E-08	1.30E-07
218	479576.3	3769244.68	4.23E-08	8.46E-08	1.27E-07
219	479576.3	3769225.58	4.10E-08	8.21E-08	1.23E-07
220	479649.4	3769433.63	2.82E-08	5.64E-08	8.46E-08
221	479642.49	3769450.69	2.75E-08	5.49E-08	8.24E-08
222	479635.59	3769467.76	2.66E-08	5.32E-08	7.98E-08
223	479628.69	3769484.82	2.56E-08	5.13E-08	7.69E-08
224	479621.78	3769501.89	2.47E-08	4.93E-08	7.40E-08
225	479566.56	3769638.41	1.56E-08	3.12E-08	4.67E-08
226	479559.66	3769655.48	1.45E-08	2.90E-08	4.36E-08
227	479552.75	3769672.54	1.35E-08	2.70E-08	4.05E-08
228	479545.85	3769689.61	1.26E-08	2.51E-08	3.77E-08
229	479538.95	3769706.67	1.17E-08	2.34E-08	3.51E-08
230	479532.04	3769723.74	1.09E-08	2.18E-08	3.27E-08
231	479525.14	3769740.8	1.02E-08	2.03E-08	3.05E-08
232	479518.24	3769757.87	9.51E-09	1.90E-08	2.85E-08
233	479511.33	3769774.93	8.95E-09	1.79E-08	2.69E-08
234	479487.61	3769799.46	8.38E-09	1.68E-08	2.51E-08
235	479470.78	3769806.93	8.30E-09	1.66E-08	2.49E-08
236	479453.95	3769814.4	8.23E-09	1.65E-08	2.47E-08
237	479437.13	3769821.86	8.17E-09	1.63E-08	2.45E-08
238	479420.3	3769829.33	8.13E-09	1.63E-08	2.44E-08
239	479403.47	3769836.8	8.10E-09	1.62E-08	2.43E-08
240	479386.65	3769844.26	8.11E-09	1.62E-08	2.43E-08
241	479369.82	3769851.73	8.07E-09	1.61E-08	2.42E-08
242	479352.99	3769859.2	8.03E-09	1.61E-08	2.41E-08
243	479336.17	3769866.66	8.01E-09	1.60E-08	2.40E-08
244	479319.34	3769874.13	8.00E-09	1.60E-08	2.40E-08
245	479302.51	3769881.6	7.96E-09	1.59E-08	2.39E-08
246	479285.69	3769889.06	7.92E-09	1.58E-08	2.38E-08
247	479268.86	3769896.53	7.90E-09	1.58E-08	2.37E-08
248	479252.03	3769904	7.86E-09	1.57E-08	2.36E-08
249	479235.21	3769911.46	7.81E-09	1.56E-08	2.34E-08
250	479218.38	3769918.93	7.78E-09	1.56E-08	2.33E-08
251	479201.56	3769926.4	7.72E-09	1.54E-08	2.32E-08
252	479184.73	3769933.86	7.65E-09	1.53E-08	2.30E-08
253	479656.3	3769416.56	2.88E-08	5.75E-08	8.63E-08
254	479656.3	3769397.46	3.00E-08	5.99E-08	8.99E-08
255	479656.3	3769378.36	3.10E-08	6.20E-08	9.30E-08
256	479656.3	3769359.27	3.19E-08	6.38E-08	9.57E-08

257	479656.3	3769340.17	3.26E-08	6.52E-08	9.77E-08
258	479656.3	3769321.07	3.31E-08	6.61E-08	9.92E-08
259	479656.3	3769301.97	3.33E-08	6.67E-08	1.00E-07
260	479656.3	3769282.87	3.34E-08	6.67E-08	1.00E-07
261	479656.3	3769263.78	3.32E-08	6.64E-08	9.96E-08
262	479656.3	3769244.68	3.28E-08	6.56E-08	9.84E-08
263	479656.3	3769225.58	3.22E-08	6.44E-08	9.66E-08
264	479729.33	3769433.8	2.20E-08	4.40E-08	6.60E-08
265	479722.35	3769451.04	2.15E-08	4.30E-08	6.45E-08
266	479715.38	3769468.29	2.09E-08	4.17E-08	6.26E-08
267	479708.4	3769485.53	2.01E-08	4.02E-08	6.04E-08
268	479701.43	3769502.77	1.94E-08	3.89E-08	5.83E-08
269	479652.6	3769623.47	1.40E-08	2.80E-08	4.19E-08
270	479645.63	3769640.71	1.32E-08	2.65E-08	3.97E-08
271	479638.65	3769657.95	1.25E-08	2.49E-08	3.74E-08
272	479631.68	3769675.2	1.17E-08	2.34E-08	3.51E-08
273	479624.7	3769692.44	1.10E-08	2.20E-08	3.30E-08
274	479617.73	3769709.68	1.03E-08	2.06E-08	3.09E-08
275	479610.76	3769726.92	9.66E-09	1.93E-08	2.90E-08
276	479603.78	3769744.16	9.06E-09	1.81E-08	2.72E-08
277	479596.81	3769761.41	8.52E-09	1.70E-08	2.55E-08
278	479589.83	3769778.65	8.04E-09	1.61E-08	2.41E-08
279	479582.86	3769795.89	7.59E-09	1.52E-08	2.28E-08
280	479575.88	3769813.13	7.17E-09	1.43E-08	2.15E-08
281	479568.91	3769830.38	6.79E-09	1.36E-08	2.04E-08
282	479544.93	3769855.16	6.38E-09	1.28E-08	1.92E-08
283	479527.93	3769862.71	6.34E-09	1.27E-08	1.90E-08
284	479510.93	3769870.25	6.32E-09	1.27E-08	1.90E-08
285	479493.93	3769877.79	6.31E-09	1.26E-08	1.89E-08
286	479476.93	3769885.34	6.27E-09	1.25E-08	1.88E-08
287	479459.93	3769892.88	6.24E-09	1.25E-08	1.87E-08
288	479442.93	3769900.43	6.22E-09	1.24E-08	1.86E-08
289	479425.92	3769907.97	6.21E-09	1.24E-08	1.86E-08
290	479408.92	3769915.51	6.23E-09	1.25E-08	1.87E-08
291	479391.92	3769923.06	6.21E-09	1.24E-08	1.86E-08
292	479374.92	3769930.6	6.19E-09	1.24E-08	1.86E-08
293	479357.92	3769938.15	6.19E-09	1.24E-08	1.86E-08
294	479340.92	3769945.69	6.17E-09	1.23E-08	1.85E-08
295	479323.92	3769953.23	6.15E-09	1.23E-08	1.84E-08
296	479306.92	3769960.78	6.13E-09	1.23E-08	1.84E-08
297	479289.92	3769968.32	6.12E-09	1.22E-08	1.84E-08
298	479272.92	3769975.87	6.08E-09	1.22E-08	1.83E-08
299	479255.92	3769983.41	6.05E-09	1.21E-08	1.81E-08
300	479238.91	3769990.95	6.03E-09	1.21E-08	1.81E-08
301	479221.91	3769998.5	5.99E-09	1.20E-08	1.80E-08
302	479204.91	3770006.04	5.95E-09	1.19E-08	1.78E-08
303	479187.91	3770013.59	5.90E-09	1.18E-08	1.77E-08
304	479736.3	3769416.56	2.25E-08	4.49E-08	6.74E-08
305	479736.3	3769397.46	2.34E-08	4.68E-08	7.01E-08
306	479736.3	3769378.36	2.42E-08	4.84E-08	7.26E-08
307	479736.3	3769359.27	2.49E-08	4.98E-08	7.47E-08
308	479736.3	3769340.17	2.55E-08	5.09E-08	7.64E-08

309	479736.3	3769321.07	2.59E-08	5.18E-08	7.77E-08
310	479736.3	3769301.97	2.62E-08	5.24E-08	7.86E-08
311	479736.3	3769282.87	2.64E-08	5.27E-08	7.91E-08
312	479736.3	3769263.78	2.64E-08	5.27E-08	7.91E-08
313	479736.3	3769244.68	2.62E-08	5.25E-08	7.87E-08
314	479736.3	3769225.58	2.60E-08	5.20E-08	7.79E-08
315	479809.27	3769433.94	1.79E-08	3.58E-08	5.37E-08
316	479802.24	3769451.32	1.75E-08	3.51E-08	5.26E-08
317	479795.21	3769468.7	1.71E-08	3.42E-08	5.12E-08
318	479788.18	3769486.09	1.66E-08	3.31E-08	4.97E-08
319	479781.15	3769503.47	1.60E-08	3.20E-08	4.81E-08
320	479731.93	3769625.14	1.19E-08	2.38E-08	3.58E-08
321	479724.9	3769642.52	1.13E-08	2.26E-08	3.40E-08
322	479717.87	3769659.9	1.07E-08	2.15E-08	3.22E-08
323	479710.84	3769677.28	1.02E-08	2.04E-08	3.06E-08
324	479703.8	3769694.66	9.65E-09	1.93E-08	2.90E-08
325	479696.77	3769712.04	9.14E-09	1.83E-08	2.74E-08
326	479689.74	3769729.43	8.65E-09	1.73E-08	2.60E-08
327	479682.71	3769746.81	8.17E-09	1.63E-08	2.45E-08
328	479675.68	3769764.19	7.71E-09	1.54E-08	2.31E-08
329	479668.65	3769781.57	7.29E-09	1.46E-08	2.19E-08
330	479661.62	3769798.95	6.90E-09	1.38E-08	2.07E-08
331	479654.59	3769816.33	6.54E-09	1.31E-08	1.96E-08
332	479647.56	3769833.71	6.21E-09	1.24E-08	1.86E-08
333	479640.53	3769851.09	5.89E-09	1.18E-08	1.77E-08
334	479633.5	3769868.48	5.61E-09	1.12E-08	1.68E-08
335	479626.46	3769885.86	5.35E-09	1.07E-08	1.61E-08
336	479602.3	3769910.84	5.10E-09	1.02E-08	1.53E-08
337	479585.16	3769918.45	5.08E-09	1.02E-08	1.52E-08
338	479568.02	3769926.05	5.05E-09	1.01E-08	1.51E-08
339	479550.88	3769933.66	5.02E-09	1.00E-08	1.51E-08
340	479533.74	3769941.26	5.00E-09	1.00E-08	1.50E-08
341	479516.61	3769948.87	5.00E-09	1.00E-08	1.50E-08
342	479499.47	3769956.47	5.00E-09	1.00E-08	1.50E-08
343	479482.33	3769964.08	4.99E-09	9.97E-09	1.50E-08
344	479465.19	3769971.68	4.98E-09	9.95E-09	1.49E-08
345	479448.05	3769979.29	4.98E-09	9.95E-09	1.49E-08
346	479430.91	3769986.89	4.99E-09	9.98E-09	1.50E-08
347	479413.78	3769994.5	4.98E-09	9.95E-09	1.49E-08
348	479396.64	3770002.1	4.96E-09	9.93E-09	1.49E-08
349	479379.5	3770009.71	4.96E-09	9.91E-09	1.49E-08
350	479362.36	3770017.31	4.95E-09	9.90E-09	1.49E-08
351	479345.22	3770024.92	4.93E-09	9.87E-09	1.48E-08
352	479328.09	3770032.52	4.91E-09	9.83E-09	1.47E-08
353	479310.95	3770040.13	4.90E-09	9.80E-09	1.47E-08
354	479293.81	3770047.73	4.89E-09	9.77E-09	1.47E-08
355	479276.67	3770055.33	4.86E-09	9.73E-09	1.46E-08
356	479259.53	3770062.94	4.84E-09	9.67E-09	1.45E-08
357	479242.4	3770070.54	4.82E-09	9.64E-09	1.45E-08
358	479225.26	3770078.15	4.80E-09	9.59E-09	1.44E-08
359	479208.12	3770085.75	4.76E-09	9.53E-09	1.43E-08
360	479190.98	3770093.36	4.73E-09	9.46E-09	1.42E-08

361	479173.84	3770100.96	4.69E-09	9.39E-09	1.41E-08
362	479816.3	3769416.56	1.83E-08	3.65E-08	5.48E-08
363	479816.3	3769397.46	1.89E-08	3.79E-08	5.68E-08
364	479816.3	3769378.36	1.95E-08	3.91E-08	5.86E-08
365	479816.3	3769359.27	2.01E-08	4.02E-08	6.03E-08
366	479816.3	3769340.17	2.05E-08	4.11E-08	6.16E-08
367	479816.3	3769321.07	2.09E-08	4.18E-08	6.27E-08
368	479816.3	3769301.97	2.12E-08	4.24E-08	6.36E-08
369	479816.3	3769282.87	2.14E-08	4.28E-08	6.42E-08
370	479816.3	3769263.78	2.15E-08	4.31E-08	6.46E-08
371	479816.3	3769244.68	2.15E-08	4.31E-08	6.46E-08
372	479816.3	3769225.58	2.14E-08	4.29E-08	6.43E-08
373	479969.19	3769434.15	1.28E-08	2.56E-08	3.84E-08
374	479962.07	3769451.73	1.26E-08	2.51E-08	3.77E-08
375	479954.96	3769469.32	1.23E-08	2.46E-08	3.69E-08
376	479947.85	3769486.9	1.20E-08	2.40E-08	3.60E-08
377	479940.73	3769504.49	1.17E-08	2.34E-08	3.51E-08
378	479898.05	3769610	9.59E-09	1.92E-08	2.88E-08
379	479890.94	3769627.59	9.23E-09	1.85E-08	2.77E-08
380	479883.82	3769645.18	8.87E-09	1.77E-08	2.66E-08
381	479876.71	3769662.76	8.50E-09	1.70E-08	2.55E-08
382	479869.6	3769680.35	8.15E-09	1.63E-08	2.45E-08
383	479862.48	3769697.93	7.81E-09	1.56E-08	2.34E-08
384	479855.37	3769715.52	7.46E-09	1.49E-08	2.24E-08
385	479848.25	3769733.11	7.11E-09	1.42E-08	2.13E-08
386	479841.14	3769750.69	6.79E-09	1.36E-08	2.04E-08
387	479834.03	3769768.28	6.48E-09	1.30E-08	1.94E-08
388	479826.91	3769785.86	6.17E-09	1.23E-08	1.85E-08
389	479819.8	3769803.45	5.87E-09	1.17E-08	1.76E-08
390	479812.69	3769821.04	5.60E-09	1.12E-08	1.68E-08
391	479805.57	3769838.62	5.34E-09	1.07E-08	1.60E-08
392	479798.46	3769856.21	5.10E-09	1.02E-08	1.53E-08
393	479791.34	3769873.79	4.87E-09	9.74E-09	1.46E-08
394	479784.23	3769891.38	4.66E-09	9.31E-09	1.40E-08
395	479777.12	3769908.96	4.46E-09	8.91E-09	1.34E-08
396	479770	3769926.55	4.27E-09	8.54E-09	1.28E-08
397	479762.89	3769944.14	4.10E-09	8.21E-09	1.23E-08
398	479755.78	3769961.72	3.95E-09	7.90E-09	1.19E-08
399	479748.66	3769979.31	3.81E-09	7.62E-09	1.14E-08
400	479741.55	3769996.89	3.68E-09	7.36E-09	1.10E-08
401	479717.1	3770022.17	3.54E-09	7.08E-09	1.06E-08
402	479699.76	3770029.87	3.53E-09	7.06E-09	1.06E-08
403	479682.42	3770037.56	3.52E-09	7.04E-09	1.06E-08
404	479665.08	3770045.26	3.51E-09	7.02E-09	1.05E-08
405	479647.74	3770052.95	3.50E-09	7.00E-09	1.05E-08
406	479630.4	3770060.65	3.50E-09	6.99E-09	1.05E-08
407	479613.06	3770068.34	3.49E-09	6.99E-09	1.05E-08
408	479595.72	3770076.03	3.49E-09	6.97E-09	1.05E-08
409	479578.38	3770083.73	3.48E-09	6.96E-09	1.04E-08
410	479561.04	3770091.42	3.48E-09	6.95E-09	1.04E-08
411	479543.7	3770099.12	3.48E-09	6.96E-09	1.04E-08
412	479526.36	3770106.81	3.48E-09	6.97E-09	1.04E-08

413	479509.02	3770114.51	3.48E-09	6.95E-09	1.04E-08
414	479491.68	3770122.2	3.47E-09	6.94E-09	1.04E-08
415	479474.34	3770129.89	3.47E-09	6.93E-09	1.04E-08
416	479457	3770137.59	3.46E-09	6.93E-09	1.04E-08
417	479439.66	3770145.28	3.48E-09	6.95E-09	1.04E-08
418	479422.32	3770152.98	3.47E-09	6.94E-09	1.04E-08
419	479404.98	3770160.67	3.46E-09	6.92E-09	1.04E-08
420	479387.64	3770168.37	3.46E-09	6.91E-09	1.04E-08
421	479370.3	3770176.06	3.45E-09	6.90E-09	1.03E-08
422	479352.96	3770183.75	3.44E-09	6.87E-09	1.03E-08
423	479335.62	3770191.45	3.42E-09	6.85E-09	1.03E-08
424	479318.28	3770199.14	3.41E-09	6.82E-09	1.02E-08
425	479300.94	3770206.84	3.40E-09	6.81E-09	1.02E-08
426	479283.6	3770214.53	3.39E-09	6.78E-09	1.02E-08
427	479266.26	3770222.22	3.38E-09	6.75E-09	1.01E-08
428	479248.92	3770229.92	3.36E-09	6.73E-09	1.01E-08
429	479231.58	3770237.61	3.35E-09	6.71E-09	1.01E-08
430	479214.24	3770245.31	3.34E-09	6.67E-09	1.00E-08
431	479196.9	3770253	3.32E-09	6.64E-09	9.96E-09
432	479179.56	3770260.7	3.30E-09	6.60E-09	9.90E-09
433	479976.3	3769416.56	1.30E-08	2.61E-08	3.91E-08
434	479976.3	3769397.46	1.34E-08	2.69E-08	4.03E-08
435	479976.3	3769378.36	1.38E-08	2.76E-08	4.14E-08
436	479976.3	3769359.27	1.42E-08	2.83E-08	4.25E-08
437	479976.3	3769340.17	1.45E-08	2.89E-08	4.34E-08
438	479976.3	3769321.07	1.48E-08	2.95E-08	4.43E-08
439	479976.3	3769301.97	1.50E-08	3.00E-08	4.51E-08
440	479976.3	3769282.87	1.52E-08	3.04E-08	4.56E-08
441	479976.3	3769263.78	1.54E-08	3.07E-08	4.61E-08
442	479976.3	3769244.68	1.55E-08	3.09E-08	4.64E-08
443	479976.3	3769225.58	1.55E-08	3.10E-08	4.66E-08
444	480129.3	3769433.86	9.81E-09	1.96E-08	2.94E-08
445	480122.31	3769451.15	9.64E-09	1.93E-08	2.89E-08
446	480115.31	3769468.45	9.46E-09	1.89E-08	2.84E-08
447	480108.31	3769485.75	9.27E-09	1.85E-08	2.78E-08
448	480101.32	3769503.04	9.07E-09	1.81E-08	2.72E-08
449	480059.34	3769606.82	7.75E-09	1.55E-08	2.32E-08
450	480052.34	3769624.12	7.51E-09	1.50E-08	2.25E-08
451	480045.34	3769641.42	7.28E-09	1.46E-08	2.18E-08
452	480038.35	3769658.71	7.04E-09	1.41E-08	2.11E-08
453	480031.35	3769676.01	6.80E-09	1.36E-08	2.04E-08
454	480024.35	3769693.31	6.57E-09	1.31E-08	1.97E-08
455	480017.36	3769710.6	6.34E-09	1.27E-08	1.90E-08
456	480010.36	3769727.9	6.12E-09	1.22E-08	1.84E-08
457	480003.36	3769745.2	5.90E-09	1.18E-08	1.77E-08
458	479996.37	3769762.49	5.67E-09	1.13E-08	1.70E-08
459	479989.37	3769779.79	5.46E-09	1.09E-08	1.64E-08
460	479982.37	3769797.09	5.24E-09	1.05E-08	1.57E-08
461	479975.38	3769814.38	5.04E-09	1.01E-08	1.51E-08
462	479968.38	3769831.68	4.84E-09	9.68E-09	1.45E-08
463	479961.38	3769848.98	4.65E-09	9.30E-09	1.39E-08
464	479954.39	3769866.27	4.47E-09	8.93E-09	1.34E-08

465	479947.39	3769883.57	4.29E-09	8.58E-09	1.29E-08
466	479940.39	3769900.86	4.12E-09	8.24E-09	1.24E-08
467	479933.4	3769918.16	3.96E-09	7.92E-09	1.19E-08
468	479926.4	3769935.46	3.81E-09	7.62E-09	1.14E-08
469	479919.4	3769952.75	3.67E-09	7.33E-09	1.10E-08
470	479912.41	3769970.05	3.53E-09	7.07E-09	1.06E-08
471	479905.41	3769987.35	3.41E-09	6.82E-09	1.02E-08
472	479898.41	3770004.64	3.30E-09	6.60E-09	9.89E-09
473	479891.42	3770021.94	3.19E-09	6.38E-09	9.57E-09
474	479884.42	3770039.24	3.09E-09	6.18E-09	9.27E-09
475	479877.42	3770056.53	3.00E-09	5.99E-09	8.99E-09
476	479870.43	3770073.83	2.91E-09	5.81E-09	8.72E-09
477	479863.43	3770091.13	2.83E-09	5.65E-09	8.48E-09
478	479856.43	3770108.42	2.75E-09	5.50E-09	8.25E-09
479	479832.38	3770133.29	2.68E-09	5.35E-09	8.03E-09
480	479815.33	3770140.86	2.67E-09	5.33E-09	8.00E-09
481	479798.27	3770148.42	2.66E-09	5.32E-09	7.98E-09
482	479781.22	3770155.99	2.66E-09	5.32E-09	7.97E-09
483	479764.17	3770163.56	2.66E-09	5.31E-09	7.97E-09
484	479747.11	3770171.13	2.65E-09	5.31E-09	7.96E-09
485	479730.06	3770178.69	2.65E-09	5.30E-09	7.96E-09
486	479713	3770186.26	2.65E-09	5.30E-09	7.94E-09
487	479695.95	3770193.83	2.64E-09	5.29E-09	7.93E-09
488	479678.89	3770201.4	2.64E-09	5.28E-09	7.92E-09
489	479661.84	3770208.97	2.64E-09	5.28E-09	7.92E-09
490	479644.78	3770216.53	2.64E-09	5.28E-09	7.92E-09
491	479627.73	3770224.1	2.64E-09	5.28E-09	7.92E-09
492	479610.67	3770231.67	2.64E-09	5.27E-09	7.91E-09
493	479593.62	3770239.24	2.63E-09	5.27E-09	7.90E-09
494	479576.57	3770246.8	2.64E-09	5.27E-09	7.91E-09
495	479559.51	3770254.37	2.64E-09	5.28E-09	7.92E-09
496	479542.46	3770261.94	2.64E-09	5.27E-09	7.91E-09
497	479525.4	3770269.51	2.63E-09	5.26E-09	7.90E-09
498	479508.35	3770277.07	2.63E-09	5.26E-09	7.89E-09
499	479491.29	3770284.64	2.63E-09	5.25E-09	7.88E-09
500	479474.24	3770292.21	2.63E-09	5.25E-09	7.88E-09
501	479457.18	3770299.78	2.63E-09	5.26E-09	7.89E-09
502	479440.13	3770307.35	2.62E-09	5.25E-09	7.87E-09
503	479423.08	3770314.91	2.62E-09	5.24E-09	7.85E-09
504	479406.02	3770322.48	2.61E-09	5.23E-09	7.84E-09
505	479388.97	3770330.05	2.61E-09	5.22E-09	7.83E-09
506	479371.91	3770337.62	2.60E-09	5.21E-09	7.81E-09
507	479354.86	3770345.18	2.60E-09	5.19E-09	7.79E-09
508	479337.8	3770352.75	2.59E-09	5.17E-09	7.76E-09
509	479320.75	3770360.32	2.58E-09	5.16E-09	7.74E-09
510	479303.69	3770367.89	2.57E-09	5.14E-09	7.71E-09
511	479286.64	3770375.45	2.56E-09	5.12E-09	7.68E-09
512	479269.59	3770383.02	2.56E-09	5.11E-09	7.67E-09
513	479252.53	3770390.59	2.55E-09	5.10E-09	7.65E-09
514	479235.48	3770398.16	2.54E-09	5.08E-09	7.62E-09
515	479218.42	3770405.73	2.53E-09	5.06E-09	7.59E-09
516	479201.37	3770413.29	2.52E-09	5.04E-09	7.56E-09

517	479184.31	3770420.86	2.51E-09	5.03E-09	7.54E-09
518	479167.26	3770428.43	2.51E-09	5.01E-09	7.52E-09
519	480136.3	3769416.56	9.97E-09	1.99E-08	2.99E-08
520	480136.3	3769397.46	1.02E-08	2.05E-08	3.07E-08
521	480136.3	3769378.36	1.05E-08	2.10E-08	3.16E-08
522	480136.3	3769359.27	1.08E-08	2.15E-08	3.23E-08
523	480136.3	3769340.17	1.10E-08	2.20E-08	3.30E-08
524	480136.3	3769321.07	1.12E-08	2.24E-08	3.36E-08
525	480136.3	3769301.97	1.14E-08	2.28E-08	3.42E-08
526	480136.3	3769282.87	1.16E-08	2.32E-08	3.47E-08
527	480136.3	3769263.78	1.17E-08	2.34E-08	3.52E-08
528	480136.3	3769244.68	1.18E-08	2.37E-08	3.55E-08
529	480136.3	3769225.58	1.19E-08	2.39E-08	3.58E-08
530	480289.24	3769434.02	7.89E-09	1.58E-08	2.37E-08
531	480282.18	3769451.47	7.76E-09	1.55E-08	2.33E-08
532	480275.12	3769468.93	7.62E-09	1.52E-08	2.29E-08
533	480268.06	3769486.38	7.48E-09	1.50E-08	2.24E-08
534	480261	3769503.84	7.34E-09	1.47E-08	2.20E-08
535	480218.63	3769608.57	6.38E-09	1.28E-08	1.92E-08
536	480211.57	3769626.02	6.23E-09	1.25E-08	1.87E-08
537	480204.51	3769643.48	6.06E-09	1.21E-08	1.82E-08
538	480197.45	3769660.93	5.90E-09	1.18E-08	1.77E-08
539	480190.39	3769678.39	5.73E-09	1.15E-08	1.72E-08
540	480183.33	3769695.85	5.56E-09	1.11E-08	1.67E-08
541	480176.27	3769713.3	5.40E-09	1.08E-08	1.62E-08
542	480169.2	3769730.76	5.24E-09	1.05E-08	1.57E-08
543	480162.14	3769748.21	5.08E-09	1.02E-08	1.52E-08
544	480155.08	3769765.67	4.92E-09	9.84E-09	1.48E-08
545	480148.02	3769783.12	4.76E-09	9.53E-09	1.43E-08
546	480140.96	3769800.58	4.61E-09	9.21E-09	1.38E-08
547	480133.9	3769818.03	4.45E-09	8.91E-09	1.34E-08
548	480126.84	3769835.49	4.30E-09	8.61E-09	1.29E-08
549	480119.78	3769852.94	4.16E-09	8.32E-09	1.25E-08
550	480112.72	3769870.4	4.02E-09	8.03E-09	1.20E-08
551	480105.66	3769887.85	3.88E-09	7.76E-09	1.16E-08
552	480098.6	3769905.31	3.74E-09	7.49E-09	1.12E-08
553	480091.54	3769922.77	3.61E-09	7.22E-09	1.08E-08
554	480084.47	3769940.22	3.49E-09	6.97E-09	1.05E-08
555	480077.41	3769957.68	3.36E-09	6.73E-09	1.01E-08
556	480070.35	3769975.13	3.25E-09	6.50E-09	9.75E-09
557	480063.29	3769992.59	3.14E-09	6.28E-09	9.42E-09
558	480056.23	3770010.04	3.03E-09	6.07E-09	9.10E-09
559	480049.17	3770027.5	2.94E-09	5.87E-09	8.81E-09
560	480042.11	3770044.95	2.84E-09	5.68E-09	8.53E-09
561	480035.05	3770062.41	2.76E-09	5.51E-09	8.27E-09
562	480027.99	3770079.86	2.68E-09	5.35E-09	8.03E-09
563	480020.93	3770097.32	2.60E-09	5.20E-09	7.80E-09
564	480013.87	3770114.77	2.53E-09	5.06E-09	7.59E-09
565	480006.8	3770132.23	2.46E-09	4.93E-09	7.39E-09
566	479999.74	3770149.68	2.40E-09	4.80E-09	7.20E-09
567	479992.68	3770167.14	2.34E-09	4.69E-09	7.03E-09
568	479985.62	3770184.6	2.29E-09	4.58E-09	6.86E-09

569	479978.56	3770202.05	2.24E-09	4.47E-09	6.71E-09
570	479971.5	3770219.51	2.19E-09	4.37E-09	6.56E-09
571	479947.23	3770244.6	2.14E-09	4.27E-09	6.41E-09
572	479930.02	3770252.24	2.13E-09	4.27E-09	6.40E-09
573	479912.81	3770259.87	2.13E-09	4.26E-09	6.39E-09
574	479895.6	3770267.51	2.13E-09	4.25E-09	6.38E-09
575	479878.38	3770275.15	2.12E-09	4.25E-09	6.37E-09
576	479861.17	3770282.78	2.12E-09	4.25E-09	6.37E-09
577	479843.96	3770290.42	2.12E-09	4.24E-09	6.37E-09
578	479826.75	3770298.06	2.12E-09	4.24E-09	6.36E-09
579	479809.54	3770305.7	2.12E-09	4.24E-09	6.36E-09
580	479792.33	3770313.33	2.12E-09	4.24E-09	6.36E-09
581	479775.12	3770320.97	2.12E-09	4.23E-09	6.35E-09
582	479757.91	3770328.61	2.12E-09	4.23E-09	6.35E-09
583	479740.7	3770336.24	2.12E-09	4.23E-09	6.35E-09
584	479723.49	3770343.88	2.12E-09	4.23E-09	6.35E-09
585	479706.27	3770351.52	2.11E-09	4.23E-09	6.34E-09
586	479689.06	3770359.16	2.11E-09	4.22E-09	6.33E-09
587	479671.85	3770366.79	2.11E-09	4.22E-09	6.33E-09
588	479654.64	3770374.43	2.11E-09	4.22E-09	6.33E-09
589	479637.43	3770382.07	2.11E-09	4.22E-09	6.33E-09
590	479620.22	3770389.7	2.11E-09	4.22E-09	6.32E-09
591	479603.01	3770397.34	2.11E-09	4.21E-09	6.32E-09
592	479585.8	3770404.98	2.10E-09	4.21E-09	6.31E-09
593	479568.59	3770412.62	2.11E-09	4.21E-09	6.32E-09
594	479551.38	3770420.25	2.11E-09	4.21E-09	6.32E-09
595	479534.16	3770427.89	2.10E-09	4.21E-09	6.31E-09
596	479516.95	3770435.53	2.10E-09	4.20E-09	6.30E-09
597	479499.74	3770443.16	2.10E-09	4.20E-09	6.29E-09
598	479482.53	3770450.8	2.10E-09	4.19E-09	6.29E-09
599	479465.32	3770458.44	2.10E-09	4.20E-09	6.30E-09
600	479448.11	3770466.08	2.10E-09	4.19E-09	6.29E-09
601	479430.9	3770473.71	2.09E-09	4.18E-09	6.28E-09
602	479413.69	3770481.35	2.09E-09	4.18E-09	6.26E-09
603	479396.48	3770488.99	2.08E-09	4.17E-09	6.25E-09
604	479379.27	3770496.62	2.08E-09	4.16E-09	6.24E-09
605	479362.05	3770504.26	2.08E-09	4.15E-09	6.23E-09
606	479344.84	3770511.9	2.07E-09	4.14E-09	6.21E-09
607	479327.63	3770519.54	2.07E-09	4.13E-09	6.20E-09
608	479310.42	3770527.17	2.06E-09	4.12E-09	6.18E-09
609	479293.21	3770534.81	2.06E-09	4.11E-09	6.17E-09
610	479276	3770542.45	2.05E-09	4.10E-09	6.16E-09
611	479258.79	3770550.09	2.05E-09	4.09E-09	6.14E-09
612	479241.58	3770557.72	2.04E-09	4.08E-09	6.12E-09
613	479224.37	3770565.36	2.04E-09	4.07E-09	6.11E-09
614	479207.16	3770573	2.03E-09	4.06E-09	6.10E-09
615	479189.94	3770580.63	2.03E-09	4.05E-09	6.08E-09
616	479172.73	3770588.27	2.02E-09	4.04E-09	6.06E-09
617	480296.3	3769416.56	8.01E-09	1.60E-08	2.40E-08
618	480296.3	3769397.46	8.22E-09	1.64E-08	2.47E-08
619	480296.3	3769378.36	8.41E-09	1.68E-08	2.52E-08
620	480296.3	3769359.27	8.60E-09	1.72E-08	2.58E-08

621	480296.3	3769340.17	8.78E-09	1.76E-08	2.63E-08
622	480296.3	3769321.07	8.95E-09	1.79E-08	2.68E-08
623	480296.3	3769301.97	9.11E-09	1.82E-08	2.73E-08
624	480296.3	3769282.87	9.25E-09	1.85E-08	2.78E-08
625	480296.3	3769263.78	9.38E-09	1.88E-08	2.81E-08
626	480296.3	3769244.68	9.49E-09	1.90E-08	2.85E-08
627	480296.3	3769225.58	9.59E-09	1.92E-08	2.88E-08
628	480449.19	3769434.14	6.59E-09	1.32E-08	1.98E-08
629	480442.08	3769451.72	6.48E-09	1.30E-08	1.94E-08
630	480434.97	3769469.29	6.37E-09	1.27E-08	1.91E-08
631	480427.86	3769486.87	6.26E-09	1.25E-08	1.88E-08
632	480420.75	3769504.45	6.15E-09	1.23E-08	1.84E-08
633	480378.08	3769609.92	5.42E-09	1.08E-08	1.63E-08
634	480370.97	3769627.5	5.30E-09	1.06E-08	1.59E-08
635	480363.86	3769645.08	5.18E-09	1.04E-08	1.55E-08
636	480356.75	3769662.65	5.06E-09	1.01E-08	1.52E-08
637	480349.64	3769680.23	4.94E-09	9.88E-09	1.48E-08
638	480342.53	3769697.81	4.81E-09	9.63E-09	1.44E-08
639	480335.42	3769715.39	4.69E-09	9.38E-09	1.41E-08
640	480328.31	3769732.97	4.57E-09	9.14E-09	1.37E-08
641	480321.2	3769750.55	4.45E-09	8.90E-09	1.34E-08
642	480314.09	3769768.12	4.33E-09	8.66E-09	1.30E-08
643	480306.98	3769785.7	4.21E-09	8.43E-09	1.26E-08
644	480299.87	3769803.28	4.10E-09	8.19E-09	1.23E-08
645	480292.76	3769820.86	3.98E-09	7.96E-09	1.19E-08
646	480285.65	3769838.44	3.87E-09	7.73E-09	1.16E-08
647	480278.54	3769856.01	3.75E-09	7.50E-09	1.13E-08
648	480271.43	3769873.59	3.64E-09	7.29E-09	1.09E-08
649	480264.32	3769891.17	3.53E-09	7.07E-09	1.06E-08
650	480257.21	3769908.75	3.43E-09	6.86E-09	1.03E-08
651	480250.09	3769926.33	3.32E-09	6.65E-09	9.97E-09
652	480242.98	3769943.9	3.22E-09	6.44E-09	9.66E-09
653	480235.87	3769961.48	3.12E-09	6.24E-09	9.36E-09
654	480228.76	3769979.06	3.02E-09	6.05E-09	9.07E-09
655	480221.65	3769996.64	2.93E-09	5.86E-09	8.79E-09
656	480214.54	3770014.22	2.84E-09	5.68E-09	8.51E-09
657	480207.43	3770031.8	2.75E-09	5.50E-09	8.25E-09
658	480200.32	3770049.37	2.67E-09	5.34E-09	8.01E-09
659	480193.21	3770066.95	2.59E-09	5.19E-09	7.78E-09
660	480186.1	3770084.53	2.52E-09	5.04E-09	7.55E-09
661	480178.99	3770102.11	2.45E-09	4.89E-09	7.34E-09
662	480171.88	3770119.69	2.38E-09	4.76E-09	7.13E-09
663	480164.77	3770137.26	2.31E-09	4.63E-09	6.94E-09
664	480157.66	3770154.84	2.25E-09	4.51E-09	6.76E-09
665	480150.55	3770172.42	2.20E-09	4.39E-09	6.59E-09
666	480143.44	3770190	2.14E-09	4.29E-09	6.43E-09
667	480136.33	3770207.58	2.09E-09	4.19E-09	6.28E-09
668	480129.22	3770225.16	2.05E-09	4.09E-09	6.14E-09
669	480122.1	3770242.73	2.00E-09	4.00E-09	6.00E-09
670	480114.99	3770260.31	1.96E-09	3.91E-09	5.87E-09
671	480107.88	3770277.89	1.92E-09	3.83E-09	5.75E-09
672	480100.77	3770295.47	1.88E-09	3.76E-09	5.64E-09

673	480093.66	3770313.05	1.85E-09	3.69E-09	5.54E-09
674	480086.55	3770330.62	1.81E-09	3.62E-09	5.44E-09
675	480062.11	3770355.89	1.78E-09	3.55E-09	5.33E-09
676	480044.78	3770363.58	1.78E-09	3.55E-09	5.33E-09
677	480027.45	3770371.28	1.77E-09	3.55E-09	5.32E-09
678	480010.11	3770378.97	1.77E-09	3.54E-09	5.31E-09
679	479992.78	3770386.66	1.77E-09	3.54E-09	5.30E-09
680	479975.45	3770394.35	1.77E-09	3.53E-09	5.30E-09
681	479958.12	3770402.04	1.77E-09	3.53E-09	5.30E-09
682	479940.78	3770409.73	1.77E-09	3.53E-09	5.30E-09
683	479923.45	3770417.42	1.77E-09	3.53E-09	5.30E-09
684	479906.12	3770425.11	1.77E-09	3.53E-09	5.30E-09
685	479888.79	3770432.8	1.77E-09	3.53E-09	5.30E-09
686	479871.46	3770440.49	1.76E-09	3.53E-09	5.29E-09
687	479854.12	3770448.18	1.76E-09	3.53E-09	5.29E-09
688	479836.79	3770455.88	1.76E-09	3.52E-09	5.29E-09
689	479819.46	3770463.57	1.76E-09	3.52E-09	5.28E-09
690	479802.13	3770471.26	1.76E-09	3.52E-09	5.28E-09
691	479784.8	3770478.95	1.76E-09	3.52E-09	5.28E-09
692	479767.46	3770486.64	1.76E-09	3.52E-09	5.28E-09
693	479750.13	3770494.33	1.76E-09	3.51E-09	5.27E-09
694	479732.8	3770502.02	1.76E-09	3.51E-09	5.27E-09
695	479715.47	3770509.71	1.76E-09	3.51E-09	5.27E-09
696	479698.14	3770517.4	1.76E-09	3.51E-09	5.27E-09
697	479680.8	3770525.09	1.75E-09	3.51E-09	5.26E-09
698	479663.47	3770532.78	1.75E-09	3.50E-09	5.26E-09
699	479646.14	3770540.47	1.75E-09	3.50E-09	5.26E-09
700	479628.81	3770548.17	1.75E-09	3.50E-09	5.26E-09
701	479611.47	3770555.86	1.75E-09	3.50E-09	5.25E-09
702	479594.14	3770563.55	1.75E-09	3.50E-09	5.25E-09
703	479576.81	3770571.24	1.75E-09	3.50E-09	5.25E-09
704	479559.48	3770578.93	1.75E-09	3.50E-09	5.25E-09
705	479542.15	3770586.62	1.75E-09	3.50E-09	5.25E-09
706	479524.81	3770594.31	1.75E-09	3.49E-09	5.24E-09
707	479507.48	3770602	1.74E-09	3.49E-09	5.23E-09
708	479490.15	3770609.69	1.74E-09	3.48E-09	5.23E-09
709	479472.82	3770617.38	1.75E-09	3.49E-09	5.24E-09
710	479455.49	3770625.07	1.74E-09	3.49E-09	5.23E-09
711	479438.15	3770632.77	1.74E-09	3.48E-09	5.22E-09
712	479420.82	3770640.46	1.74E-09	3.48E-09	5.21E-09
713	479403.49	3770648.15	1.74E-09	3.47E-09	5.21E-09
714	479386.16	3770655.84	1.73E-09	3.46E-09	5.19E-09
715	479368.83	3770663.53	1.73E-09	3.45E-09	5.18E-09
716	479351.49	3770671.22	1.72E-09	3.45E-09	5.17E-09
717	479334.16	3770678.91	1.72E-09	3.44E-09	5.16E-09
718	479316.83	3770686.6	1.72E-09	3.44E-09	5.16E-09
719	479299.5	3770694.29	1.71E-09	3.43E-09	5.14E-09
720	479282.17	3770701.98	1.71E-09	3.42E-09	5.13E-09
721	479264.83	3770709.67	1.71E-09	3.41E-09	5.12E-09
722	479247.5	3770717.37	1.70E-09	3.41E-09	5.11E-09
723	479230.17	3770725.06	1.70E-09	3.40E-09	5.11E-09
724	479212.84	3770732.75	1.70E-09	3.40E-09	5.09E-09

725	479195.5	3770740.44	1.69E-09	3.39E-09	5.08E-09
726	479178.17	3770748.13	1.69E-09	3.38E-09	5.07E-09
727	480456.3	3769416.56	6.69E-09	1.34E-08	2.01E-08
728	480456.3	3769397.46	6.84E-09	1.37E-08	2.05E-08
729	480456.3	3769378.36	7.00E-09	1.40E-08	2.10E-08
730	480456.3	3769359.27	7.15E-09	1.43E-08	2.14E-08
731	480456.3	3769340.17	7.29E-09	1.46E-08	2.19E-08
732	480456.3	3769321.07	7.42E-09	1.48E-08	2.23E-08
733	480456.3	3769301.97	7.55E-09	1.51E-08	2.27E-08
734	480456.3	3769282.87	7.67E-09	1.53E-08	2.30E-08
735	480456.3	3769263.78	7.79E-09	1.56E-08	2.34E-08
736	480456.3	3769244.68	7.89E-09	1.58E-08	2.37E-08
737	480456.3	3769225.58	7.98E-09	1.60E-08	2.39E-08
738	480609.15	3769434.24	5.64E-09	1.13E-08	1.69E-08
739	480602	3769451.91	5.55E-09	1.11E-08	1.67E-08
740	480594.85	3769469.59	5.47E-09	1.09E-08	1.64E-08
741	480587.7	3769487.26	5.38E-09	1.08E-08	1.61E-08
742	480580.55	3769504.94	5.29E-09	1.06E-08	1.59E-08
743	480573.4	3769522.62	5.20E-09	1.04E-08	1.56E-08
744	480523.35	3769646.35	4.54E-09	9.09E-09	1.36E-08
745	480516.2	3769664.02	4.45E-09	8.89E-09	1.33E-08
746	480509.05	3769681.7	4.35E-09	8.69E-09	1.30E-08
747	480501.9	3769699.38	4.25E-09	8.50E-09	1.28E-08
748	480494.75	3769717.05	4.16E-09	8.31E-09	1.25E-08
749	480487.6	3769734.73	4.06E-09	8.12E-09	1.22E-08
750	480480.45	3769752.4	3.96E-09	7.93E-09	1.19E-08
751	480473.3	3769770.08	3.87E-09	7.74E-09	1.16E-08
752	480466.15	3769787.76	3.77E-09	7.55E-09	1.13E-08
753	480459	3769805.43	3.68E-09	7.36E-09	1.10E-08
754	480451.85	3769823.11	3.59E-09	7.18E-09	1.08E-08
755	480444.7	3769840.78	3.50E-09	7.01E-09	1.05E-08
756	480437.55	3769858.46	3.42E-09	6.83E-09	1.02E-08
757	480430.4	3769876.14	3.33E-09	6.66E-09	9.99E-09
758	480423.25	3769893.81	3.24E-09	6.49E-09	9.73E-09
759	480416.1	3769911.49	3.16E-09	6.32E-09	9.47E-09
760	480408.95	3769929.16	3.07E-09	6.15E-09	9.22E-09
761	480401.8	3769946.84	2.99E-09	5.98E-09	8.97E-09
762	480394.65	3769964.52	2.91E-09	5.82E-09	8.73E-09
763	480387.5	3769982.19	2.83E-09	5.66E-09	8.49E-09
764	480380.35	3769999.87	2.75E-09	5.50E-09	8.25E-09
765	480373.2	3770017.54	2.67E-09	5.34E-09	8.02E-09
766	480366.05	3770035.22	2.60E-09	5.19E-09	7.79E-09
767	480358.9	3770052.9	2.52E-09	5.05E-09	7.57E-09
768	480351.75	3770070.57	2.46E-09	4.91E-09	7.37E-09
769	480344.6	3770088.25	2.39E-09	4.78E-09	7.16E-09
770	480337.45	3770105.92	2.32E-09	4.65E-09	6.97E-09
771	480330.3	3770123.6	2.26E-09	4.52E-09	6.78E-09
772	480323.15	3770141.28	2.20E-09	4.40E-09	6.60E-09
773	480316	3770158.95	2.14E-09	4.29E-09	6.43E-09
774	480308.85	3770176.63	2.09E-09	4.18E-09	6.27E-09
775	480301.7	3770194.3	2.04E-09	4.08E-09	6.12E-09
776	480294.55	3770211.98	1.99E-09	3.99E-09	5.98E-09

777	480287.4	3770229.66	1.95E-09	3.89E-09	5.84E-09
778	480280.25	3770247.33	1.90E-09	3.81E-09	5.71E-09
779	480273.09	3770265.01	1.86E-09	3.72E-09	5.58E-09
780	480265.94	3770282.68	1.82E-09	3.64E-09	5.46E-09
781	480258.79	3770300.36	1.78E-09	3.57E-09	5.35E-09
782	480251.64	3770318.04	1.75E-09	3.49E-09	5.24E-09
783	480244.49	3770335.71	1.71E-09	3.43E-09	5.14E-09
784	480237.34	3770353.39	1.68E-09	3.37E-09	5.05E-09
785	480230.19	3770371.06	1.65E-09	3.30E-09	4.96E-09
786	480223.04	3770388.74	1.62E-09	3.24E-09	4.87E-09
787	480215.89	3770406.42	1.60E-09	3.19E-09	4.79E-09
788	480208.74	3770424.09	1.57E-09	3.14E-09	4.71E-09
789	480201.59	3770441.77	1.54E-09	3.09E-09	4.63E-09
790	480177.02	3770467.18	1.52E-09	3.04E-09	4.56E-09
791	480159.59	3770474.91	1.52E-09	3.03E-09	4.55E-09
792	480142.16	3770482.64	1.52E-09	3.03E-09	4.55E-09
793	480124.73	3770490.38	1.52E-09	3.03E-09	4.55E-09
794	480107.3	3770498.11	1.51E-09	3.03E-09	4.54E-09
795	480089.87	3770505.85	1.51E-09	3.03E-09	4.54E-09
796	480072.44	3770513.58	1.51E-09	3.02E-09	4.54E-09
797	480055.02	3770521.31	1.51E-09	3.03E-09	4.54E-09
798	480037.59	3770529.05	1.51E-09	3.03E-09	4.54E-09
799	480020.16	3770536.78	1.51E-09	3.03E-09	4.54E-09
800	480002.73	3770544.51	1.51E-09	3.02E-09	4.54E-09
801	479985.3	3770552.25	1.51E-09	3.02E-09	4.54E-09
802	479967.87	3770559.98	1.51E-09	3.02E-09	4.53E-09
803	479950.44	3770567.72	1.51E-09	3.02E-09	4.53E-09
804	479933.02	3770575.45	1.51E-09	3.02E-09	4.53E-09
805	479915.59	3770583.18	1.51E-09	3.02E-09	4.53E-09
806	479898.16	3770590.92	1.51E-09	3.02E-09	4.53E-09
807	479880.73	3770598.65	1.51E-09	3.02E-09	4.53E-09
808	479863.3	3770606.38	1.51E-09	3.01E-09	4.52E-09
809	479845.87	3770614.12	1.51E-09	3.01E-09	4.52E-09
810	479828.44	3770621.85	1.51E-09	3.01E-09	4.52E-09
811	479811.02	3770629.58	1.50E-09	3.01E-09	4.51E-09
812	479793.59	3770637.32	1.50E-09	3.01E-09	4.51E-09
813	479776.16	3770645.05	1.50E-09	3.01E-09	4.51E-09
814	479758.73	3770652.79	1.50E-09	3.01E-09	4.51E-09
815	479741.3	3770660.52	1.50E-09	3.00E-09	4.51E-09
816	479723.87	3770668.25	1.50E-09	3.00E-09	4.51E-09
817	479706.44	3770675.99	1.50E-09	3.00E-09	4.51E-09
818	479689.02	3770683.72	1.50E-09	3.00E-09	4.50E-09
819	479671.59	3770691.45	1.50E-09	3.00E-09	4.50E-09
820	479654.16	3770699.19	1.50E-09	3.00E-09	4.50E-09
821	479636.73	3770706.92	1.50E-09	3.00E-09	4.50E-09
822	479619.3	3770714.66	1.50E-09	3.00E-09	4.49E-09
823	479601.87	3770722.39	1.50E-09	2.99E-09	4.49E-09
824	479584.44	3770730.12	1.50E-09	2.99E-09	4.49E-09
825	479567.02	3770737.86	1.50E-09	2.99E-09	4.49E-09
826	479549.59	3770745.59	1.50E-09	2.99E-09	4.49E-09
827	479532.16	3770753.32	1.49E-09	2.99E-09	4.48E-09
828	479514.73	3770761.06	1.49E-09	2.98E-09	4.48E-09

829	479497.3	3770768.79	1.49E-09	2.98E-09	4.47E-09
830	479479.87	3770776.52	1.49E-09	2.99E-09	4.48E-09
831	479462.44	3770784.26	1.49E-09	2.98E-09	4.47E-09
832	479445.02	3770791.99	1.49E-09	2.98E-09	4.46E-09
833	479427.59	3770799.73	1.49E-09	2.97E-09	4.46E-09
834	479410.16	3770807.46	1.48E-09	2.97E-09	4.45E-09
835	479392.73	3770815.19	1.48E-09	2.96E-09	4.45E-09
836	479375.3	3770822.93	1.48E-09	2.96E-09	4.44E-09
837	479357.87	3770830.66	1.48E-09	2.95E-09	4.43E-09
838	479340.44	3770838.39	1.48E-09	2.95E-09	4.43E-09
839	479323.02	3770846.13	1.47E-09	2.94E-09	4.42E-09
840	479305.59	3770853.86	1.47E-09	2.94E-09	4.41E-09
841	479288.16	3770861.6	1.47E-09	2.93E-09	4.40E-09
842	479270.73	3770869.33	1.47E-09	2.93E-09	4.40E-09
843	479253.3	3770877.06	1.46E-09	2.93E-09	4.39E-09
844	479235.87	3770884.8	1.46E-09	2.92E-09	4.38E-09
845	479218.44	3770892.53	1.46E-09	2.92E-09	4.37E-09
846	479201.02	3770900.26	1.46E-09	2.91E-09	4.37E-09
847	479183.59	3770908	1.45E-09	2.90E-09	4.36E-09
848	480616.3	3769416.56	5.72E-09	1.14E-08	1.72E-08
849	480616.3	3769397.46	5.84E-09	1.17E-08	1.75E-08
850	480616.3	3769378.36	5.97E-09	1.19E-08	1.79E-08
851	480616.3	3769359.27	6.10E-09	1.22E-08	1.83E-08
852	480616.3	3769340.17	6.22E-09	1.24E-08	1.86E-08
853	480616.3	3769321.07	6.33E-09	1.27E-08	1.90E-08
854	480616.3	3769301.97	6.44E-09	1.29E-08	1.93E-08
855	480616.3	3769282.87	6.54E-09	1.31E-08	1.96E-08
856	480616.3	3769263.78	6.64E-09	1.33E-08	1.99E-08
857	480616.3	3769244.68	6.73E-09	1.35E-08	2.02E-08
858	480616.3	3769225.58	6.82E-09	1.36E-08	2.04E-08
859	479077.49	3769215.89	8.81E-08	1.76E-07	2.64E-07
860	479072.74	3769234.91	1.15E-07	2.29E-07	3.44E-07
861	479084.3	3769193.04	6.70E-08	1.34E-07	2.01E-07
862	479155.23	3769201.76	1.15E-07	2.30E-07	3.46E-07
863	479058.09	3769211.04	7.06E-08	1.41E-07	2.12E-07
864	479053.34	3769230.06	8.89E-08	1.78E-07	2.67E-07
865	479038.68	3769206.2	5.80E-08	1.16E-07	1.74E-07
866	479033.93	3769225.22	7.13E-08	1.43E-07	2.14E-07
867	479081.69	3769158.48	4.35E-08	8.71E-08	1.31E-07
868	479191.22	3769197.22	1.16E-07	2.31E-07	3.47E-07
869	479019.28	3769201.35	4.82E-08	9.64E-08	1.45E-07
870	479014.53	3769220.37	5.82E-08	1.16E-07	1.75E-07
871	479026.35	3769160.15	3.31E-08	6.63E-08	9.94E-08
872	479041.64	3769149.65	3.24E-08	6.49E-08	9.73E-08
873	479056.93	3769139.14	3.16E-08	6.32E-08	9.49E-08
874	479072.22	3769128.64	3.08E-08	6.16E-08	9.24E-08
875	479087.51	3769118.14	2.99E-08	5.98E-08	8.97E-08
876	479102.81	3769107.63	2.88E-08	5.77E-08	8.65E-08
877	479170.26	3769128.31	4.61E-08	9.21E-08	1.38E-07
878	479182.55	3769142.21	5.59E-08	1.12E-07	1.68E-07
879	479194.84	3769156.1	6.79E-08	1.36E-07	2.04E-07
880	479231.72	3769197.79	1.13E-07	2.26E-07	3.39E-07

881	479244.01	3769211.68	1.29E-07	2.58E-07	3.87E-07
882	478980.47	3769191.66	3.50E-08	6.99E-08	1.05E-07
883	478975.72	3769210.68	4.13E-08	8.26E-08	1.24E-07
884	478987.03	3769150.8	2.53E-08	5.06E-08	7.58E-08
885	479002.16	3769140.42	2.49E-08	4.98E-08	7.47E-08
886	479017.28	3769130.03	2.45E-08	4.89E-08	7.34E-08
887	479032.41	3769119.64	2.40E-08	4.79E-08	7.19E-08
888	479047.53	3769109.25	2.35E-08	4.69E-08	7.04E-08
889	479062.65	3769098.86	2.30E-08	4.59E-08	6.89E-08
890	479077.78	3769088.48	2.24E-08	4.48E-08	6.72E-08
891	479092.9	3769078.09	2.18E-08	4.35E-08	6.53E-08
892	479108.02	3769067.7	2.11E-08	4.22E-08	6.33E-08
893	479174.74	3769088.15	3.14E-08	6.27E-08	9.41E-08
894	479186.9	3769101.9	3.70E-08	7.40E-08	1.11E-07
895	479199.05	3769115.64	4.38E-08	8.76E-08	1.31E-07
896	479211.21	3769129.38	5.16E-08	1.03E-07	1.55E-07
897	479223.36	3769143.12	6.06E-08	1.21E-07	1.82E-07
898	479235.52	3769156.87	7.07E-08	1.41E-07	2.12E-07
899	479271.99	3769198.09	1.04E-07	2.08E-07	3.11E-07
900	479284.14	3769211.84	1.13E-07	2.26E-07	3.39E-07
901	478936.91	3769200.99	3.12E-08	6.24E-08	9.36E-08
902	478934.9	3769150.27	2.03E-08	4.05E-08	6.08E-08
903	478950.92	3769139.26	1.99E-08	3.98E-08	5.97E-08
904	478966.93	3769128.26	1.96E-08	3.92E-08	5.88E-08
905	478982.95	3769117.26	1.93E-08	3.86E-08	5.80E-08
906	478998.97	3769106.25	1.90E-08	3.80E-08	5.71E-08
907	479014.99	3769095.25	1.87E-08	3.73E-08	5.60E-08
908	479031.01	3769084.25	1.83E-08	3.66E-08	5.49E-08
909	479047.03	3769073.24	1.79E-08	3.58E-08	5.38E-08
910	479063.05	3769062.24	1.75E-08	3.51E-08	5.26E-08
911	479079.07	3769051.24	1.71E-08	3.43E-08	5.14E-08
912	479095.09	3769040.24	1.67E-08	3.34E-08	5.01E-08
913	479111.11	3769029.23	1.62E-08	3.24E-08	4.87E-08
914	479181.78	3769050.9	2.34E-08	4.68E-08	7.01E-08
915	479194.66	3769065.45	2.72E-08	5.45E-08	8.17E-08
916	479207.54	3769080.01	3.19E-08	6.38E-08	9.57E-08
917	479220.41	3769094.57	3.74E-08	7.48E-08	1.12E-07
918	479233.29	3769109.12	4.37E-08	8.73E-08	1.31E-07
919	479246.16	3769123.68	5.07E-08	1.01E-07	1.52E-07
920	479259.04	3769138.24	5.87E-08	1.17E-07	1.76E-07
921	479271.92	3769152.8	6.70E-08	1.34E-07	2.01E-07
922	479310.55	3769196.47	9.12E-08	1.82E-07	2.74E-07
923	479323.42	3769211.02	9.76E-08	1.95E-07	2.93E-07
924	478898.11	3769191.29	2.46E-08	4.91E-08	7.37E-08
925	478879.82	3769151.75	1.69E-08	3.39E-08	5.08E-08
926	478895.6	3769140.91	1.65E-08	3.31E-08	4.96E-08
927	478911.38	3769130.07	1.62E-08	3.24E-08	4.86E-08
928	478927.16	3769119.24	1.59E-08	3.19E-08	4.78E-08
929	478942.93	3769108.4	1.57E-08	3.14E-08	4.72E-08
930	478958.71	3769097.56	1.55E-08	3.10E-08	4.66E-08
931	478974.49	3769086.73	1.53E-08	3.06E-08	4.59E-08
932	478990.26	3769075.89	1.51E-08	3.02E-08	4.53E-08

933	479006.04	3769065.05	1.49E-08	2.97E-08	4.46E-08
934	479021.82	3769054.22	1.46E-08	2.91E-08	4.37E-08
935	479037.6	3769043.38	1.43E-08	2.86E-08	4.29E-08
936	479053.37	3769032.54	1.40E-08	2.81E-08	4.21E-08
937	479069.15	3769021.71	1.37E-08	2.75E-08	4.12E-08
938	479084.93	3769010.87	1.34E-08	2.68E-08	4.03E-08
939	479100.7	3769000.03	1.31E-08	2.63E-08	3.94E-08
940	479198.76	3769024.87	2.01E-08	4.02E-08	6.04E-08
941	479211.44	3769039.21	2.31E-08	4.61E-08	6.92E-08
942	479224.12	3769053.54	2.65E-08	5.30E-08	7.95E-08
943	479236.81	3769067.88	3.05E-08	6.10E-08	9.15E-08
944	479249.49	3769082.22	3.50E-08	7.00E-08	1.05E-07
945	479262.17	3769096.55	4.00E-08	8.01E-08	1.20E-07
946	479274.85	3769110.89	4.57E-08	9.13E-08	1.37E-07
947	479287.53	3769125.22	5.14E-08	1.03E-07	1.54E-07
948	479300.21	3769139.56	5.78E-08	1.16E-07	1.73E-07
949	479312.89	3769153.9	6.42E-08	1.28E-07	1.93E-07
950	479350.94	3769196.91	8.06E-08	1.61E-07	2.42E-07
951	479363.62	3769211.24	8.39E-08	1.68E-07	2.52E-07
952	478840.84	3769142.17	1.42E-08	2.84E-08	4.26E-08
953	478856.45	3769131.46	1.38E-08	2.76E-08	4.15E-08
954	478872.05	3769120.74	1.35E-08	2.70E-08	4.05E-08
955	478887.65	3769110.02	1.33E-08	2.66E-08	3.98E-08
956	478903.26	3769099.3	1.31E-08	2.62E-08	3.93E-08
957	478918.86	3769088.59	1.29E-08	2.58E-08	3.88E-08
958	478934.47	3769077.87	1.28E-08	2.55E-08	3.83E-08
959	478950.07	3769067.15	1.26E-08	2.52E-08	3.79E-08
960	478965.67	3769056.43	1.25E-08	2.49E-08	3.74E-08
961	478981.28	3769045.72	1.23E-08	2.46E-08	3.69E-08
962	478996.88	3769035	1.21E-08	2.42E-08	3.63E-08
963	479012.48	3769024.28	1.19E-08	2.38E-08	3.57E-08
964	479028.09	3769013.56	1.17E-08	2.34E-08	3.51E-08
965	479043.69	3769002.85	1.15E-08	2.30E-08	3.46E-08
966	479059.3	3768992.13	1.13E-08	2.26E-08	3.39E-08
967	479074.9	3768981.41	1.11E-08	2.22E-08	3.33E-08
968	479090.5	3768970.69	1.09E-08	2.18E-08	3.27E-08
969	479106.11	3768959.98	1.07E-08	2.14E-08	3.21E-08
970	479137.31	3768938.54	1.03E-08	2.07E-08	3.10E-08
971	479165.46	3768942	1.12E-08	2.24E-08	3.37E-08
972	479203.09	3768984.54	1.55E-08	3.11E-08	4.66E-08
973	479215.63	3768998.72	1.75E-08	3.50E-08	5.25E-08
974	479228.17	3769012.9	1.98E-08	3.96E-08	5.93E-08
975	479240.71	3769027.08	2.24E-08	4.47E-08	6.71E-08
976	479253.25	3769041.25	2.53E-08	5.06E-08	7.58E-08
977	479265.8	3769055.43	2.87E-08	5.73E-08	8.60E-08
978	479278.34	3769069.61	3.25E-08	6.50E-08	9.75E-08
979	479290.88	3769083.79	3.68E-08	7.35E-08	1.10E-07
980	479303.42	3769097.97	4.11E-08	8.23E-08	1.23E-07
981	479315.96	3769112.15	4.57E-08	9.14E-08	1.37E-07
982	479328.51	3769126.33	5.06E-08	1.01E-07	1.52E-07
983	479341.05	3769140.51	5.54E-08	1.11E-07	1.66E-07
984	479353.59	3769154.69	6.00E-08	1.20E-07	1.80E-07

985	479391.22	3769197.22	7.01E-08	1.40E-07	2.10E-07
986	479403.76	3769211.4	7.21E-08	1.44E-07	2.16E-07
987	478825.24	3769152.89	1.47E-08	2.94E-08	4.41E-08
988	478763.59	3769122.54	1.06E-08	2.13E-08	3.19E-08
989	478779.55	3769111.58	1.02E-08	2.05E-08	3.07E-08
990	478795.51	3769100.61	9.95E-09	1.99E-08	2.99E-08
991	478811.48	3769089.65	9.72E-09	1.94E-08	2.92E-08
992	478827.44	3769078.68	9.54E-09	1.91E-08	2.86E-08
993	478843.41	3769067.72	9.41E-09	1.88E-08	2.82E-08
994	478859.37	3769056.75	9.30E-09	1.86E-08	2.79E-08
995	478875.33	3769045.79	9.21E-09	1.84E-08	2.76E-08
996	478891.3	3769034.82	9.12E-09	1.82E-08	2.74E-08
997	478907.26	3769023.86	9.04E-09	1.81E-08	2.71E-08
998	478923.23	3769012.89	8.95E-09	1.79E-08	2.68E-08
999	478939.19	3769001.93	8.85E-09	1.77E-08	2.65E-08
1000	478955.15	3768990.96	8.74E-09	1.75E-08	2.62E-08
1001	478971.12	3768980	8.63E-09	1.73E-08	2.59E-08
1002	478987.08	3768969.03	8.51E-09	1.70E-08	2.55E-08
1003	479003.04	3768958.07	8.39E-09	1.68E-08	2.52E-08
1004	479019.01	3768947.11	8.28E-09	1.66E-08	2.48E-08
1005	479034.97	3768936.14	8.17E-09	1.63E-08	2.45E-08
1006	479050.94	3768925.18	8.04E-09	1.61E-08	2.41E-08
1007	479066.9	3768914.21	7.93E-09	1.59E-08	2.38E-08
1008	479082.86	3768903.25	7.83E-09	1.57E-08	2.35E-08
1009	479098.83	3768892.28	7.74E-09	1.55E-08	2.32E-08
1010	479146.72	3768859.39	7.44E-09	1.49E-08	2.23E-08
1011	479175.51	3768862.93	7.94E-09	1.59E-08	2.38E-08
1012	479226.84	3768920.95	1.14E-08	2.29E-08	3.43E-08
1013	479239.67	3768935.46	1.26E-08	2.52E-08	3.79E-08
1014	479252.5	3768949.96	1.39E-08	2.79E-08	4.18E-08
1015	479265.33	3768964.47	1.55E-08	3.09E-08	4.64E-08
1016	479278.17	3768978.98	1.72E-08	3.45E-08	5.17E-08
1017	479291	3768993.48	1.92E-08	3.84E-08	5.76E-08
1018	479303.83	3769007.99	2.14E-08	4.27E-08	6.41E-08
1019	479316.66	3769022.49	2.37E-08	4.74E-08	7.12E-08
1020	479329.49	3769037	2.64E-08	5.27E-08	7.91E-08
1021	479342.32	3769051.51	2.92E-08	5.85E-08	8.77E-08
1022	479355.15	3769066.01	3.22E-08	6.45E-08	9.67E-08
1023	479367.99	3769080.52	3.52E-08	7.05E-08	1.06E-07
1024	479380.82	3769095.03	3.83E-08	7.65E-08	1.15E-07
1025	479393.65	3769109.53	4.14E-08	8.27E-08	1.24E-07
1026	479406.48	3769124.04	4.43E-08	8.87E-08	1.33E-07
1027	479419.31	3769138.54	4.70E-08	9.39E-08	1.41E-07
1028	479432.14	3769153.05	4.95E-08	9.89E-08	1.48E-07
1029	479470.64	3769196.57	5.35E-08	1.07E-07	1.61E-07
1030	479483.47	3769211.07	5.40E-08	1.08E-07	1.62E-07
1031	478747.62	3769133.51	1.11E-08	2.22E-08	3.33E-08
1032	478742.87	3769152.53	1.26E-08	2.52E-08	3.77E-08
1033	478685.71	3769103.34	8.57E-09	1.71E-08	2.57E-08
1034	478701.41	3769092.56	8.19E-09	1.64E-08	2.46E-08
1035	478717.11	3769081.77	7.88E-09	1.58E-08	2.37E-08
1036	478732.81	3769070.99	7.63E-09	1.53E-08	2.29E-08

1037	478748.51	3769060.2	7.43E-09	1.49E-08	2.23E-08
1038	478764.21	3769049.42	7.28E-09	1.46E-08	2.18E-08
1039	478779.92	3769038.63	7.17E-09	1.43E-08	2.15E-08
1040	478795.62	3769027.85	7.08E-09	1.42E-08	2.13E-08
1041	478811.32	3769017.06	7.02E-09	1.40E-08	2.11E-08
1042	478827.02	3769006.28	6.97E-09	1.39E-08	2.09E-08
1043	478842.72	3768995.49	6.92E-09	1.38E-08	2.08E-08
1044	478858.42	3768984.71	6.88E-09	1.38E-08	2.06E-08
1045	478874.12	3768973.93	6.83E-09	1.37E-08	2.05E-08
1046	478889.82	3768963.14	6.77E-09	1.35E-08	2.03E-08
1047	478905.53	3768952.36	6.71E-09	1.34E-08	2.01E-08
1048	478921.23	3768941.57	6.65E-09	1.33E-08	1.99E-08
1049	478936.93	3768930.79	6.58E-09	1.32E-08	1.97E-08
1050	478952.63	3768920	6.50E-09	1.30E-08	1.95E-08
1051	478968.33	3768909.22	6.43E-09	1.29E-08	1.93E-08
1052	478984.03	3768898.43	6.36E-09	1.27E-08	1.91E-08
1053	478999.73	3768887.65	6.29E-09	1.26E-08	1.89E-08
1054	479015.44	3768876.86	6.22E-09	1.24E-08	1.87E-08
1055	479031.14	3768866.08	6.15E-09	1.23E-08	1.84E-08
1056	479046.84	3768855.3	6.08E-09	1.22E-08	1.83E-08
1057	479062.54	3768844.51	6.03E-09	1.21E-08	1.81E-08
1058	479078.24	3768833.73	5.98E-09	1.20E-08	1.79E-08
1059	479093.94	3768822.94	5.93E-09	1.19E-08	1.78E-08
1060	479109.64	3768812.16	5.87E-09	1.17E-08	1.76E-08
1061	479141.05	3768790.59	5.75E-09	1.15E-08	1.73E-08
1062	479156.75	3768779.8	5.69E-09	1.14E-08	1.71E-08
1063	479185.07	3768783.29	6.01E-09	1.20E-08	1.80E-08
1064	479197.69	3768797.55	6.43E-09	1.29E-08	1.93E-08
1065	479248.17	3768854.62	8.67E-09	1.73E-08	2.60E-08
1066	479260.79	3768868.89	9.41E-09	1.88E-08	2.82E-08
1067	479273.41	3768883.16	1.02E-08	2.05E-08	3.07E-08
1068	479286.03	3768897.43	1.11E-08	2.23E-08	3.34E-08
1069	479298.65	3768911.69	1.22E-08	2.43E-08	3.65E-08
1070	479311.27	3768925.96	1.33E-08	2.66E-08	4.00E-08
1071	479323.89	3768940.23	1.46E-08	2.92E-08	4.38E-08
1072	479336.51	3768954.5	1.60E-08	3.20E-08	4.80E-08
1073	479349.13	3768968.76	1.76E-08	3.51E-08	5.27E-08
1074	479361.75	3768983.03	1.92E-08	3.84E-08	5.75E-08
1075	479374.37	3768997.3	2.09E-08	4.18E-08	6.28E-08
1076	479386.99	3769011.57	2.28E-08	4.56E-08	6.84E-08
1077	479399.61	3769025.83	2.48E-08	4.96E-08	7.44E-08
1078	479412.24	3769040.1	2.68E-08	5.37E-08	8.05E-08
1079	479424.86	3769054.37	2.88E-08	5.76E-08	8.64E-08
1080	479437.48	3769068.64	3.08E-08	6.16E-08	9.24E-08
1081	479450.1	3769082.9	3.28E-08	6.56E-08	9.84E-08
1082	479462.72	3769097.17	3.47E-08	6.95E-08	1.04E-07
1083	479475.34	3769111.44	3.65E-08	7.30E-08	1.10E-07
1084	479487.96	3769125.71	3.81E-08	7.62E-08	1.14E-07
1085	479500.58	3769139.97	3.95E-08	7.89E-08	1.18E-07
1086	479538.44	3769182.78	4.17E-08	8.34E-08	1.25E-07
1087	479551.06	3769197.04	4.17E-08	8.35E-08	1.25E-07
1088	479563.68	3769211.31	4.15E-08	8.30E-08	1.25E-07

1089	478670.01	3769114.12	9.00E-09	1.80E-08	2.70E-08
1090	478665.26	3769133.14	1.01E-08	2.02E-08	3.03E-08
1091	478608.33	3769083.79	7.23E-09	1.45E-08	2.17E-08
1092	478624.27	3769072.84	6.89E-09	1.38E-08	2.07E-08
1093	478640.21	3769061.89	6.59E-09	1.32E-08	1.98E-08
1094	478656.16	3769050.94	6.33E-09	1.27E-08	1.90E-08
1095	478672.1	3769039.99	6.11E-09	1.22E-08	1.83E-08
1096	478688.04	3769029.04	5.94E-09	1.19E-08	1.78E-08
1097	478703.98	3769018.1	5.80E-09	1.16E-08	1.74E-08
1098	478719.92	3769007.15	5.69E-09	1.14E-08	1.71E-08
1099	478735.86	3768996.2	5.61E-09	1.12E-08	1.68E-08
1100	478751.8	3768985.25	5.56E-09	1.11E-08	1.67E-08
1101	478767.74	3768974.3	5.52E-09	1.10E-08	1.66E-08
1102	478783.68	3768963.35	5.49E-09	1.10E-08	1.65E-08
1103	478799.63	3768952.4	5.46E-09	1.09E-08	1.64E-08
1104	478815.57	3768941.45	5.44E-09	1.09E-08	1.63E-08
1105	478831.51	3768930.5	5.42E-09	1.08E-08	1.62E-08
1106	478847.45	3768919.55	5.39E-09	1.08E-08	1.62E-08
1107	478863.39	3768908.6	5.35E-09	1.07E-08	1.60E-08
1108	478879.33	3768897.65	5.31E-09	1.06E-08	1.59E-08
1109	478895.27	3768886.7	5.26E-09	1.05E-08	1.58E-08
1110	478911.21	3768875.76	5.21E-09	1.04E-08	1.56E-08
1111	478927.15	3768864.81	5.15E-09	1.03E-08	1.55E-08
1112	478943.1	3768853.86	5.10E-09	1.02E-08	1.53E-08
1113	478959.04	3768842.91	5.06E-09	1.01E-08	1.52E-08
1114	478974.98	3768831.96	5.01E-09	1.00E-08	1.50E-08
1115	478990.92	3768821.01	4.96E-09	9.93E-09	1.49E-08
1116	479006.86	3768810.06	4.91E-09	9.83E-09	1.47E-08
1117	479022.8	3768799.11	4.88E-09	9.75E-09	1.46E-08
1118	479038.74	3768788.16	4.84E-09	9.68E-09	1.45E-08
1119	479054.68	3768777.21	4.81E-09	9.62E-09	1.44E-08
1120	479070.62	3768766.26	4.77E-09	9.54E-09	1.43E-08
1121	479086.57	3768755.31	4.73E-09	9.47E-09	1.42E-08
1122	479102.51	3768744.36	4.71E-09	9.42E-09	1.41E-08
1123	479150.33	3768711.52	4.61E-09	9.22E-09	1.38E-08
1124	479166.27	3768700.57	4.58E-09	9.17E-09	1.37E-08
1125	479195.03	3768704.1	4.82E-09	9.64E-09	1.45E-08
1126	479207.84	3768718.59	5.11E-09	1.02E-08	1.53E-08
1127	479220.65	3768733.07	5.42E-09	1.08E-08	1.63E-08
1128	479259.09	3768776.53	6.56E-09	1.31E-08	1.97E-08
1129	479271.9	3768791.02	7.02E-09	1.40E-08	2.11E-08
1130	479284.72	3768805.5	7.53E-09	1.51E-08	2.26E-08
1131	479297.53	3768819.99	8.11E-09	1.62E-08	2.43E-08
1132	479310.34	3768834.47	8.72E-09	1.74E-08	2.62E-08
1133	479323.16	3768848.96	9.40E-09	1.88E-08	2.82E-08
1134	479335.97	3768863.44	1.02E-08	2.03E-08	3.05E-08
1135	479348.78	3768877.93	1.10E-08	2.20E-08	3.30E-08
1136	479361.6	3768892.41	1.19E-08	2.39E-08	3.58E-08
1137	479374.41	3768906.9	1.30E-08	2.59E-08	3.89E-08
1138	479387.22	3768921.39	1.40E-08	2.80E-08	4.20E-08
1139	479400.04	3768935.87	1.52E-08	3.04E-08	4.56E-08
1140	479412.85	3768950.36	1.65E-08	3.30E-08	4.95E-08

1141	479425.66	3768964.84	1.78E-08	3.55E-08	5.33E-08
1142	479438.48	3768979.33	1.91E-08	3.82E-08	5.73E-08
1143	479451.29	3768993.81	2.06E-08	4.11E-08	6.17E-08
1144	479464.1	3769008.3	2.20E-08	4.41E-08	6.61E-08
1145	479476.92	3769022.78	2.36E-08	4.71E-08	7.07E-08
1146	479489.73	3769037.27	2.51E-08	5.01E-08	7.52E-08
1147	479502.54	3769051.75	2.65E-08	5.30E-08	7.95E-08
1148	479515.36	3769066.24	2.78E-08	5.57E-08	8.35E-08
1149	479528.17	3769080.73	2.91E-08	5.81E-08	8.72E-08
1150	479540.98	3769095.21	3.02E-08	6.04E-08	9.07E-08
1151	479553.79	3769109.7	3.13E-08	6.25E-08	9.38E-08
1152	479566.61	3769124.18	3.21E-08	6.42E-08	9.63E-08
1153	479579.42	3769138.67	3.28E-08	6.55E-08	9.83E-08
1154	479592.23	3769153.15	3.32E-08	6.64E-08	9.97E-08
1155	479617.86	3769182.12	3.35E-08	6.70E-08	1.00E-07
1156	479630.67	3769196.61	3.32E-08	6.65E-08	9.97E-08
1157	479643.49	3769211.09	3.28E-08	6.56E-08	9.84E-08
1158	478592.39	3769094.74	7.61E-09	1.52E-08	2.28E-08
1159	478587.64	3769113.76	8.47E-09	1.69E-08	2.54E-08
1160	478530.9	3769064.28	6.29E-09	1.26E-08	1.89E-08
1161	478547.02	3769053.21	6.00E-09	1.20E-08	1.80E-08
1162	478563.15	3769042.13	5.73E-09	1.15E-08	1.72E-08
1163	478579.27	3769031.06	5.48E-09	1.10E-08	1.64E-08
1164	478595.39	3769019.98	5.26E-09	1.05E-08	1.58E-08
1165	478611.52	3769008.91	5.07E-09	1.01E-08	1.52E-08
1166	478627.64	3768997.83	4.91E-09	9.82E-09	1.47E-08
1167	478643.77	3768986.76	4.78E-09	9.56E-09	1.43E-08
1168	478659.89	3768975.68	4.68E-09	9.36E-09	1.40E-08
1169	478676.01	3768964.61	4.60E-09	9.20E-09	1.38E-08
1170	478692.14	3768953.53	4.55E-09	9.09E-09	1.36E-08
1171	478708.26	3768942.46	4.51E-09	9.02E-09	1.35E-08
1172	478724.38	3768931.38	4.48E-09	8.97E-09	1.35E-08
1173	478740.51	3768920.31	4.47E-09	8.94E-09	1.34E-08
1174	478756.63	3768909.24	4.46E-09	8.91E-09	1.34E-08
1175	478772.76	3768898.16	4.45E-09	8.89E-09	1.33E-08
1176	478788.88	3768887.09	4.44E-09	8.87E-09	1.33E-08
1177	478805	3768876.01	4.42E-09	8.84E-09	1.33E-08
1178	478821.13	3768864.94	4.40E-09	8.80E-09	1.32E-08
1179	478837.25	3768853.86	4.38E-09	8.75E-09	1.31E-08
1180	478853.38	3768842.79	4.34E-09	8.69E-09	1.30E-08
1181	478869.5	3768831.71	4.31E-09	8.62E-09	1.29E-08
1182	478885.62	3768820.64	4.27E-09	8.55E-09	1.28E-08
1183	478901.75	3768809.56	4.23E-09	8.46E-09	1.27E-08
1184	478917.87	3768798.49	4.19E-09	8.39E-09	1.26E-08
1185	478934	3768787.41	4.16E-09	8.32E-09	1.25E-08
1186	478950.12	3768776.34	4.12E-09	8.24E-09	1.24E-08
1187	478966.24	3768765.26	4.08E-09	8.16E-09	1.22E-08
1188	478982.37	3768754.19	4.05E-09	8.11E-09	1.22E-08
1189	478998.49	3768743.11	4.03E-09	8.06E-09	1.21E-08
1190	479014.61	3768732.04	4.01E-09	8.01E-09	1.20E-08
1191	479030.74	3768720.96	3.98E-09	7.96E-09	1.19E-08
1192	479046.86	3768709.89	3.96E-09	7.91E-09	1.19E-08

1193	479062.99	3768698.81	3.94E-09	7.88E-09	1.18E-08
1194	479079.11	3768687.74	3.92E-09	7.85E-09	1.18E-08
1195	479095.23	3768676.66	3.90E-09	7.81E-09	1.17E-08
1196	479111.36	3768665.59	3.88E-09	7.77E-09	1.17E-08
1197	479143.61	3768643.44	3.86E-09	7.71E-09	1.16E-08
1198	479159.73	3768632.37	3.84E-09	7.69E-09	1.15E-08
1199	479175.85	3768621.29	3.83E-09	7.65E-09	1.15E-08
1200	479204.94	3768624.87	4.00E-09	8.00E-09	1.20E-08
1201	479217.9	3768639.52	4.21E-09	8.42E-09	1.26E-08
1202	479230.86	3768654.17	4.43E-09	8.86E-09	1.33E-08
1203	479243.82	3768668.82	4.67E-09	9.35E-09	1.40E-08
1204	479282.7	3768712.78	5.54E-09	1.11E-08	1.66E-08
1205	479295.66	3768727.43	5.89E-09	1.18E-08	1.77E-08
1206	479308.62	3768742.08	6.26E-09	1.25E-08	1.88E-08
1207	479321.58	3768756.73	6.67E-09	1.33E-08	2.00E-08
1208	479334.54	3768771.38	7.11E-09	1.42E-08	2.13E-08
1209	479347.5	3768786.03	7.59E-09	1.52E-08	2.28E-08
1210	479360.46	3768800.69	8.12E-09	1.62E-08	2.44E-08
1211	479373.42	3768815.34	8.70E-09	1.74E-08	2.61E-08
1212	479386.38	3768829.99	9.33E-09	1.87E-08	2.80E-08
1213	479399.34	3768844.64	1.00E-08	2.00E-08	3.01E-08
1214	479412.3	3768859.29	1.08E-08	2.15E-08	3.23E-08
1215	479425.26	3768873.94	1.16E-08	2.32E-08	3.47E-08
1216	479438.22	3768888.59	1.24E-08	2.49E-08	3.73E-08
1217	479451.18	3768903.25	1.34E-08	2.67E-08	4.01E-08
1218	479464.14	3768917.9	1.43E-08	2.87E-08	4.30E-08
1219	479477.1	3768932.55	1.54E-08	3.07E-08	4.61E-08
1220	479490.06	3768947.2	1.64E-08	3.29E-08	4.93E-08
1221	479503.02	3768961.85	1.75E-08	3.50E-08	5.26E-08
1222	479515.98	3768976.5	1.86E-08	3.72E-08	5.58E-08
1223	479528.94	3768991.16	1.97E-08	3.93E-08	5.90E-08
1224	479541.9	3769005.81	2.08E-08	4.16E-08	6.23E-08
1225	479554.86	3769020.46	2.19E-08	4.38E-08	6.56E-08
1226	479567.82	3769035.11	2.29E-08	4.59E-08	6.88E-08
1227	479580.78	3769049.76	2.39E-08	4.78E-08	7.18E-08
1228	479593.74	3769064.41	2.48E-08	4.96E-08	7.44E-08
1229	479606.7	3769079.06	2.56E-08	5.11E-08	7.67E-08
1230	479619.66	3769093.72	2.62E-08	5.24E-08	7.86E-08
1231	479632.62	3769108.37	2.67E-08	5.35E-08	8.02E-08
1232	479645.58	3769123.02	2.72E-08	5.43E-08	8.15E-08
1233	479658.54	3769137.67	2.74E-08	5.49E-08	8.23E-08
1234	479671.5	3769152.32	2.76E-08	5.51E-08	8.27E-08
1235	479697.42	3769181.63	2.74E-08	5.47E-08	8.21E-08
1236	479710.38	3769196.28	2.70E-08	5.41E-08	8.11E-08
1237	479723.34	3769210.93	2.66E-08	5.31E-08	7.97E-08
1238	478514.77	3769075.36	6.61E-09	1.32E-08	1.98E-08
1239	478510.02	3769094.38	7.29E-09	1.46E-08	2.19E-08
1240	478453.09	3769045.03	5.59E-09	1.12E-08	1.68E-08
1241	478469.02	3769034.09	5.34E-09	1.07E-08	1.60E-08
1242	478484.94	3769023.15	5.11E-09	1.02E-08	1.53E-08
1243	478500.87	3769012.21	4.89E-09	9.78E-09	1.47E-08
1244	478516.8	3769001.27	4.69E-09	9.38E-09	1.41E-08

1245	478532.73	3768990.33	4.51E-09	9.01E-09	1.35E-08
1246	478548.66	3768979.39	4.34E-09	8.68E-09	1.30E-08
1247	478564.59	3768968.45	4.20E-09	8.40E-09	1.26E-08
1248	478580.52	3768957.51	4.08E-09	8.16E-09	1.22E-08
1249	478596.45	3768946.56	3.98E-09	7.96E-09	1.19E-08
1250	478612.38	3768935.62	3.90E-09	7.80E-09	1.17E-08
1251	478628.3	3768924.68	3.84E-09	7.67E-09	1.15E-08
1252	478644.23	3768913.74	3.79E-09	7.59E-09	1.14E-08
1253	478660.16	3768902.8	3.76E-09	7.53E-09	1.13E-08
1254	478676.09	3768891.86	3.75E-09	7.49E-09	1.12E-08
1255	478692.02	3768880.92	3.74E-09	7.47E-09	1.12E-08
1256	478707.95	3768869.98	3.73E-09	7.46E-09	1.12E-08
1257	478723.88	3768859.04	3.73E-09	7.46E-09	1.12E-08
1258	478739.81	3768848.1	3.73E-09	7.45E-09	1.12E-08
1259	478755.73	3768837.16	3.72E-09	7.44E-09	1.12E-08
1260	478771.66	3768826.22	3.71E-09	7.43E-09	1.11E-08
1261	478787.59	3768815.28	3.70E-09	7.40E-09	1.11E-08
1262	478803.52	3768804.33	3.68E-09	7.37E-09	1.11E-08
1263	478819.45	3768793.39	3.66E-09	7.33E-09	1.10E-08
1264	478835.38	3768782.45	3.64E-09	7.28E-09	1.09E-08
1265	478851.31	3768771.51	3.61E-09	7.22E-09	1.08E-08
1266	478867.24	3768760.57	3.58E-09	7.17E-09	1.08E-08
1267	478883.17	3768749.63	3.56E-09	7.11E-09	1.07E-08
1268	478899.09	3768738.69	3.53E-09	7.06E-09	1.06E-08
1269	478915.02	3768727.75	3.50E-09	7.00E-09	1.05E-08
1270	478930.95	3768716.81	3.47E-09	6.94E-09	1.04E-08
1271	478946.88	3768705.87	3.44E-09	6.89E-09	1.03E-08
1272	478962.81	3768694.93	3.42E-09	6.85E-09	1.03E-08
1273	478978.74	3768683.99	3.41E-09	6.81E-09	1.02E-08
1274	478994.67	3768673.04	3.39E-09	6.78E-09	1.02E-08
1275	479010.6	3768662.1	3.37E-09	6.74E-09	1.01E-08
1276	479026.53	3768651.16	3.36E-09	6.71E-09	1.01E-08
1277	479042.45	3768640.22	3.35E-09	6.69E-09	1.00E-08
1278	479058.38	3768629.28	3.33E-09	6.66E-09	1.00E-08
1279	479074.31	3768618.34	3.32E-09	6.65E-09	9.97E-09
1280	479090.24	3768607.4	3.32E-09	6.63E-09	9.95E-09
1281	479106.17	3768596.46	3.31E-09	6.62E-09	9.93E-09
1282	479138.03	3768574.58	3.30E-09	6.59E-09	9.89E-09
1283	479153.96	3768563.64	3.29E-09	6.57E-09	9.86E-09
1284	479169.88	3768552.7	3.28E-09	6.56E-09	9.84E-09
1285	479185.81	3768541.75	3.27E-09	6.55E-09	9.82E-09
1286	479214.55	3768545.29	3.42E-09	6.84E-09	1.03E-08
1287	479227.35	3768559.76	3.57E-09	7.13E-09	1.07E-08
1288	479240.15	3768574.24	3.74E-09	7.48E-09	1.12E-08
1289	479252.96	3768588.71	3.92E-09	7.83E-09	1.17E-08
1290	479265.76	3768603.19	4.11E-09	8.21E-09	1.23E-08
1291	479316.97	3768661.08	5.00E-09	1.00E-08	1.50E-08
1292	479329.78	3768675.56	5.28E-09	1.06E-08	1.58E-08
1293	479342.58	3768690.03	5.57E-09	1.11E-08	1.67E-08
1294	479355.38	3768704.51	5.89E-09	1.18E-08	1.77E-08
1295	479368.19	3768718.98	6.24E-09	1.25E-08	1.87E-08
1296	479380.99	3768733.45	6.61E-09	1.32E-08	1.98E-08

1297	479393.79	3768747.93	7.01E-09	1.40E-08	2.10E-08
1298	479406.59	3768762.4	7.45E-09	1.49E-08	2.24E-08
1299	479419.4	3768776.88	7.92E-09	1.58E-08	2.38E-08
1300	479432.2	3768791.35	8.41E-09	1.68E-08	2.52E-08
1301	479445	3768805.83	8.94E-09	1.79E-08	2.68E-08
1302	479457.81	3768820.3	9.52E-09	1.90E-08	2.86E-08
1303	479470.61	3768834.77	1.01E-08	2.03E-08	3.04E-08
1304	479483.41	3768849.25	1.08E-08	2.16E-08	3.24E-08
1305	479496.22	3768863.72	1.15E-08	2.30E-08	3.45E-08
1306	479509.02	3768878.2	1.22E-08	2.45E-08	3.67E-08
1307	479521.82	3768892.67	1.30E-08	2.60E-08	3.90E-08
1308	479534.63	3768907.15	1.38E-08	2.76E-08	4.14E-08
1309	479547.43	3768921.62	1.46E-08	2.93E-08	4.39E-08
1310	479560.23	3768936.09	1.55E-08	3.10E-08	4.64E-08
1311	479573.04	3768950.57	1.63E-08	3.27E-08	4.90E-08
1312	479585.84	3768965.04	1.72E-08	3.44E-08	5.16E-08
1313	479598.64	3768979.52	1.80E-08	3.60E-08	5.40E-08
1314	479611.45	3768993.99	1.88E-08	3.76E-08	5.64E-08
1315	479624.25	3769008.47	1.95E-08	3.91E-08	5.86E-08
1316	479637.05	3769022.94	2.03E-08	4.06E-08	6.08E-08
1317	479649.86	3769037.41	2.10E-08	4.19E-08	6.29E-08
1318	479662.66	3769051.89	2.16E-08	4.31E-08	6.47E-08
1319	479675.46	3769066.36	2.21E-08	4.42E-08	6.63E-08
1320	479688.27	3769080.84	2.25E-08	4.50E-08	6.76E-08
1321	479701.07	3769095.31	2.28E-08	4.57E-08	6.85E-08
1322	479713.87	3769109.79	2.30E-08	4.61E-08	6.91E-08
1323	479726.68	3769124.26	2.32E-08	4.64E-08	6.96E-08
1324	479739.48	3769138.73	2.32E-08	4.65E-08	6.97E-08
1325	479790.69	3769196.63	2.23E-08	4.47E-08	6.70E-08
1326	479803.5	3769211.11	2.19E-08	4.39E-08	6.58E-08
1327	478437.16	3769055.97	5.85E-09	1.17E-08	1.76E-08
1328	478432.41	3769074.99	6.39E-09	1.28E-08	1.92E-08
1329	478297.85	3769006.27	4.55E-09	9.11E-09	1.37E-08
1330	478313.77	3768995.33	4.38E-09	8.77E-09	1.32E-08
1331	478329.69	3768984.4	4.22E-09	8.43E-09	1.27E-08
1332	478345.61	3768973.46	4.06E-09	8.11E-09	1.22E-08
1333	478361.53	3768962.53	3.90E-09	7.81E-09	1.17E-08
1334	478377.45	3768951.59	3.75E-09	7.51E-09	1.13E-08
1335	478393.37	3768940.66	3.61E-09	7.23E-09	1.08E-08
1336	478409.29	3768929.72	3.48E-09	6.96E-09	1.04E-08
1337	478425.22	3768918.79	3.36E-09	6.71E-09	1.01E-08
1338	478441.14	3768907.85	3.24E-09	6.49E-09	9.73E-09
1339	478457.06	3768896.92	3.14E-09	6.29E-09	9.43E-09
1340	478472.98	3768885.98	3.05E-09	6.11E-09	9.16E-09
1341	478488.9	3768875.04	2.98E-09	5.95E-09	8.93E-09
1342	478504.82	3768864.11	2.92E-09	5.83E-09	8.75E-09
1343	478520.74	3768853.17	2.86E-09	5.73E-09	8.59E-09
1344	478536.66	3768842.24	2.83E-09	5.65E-09	8.48E-09
1345	478552.58	3768831.3	2.80E-09	5.59E-09	8.39E-09
1346	478568.51	3768820.37	2.78E-09	5.56E-09	8.33E-09
1347	478584.43	3768809.43	2.77E-09	5.53E-09	8.30E-09
1348	478600.35	3768798.5	2.76E-09	5.53E-09	8.29E-09

1349	478616.27	3768787.56	2.76E-09	5.53E-09	8.29E-09
1350	478632.19	3768776.62	2.76E-09	5.53E-09	8.29E-09
1351	478648.11	3768765.69	2.77E-09	5.54E-09	8.31E-09
1352	478664.03	3768754.75	2.77E-09	5.54E-09	8.32E-09
1353	478679.95	3768743.82	2.78E-09	5.55E-09	8.32E-09
1354	478695.88	3768732.88	2.78E-09	5.55E-09	8.33E-09
1355	478711.8	3768721.95	2.77E-09	5.55E-09	8.32E-09
1356	478727.72	3768711.01	2.77E-09	5.54E-09	8.31E-09
1357	478743.64	3768700.08	2.76E-09	5.52E-09	8.28E-09
1358	478759.56	3768689.14	2.75E-09	5.50E-09	8.25E-09
1359	478775.48	3768678.2	2.74E-09	5.47E-09	8.21E-09
1360	478791.4	3768667.27	2.72E-09	5.44E-09	8.17E-09
1361	478807.32	3768656.33	2.70E-09	5.41E-09	8.11E-09
1362	478823.24	3768645.4	2.69E-09	5.37E-09	8.06E-09
1363	478839.17	3768634.46	2.66E-09	5.33E-09	7.99E-09
1364	478855.09	3768623.53	2.65E-09	5.29E-09	7.94E-09
1365	478871.01	3768612.59	2.63E-09	5.26E-09	7.89E-09
1366	478886.93	3768601.66	2.61E-09	5.23E-09	7.84E-09
1367	478902.85	3768590.72	2.60E-09	5.20E-09	7.80E-09
1368	478918.77	3768579.79	2.58E-09	5.16E-09	7.75E-09
1369	478934.69	3768568.85	2.57E-09	5.14E-09	7.71E-09
1370	478950.61	3768557.91	2.56E-09	5.12E-09	7.68E-09
1371	478966.53	3768546.98	2.55E-09	5.10E-09	7.65E-09
1372	478982.46	3768536.04	2.54E-09	5.09E-09	7.63E-09
1373	478998.38	3768525.11	2.54E-09	5.07E-09	7.61E-09
1374	479014.3	3768514.17	2.53E-09	5.07E-09	7.60E-09
1375	479030.22	3768503.24	2.53E-09	5.06E-09	7.60E-09
1376	479046.14	3768492.3	2.53E-09	5.06E-09	7.60E-09
1377	479062.06	3768481.37	2.53E-09	5.06E-09	7.60E-09
1378	479077.98	3768470.43	2.53E-09	5.06E-09	7.59E-09
1379	479093.9	3768459.49	2.53E-09	5.06E-09	7.59E-09
1380	479109.82	3768448.56	2.53E-09	5.06E-09	7.60E-09
1381	479157.59	3768415.75	2.53E-09	5.06E-09	7.60E-09
1382	479173.51	3768404.82	2.54E-09	5.07E-09	7.61E-09
1383	479189.43	3768393.88	2.54E-09	5.08E-09	7.62E-09
1384	479205.35	3768382.95	2.54E-09	5.08E-09	7.62E-09
1385	479234.07	3768386.48	2.64E-09	5.27E-09	7.91E-09
1386	479246.87	3768400.95	2.74E-09	5.47E-09	8.21E-09
1387	479259.66	3768415.41	2.84E-09	5.68E-09	8.52E-09
1388	479272.46	3768429.88	2.95E-09	5.90E-09	8.85E-09
1389	479285.26	3768444.35	3.06E-09	6.12E-09	9.18E-09
1390	479298.05	3768458.81	3.18E-09	6.37E-09	9.55E-09
1391	479310.85	3768473.28	3.31E-09	6.61E-09	9.92E-09
1392	479323.65	3768487.75	3.44E-09	6.88E-09	1.03E-08
1393	479336.45	3768502.22	3.58E-09	7.16E-09	1.07E-08
1394	479349.24	3768516.68	3.73E-09	7.45E-09	1.12E-08
1395	479387.63	3768560.09	4.23E-09	8.45E-09	1.27E-08
1396	479400.43	3768574.55	4.41E-09	8.83E-09	1.32E-08
1397	479413.23	3768589.02	4.62E-09	9.23E-09	1.38E-08
1398	479426.03	3768603.49	4.83E-09	9.66E-09	1.45E-08
1399	479438.82	3768617.95	5.06E-09	1.01E-08	1.52E-08
1400	479451.62	3768632.42	5.30E-09	1.06E-08	1.59E-08

1401	479464.42	3768646.89	5.55E-09	1.11E-08	1.67E-08
1402	479477.21	3768661.36	5.83E-09	1.17E-08	1.75E-08
1403	479490.01	3768675.82	6.12E-09	1.22E-08	1.84E-08
1404	479502.81	3768690.29	6.44E-09	1.29E-08	1.93E-08
1405	479515.6	3768704.76	6.77E-09	1.35E-08	2.03E-08
1406	479528.4	3768719.23	7.12E-09	1.42E-08	2.14E-08
1407	479541.2	3768733.69	7.49E-09	1.50E-08	2.25E-08
1408	479554	3768748.16	7.88E-09	1.58E-08	2.37E-08
1409	479566.79	3768762.63	8.30E-09	1.66E-08	2.49E-08
1410	479579.59	3768777.09	8.73E-09	1.75E-08	2.62E-08
1411	479592.39	3768791.56	9.19E-09	1.84E-08	2.76E-08
1412	479605.18	3768806.03	9.66E-09	1.93E-08	2.90E-08
1413	479617.98	3768820.5	1.02E-08	2.03E-08	3.05E-08
1414	479630.78	3768834.96	1.07E-08	2.13E-08	3.20E-08
1415	479643.58	3768849.43	1.12E-08	2.24E-08	3.36E-08
1416	479656.37	3768863.9	1.17E-08	2.35E-08	3.52E-08
1417	479669.17	3768878.37	1.23E-08	2.45E-08	3.68E-08
1418	479681.97	3768892.83	1.28E-08	2.56E-08	3.85E-08
1419	479694.76	3768907.3	1.33E-08	2.67E-08	4.00E-08
1420	479707.56	3768921.77	1.38E-08	2.77E-08	4.15E-08
1421	479720.36	3768936.23	1.43E-08	2.87E-08	4.30E-08
1422	479733.16	3768950.7	1.48E-08	2.96E-08	4.44E-08
1423	479745.95	3768965.17	1.53E-08	3.05E-08	4.58E-08
1424	479758.75	3768979.64	1.57E-08	3.14E-08	4.71E-08
1425	479771.55	3768994.1	1.61E-08	3.22E-08	4.83E-08
1426	479784.34	3769008.57	1.64E-08	3.29E-08	4.93E-08
1427	479797.14	3769023.04	1.68E-08	3.35E-08	5.03E-08
1428	479809.94	3769037.51	1.70E-08	3.40E-08	5.10E-08
1429	479822.73	3769051.97	1.72E-08	3.44E-08	5.16E-08
1430	479835.53	3769066.44	1.73E-08	3.47E-08	5.20E-08
1431	479848.33	3769080.91	1.74E-08	3.49E-08	5.23E-08
1432	479861.13	3769095.37	1.75E-08	3.49E-08	5.24E-08
1433	479873.92	3769109.84	1.74E-08	3.49E-08	5.23E-08
1434	479886.72	3769124.31	1.74E-08	3.47E-08	5.21E-08
1435	479899.52	3769138.78	1.72E-08	3.44E-08	5.17E-08
1436	479937.91	3769182.18	1.65E-08	3.30E-08	4.96E-08
1437	479950.71	3769196.65	1.62E-08	3.24E-08	4.87E-08
1438	479963.5	3769211.11	1.59E-08	3.18E-08	4.76E-08
1439	478281.93	3769017.21	4.73E-09	9.46E-09	1.42E-08
1440	478277.18	3769036.23	5.08E-09	1.02E-08	1.52E-08
1441	478142.84	3768967.35	3.81E-09	7.61E-09	1.14E-08
1442	478158.99	3768956.26	3.69E-09	7.38E-09	1.11E-08
1443	478175.13	3768945.17	3.57E-09	7.14E-09	1.07E-08
1444	478191.28	3768934.08	3.45E-09	6.91E-09	1.04E-08
1445	478207.43	3768922.99	3.34E-09	6.68E-09	1.00E-08
1446	478223.57	3768911.9	3.23E-09	6.46E-09	9.69E-09
1447	478239.72	3768900.81	3.12E-09	6.24E-09	9.36E-09
1448	478255.87	3768889.72	3.01E-09	6.02E-09	9.04E-09
1449	478272.01	3768878.63	2.91E-09	5.82E-09	8.72E-09
1450	478288.16	3768867.54	2.81E-09	5.62E-09	8.43E-09
1451	478304.3	3768856.45	2.72E-09	5.43E-09	8.15E-09
1452	478320.45	3768845.35	2.63E-09	5.25E-09	7.88E-09

1453	478336.6	3768834.26	2.55E-09	5.09E-09	7.64E-09
1454	478352.74	3768823.17	2.47E-09	4.94E-09	7.41E-09
1455	478368.89	3768812.08	2.40E-09	4.81E-09	7.21E-09
1456	478385.04	3768800.99	2.35E-09	4.69E-09	7.04E-09
1457	478401.18	3768789.9	2.30E-09	4.59E-09	6.89E-09
1458	478417.33	3768778.81	2.26E-09	4.51E-09	6.77E-09
1459	478433.48	3768767.72	2.22E-09	4.44E-09	6.67E-09
1460	478449.62	3768756.63	2.20E-09	4.40E-09	6.59E-09
1461	478465.77	3768745.54	2.18E-09	4.36E-09	6.54E-09
1462	478481.92	3768734.45	2.17E-09	4.34E-09	6.51E-09
1463	478498.06	3768723.36	2.16E-09	4.32E-09	6.49E-09
1464	478514.21	3768712.27	2.16E-09	4.32E-09	6.48E-09
1465	478530.36	3768701.18	2.16E-09	4.33E-09	6.49E-09
1466	478546.5	3768690.09	2.17E-09	4.33E-09	6.50E-09
1467	478562.65	3768679	2.17E-09	4.34E-09	6.52E-09
1468	478578.8	3768667.91	2.18E-09	4.36E-09	6.53E-09
1469	478594.94	3768656.82	2.18E-09	4.37E-09	6.55E-09
1470	478611.09	3768645.73	2.19E-09	4.38E-09	6.56E-09
1471	478627.23	3768634.64	2.19E-09	4.38E-09	6.57E-09
1472	478643.38	3768623.55	2.19E-09	4.38E-09	6.58E-09
1473	478659.53	3768612.46	2.19E-09	4.38E-09	6.57E-09
1474	478675.67	3768601.37	2.19E-09	4.38E-09	6.57E-09
1475	478691.82	3768590.28	2.18E-09	4.37E-09	6.55E-09
1476	478707.97	3768579.19	2.18E-09	4.35E-09	6.53E-09
1477	478724.11	3768568.1	2.17E-09	4.34E-09	6.50E-09
1478	478740.26	3768557.01	2.16E-09	4.32E-09	6.47E-09
1479	478756.41	3768545.92	2.15E-09	4.29E-09	6.44E-09
1480	478772.55	3768534.83	2.13E-09	4.27E-09	6.40E-09
1481	478788.7	3768523.74	2.12E-09	4.24E-09	6.36E-09
1482	478804.85	3768512.65	2.11E-09	4.22E-09	6.32E-09
1483	478820.99	3768501.56	2.09E-09	4.19E-09	6.28E-09
1484	478837.14	3768490.46	2.08E-09	4.16E-09	6.24E-09
1485	478853.29	3768479.37	2.07E-09	4.14E-09	6.21E-09
1486	478869.43	3768468.28	2.06E-09	4.12E-09	6.18E-09
1487	478885.58	3768457.19	2.05E-09	4.10E-09	6.15E-09
1488	478901.73	3768446.1	2.04E-09	4.09E-09	6.13E-09
1489	478917.87	3768435.01	2.03E-09	4.07E-09	6.10E-09
1490	478934.02	3768423.92	2.03E-09	4.06E-09	6.08E-09
1491	478950.16	3768412.83	2.02E-09	4.05E-09	6.07E-09
1492	478966.31	3768401.74	2.02E-09	4.05E-09	6.07E-09
1493	478982.46	3768390.65	2.02E-09	4.04E-09	6.07E-09
1494	478998.6	3768379.56	2.02E-09	4.04E-09	6.07E-09
1495	479014.75	3768368.47	2.02E-09	4.04E-09	6.06E-09
1496	479030.9	3768357.38	2.02E-09	4.05E-09	6.07E-09
1497	479047.04	3768346.29	2.03E-09	4.05E-09	6.08E-09
1498	479063.19	3768335.2	2.02E-09	4.03E-09	6.05E-09
1499	479079.34	3768324.11	2.02E-09	4.04E-09	6.06E-09
1500	479095.48	3768313.02	2.02E-09	4.05E-09	6.07E-09
1501	479111.63	3768301.93	2.03E-09	4.06E-09	6.09E-09
1502	479160.07	3768268.66	2.05E-09	4.09E-09	6.14E-09
1503	479176.22	3768257.57	2.05E-09	4.10E-09	6.14E-09
1504	479192.36	3768246.48	2.06E-09	4.11E-09	6.17E-09

1505	479208.51	3768235.39	2.06E-09	4.13E-09	6.19E-09
1506	479224.66	3768224.3	2.07E-09	4.14E-09	6.21E-09
1507	479253.78	3768227.88	2.14E-09	4.29E-09	6.43E-09
1508	479266.76	3768242.55	2.22E-09	4.43E-09	6.65E-09
1509	479279.74	3768257.22	2.29E-09	4.58E-09	6.87E-09
1510	479292.71	3768271.9	2.37E-09	4.73E-09	7.10E-09
1511	479305.69	3768286.57	2.44E-09	4.89E-09	7.33E-09
1512	479318.67	3768301.24	2.53E-09	5.05E-09	7.58E-09
1513	479331.65	3768315.91	2.61E-09	5.22E-09	7.83E-09
1514	479344.63	3768330.58	2.70E-09	5.40E-09	8.09E-09
1515	479357.61	3768345.26	2.79E-09	5.58E-09	8.37E-09
1516	479370.58	3768359.93	2.88E-09	5.77E-09	8.65E-09
1517	479383.56	3768374.6	2.98E-09	5.97E-09	8.95E-09
1518	479396.54	3768389.27	3.09E-09	6.18E-09	9.26E-09
1519	479409.52	3768403.94	3.20E-09	6.39E-09	9.59E-09
1520	479422.5	3768418.62	3.31E-09	6.62E-09	9.93E-09
1521	479487.39	3768491.98	3.98E-09	7.96E-09	1.19E-08
1522	479500.37	3768506.65	4.14E-09	8.28E-09	1.24E-08
1523	479513.34	3768521.32	4.31E-09	8.61E-09	1.29E-08
1524	479526.32	3768535.99	4.48E-09	8.97E-09	1.35E-08
1525	479539.3	3768550.66	4.67E-09	9.34E-09	1.40E-08
1526	479552.28	3768565.34	4.87E-09	9.74E-09	1.46E-08
1527	479565.26	3768580.01	5.07E-09	1.01E-08	1.52E-08
1528	479578.24	3768594.68	5.29E-09	1.06E-08	1.59E-08
1529	479591.21	3768609.35	5.52E-09	1.10E-08	1.65E-08
1530	479604.19	3768624.02	5.76E-09	1.15E-08	1.73E-08
1531	479617.17	3768638.7	6.01E-09	1.20E-08	1.80E-08
1532	479630.15	3768653.37	6.27E-09	1.25E-08	1.88E-08
1533	479643.13	3768668.04	6.54E-09	1.31E-08	1.96E-08
1534	479656.11	3768682.71	6.83E-09	1.37E-08	2.05E-08
1535	479669.08	3768697.39	7.14E-09	1.43E-08	2.14E-08
1536	479682.06	3768712.06	7.45E-09	1.49E-08	2.23E-08
1537	479695.04	3768726.73	7.78E-09	1.56E-08	2.33E-08
1538	479708.02	3768741.4	8.12E-09	1.62E-08	2.44E-08
1539	479721	3768756.07	8.48E-09	1.70E-08	2.54E-08
1540	479733.97	3768770.75	8.84E-09	1.77E-08	2.65E-08
1541	479746.95	3768785.42	9.21E-09	1.84E-08	2.76E-08
1542	479759.93	3768800.09	9.59E-09	1.92E-08	2.88E-08
1543	479772.91	3768814.76	9.96E-09	1.99E-08	2.99E-08
1544	479785.89	3768829.43	1.03E-08	2.06E-08	3.10E-08
1545	479798.87	3768844.11	1.07E-08	2.14E-08	3.21E-08
1546	479811.84	3768858.78	1.10E-08	2.21E-08	3.31E-08
1547	479824.82	3768873.45	1.14E-08	2.28E-08	3.42E-08
1548	479837.8	3768888.12	1.18E-08	2.35E-08	3.53E-08
1549	479850.78	3768902.79	1.21E-08	2.42E-08	3.62E-08
1550	479863.76	3768917.47	1.24E-08	2.48E-08	3.72E-08
1551	479876.74	3768932.14	1.27E-08	2.53E-08	3.80E-08
1552	479889.71	3768946.81	1.29E-08	2.58E-08	3.87E-08
1553	479902.69	3768961.48	1.32E-08	2.63E-08	3.95E-08
1554	479915.67	3768976.15	1.34E-08	2.67E-08	4.01E-08
1555	479928.65	3768990.83	1.35E-08	2.71E-08	4.06E-08
1556	479941.63	3769005.5	1.37E-08	2.74E-08	4.11E-08

1557	479954.6	3769020.17	1.38E-08	2.76E-08	4.14E-08
1558	479967.58	3769034.84	1.39E-08	2.78E-08	4.16E-08
1559	479980.56	3769049.52	1.39E-08	2.78E-08	4.18E-08
1560	479993.54	3769064.19	1.39E-08	2.78E-08	4.17E-08
1561	480006.52	3769078.86	1.39E-08	2.77E-08	4.16E-08
1562	480019.5	3769093.53	1.38E-08	2.76E-08	4.14E-08
1563	480032.47	3769108.2	1.37E-08	2.74E-08	4.11E-08
1564	480045.45	3769122.88	1.36E-08	2.71E-08	4.07E-08
1565	480058.43	3769137.55	1.34E-08	2.68E-08	4.02E-08
1566	480071.41	3769152.22	1.32E-08	2.64E-08	3.96E-08
1567	480084.39	3769166.89	1.30E-08	2.60E-08	3.89E-08
1568	480097.37	3769181.56	1.27E-08	2.55E-08	3.82E-08
1569	480110.34	3769196.24	1.25E-08	2.50E-08	3.74E-08
1570	480123.32	3769210.91	1.22E-08	2.44E-08	3.66E-08
1571	478126.69	3768978.44	3.93E-09	7.86E-09	1.18E-08
1572	478121.94	3768997.46	4.18E-09	8.35E-09	1.25E-08
1573	477987.57	3768928.61	3.24E-09	6.49E-09	9.73E-09
1574	478003.68	3768917.54	3.16E-09	6.32E-09	9.48E-09
1575	478019.79	3768906.47	3.08E-09	6.15E-09	9.23E-09
1576	478035.9	3768895.41	2.99E-09	5.99E-09	8.98E-09
1577	478052.02	3768884.34	2.91E-09	5.83E-09	8.74E-09
1578	478068.13	3768873.28	2.83E-09	5.66E-09	8.49E-09
1579	478084.24	3768862.21	2.75E-09	5.50E-09	8.24E-09
1580	478100.35	3768851.14	2.67E-09	5.33E-09	8.00E-09
1581	478116.46	3768840.08	2.59E-09	5.17E-09	7.76E-09
1582	478132.57	3768829.01	2.51E-09	5.02E-09	7.52E-09
1583	478148.68	3768817.95	2.43E-09	4.86E-09	7.29E-09
1584	478164.79	3768806.88	2.36E-09	4.71E-09	7.07E-09
1585	478180.9	3768795.82	2.28E-09	4.57E-09	6.85E-09
1586	478197.01	3768784.75	2.21E-09	4.43E-09	6.64E-09
1587	478213.12	3768773.68	2.15E-09	4.30E-09	6.44E-09
1588	478229.24	3768762.62	2.09E-09	4.17E-09	6.26E-09
1589	478245.35	3768751.55	2.03E-09	4.06E-09	6.09E-09
1590	478261.46	3768740.49	1.98E-09	3.95E-09	5.93E-09
1591	478277.57	3768729.42	1.93E-09	3.86E-09	5.79E-09
1592	478293.68	3768718.35	1.89E-09	3.78E-09	5.67E-09
1593	478309.79	3768707.29	1.86E-09	3.71E-09	5.57E-09
1594	478325.9	3768696.22	1.83E-09	3.65E-09	5.48E-09
1595	478342.01	3768685.16	1.80E-09	3.61E-09	5.41E-09
1596	478358.12	3768674.09	1.79E-09	3.57E-09	5.36E-09
1597	478374.23	3768663.02	1.77E-09	3.55E-09	5.32E-09
1598	478390.34	3768651.96	1.77E-09	3.53E-09	5.30E-09
1599	478406.45	3768640.89	1.76E-09	3.52E-09	5.28E-09
1600	478422.57	3768629.83	1.76E-09	3.52E-09	5.28E-09
1601	478438.68	3768618.76	1.76E-09	3.52E-09	5.28E-09
1602	478454.79	3768607.7	1.76E-09	3.53E-09	5.29E-09
1603	478470.9	3768596.63	1.77E-09	3.54E-09	5.31E-09
1604	478487.01	3768585.56	1.78E-09	3.55E-09	5.33E-09
1605	478503.12	3768574.5	1.78E-09	3.56E-09	5.34E-09
1606	478519.23	3768563.43	1.79E-09	3.57E-09	5.36E-09
1607	478535.34	3768552.37	1.79E-09	3.58E-09	5.37E-09
1608	478551.45	3768541.3	1.80E-09	3.59E-09	5.39E-09

1609	478567.56	3768530.23	1.80E-09	3.60E-09	5.39E-09
1610	478583.67	3768519.17	1.80E-09	3.60E-09	5.40E-09
1611	478599.79	3768508.1	1.80E-09	3.60E-09	5.40E-09
1612	478615.9	3768497.04	1.80E-09	3.60E-09	5.39E-09
1613	478632.01	3768485.97	1.80E-09	3.59E-09	5.39E-09
1614	478648.12	3768474.91	1.79E-09	3.58E-09	5.37E-09
1615	478664.23	3768463.84	1.79E-09	3.57E-09	5.36E-09
1616	478680.34	3768452.77	1.78E-09	3.56E-09	5.34E-09
1617	478696.45	3768441.71	1.77E-09	3.54E-09	5.31E-09
1618	478712.56	3768430.64	1.76E-09	3.53E-09	5.29E-09
1619	478728.67	3768419.58	1.76E-09	3.51E-09	5.27E-09
1620	478744.78	3768408.51	1.75E-09	3.49E-09	5.24E-09
1621	478760.89	3768397.44	1.74E-09	3.47E-09	5.21E-09
1622	478777.01	3768386.38	1.73E-09	3.45E-09	5.18E-09
1623	478793.12	3768375.31	1.72E-09	3.44E-09	5.16E-09
1624	478809.23	3768364.25	1.71E-09	3.42E-09	5.13E-09
1625	478825.34	3768353.18	1.70E-09	3.40E-09	5.10E-09
1626	478841.45	3768342.12	1.69E-09	3.39E-09	5.08E-09
1627	478857.56	3768331.05	1.69E-09	3.37E-09	5.06E-09
1628	478873.67	3768319.98	1.68E-09	3.36E-09	5.05E-09
1629	478889.78	3768308.92	1.68E-09	3.36E-09	5.04E-09
1630	478905.89	3768297.85	1.68E-09	3.35E-09	5.03E-09
1631	478922	3768286.79	1.67E-09	3.34E-09	5.01E-09
1632	478938.11	3768275.72	1.67E-09	3.34E-09	5.01E-09
1633	478954.22	3768264.65	1.67E-09	3.34E-09	5.01E-09
1634	478970.34	3768253.59	1.67E-09	3.34E-09	5.01E-09
1635	478986.45	3768242.52	1.66E-09	3.31E-09	4.97E-09
1636	479002.56	3768231.46	1.66E-09	3.31E-09	4.97E-09
1637	479018.67	3768220.39	1.66E-09	3.32E-09	4.98E-09
1638	479034.78	3768209.33	1.66E-09	3.33E-09	4.99E-09
1639	479050.89	3768198.26	1.67E-09	3.34E-09	5.01E-09
1640	479067	3768187.19	1.68E-09	3.35E-09	5.03E-09
1641	479083.11	3768176.13	1.68E-09	3.36E-09	5.04E-09
1642	479099.22	3768165.06	1.68E-09	3.36E-09	5.05E-09
1643	479163.67	3768120.8	1.71E-09	3.41E-09	5.12E-09
1644	479179.78	3768109.73	1.71E-09	3.43E-09	5.14E-09
1645	479195.89	3768098.67	1.72E-09	3.44E-09	5.17E-09
1646	479212	3768087.6	1.73E-09	3.46E-09	5.19E-09
1647	479228.11	3768076.53	1.74E-09	3.48E-09	5.22E-09
1648	479244.22	3768065.47	1.75E-09	3.49E-09	5.24E-09
1649	479273.28	3768069.04	1.80E-09	3.61E-09	5.41E-09
1650	479286.23	3768083.68	1.86E-09	3.72E-09	5.57E-09
1651	479299.18	3768098.32	1.91E-09	3.83E-09	5.74E-09
1652	479312.13	3768112.96	1.97E-09	3.94E-09	5.91E-09
1653	479325.08	3768127.6	2.03E-09	4.05E-09	6.08E-09
1654	479338.03	3768142.24	2.09E-09	4.17E-09	6.26E-09
1655	479350.98	3768156.88	2.15E-09	4.29E-09	6.44E-09
1656	479363.93	3768171.52	2.21E-09	4.42E-09	6.63E-09
1657	479376.88	3768186.16	2.27E-09	4.55E-09	6.82E-09
1658	479389.83	3768200.8	2.34E-09	4.68E-09	7.02E-09
1659	479402.78	3768215.44	2.41E-09	4.81E-09	7.22E-09
1660	479415.73	3768230.08	2.48E-09	4.95E-09	7.43E-09

1661	479428.68	3768244.72	2.55E-09	5.09E-09	7.64E-09
1662	479441.63	3768259.36	2.62E-09	5.24E-09	7.87E-09
1663	479454.58	3768274	2.70E-09	5.40E-09	8.10E-09
1664	479467.53	3768288.64	2.78E-09	5.57E-09	8.35E-09
1665	479480.47	3768303.28	2.87E-09	5.74E-09	8.60E-09
1666	479493.42	3768317.92	2.96E-09	5.91E-09	8.87E-09
1667	479506.37	3768332.56	3.05E-09	6.10E-09	9.15E-09
1668	479519.32	3768347.2	3.15E-09	6.30E-09	9.45E-09
1669	479597.02	3768435.04	3.85E-09	7.71E-09	1.16E-08
1670	479609.97	3768449.68	3.99E-09	7.99E-09	1.20E-08
1671	479622.92	3768464.32	4.14E-09	8.28E-09	1.24E-08
1672	479635.87	3768478.95	4.28E-09	8.57E-09	1.29E-08
1673	479648.82	3768493.59	4.44E-09	8.88E-09	1.33E-08
1674	479661.77	3768508.23	4.60E-09	9.20E-09	1.38E-08
1675	479674.72	3768522.87	4.76E-09	9.53E-09	1.43E-08
1676	479687.67	3768537.51	4.94E-09	9.88E-09	1.48E-08
1677	479700.62	3768552.15	5.12E-09	1.02E-08	1.54E-08
1678	479713.57	3768566.79	5.32E-09	1.06E-08	1.59E-08
1679	479726.52	3768581.43	5.51E-09	1.10E-08	1.65E-08
1680	479739.47	3768596.07	5.71E-09	1.14E-08	1.71E-08
1681	479752.42	3768610.71	5.93E-09	1.19E-08	1.78E-08
1682	479765.37	3768625.35	6.16E-09	1.23E-08	1.85E-08
1683	479778.32	3768639.99	6.40E-09	1.28E-08	1.92E-08
1684	479791.27	3768654.63	6.64E-09	1.33E-08	1.99E-08
1685	479804.21	3768669.27	6.90E-09	1.38E-08	2.07E-08
1686	479817.16	3768683.91	7.16E-09	1.43E-08	2.15E-08
1687	479830.11	3768698.55	7.42E-09	1.48E-08	2.23E-08
1688	479843.06	3768713.19	7.68E-09	1.54E-08	2.31E-08
1689	479856.01	3768727.83	7.95E-09	1.59E-08	2.38E-08
1690	479868.96	3768742.47	8.22E-09	1.64E-08	2.47E-08
1691	479881.91	3768757.11	8.49E-09	1.70E-08	2.55E-08
1692	479894.86	3768771.75	8.77E-09	1.75E-08	2.63E-08
1693	479907.81	3768786.39	9.03E-09	1.81E-08	2.71E-08
1694	479920.76	3768801.03	9.30E-09	1.86E-08	2.79E-08
1695	479933.71	3768815.67	9.55E-09	1.91E-08	2.86E-08
1696	479946.66	3768830.31	9.79E-09	1.96E-08	2.94E-08
1697	479959.61	3768844.95	1.00E-08	2.01E-08	3.01E-08
1698	479972.56	3768859.59	1.03E-08	2.05E-08	3.08E-08
1699	479985.51	3768874.23	1.05E-08	2.09E-08	3.14E-08
1700	479998.46	3768888.87	1.07E-08	2.13E-08	3.20E-08
1701	480011.41	3768903.51	1.08E-08	2.17E-08	3.25E-08
1702	480024.36	3768918.15	1.10E-08	2.20E-08	3.30E-08
1703	480037.31	3768932.79	1.12E-08	2.23E-08	3.35E-08
1704	480050.26	3768947.43	1.13E-08	2.25E-08	3.38E-08
1705	480063.21	3768962.07	1.14E-08	2.27E-08	3.41E-08
1706	480076.16	3768976.7	1.14E-08	2.29E-08	3.43E-08
1707	480089.11	3768991.34	1.15E-08	2.30E-08	3.45E-08
1708	480102.06	3769005.98	1.15E-08	2.30E-08	3.46E-08
1709	480115.01	3769020.62	1.15E-08	2.31E-08	3.46E-08
1710	480127.96	3769035.26	1.15E-08	2.30E-08	3.45E-08
1711	480140.9	3769049.9	1.15E-08	2.30E-08	3.44E-08
1712	480153.85	3769064.54	1.14E-08	2.28E-08	3.42E-08

1713	480166.8	3769079.18	1.13E-08	2.26E-08	3.40E-08
1714	480179.75	3769093.82	1.12E-08	2.24E-08	3.36E-08
1715	480192.7	3769108.46	1.11E-08	2.22E-08	3.32E-08
1716	480205.65	3769123.1	1.09E-08	2.19E-08	3.28E-08
1717	480218.6	3769137.74	1.08E-08	2.15E-08	3.23E-08
1718	480231.55	3769152.38	1.06E-08	2.12E-08	3.18E-08
1719	480244.5	3769167.02	1.04E-08	2.08E-08	3.13E-08
1720	480257.45	3769181.66	1.02E-08	2.05E-08	3.07E-08
1721	480270.4	3769196.3	1.00E-08	2.00E-08	3.01E-08
1722	480283.35	3769210.94	9.80E-09	1.96E-08	2.94E-08
1723	477971.46	3768939.67	3.33E-09	6.66E-09	9.99E-09
1724	477966.71	3768958.69	3.51E-09	7.01E-09	1.05E-08
1725	477832.31	3768889.86	2.80E-09	5.61E-09	8.41E-09
1726	477848.4	3768878.81	2.74E-09	5.49E-09	8.23E-09
1727	477864.48	3768867.76	2.68E-09	5.37E-09	8.05E-09
1728	477880.56	3768856.71	2.62E-09	5.25E-09	7.87E-09
1729	477896.65	3768845.67	2.56E-09	5.12E-09	7.69E-09
1730	477912.73	3768834.62	2.50E-09	5.00E-09	7.50E-09
1731	477928.82	3768823.57	2.44E-09	4.88E-09	7.32E-09
1732	477944.9	3768812.53	2.38E-09	4.76E-09	7.14E-09
1733	477960.98	3768801.48	2.32E-09	4.64E-09	6.96E-09
1734	477977.07	3768790.43	2.26E-09	4.52E-09	6.78E-09
1735	477993.15	3768779.38	2.20E-09	4.40E-09	6.60E-09
1736	478009.24	3768768.34	2.14E-09	4.28E-09	6.41E-09
1737	478025.32	3768757.29	2.08E-09	4.16E-09	6.24E-09
1738	478041.4	3768746.24	2.02E-09	4.04E-09	6.06E-09
1739	478057.49	3768735.19	1.96E-09	3.93E-09	5.89E-09
1740	478073.57	3768724.15	1.91E-09	3.82E-09	5.73E-09
1741	478089.65	3768713.1	1.86E-09	3.71E-09	5.57E-09
1742	478105.74	3768702.05	1.81E-09	3.61E-09	5.42E-09
1743	478121.82	3768691.01	1.76E-09	3.51E-09	5.27E-09
1744	478137.91	3768679.96	1.71E-09	3.42E-09	5.14E-09
1745	478153.99	3768668.91	1.67E-09	3.34E-09	5.01E-09
1746	478170.07	3768657.86	1.63E-09	3.27E-09	4.90E-09
1747	478186.16	3768646.82	1.60E-09	3.20E-09	4.80E-09
1748	478202.24	3768635.77	1.57E-09	3.14E-09	4.71E-09
1749	478218.33	3768624.72	1.55E-09	3.09E-09	4.64E-09
1750	478234.41	3768613.67	1.53E-09	3.05E-09	4.58E-09
1751	478250.49	3768602.63	1.51E-09	3.02E-09	4.53E-09
1752	478266.58	3768591.58	1.50E-09	2.99E-09	4.49E-09
1753	478282.66	3768580.53	1.49E-09	2.97E-09	4.46E-09
1754	478298.74	3768569.48	1.48E-09	2.96E-09	4.44E-09
1755	478314.83	3768558.44	1.48E-09	2.95E-09	4.43E-09
1756	478330.91	3768547.39	1.48E-09	2.95E-09	4.43E-09
1757	478347	3768536.34	1.48E-09	2.95E-09	4.43E-09
1758	478363.08	3768525.3	1.48E-09	2.96E-09	4.44E-09
1759	478379.16	3768514.25	1.48E-09	2.97E-09	4.45E-09
1760	478395.25	3768503.2	1.49E-09	2.98E-09	4.46E-09
1761	478411.33	3768492.15	1.49E-09	2.99E-09	4.48E-09
1762	478427.42	3768481.11	1.50E-09	3.00E-09	4.49E-09
1763	478443.5	3768470.06	1.50E-09	3.01E-09	4.51E-09
1764	478459.58	3768459.01	1.51E-09	3.02E-09	4.52E-09

1765	478475.67	3768447.96	1.51E-09	3.02E-09	4.54E-09
1766	478491.75	3768436.92	1.52E-09	3.03E-09	4.55E-09
1767	478507.84	3768425.87	1.52E-09	3.04E-09	4.55E-09
1768	478523.92	3768414.82	1.52E-09	3.04E-09	4.56E-09
1769	478540	3768403.78	1.52E-09	3.04E-09	4.56E-09
1770	478556.09	3768392.73	1.52E-09	3.04E-09	4.56E-09
1771	478572.17	3768381.68	1.52E-09	3.03E-09	4.55E-09
1772	478588.25	3768370.63	1.52E-09	3.03E-09	4.55E-09
1773	478604.34	3768359.59	1.51E-09	3.02E-09	4.53E-09
1774	478620.42	3768348.54	1.51E-09	3.01E-09	4.52E-09
1775	478636.51	3768337.49	1.50E-09	3.00E-09	4.51E-09
1776	478652.59	3768326.44	1.50E-09	2.99E-09	4.49E-09
1777	478668.67	3768315.4	1.49E-09	2.98E-09	4.47E-09
1778	478684.76	3768304.35	1.48E-09	2.97E-09	4.45E-09
1779	478700.84	3768293.3	1.48E-09	2.95E-09	4.43E-09
1780	478716.93	3768282.26	1.47E-09	2.94E-09	4.41E-09
1781	478733.01	3768271.21	1.46E-09	2.93E-09	4.39E-09
1782	478749.09	3768260.16	1.46E-09	2.92E-09	4.38E-09
1783	478765.18	3768249.11	1.45E-09	2.90E-09	4.35E-09
1784	478781.26	3768238.07	1.44E-09	2.89E-09	4.33E-09
1785	478797.34	3768227.02	1.44E-09	2.88E-09	4.32E-09
1786	478813.43	3768215.97	1.43E-09	2.87E-09	4.30E-09
1787	478829.51	3768204.92	1.43E-09	2.86E-09	4.29E-09
1788	478845.6	3768193.88	1.43E-09	2.85E-09	4.28E-09
1789	478861.68	3768182.83	1.42E-09	2.84E-09	4.27E-09
1790	478877.76	3768171.78	1.42E-09	2.84E-09	4.26E-09
1791	478893.85	3768160.73	1.41E-09	2.82E-09	4.23E-09
1792	478909.93	3768149.69	1.41E-09	2.81E-09	4.22E-09
1793	478926.02	3768138.64	1.40E-09	2.81E-09	4.21E-09
1794	478942.1	3768127.59	1.40E-09	2.81E-09	4.21E-09
1795	478958.18	3768116.55	1.40E-09	2.81E-09	4.21E-09
1796	478974.27	3768105.5	1.40E-09	2.81E-09	4.21E-09
1797	478990.35	3768094.45	1.40E-09	2.81E-09	4.21E-09
1798	479006.44	3768083.4	1.40E-09	2.80E-09	4.20E-09
1799	479022.52	3768072.36	1.40E-09	2.81E-09	4.21E-09
1800	479038.6	3768061.31	1.41E-09	2.82E-09	4.23E-09
1801	479054.69	3768050.26	1.41E-09	2.83E-09	4.24E-09
1802	479070.77	3768039.21	1.42E-09	2.83E-09	4.25E-09
1803	479086.85	3768028.17	1.42E-09	2.84E-09	4.27E-09
1804	479102.94	3768017.12	1.43E-09	2.86E-09	4.29E-09
1805	479151.19	3767983.98	1.45E-09	2.90E-09	4.36E-09
1806	479167.27	3767972.93	1.46E-09	2.92E-09	4.38E-09
1807	479183.36	3767961.88	1.47E-09	2.93E-09	4.40E-09
1808	479199.44	3767950.84	1.48E-09	2.95E-09	4.43E-09
1809	479215.53	3767939.79	1.48E-09	2.97E-09	4.45E-09
1810	479231.61	3767928.74	1.49E-09	2.98E-09	4.47E-09
1811	479247.69	3767917.69	1.50E-09	3.00E-09	4.50E-09
1812	479263.78	3767906.65	1.51E-09	3.01E-09	4.52E-09
1813	479292.79	3767910.21	1.56E-09	3.11E-09	4.67E-09
1814	479305.72	3767924.83	1.60E-09	3.20E-09	4.79E-09
1815	479318.64	3767939.45	1.64E-09	3.28E-09	4.92E-09
1816	479331.57	3767954.06	1.68E-09	3.37E-09	5.05E-09

1817	479344.5	3767968.68	1.73E-09	3.46E-09	5.19E-09
1818	479357.43	3767983.29	1.78E-09	3.55E-09	5.33E-09
1819	479370.36	3767997.91	1.82E-09	3.64E-09	5.47E-09
1820	479383.28	3768012.52	1.87E-09	3.74E-09	5.61E-09
1821	479396.21	3768027.14	1.92E-09	3.83E-09	5.75E-09
1822	479409.14	3768041.75	1.97E-09	3.93E-09	5.90E-09
1823	479422.07	3768056.37	2.02E-09	4.03E-09	6.05E-09
1824	479435	3768070.98	2.07E-09	4.13E-09	6.20E-09
1825	479447.92	3768085.6	2.12E-09	4.24E-09	6.36E-09
1826	479460.85	3768100.21	2.17E-09	4.34E-09	6.51E-09
1827	479473.78	3768114.83	2.23E-09	4.45E-09	6.68E-09
1828	479486.71	3768129.44	2.28E-09	4.56E-09	6.85E-09
1829	479499.64	3768144.06	2.34E-09	4.68E-09	7.02E-09
1830	479512.56	3768158.67	2.40E-09	4.80E-09	7.20E-09
1831	479525.49	3768173.29	2.46E-09	4.93E-09	7.39E-09
1832	479538.42	3768187.9	2.53E-09	5.06E-09	7.59E-09
1833	479551.35	3768202.52	2.60E-09	5.19E-09	7.79E-09
1834	479564.27	3768217.13	2.67E-09	5.34E-09	8.01E-09
1835	479577.2	3768231.75	2.75E-09	5.49E-09	8.24E-09
1836	479590.13	3768246.36	2.83E-09	5.65E-09	8.48E-09
1837	479603.06	3768260.98	2.91E-09	5.82E-09	8.73E-09
1838	479615.99	3768275.59	2.99E-09	5.99E-09	8.98E-09
1839	479628.91	3768290.21	3.08E-09	6.17E-09	9.25E-09
1840	479641.84	3768304.82	3.18E-09	6.36E-09	9.54E-09
1841	479654.77	3768319.44	3.28E-09	6.55E-09	9.83E-09
1842	479667.7	3768334.05	3.38E-09	6.76E-09	1.01E-08
1843	479719.41	3768392.52	3.83E-09	7.67E-09	1.15E-08
1844	479732.34	3768407.13	3.95E-09	7.90E-09	1.19E-08
1845	479745.27	3768421.75	4.07E-09	8.15E-09	1.22E-08
1846	479758.19	3768436.36	4.20E-09	8.40E-09	1.26E-08
1847	479771.12	3768450.98	4.33E-09	8.66E-09	1.30E-08
1848	479784.05	3768465.59	4.47E-09	8.94E-09	1.34E-08
1849	479796.98	3768480.21	4.62E-09	9.23E-09	1.38E-08
1850	479809.9	3768494.82	4.77E-09	9.53E-09	1.43E-08
1851	479822.83	3768509.44	4.92E-09	9.84E-09	1.48E-08
1852	479835.76	3768524.05	5.08E-09	1.02E-08	1.52E-08
1853	479848.69	3768538.67	5.25E-09	1.05E-08	1.58E-08
1854	479861.62	3768553.28	5.43E-09	1.09E-08	1.63E-08
1855	479874.54	3768567.9	5.62E-09	1.12E-08	1.68E-08
1856	479887.47	3768582.51	5.81E-09	1.16E-08	1.74E-08
1857	479900.4	3768597.13	6.00E-09	1.20E-08	1.80E-08
1858	479913.33	3768611.74	6.20E-09	1.24E-08	1.86E-08
1859	479926.26	3768626.36	6.40E-09	1.28E-08	1.92E-08
1860	479939.18	3768640.97	6.60E-09	1.32E-08	1.98E-08
1861	479952.11	3768655.59	6.80E-09	1.36E-08	2.04E-08
1862	479965.04	3768670.2	7.01E-09	1.40E-08	2.10E-08
1863	479977.97	3768684.82	7.22E-09	1.44E-08	2.17E-08
1864	479990.9	3768699.43	7.42E-09	1.48E-08	2.23E-08
1865	480003.82	3768714.05	7.62E-09	1.52E-08	2.29E-08
1866	480016.75	3768728.66	7.82E-09	1.56E-08	2.35E-08
1867	480029.68	3768743.28	8.02E-09	1.60E-08	2.41E-08
1868	480042.61	3768757.89	8.21E-09	1.64E-08	2.46E-08

1869	480055.54	3768772.51	8.40E-09	1.68E-08	2.52E-08
1870	480068.46	3768787.12	8.58E-09	1.72E-08	2.58E-08
1871	480081.39	3768801.74	8.76E-09	1.75E-08	2.63E-08
1872	480094.32	3768816.36	8.92E-09	1.78E-08	2.68E-08
1873	480107.25	3768830.97	9.07E-09	1.81E-08	2.72E-08
1874	480120.17	3768845.59	9.22E-09	1.84E-08	2.77E-08
1875	480133.1	3768860.2	9.35E-09	1.87E-08	2.81E-08
1876	480146.03	3768874.82	9.46E-09	1.89E-08	2.84E-08
1877	480158.96	3768889.43	9.56E-09	1.91E-08	2.87E-08
1878	480171.89	3768904.05	9.64E-09	1.93E-08	2.89E-08
1879	480184.81	3768918.66	9.71E-09	1.94E-08	2.91E-08
1880	480197.74	3768933.28	9.77E-09	1.95E-08	2.93E-08
1881	480210.67	3768947.89	9.81E-09	1.96E-08	2.94E-08
1882	480223.6	3768962.51	9.84E-09	1.97E-08	2.95E-08
1883	480236.53	3768977.12	9.85E-09	1.97E-08	2.95E-08
1884	480249.45	3768991.74	9.84E-09	1.97E-08	2.95E-08
1885	480262.38	3769006.35	9.81E-09	1.96E-08	2.94E-08
1886	480275.31	3769020.97	9.76E-09	1.95E-08	2.93E-08
1887	480288.24	3769035.58	9.71E-09	1.94E-08	2.91E-08
1888	480301.17	3769050.2	9.64E-09	1.93E-08	2.89E-08
1889	480314.09	3769064.81	9.55E-09	1.91E-08	2.87E-08
1890	480327.02	3769079.43	9.45E-09	1.89E-08	2.83E-08
1891	480339.95	3769094.04	9.33E-09	1.87E-08	2.80E-08
1892	480352.88	3769108.66	9.22E-09	1.84E-08	2.76E-08
1893	480365.8	3769123.27	9.09E-09	1.82E-08	2.73E-08
1894	480378.73	3769137.89	8.95E-09	1.79E-08	2.68E-08
1895	480391.66	3769152.5	8.80E-09	1.76E-08	2.64E-08
1896	480404.59	3769167.12	8.64E-09	1.73E-08	2.59E-08
1897	480417.52	3769181.73	8.48E-09	1.70E-08	2.55E-08
1898	480430.44	3769196.35	8.32E-09	1.66E-08	2.50E-08
1899	480443.37	3769210.96	8.15E-09	1.63E-08	2.45E-08
1900	477816.23	3768900.9	2.87E-09	5.73E-09	8.60E-09
1901	477811.48	3768919.92	3.00E-09	5.99E-09	8.99E-09
1902	477677.06	3768851.1	2.45E-09	4.91E-09	7.36E-09
1903	477693.12	3768840.07	2.41E-09	4.82E-09	7.22E-09
1904	477709.18	3768829.04	2.36E-09	4.72E-09	7.09E-09
1905	477725.25	3768818.01	2.32E-09	4.64E-09	6.95E-09
1906	477741.31	3768806.97	2.27E-09	4.55E-09	6.82E-09
1907	477757.37	3768795.94	2.23E-09	4.45E-09	6.68E-09
1908	477773.44	3768784.91	2.18E-09	4.36E-09	6.54E-09
1909	477789.5	3768773.87	2.13E-09	4.27E-09	6.40E-09
1910	477805.56	3768762.84	2.09E-09	4.18E-09	6.27E-09
1911	477821.62	3768751.81	2.04E-09	4.09E-09	6.13E-09
1912	477837.69	3768740.78	2.00E-09	3.99E-09	5.99E-09
1913	477853.75	3768729.74	1.95E-09	3.90E-09	5.85E-09
1914	477869.81	3768718.71	1.90E-09	3.81E-09	5.71E-09
1915	477885.87	3768707.68	1.86E-09	3.71E-09	5.57E-09
1916	477901.94	3768696.65	1.81E-09	3.62E-09	5.43E-09
1917	477918	3768685.61	1.76E-09	3.53E-09	5.29E-09
1918	477934.06	3768674.58	1.72E-09	3.44E-09	5.16E-09
1919	477950.12	3768663.55	1.67E-09	3.35E-09	5.02E-09
1920	477966.19	3768652.51	1.63E-09	3.26E-09	4.89E-09

1921	477982.25	3768641.48	1.59E-09	3.18E-09	4.77E-09
1922	477998.31	3768630.45	1.55E-09	3.10E-09	4.65E-09
1923	478014.38	3768619.42	1.51E-09	3.02E-09	4.53E-09
1924	478030.44	3768608.38	1.48E-09	2.95E-09	4.43E-09
1925	478046.5	3768597.35	1.44E-09	2.88E-09	4.32E-09
1926	478062.56	3768586.32	1.41E-09	2.82E-09	4.23E-09
1927	478078.63	3768575.29	1.38E-09	2.77E-09	4.15E-09
1928	478094.69	3768564.25	1.36E-09	2.72E-09	4.08E-09
1929	478110.75	3768553.22	1.34E-09	2.67E-09	4.01E-09
1930	478126.81	3768542.19	1.32E-09	2.64E-09	3.95E-09
1931	478142.88	3768531.15	1.30E-09	2.60E-09	3.91E-09
1932	478158.94	3768520.12	1.29E-09	2.58E-09	3.87E-09
1933	478175	3768509.09	1.28E-09	2.56E-09	3.84E-09
1934	478191.07	3768498.06	1.27E-09	2.55E-09	3.82E-09
1935	478207.13	3768487.02	1.27E-09	2.54E-09	3.80E-09
1936	478223.19	3768475.99	1.27E-09	2.53E-09	3.80E-09
1937	478239.25	3768464.96	1.27E-09	2.53E-09	3.80E-09
1938	478255.32	3768453.92	1.27E-09	2.53E-09	3.80E-09
1939	478271.38	3768442.89	1.27E-09	2.54E-09	3.80E-09
1940	478287.44	3768431.86	1.27E-09	2.54E-09	3.81E-09
1941	478303.5	3768420.83	1.27E-09	2.55E-09	3.82E-09
1942	478319.57	3768409.79	1.28E-09	2.56E-09	3.84E-09
1943	478335.63	3768398.76	1.28E-09	2.57E-09	3.85E-09
1944	478351.69	3768387.73	1.29E-09	2.58E-09	3.87E-09
1945	478367.75	3768376.7	1.29E-09	2.59E-09	3.88E-09
1946	478383.82	3768365.66	1.30E-09	2.60E-09	3.89E-09
1947	478399.88	3768354.63	1.30E-09	2.60E-09	3.91E-09
1948	478415.94	3768343.6	1.30E-09	2.61E-09	3.91E-09
1949	478432.01	3768332.56	1.31E-09	2.61E-09	3.92E-09
1950	478448.07	3768321.53	1.31E-09	2.62E-09	3.93E-09
1951	478464.13	3768310.5	1.31E-09	2.62E-09	3.93E-09
1952	478480.19	3768299.47	1.31E-09	2.62E-09	3.93E-09
1953	478496.26	3768288.43	1.31E-09	2.62E-09	3.93E-09
1954	478512.32	3768277.4	1.31E-09	2.62E-09	3.93E-09
1955	478528.38	3768266.37	1.31E-09	2.62E-09	3.92E-09
1956	478544.44	3768255.34	1.31E-09	2.61E-09	3.92E-09
1957	478560.51	3768244.3	1.30E-09	2.61E-09	3.91E-09
1958	478576.57	3768233.27	1.30E-09	2.60E-09	3.90E-09
1959	478592.63	3768222.24	1.30E-09	2.59E-09	3.89E-09
1960	478608.7	3768211.2	1.29E-09	2.59E-09	3.88E-09
1961	478624.76	3768200.17	1.29E-09	2.58E-09	3.86E-09
1962	478640.82	3768189.14	1.28E-09	2.56E-09	3.85E-09
1963	478656.88	3768178.11	1.28E-09	2.56E-09	3.83E-09
1964	478672.95	3768167.07	1.27E-09	2.55E-09	3.82E-09
1965	478689.01	3768156.04	1.27E-09	2.54E-09	3.81E-09
1966	478705.07	3768145.01	1.26E-09	2.52E-09	3.79E-09
1967	478721.13	3768133.98	1.26E-09	2.52E-09	3.77E-09
1968	478737.2	3768122.94	1.25E-09	2.51E-09	3.76E-09
1969	478753.26	3768111.91	1.25E-09	2.50E-09	3.75E-09
1970	478769.32	3768100.88	1.24E-09	2.49E-09	3.73E-09
1971	478785.38	3768089.84	1.24E-09	2.48E-09	3.72E-09
1972	478801.45	3768078.81	1.24E-09	2.47E-09	3.71E-09

1973	478817.51	3768067.78	1.23E-09	2.47E-09	3.70E-09
1974	478833.57	3768056.75	1.23E-09	2.45E-09	3.68E-09
1975	478849.64	3768045.71	1.22E-09	2.44E-09	3.67E-09
1976	478865.7	3768034.68	1.22E-09	2.44E-09	3.66E-09
1977	478881.76	3768023.65	1.22E-09	2.44E-09	3.65E-09
1978	478897.82	3768012.61	1.22E-09	2.43E-09	3.65E-09
1979	478913.89	3768001.58	1.21E-09	2.43E-09	3.64E-09
1980	478929.95	3767990.55	1.21E-09	2.42E-09	3.63E-09
1981	478946.01	3767979.52	1.21E-09	2.42E-09	3.63E-09
1982	478962.07	3767968.48	1.21E-09	2.42E-09	3.63E-09
1983	478978.14	3767957.45	1.21E-09	2.42E-09	3.63E-09
1984	478994.2	3767946.42	1.21E-09	2.42E-09	3.64E-09
1985	479010.26	3767935.39	1.21E-09	2.43E-09	3.64E-09
1986	479026.32	3767924.35	1.22E-09	2.44E-09	3.66E-09
1987	479042.39	3767913.32	1.22E-09	2.45E-09	3.67E-09
1988	479058.45	3767902.29	1.23E-09	2.45E-09	3.68E-09
1989	479074.51	3767891.25	1.23E-09	2.46E-09	3.69E-09
1990	479090.58	3767880.22	1.24E-09	2.47E-09	3.71E-09
1991	479106.64	3767869.19	1.24E-09	2.48E-09	3.72E-09
1992	479154.83	3767836.09	1.26E-09	2.53E-09	3.79E-09
1993	479170.89	3767825.06	1.27E-09	2.54E-09	3.82E-09
1994	479186.95	3767814.03	1.28E-09	2.56E-09	3.84E-09
1995	479203.01	3767802.99	1.29E-09	2.57E-09	3.86E-09
1996	479219.08	3767791.96	1.29E-09	2.59E-09	3.88E-09
1997	479235.14	3767780.93	1.30E-09	2.61E-09	3.91E-09
1998	479251.2	3767769.89	1.31E-09	2.62E-09	3.93E-09
1999	479267.27	3767758.86	1.32E-09	2.63E-09	3.95E-09
2000	479283.33	3767747.83	1.32E-09	2.65E-09	3.97E-09
2001	479312.3	3767751.39	1.37E-09	2.73E-09	4.10E-09
2002	479325.21	3767765.99	1.40E-09	2.80E-09	4.20E-09
2003	479338.12	3767780.58	1.43E-09	2.87E-09	4.30E-09
2004	479351.03	3767795.18	1.47E-09	2.94E-09	4.41E-09
2005	479363.95	3767809.78	1.51E-09	3.01E-09	4.52E-09
2006	479376.86	3767824.37	1.54E-09	3.09E-09	4.63E-09
2007	479389.77	3767838.97	1.58E-09	3.16E-09	4.74E-09
2008	479402.68	3767853.56	1.62E-09	3.23E-09	4.85E-09
2009	479415.59	3767868.16	1.66E-09	3.31E-09	4.97E-09
2010	479428.5	3767882.76	1.69E-09	3.39E-09	5.08E-09
2011	479441.41	3767897.35	1.73E-09	3.47E-09	5.20E-09
2012	479454.32	3767911.95	1.77E-09	3.55E-09	5.32E-09
2013	479467.23	3767926.54	1.81E-09	3.62E-09	5.44E-09
2014	479480.14	3767941.14	1.85E-09	3.71E-09	5.56E-09
2015	479493.05	3767955.73	1.89E-09	3.79E-09	5.68E-09
2016	479505.96	3767970.33	1.94E-09	3.87E-09	5.81E-09
2017	479518.88	3767984.93	1.98E-09	3.96E-09	5.94E-09
2018	479531.79	3767999.52	2.02E-09	4.04E-09	6.07E-09
2019	479544.7	3768014.12	2.07E-09	4.13E-09	6.20E-09
2020	479557.61	3768028.71	2.11E-09	4.23E-09	6.34E-09
2021	479570.52	3768043.31	2.16E-09	4.32E-09	6.49E-09
2022	479583.43	3768057.91	2.21E-09	4.42E-09	6.64E-09
2023	479596.34	3768072.5	2.26E-09	4.53E-09	6.79E-09
2024	479609.25	3768087.1	2.32E-09	4.64E-09	6.95E-09

2025	479622.16	3768101.69	2.37E-09	4.75E-09	7.12E-09
2026	479635.07	3768116.29	2.43E-09	4.87E-09	7.30E-09
2027	479647.98	3768130.89	2.50E-09	4.99E-09	7.49E-09
2028	479660.9	3768145.48	2.56E-09	5.12E-09	7.68E-09
2029	479673.81	3768160.08	2.63E-09	5.26E-09	7.88E-09
2030	479686.72	3768174.67	2.70E-09	5.40E-09	8.09E-09
2031	479699.63	3768189.27	2.77E-09	5.54E-09	8.31E-09
2032	479712.54	3768203.87	2.85E-09	5.69E-09	8.54E-09
2033	479725.45	3768218.46	2.92E-09	5.85E-09	8.77E-09
2034	479738.36	3768233.06	3.00E-09	6.01E-09	9.01E-09
2035	479751.27	3768247.65	3.09E-09	6.18E-09	9.27E-09
2036	479764.18	3768262.25	3.18E-09	6.35E-09	9.53E-09
2037	479777.09	3768276.85	3.27E-09	6.53E-09	9.80E-09
2038	479790	3768291.44	3.36E-09	6.71E-09	1.01E-08
2039	479802.91	3768306.04	3.45E-09	6.90E-09	1.03E-08
2040	479815.83	3768320.63	3.55E-09	7.09E-09	1.06E-08
2041	479828.74	3768335.23	3.65E-09	7.29E-09	1.09E-08
2042	479880.38	3768393.61	4.08E-09	8.15E-09	1.22E-08
2043	479893.29	3768408.21	4.20E-09	8.39E-09	1.26E-08
2044	479906.2	3768422.8	4.32E-09	8.64E-09	1.30E-08
2045	479919.11	3768437.4	4.45E-09	8.90E-09	1.33E-08
2046	479932.02	3768452	4.58E-09	9.17E-09	1.38E-08
2047	479944.93	3768466.59	4.72E-09	9.45E-09	1.42E-08
2048	479957.85	3768481.19	4.87E-09	9.73E-09	1.46E-08
2049	479970.76	3768495.78	5.01E-09	1.00E-08	1.50E-08
2050	479983.67	3768510.38	5.17E-09	1.03E-08	1.55E-08
2051	479996.58	3768524.98	5.32E-09	1.06E-08	1.60E-08
2052	480009.49	3768539.57	5.48E-09	1.10E-08	1.64E-08
2053	480022.4	3768554.17	5.64E-09	1.13E-08	1.69E-08
2054	480035.31	3768568.76	5.79E-09	1.16E-08	1.74E-08
2055	480048.22	3768583.36	5.96E-09	1.19E-08	1.79E-08
2056	480061.13	3768597.96	6.12E-09	1.22E-08	1.84E-08
2057	480074.04	3768612.55	6.28E-09	1.26E-08	1.89E-08
2058	480086.95	3768627.15	6.45E-09	1.29E-08	1.93E-08
2059	480099.86	3768641.74	6.60E-09	1.32E-08	1.98E-08
2060	480112.78	3768656.34	6.76E-09	1.35E-08	2.03E-08
2061	480125.69	3768670.93	6.92E-09	1.38E-08	2.08E-08
2062	480138.6	3768685.53	7.07E-09	1.42E-08	2.12E-08
2063	480151.51	3768700.13	7.23E-09	1.45E-08	2.17E-08
2064	480164.42	3768714.72	7.37E-09	1.48E-08	2.21E-08
2065	480177.33	3768729.32	7.51E-09	1.50E-08	2.25E-08
2066	480190.24	3768743.91	7.65E-09	1.53E-08	2.29E-08
2067	480203.15	3768758.51	7.78E-09	1.56E-08	2.33E-08
2068	480216.06	3768773.11	7.90E-09	1.58E-08	2.37E-08
2069	480228.97	3768787.7	8.01E-09	1.60E-08	2.40E-08
2070	480241.88	3768802.3	8.12E-09	1.62E-08	2.44E-08
2071	480254.8	3768816.89	8.22E-09	1.64E-08	2.47E-08
2072	480267.71	3768831.49	8.31E-09	1.66E-08	2.49E-08
2073	480280.62	3768846.09	8.38E-09	1.68E-08	2.51E-08
2074	480293.53	3768860.68	8.45E-09	1.69E-08	2.53E-08
2075	480306.44	3768875.28	8.51E-09	1.70E-08	2.55E-08
2076	480319.35	3768889.87	8.55E-09	1.71E-08	2.56E-08

2077	480332.26	3768904.47	8.58E-09	1.72E-08	2.57E-08
2078	480345.17	3768919.07	8.60E-09	1.72E-08	2.58E-08
2079	480358.08	3768933.66	8.61E-09	1.72E-08	2.58E-08
2080	480370.99	3768948.26	8.60E-09	1.72E-08	2.58E-08
2081	480383.9	3768962.85	8.59E-09	1.72E-08	2.58E-08
2082	480396.82	3768977.45	8.56E-09	1.71E-08	2.57E-08
2083	480409.73	3768992.05	8.52E-09	1.70E-08	2.56E-08
2084	480422.64	3769006.64	8.46E-09	1.69E-08	2.54E-08
2085	480435.55	3769021.24	8.40E-09	1.68E-08	2.52E-08
2086	480448.46	3769035.83	8.33E-09	1.67E-08	2.50E-08
2087	480461.37	3769050.43	8.25E-09	1.65E-08	2.48E-08
2088	480474.28	3769065.02	8.16E-09	1.63E-08	2.45E-08
2089	480487.19	3769079.62	8.06E-09	1.61E-08	2.42E-08
2090	480500.1	3769094.22	7.96E-09	1.59E-08	2.39E-08
2091	480513.01	3769108.81	7.85E-09	1.57E-08	2.36E-08
2092	480525.92	3769123.41	7.74E-09	1.55E-08	2.32E-08
2093	480538.83	3769138	7.61E-09	1.52E-08	2.28E-08
2094	480551.75	3769152.6	7.49E-09	1.50E-08	2.25E-08
2095	480564.66	3769167.2	7.36E-09	1.47E-08	2.21E-08
2096	480577.57	3769181.79	7.23E-09	1.45E-08	2.17E-08
2097	480590.48	3769196.39	7.09E-09	1.42E-08	2.13E-08
2098	480603.39	3769210.98	6.96E-09	1.39E-08	2.09E-08
2099	477661	3768862.14	2.50E-09	5.00E-09	7.50E-09
2100	477656.25	3768881.16	2.60E-09	5.20E-09	7.80E-09
2101	478291.65	3768985.06	4.20E-09	8.39E-09	1.26E-08
2102	478139.11	3768936.78	3.45E-09	6.90E-09	1.04E-08
2103	477986.57	3768888.49	2.91E-09	5.82E-09	8.72E-09
2104	477834.03	3768840.2	2.50E-09	4.99E-09	7.49E-09
2105	477681.49	3768791.92	2.17E-09	4.35E-09	6.52E-09
2106	478850.19	3769100.43	1.13E-08	2.26E-08	3.39E-08
2107	478781.09	3769060.13	7.89E-09	1.58E-08	2.37E-08
2108	478573.76	3768939.23	3.82E-09	7.63E-09	1.14E-08
2109	478504.65	3768898.93	3.22E-09	6.44E-09	9.66E-09
2110	478228.22	3768737.73	1.96E-09	3.92E-09	5.88E-09
2111	478090.01	3768657.13	1.63E-09	3.26E-09	4.89E-09
2112	477951.79	3768576.53	1.39E-09	2.78E-09	4.18E-09
2113	477813.57	3768495.93	1.21E-09	2.42E-09	3.63E-09
2114	479063.97	3769251.6	1.41E-07	2.82E-07	4.23E-07
2115	479038.91	3769256.47	1.20E-07	2.40E-07	3.60E-07
2116	479021.16	3769247.26	8.83E-08	1.77E-07	2.65E-07
2117	479003.41	3769238.04	6.78E-08	1.36E-07	2.03E-07
2118	478840.53	3769117.71	1.22E-08	2.44E-08	3.65E-08
2119	478769.53	3769080.85	8.52E-09	1.71E-08	2.56E-08
2120	478698.53	3769043.99	6.42E-09	1.28E-08	1.92E-08
2121	478683.9	3769072.17	7.22E-09	1.44E-08	2.17E-08
2122	478612.9	3769035.31	5.69E-09	1.14E-08	1.71E-08
2123	478491.05	3768923.37	3.46E-09	6.93E-09	1.04E-08
2124	478478.21	3768947.49	3.76E-09	7.51E-09	1.13E-08
2125	478350.31	3768847.36	2.65E-09	5.29E-09	7.94E-09
2126	478336.21	3768873.77	2.87E-09	5.74E-09	8.61E-09
2127	478186.89	3768814.14	2.40E-09	4.80E-09	7.21E-09
2128	478066.5	3768699.55	1.80E-09	3.60E-09	5.40E-09

2129	478080.46	3768674.2	1.70E-09	3.39E-09	5.09E-09
2130	477923.86	3768626.99	1.55E-09	3.10E-09	4.65E-09
2131	477936.54	3768603.95	1.47E-09	2.95E-09	4.42E-09
2132	477910.2	3768652.6	1.64E-09	3.28E-09	4.92E-09
2133	477782.61	3768551.89	1.35E-09	2.70E-09	4.05E-09
2134	477796.81	3768526.11	1.28E-09	2.57E-09	3.85E-09
2135	477768.19	3768578.88	1.43E-09	2.85E-09	4.28E-09
2136	479051.67	3769273.61	1.94E-07	3.87E-07	5.81E-07
2137	479028.23	3769273.56	1.52E-07	3.04E-07	4.56E-07
2138	479011.19	3769263.09	1.07E-07	2.13E-07	3.20E-07
2139	478960.06	3769231.68	4.84E-08	9.69E-08	1.45E-07
2140	478755.58	3769106.05	9.52E-09	1.90E-08	2.86E-08
2141	479040.44	3769289.72	2.62E-07	5.23E-07	7.85E-07
2142	478985.81	3769262.1	8.74E-08	1.75E-07	2.62E-07
2143	478922.99	3769212.57	3.31E-08	6.61E-08	9.92E-08
2144	478592.43	3768921.16	3.66E-09	7.32E-09	1.10E-08
2145	478529.6	3768871.64	3.02E-09	6.05E-09	9.07E-09
2146	478278.28	3768673.55	1.72E-09	3.44E-09	5.16E-09
2147	478263.28	3768692.58	1.78E-09	3.56E-09	5.34E-09
2148	478152.63	3768574.5	1.40E-09	2.79E-09	4.19E-09
2149	478137.63	3768593.53	1.44E-09	2.88E-09	4.32E-09
2150	478026.97	3768475.45	1.17E-09	2.34E-09	3.51E-09
2151	478011.97	3768494.48	1.20E-09	2.40E-09	3.60E-09
2152	477901.31	3768376.41	1.00E-09	2.00E-09	3.00E-09
2153	477886.31	3768395.44	1.03E-09	2.05E-09	3.08E-09
2154	479026.71	3769306.3	3.70E-07	7.40E-07	1.11E-06
2155	479011.64	3769293.15	2.11E-07	4.22E-07	6.33E-07
2156	478996.57	3769280	1.34E-07	2.68E-07	4.02E-07
2157	478943.86	3769249.14	5.64E-08	1.13E-07	1.69E-07
2158	478416.36	3768758.57	2.16E-09	4.32E-09	6.48E-09
2159	478295.81	3768653.37	1.67E-09	3.34E-09	5.01E-09
2160	478175.25	3768548.17	1.35E-09	2.70E-09	4.05E-09
2161	478054.7	3768442.98	1.13E-09	2.25E-09	3.38E-09
2162	478039.7	3768460.17	1.15E-09	2.29E-09	3.44E-09
2163	477934.14	3768337.78	9.62E-10	1.92E-09	2.89E-09
2164	477919.14	3768354.97	9.77E-10	1.95E-09	2.93E-09
2165	479012.61	3769320.84	4.60E-07	9.20E-07	1.38E-06
2166	478998.9	3769306.28	2.58E-07	5.17E-07	7.75E-07
2167	478975.86	3769300.49	1.77E-07	3.53E-07	5.30E-07
2168	478971.49	3769277.15	1.05E-07	2.10E-07	3.15E-07
2169	478907.33	3769227.67	3.67E-08	7.33E-08	1.10E-07
2170	478879.92	3769198.54	2.47E-08	4.94E-08	7.41E-08
2171	478624.45	3768889.68	3.47E-09	6.95E-09	1.04E-08
2172	478605.79	3768907.24	3.56E-09	7.13E-09	1.07E-08
2173	478459.98	3768714.9	2.06E-09	4.12E-09	6.18E-09
2174	478441.32	3768732.46	2.09E-09	4.18E-09	6.27E-09
2175	478350.33	3768598.38	1.59E-09	3.18E-09	4.78E-09
2176	478331.67	3768615.94	1.61E-09	3.22E-09	4.83E-09
2177	478222.02	3768499.42	1.30E-09	2.59E-09	3.89E-09
2178	478131.03	3768365.34	1.08E-09	2.15E-09	3.23E-09
2179	478112.37	3768382.9	1.08E-09	2.16E-09	3.25E-09
2180	478021.38	3768248.82	9.22E-10	1.84E-09	2.77E-09

2181	478002.72	3768266.38	9.25E-10	1.85E-09	2.78E-09
2182	478995.93	3769335.56	4.94E-07	9.88E-07	1.48E-06
2183	478983.21	3769320.12	2.95E-07	5.89E-07	8.84E-07
2184	478961.17	3769312.37	1.96E-07	3.92E-07	5.89E-07
2185	478957.78	3769289.25	1.21E-07	2.41E-07	3.62E-07
2186	478923.02	3769266.06	6.56E-08	1.31E-07	1.97E-07
2187	478483.92	3768694.94	2.04E-09	4.08E-09	6.12E-09
2188	478382.19	3768571.44	1.58E-09	3.16E-09	4.74E-09
2189	478178.75	3768324.44	1.07E-09	2.15E-09	3.22E-09
2190	478160.09	3768339.81	1.07E-09	2.15E-09	3.22E-09
2191	478077.02	3768200.94	9.23E-10	1.85E-09	2.77E-09
2192	478058.36	3768216.31	9.21E-10	1.84E-09	2.76E-09
2193	478981.09	3769347.07	4.84E-07	9.67E-07	1.45E-06
2194	478651.48	3768869.74	3.43E-09	6.86E-09	1.03E-08
2195	478511.91	3768674.49	2.04E-09	4.08E-09	6.12E-09
2196	478418.86	3768544.33	1.59E-09	3.17E-09	4.76E-09
2197	478232.77	3768284	1.09E-09	2.17E-09	3.26E-09
2198	478139.72	3768153.84	9.34E-10	1.87E-09	2.80E-09
2199	478957.62	3769338.9	3.06E-07	6.11E-07	9.17E-07
2200	478946.31	3769322.4	2.04E-07	4.08E-07	6.12E-07
2201	478935	3769305.91	1.38E-07	2.77E-07	4.15E-07
2202	478889.78	3769239.92	3.98E-08	7.95E-08	1.19E-07
2203	478156.32	3768142.34	9.37E-10	1.87E-09	2.81E-09
2204	478956.96	3769362.34	4.49E-07	8.98E-07	1.35E-06
2205	478906.19	3769276.19	7.07E-08	1.41E-07	2.12E-07
2206	478676.75	3768854.25	3.43E-09	6.87E-09	1.03E-08
2207	478554.89	3768647.49	2.06E-09	4.12E-09	6.18E-09
2208	478473.65	3768509.64	1.61E-09	3.22E-09	4.83E-09
2209	478311.18	3768233.96	1.11E-09	2.21E-09	3.32E-09
2210	478229.94	3768096.12	9.53E-10	1.91E-09	2.86E-09
2211	478932.81	3769353.66	2.99E-07	5.98E-07	8.97E-07
2212	478922.38	3769336.59	2.08E-07	4.16E-07	6.25E-07
2213	478911.95	3769319.53	1.47E-07	2.94E-07	4.41E-07
2214	478870.22	3769251.27	4.29E-08	8.58E-08	1.29E-07
2215	478862.53	3769209.09	2.59E-08	5.18E-08	7.77E-08
2216	478807.64	3769148.88	1.37E-08	2.75E-08	4.12E-08
2217	478528.76	3768663.02	2.05E-09	4.09E-09	6.14E-09
2218	478452.35	3768522.28	1.60E-09	3.20E-09	4.80E-09
2219	478287.67	3768247.92	1.10E-09	2.20E-09	3.30E-09
2220	478265.25	3768261.52	1.09E-09	2.19E-09	3.28E-09
2221	478205.32	3768110.74	9.47E-10	1.90E-09	2.84E-09
2222	478181.81	3768125	9.43E-10	1.89E-09	2.83E-09
2223	478930.83	3769376.77	4.45E-07	8.90E-07	1.34E-06
2224	478886.09	3769287.34	7.62E-08	1.52E-07	2.29E-07
2225	478579.3	3768635.74	2.08E-09	4.17E-09	6.25E-09
2226	478507.7	3768492.65	1.63E-09	3.26E-09	4.89E-09
2227	478364.52	3768206.47	1.12E-09	2.24E-09	3.37E-09
2228	478292.93	3768063.38	9.65E-10	1.93E-09	2.90E-09
2229	478909.85	3769387.63	4.54E-07	9.08E-07	1.36E-06
2230	478910.89	3769364.57	2.99E-07	5.98E-07	8.96E-07
2231	478901.69	3769346.81	2.09E-07	4.19E-07	6.28E-07
2232	478892.49	3769329.05	1.50E-07	3.00E-07	4.49E-07

2233	478863.85	3769298.84	8.15E-08	1.63E-07	2.45E-07
2234	478845.45	3769263.32	4.62E-08	9.25E-08	1.39E-07
2235	478837.29	3769222.5	2.77E-08	5.54E-08	8.32E-08
2236	478808.65	3769192.29	1.93E-08	3.86E-08	5.79E-08
2237	478790.25	3769156.77	1.40E-08	2.80E-08	4.20E-08
2238	478340.74	3768218.45	1.11E-09	2.23E-09	3.34E-09
2239	478268.14	3768075.87	9.61E-10	1.92E-09	2.88E-09
2240	478248.49	3768085.97	9.57E-10	1.91E-09	2.87E-09
2241	478893.59	3769395.94	4.51E-07	9.01E-07	1.35E-06
2242	478884.49	3769378.12	3.08E-07	6.16E-07	9.24E-07
2243	478875.4	3769360.31	2.17E-07	4.34E-07	6.51E-07
2244	478866.3	3769342.5	1.57E-07	3.14E-07	4.71E-07
2245	478811.73	3769235.63	3.01E-08	6.01E-08	9.02E-08
2246	478738.97	3769093.13	8.63E-09	1.73E-08	2.59E-08
2247	478835.38	3769313.06	8.83E-08	1.77E-07	2.65E-07
2248	478817.84	3769277.11	5.08E-08	1.02E-07	1.52E-07
2249	478782.75	3769205.22	2.07E-08	4.13E-08	6.20E-08
2250	478674.95	3768946.26	4.34E-09	8.68E-09	1.30E-08
2251	478862.19	3769412.08	4.12E-07	8.23E-07	1.24E-06
2252	478868.31	3769386.06	3.08E-07	6.16E-07	9.24E-07
2253	478837.09	3769402.89	2.99E-07	5.98E-07	8.97E-07
2254	478858.82	3769368.46	2.21E-07	4.42E-07	6.63E-07
2255	478827.6	3769385.28	2.27E-07	4.54E-07	6.81E-07
2256	478849.34	3769350.85	1.62E-07	3.23E-07	4.85E-07
2257	478818.12	3769367.68	1.72E-07	3.43E-07	5.15E-07
2258	478814.75	3769324.05	9.43E-08	1.89E-07	2.83E-07
2259	478783.53	3769340.88	1.03E-07	2.06E-07	3.08E-07
2260	478795.77	3769288.84	5.52E-08	1.10E-07	1.66E-07
2261	478764.55	3769305.67	6.18E-08	1.24E-07	1.85E-07
2262	478792.4	3769245.22	3.21E-08	6.41E-08	9.62E-08
2263	478761.18	3769262.04	3.63E-08	7.25E-08	1.09E-07
2264	478757.81	3769218.42	2.25E-08	4.50E-08	6.75E-08
2265	478726.59	3769235.25	2.53E-08	5.05E-08	7.58E-08
2266	478707.62	3769200.03	1.76E-08	3.52E-08	5.27E-08
2267	478716.49	3769104.37	8.92E-09	1.78E-08	2.67E-08
2268	478650.27	3768958.55	4.37E-09	8.73E-09	1.31E-08
2269	478624.97	3768971.94	4.45E-09	8.90E-09	1.33E-08
2270	478593.75	3768988.77	4.62E-09	9.24E-09	1.39E-08
2271	478587.01	3768901.52	3.44E-09	6.88E-09	1.03E-08
2272	478555.79	3768918.34	3.52E-09	7.05E-09	1.06E-08
2273	478441.93	3768707.08	2.00E-09	4.00E-09	6.01E-09
2274	478397.23	3768549.4	1.56E-09	3.13E-09	4.69E-09
2275	478245.41	3768267.71	1.08E-09	2.16E-09	3.25E-09
2276	478214.19	3768284.54	1.07E-09	2.14E-09	3.21E-09
2277	478865.47	3769484.48	4.61E-07	9.23E-07	1.38E-06
2278	478897.42	3769485.21	5.71E-07	1.14E-06	1.71E-06
2279	478839.54	3769496.45	3.59E-07	7.18E-07	1.08E-06
2280	478865.01	3769504.48	3.73E-07	7.45E-07	1.12E-06
2281	478896.96	3769505.21	4.10E-07	8.21E-07	1.23E-06
2282	478837.18	3769514.91	2.99E-07	5.98E-07	8.97E-07
2283	478803	3769487.33	3.08E-07	6.16E-07	9.24E-07
2284	478815.56	3769517.83	2.70E-07	5.40E-07	8.09E-07

2285	478783.01	3769491.56	2.73E-07	5.45E-07	8.18E-07
2286	478800.61	3769419.16	2.64E-07	5.28E-07	7.92E-07
2287	478788.32	3769516.21	2.47E-07	4.95E-07	7.42E-07
2288	478764.58	3769497.05	2.44E-07	4.89E-07	7.33E-07
2289	478790.06	3769403.94	2.17E-07	4.34E-07	6.51E-07
2290	478737.99	3769516.32	2.04E-07	4.07E-07	6.11E-07
2291	478720.16	3769482.64	2.00E-07	4.01E-07	6.01E-07
2292	478745.51	3769425.93	1.95E-07	3.90E-07	5.85E-07
2293	478758.18	3769397.58	1.70E-07	3.39E-07	5.08E-07
2294	478770.85	3769369.23	1.36E-07	2.72E-07	4.08E-07
2295	478687.13	3769516	1.67E-07	3.35E-07	5.02E-07
2296	478681.33	3769491.83	1.68E-07	3.36E-07	5.05E-07
2297	478706.93	3769434.55	1.66E-07	3.32E-07	4.97E-07
2298	478719.74	3769405.91	1.48E-07	2.96E-07	4.44E-07
2299	478732.54	3769377.27	1.23E-07	2.46E-07	3.69E-07
2300	478745.34	3769348.63	9.60E-08	1.92E-07	2.88E-07
2301	478861.8	3769644.44	4.86E-08	9.72E-08	1.46E-07
2302	478893.75	3769645.17	4.58E-08	9.16E-08	1.37E-07
2303	478832.62	3769674.15	3.77E-08	7.54E-08	1.13E-07
2304	478808.04	3769654.31	5.02E-08	1.00E-07	1.50E-07
2305	478642.48	3769501.08	1.44E-07	2.88E-07	4.32E-07
2306	478681.14	3769414.6	1.30E-07	2.61E-07	3.91E-07
2307	478694.02	3769385.77	1.11E-07	2.23E-07	3.34E-07
2308	478706.91	3769356.94	8.98E-08	1.80E-07	2.69E-07
2309	478719.8	3769328.11	6.93E-08	1.39E-07	2.08E-07
2310	478732.68	3769299.29	5.19E-08	1.04E-07	1.56E-07
2311	478860.88	3769684.43	3.26E-08	6.53E-08	9.79E-08
2312	478892.83	3769685.16	3.19E-08	6.38E-08	9.57E-08
2313	478831.64	3769714.09	2.62E-08	5.25E-08	7.87E-08
2314	478806.96	3769694.17	3.28E-08	6.55E-08	9.83E-08
2315	478782.27	3769674.25	4.31E-08	8.63E-08	1.29E-07
2316	478757.59	3769654.33	5.79E-08	1.16E-07	1.74E-07
2317	478603.61	3769510.36	1.25E-07	2.50E-07	3.75E-07
2318	478642.45	3769423.48	1.16E-07	2.32E-07	3.48E-07
2319	478655.39	3769394.52	1.01E-07	2.03E-07	3.04E-07
2320	478668.34	3769365.56	8.40E-08	1.68E-07	2.52E-07
2321	478681.28	3769336.6	6.65E-08	1.33E-07	1.99E-07
2322	478694.23	3769307.64	5.11E-08	1.02E-07	1.53E-07
2323	478707.18	3769278.68	3.85E-08	7.70E-08	1.16E-07
2324	478859.96	3769724.42	2.38E-08	4.76E-08	7.14E-08
2325	478891.91	3769725.15	2.38E-08	4.75E-08	7.13E-08
2326	478830.68	3769754.05	1.97E-08	3.93E-08	5.90E-08
2327	478805.92	3769734.06	2.32E-08	4.64E-08	6.96E-08
2328	478781.15	3769714.07	2.89E-08	5.77E-08	8.66E-08
2329	478756.38	3769694.08	3.76E-08	7.52E-08	1.13E-07
2330	478731.61	3769674.09	4.98E-08	9.96E-08	1.49E-07
2331	478706.85	3769654.11	6.47E-08	1.29E-07	1.94E-07
2332	478564.74	3769519.65	1.10E-07	2.20E-07	3.30E-07
2333	478577.73	3769490.59	1.13E-07	2.25E-07	3.38E-07
2334	478603.71	3769432.48	1.04E-07	2.07E-07	3.11E-07
2335	478616.69	3769403.42	9.24E-08	1.85E-07	2.77E-07
2336	478629.68	3769374.37	7.85E-08	1.57E-07	2.35E-07

2337	478642.67	3769345.31	6.37E-08	1.27E-07	1.91E-07
2338	478655.66	3769316.26	5.00E-08	1.00E-07	1.50E-07
2339	478668.65	3769287.2	3.85E-08	7.70E-08	1.15E-07
2340	478681.64	3769258.15	2.94E-08	5.88E-08	8.82E-08
2341	478694.63	3769229.09	2.25E-08	4.51E-08	6.76E-08
2342	478859.04	3769764.41	1.84E-08	3.68E-08	5.52E-08
2343	478891	3769765.14	1.85E-08	3.71E-08	5.56E-08
2344	478829.21	3769834.31	1.27E-08	2.53E-08	3.80E-08
2345	478805.15	3769814.9	1.39E-08	2.78E-08	4.17E-08
2346	478781.1	3769795.49	1.57E-08	3.14E-08	4.70E-08
2347	478757.05	3769776.08	1.83E-08	3.67E-08	5.50E-08
2348	478733	3769756.67	2.24E-08	4.48E-08	6.71E-08
2349	478708.95	3769737.26	2.82E-08	5.65E-08	8.47E-08
2350	478684.9	3769717.85	3.61E-08	7.22E-08	1.08E-07
2351	478660.84	3769698.44	4.59E-08	9.18E-08	1.38E-07
2352	478636.79	3769679.03	5.67E-08	1.13E-07	1.70E-07
2353	478612.74	3769659.62	6.75E-08	1.35E-07	2.03E-07
2354	478588.69	3769640.21	7.71E-08	1.54E-07	2.31E-07
2355	478499.38	3769510.53	8.98E-08	1.80E-07	2.69E-07
2356	478537.22	3769425.88	7.88E-08	1.58E-07	2.36E-07
2357	478549.83	3769397.67	7.01E-08	1.40E-07	2.10E-07
2358	478562.44	3769369.45	6.02E-08	1.20E-07	1.81E-07
2359	478575.06	3769341.23	5.01E-08	1.00E-07	1.50E-07
2360	478587.67	3769313.02	4.06E-08	8.11E-08	1.22E-07
2361	478600.29	3769284.8	3.23E-08	6.46E-08	9.69E-08
2362	478612.9	3769256.59	2.55E-08	5.10E-08	7.66E-08
2363	478625.51	3769228.37	2.02E-08	4.04E-08	6.07E-08
2364	478638.13	3769200.15	1.62E-08	3.23E-08	4.85E-08
2365	478857.21	3769844.39	1.22E-08	2.44E-08	3.66E-08
2366	478889.16	3769845.12	1.23E-08	2.47E-08	3.70E-08
2367	478827.26	3769914.21	9.07E-09	1.81E-08	2.72E-08
2368	478803	3769894.63	9.71E-09	1.94E-08	2.91E-08
2369	478778.74	3769875.05	1.05E-08	2.10E-08	3.15E-08
2370	478754.48	3769855.46	1.16E-08	2.31E-08	3.47E-08
2371	478730.21	3769835.88	1.31E-08	2.61E-08	3.92E-08
2372	478705.95	3769816.3	1.53E-08	3.05E-08	4.58E-08
2373	478681.69	3769796.72	1.85E-08	3.69E-08	5.54E-08
2374	478657.43	3769777.14	2.29E-08	4.59E-08	6.88E-08
2375	478633.16	3769757.56	2.88E-08	5.75E-08	8.63E-08
2376	478608.9	3769737.98	3.59E-08	7.18E-08	1.08E-07
2377	478584.64	3769718.4	4.39E-08	8.77E-08	1.32E-07
2378	478560.38	3769698.82	5.21E-08	1.04E-07	1.56E-07
2379	478536.11	3769679.23	5.98E-08	1.20E-07	1.79E-07
2380	478511.85	3769659.65	6.63E-08	1.33E-07	1.99E-07
2381	478487.59	3769640.07	7.09E-08	1.42E-07	2.13E-07
2382	478421.75	3769528.84	7.39E-08	1.48E-07	2.22E-07
2383	478434.48	3769500.38	7.35E-08	1.47E-07	2.20E-07
2384	478472.65	3769414.99	6.09E-08	1.22E-07	1.83E-07
2385	478485.38	3769386.52	5.38E-08	1.08E-07	1.61E-07
2386	478498.1	3769358.06	4.62E-08	9.23E-08	1.38E-07
2387	478510.82	3769329.6	3.86E-08	7.72E-08	1.16E-07
2388	478523.55	3769301.13	3.16E-08	6.33E-08	9.49E-08

2389	478536.27	3769272.67	2.56E-08	5.13E-08	7.69E-08
2390	478549	3769244.2	2.07E-08	4.14E-08	6.21E-08
2391	478561.72	3769215.74	1.68E-08	3.35E-08	5.02E-08
2392	478574.45	3769187.28	1.37E-08	2.73E-08	4.10E-08
2393	478587.17	3769158.81	1.13E-08	2.26E-08	3.39E-08
2394	478599.89	3769130.35	9.45E-09	1.89E-08	2.84E-08
2395	478612.62	3769101.89	8.02E-09	1.60E-08	2.41E-08
2396	478855.37	3769924.37	8.81E-09	1.76E-08	2.64E-08
2397	478887.33	3769925.1	8.88E-09	1.78E-08	2.67E-08
2398	478825.35	3769994.13	6.90E-09	1.38E-08	2.07E-08
2399	478800.94	3769974.42	7.30E-09	1.46E-08	2.19E-08
2400	478776.53	3769954.72	7.75E-09	1.55E-08	2.33E-08
2401	478752.11	3769935.02	8.29E-09	1.66E-08	2.49E-08
2402	478727.7	3769915.32	8.98E-09	1.80E-08	2.69E-08
2403	478703.29	3769895.61	9.90E-09	1.98E-08	2.97E-08
2404	478678.87	3769875.91	1.12E-08	2.24E-08	3.36E-08
2405	478654.46	3769856.21	1.30E-08	2.61E-08	3.91E-08
2406	478630.05	3769836.5	1.56E-08	3.13E-08	4.69E-08
2407	478605.63	3769816.8	1.91E-08	3.83E-08	5.74E-08
2408	478581.22	3769797.1	2.36E-08	4.72E-08	7.08E-08
2409	478556.81	3769777.4	2.90E-08	5.80E-08	8.69E-08
2410	478532.39	3769757.69	3.51E-08	7.01E-08	1.05E-07
2411	478507.98	3769737.99	4.14E-08	8.29E-08	1.24E-07
2412	478483.57	3769718.29	4.77E-08	9.53E-08	1.43E-07
2413	478459.15	3769698.59	5.32E-08	1.06E-07	1.60E-07
2414	478434.74	3769678.88	5.77E-08	1.15E-07	1.73E-07
2415	478410.33	3769659.18	6.08E-08	1.22E-07	1.82E-07
2416	478385.91	3769639.48	6.24E-08	1.25E-07	1.87E-07
2417	478395.3	3769432.7	5.32E-08	1.07E-07	1.60E-07
2418	478408.1	3769404.06	4.81E-08	9.62E-08	1.44E-07
2419	478420.9	3769375.42	4.23E-08	8.46E-08	1.27E-07
2420	478433.71	3769346.77	3.64E-08	7.28E-08	1.09E-07
2421	478446.51	3769318.13	3.07E-08	6.14E-08	9.21E-08
2422	478459.31	3769289.49	2.55E-08	5.10E-08	7.65E-08
2423	478472.12	3769260.85	2.10E-08	4.20E-08	6.29E-08
2424	478484.92	3769232.21	1.72E-08	3.45E-08	5.17E-08
2425	478497.72	3769203.57	1.42E-08	2.84E-08	4.26E-08
2426	478523.33	3769146.29	9.92E-09	1.98E-08	2.98E-08
2427	478536.13	3769117.65	8.41E-09	1.68E-08	2.52E-08
2428	478548.94	3769089.01	7.21E-09	1.44E-08	2.16E-08
2429	478853.54	3770004.34	6.73E-09	1.35E-08	2.02E-08
2430	478885.49	3770005.08	6.76E-09	1.35E-08	2.03E-08
2431	478823.46	3770074.06	5.47E-09	1.09E-08	1.64E-08
2432	478798.94	3770054.27	5.75E-09	1.15E-08	1.72E-08
2433	478774.41	3770034.47	6.05E-09	1.21E-08	1.82E-08
2434	478749.88	3770014.68	6.39E-09	1.28E-08	1.92E-08
2435	478725.36	3769994.88	6.78E-09	1.36E-08	2.03E-08
2436	478700.83	3769975.09	7.25E-09	1.45E-08	2.17E-08
2437	478676.3	3769955.3	7.85E-09	1.57E-08	2.36E-08
2438	478651.78	3769935.5	8.67E-09	1.73E-08	2.60E-08
2439	478627.25	3769915.71	9.80E-09	1.96E-08	2.94E-08
2440	478602.72	3769895.91	1.14E-08	2.27E-08	3.41E-08

2441	478578.2	3769876.12	1.35E-08	2.70E-08	4.05E-08
2442	478553.67	3769856.33	1.63E-08	3.26E-08	4.89E-08
2443	478529.14	3769836.53	1.98E-08	3.96E-08	5.94E-08
2444	478504.62	3769816.74	2.40E-08	4.80E-08	7.20E-08
2445	478480.09	3769796.94	2.87E-08	5.74E-08	8.61E-08
2446	478455.57	3769777.15	3.37E-08	6.74E-08	1.01E-07
2447	478431.04	3769757.36	3.87E-08	7.75E-08	1.16E-07
2448	478406.51	3769737.56	4.34E-08	8.69E-08	1.30E-07
2449	478381.99	3769717.77	4.75E-08	9.50E-08	1.43E-07
2450	478357.46	3769697.97	5.07E-08	1.01E-07	1.52E-07
2451	478332.93	3769678.18	5.28E-08	1.06E-07	1.58E-07
2452	478308.41	3769658.39	5.38E-08	1.08E-07	1.61E-07
2453	478283.88	3769638.59	5.37E-08	1.07E-07	1.61E-07
2454	478330.7	3769421.88	4.32E-08	8.64E-08	1.30E-07
2455	478343.56	3769393.1	3.88E-08	7.76E-08	1.16E-07
2456	478356.42	3769364.33	3.41E-08	6.83E-08	1.02E-07
2457	478369.29	3769335.56	2.95E-08	5.89E-08	8.83E-08
2458	478382.15	3769306.78	2.50E-08	5.00E-08	7.50E-08
2459	478395.01	3769278.01	2.10E-08	4.20E-08	6.30E-08
2460	478407.87	3769249.24	1.75E-08	3.51E-08	5.26E-08
2461	478420.74	3769220.46	1.47E-08	2.93E-08	4.40E-08
2462	478433.6	3769191.69	1.23E-08	2.46E-08	3.69E-08
2463	478446.46	3769162.92	1.04E-08	2.07E-08	3.11E-08
2464	478459.32	3769134.14	8.84E-09	1.77E-08	2.65E-08
2465	478472.19	3769105.37	7.60E-09	1.52E-08	2.28E-08
2466	478485.05	3769076.6	6.58E-09	1.32E-08	1.97E-08
2467	478497.91	3769047.82	5.74E-09	1.15E-08	1.72E-08
2468	478536.5	3768961.5	4.03E-09	8.07E-09	1.21E-08
2469	478851.7	3770084.32	5.35E-09	1.07E-08	1.61E-08
2470	478883.65	3770085.06	5.36E-09	1.07E-08	1.61E-08
2471	478821.58	3770154	4.48E-09	8.97E-09	1.35E-08
2472	478796.97	3770134.14	4.69E-09	9.37E-09	1.41E-08
2473	478772.35	3770114.27	4.90E-09	9.80E-09	1.47E-08
2474	478747.74	3770094.41	5.13E-09	1.03E-08	1.54E-08
2475	478723.12	3770074.54	5.39E-09	1.08E-08	1.62E-08
2476	478698.51	3770054.68	5.68E-09	1.14E-08	1.70E-08
2477	478673.9	3770034.81	6.02E-09	1.20E-08	1.81E-08
2478	478649.28	3770014.95	6.45E-09	1.29E-08	1.93E-08
2479	478624.67	3769995.08	6.99E-09	1.40E-08	2.10E-08
2480	478600.05	3769975.22	7.72E-09	1.54E-08	2.32E-08
2481	478575.44	3769955.35	8.71E-09	1.74E-08	2.61E-08
2482	478550.82	3769935.49	1.01E-08	2.01E-08	3.02E-08
2483	478526.21	3769915.62	1.18E-08	2.37E-08	3.55E-08
2484	478501.6	3769895.76	1.41E-08	2.82E-08	4.23E-08
2485	478476.98	3769875.89	1.69E-08	3.38E-08	5.07E-08
2486	478452.37	3769856.03	2.02E-08	4.05E-08	6.07E-08
2487	478427.75	3769836.16	2.40E-08	4.80E-08	7.20E-08
2488	478403.14	3769816.3	2.80E-08	5.61E-08	8.41E-08
2489	478378.52	3769796.43	3.21E-08	6.43E-08	9.64E-08
2490	478353.91	3769776.57	3.61E-08	7.22E-08	1.08E-07
2491	478329.3	3769756.71	3.97E-08	7.93E-08	1.19E-07
2492	478304.68	3769736.84	4.26E-08	8.53E-08	1.28E-07

2493	478280.07	3769716.98	4.49E-08	8.98E-08	1.35E-07
2494	478255.45	3769697.11	4.64E-08	9.28E-08	1.39E-07
2495	478230.84	3769677.25	4.70E-08	9.41E-08	1.41E-07
2496	478206.22	3769657.38	4.68E-08	9.37E-08	1.40E-07
2497	478181.61	3769637.52	4.60E-08	9.19E-08	1.38E-07
2498	478253.21	3769439.89	3.89E-08	7.78E-08	1.17E-07
2499	478266.12	3769411.01	3.55E-08	7.10E-08	1.07E-07
2500	478279.03	3769382.13	3.18E-08	6.37E-08	9.55E-08
2501	478291.94	3769353.26	2.80E-08	5.60E-08	8.41E-08
2502	478304.84	3769324.38	2.43E-08	4.86E-08	7.29E-08
2503	478317.75	3769295.5	2.08E-08	4.16E-08	6.25E-08
2504	478330.66	3769266.63	1.77E-08	3.54E-08	5.30E-08
2505	478343.57	3769237.75	1.50E-08	2.99E-08	4.49E-08
2506	478356.48	3769208.88	1.27E-08	2.53E-08	3.80E-08
2507	478382.3	3769151.12	9.22E-09	1.84E-08	2.77E-08
2508	478395.2	3769122.25	7.96E-09	1.59E-08	2.39E-08
2509	478408.11	3769093.37	6.92E-09	1.38E-08	2.07E-08
2510	478433.93	3769035.62	5.33E-09	1.07E-08	1.60E-08
2511	478446.84	3769006.74	4.72E-09	9.44E-09	1.42E-08
2512	478459.75	3768977.86	4.20E-09	8.40E-09	1.26E-08
2513	478849.87	3770164.3	4.39E-09	8.79E-09	1.32E-08
2514	478881.82	3770165.04	4.40E-09	8.80E-09	1.32E-08
2515	478817.85	3770313.91	3.24E-09	6.47E-09	9.71E-09
2516	478793.1	3770293.94	3.35E-09	6.70E-09	1.01E-08
2517	478768.36	3770273.97	3.47E-09	6.95E-09	1.04E-08
2518	478743.62	3770254.01	3.61E-09	7.21E-09	1.08E-08
2519	478718.88	3770234.04	3.75E-09	7.50E-09	1.12E-08
2520	478694.14	3770214.07	3.90E-09	7.80E-09	1.17E-08
2521	478669.39	3770194.1	4.07E-09	8.13E-09	1.22E-08
2522	478644.65	3770174.13	4.25E-09	8.49E-09	1.27E-08
2523	478619.91	3770154.16	4.45E-09	8.89E-09	1.33E-08
2524	478595.17	3770134.2	4.68E-09	9.36E-09	1.40E-08
2525	478570.43	3770114.23	4.96E-09	9.92E-09	1.49E-08
2526	478545.68	3770094.26	5.31E-09	1.06E-08	1.59E-08
2527	478520.94	3770074.29	5.76E-09	1.15E-08	1.73E-08
2528	478496.2	3770054.32	6.35E-09	1.27E-08	1.91E-08
2529	478471.46	3770034.36	7.13E-09	1.43E-08	2.14E-08
2530	478446.71	3770014.39	8.13E-09	1.63E-08	2.44E-08
2531	478421.97	3769994.42	9.41E-09	1.88E-08	2.82E-08
2532	478397.23	3769974.45	1.10E-08	2.20E-08	3.29E-08
2533	478372.49	3769954.48	1.29E-08	2.58E-08	3.86E-08
2534	478347.75	3769934.52	1.51E-08	3.02E-08	4.53E-08
2535	478323	3769914.55	1.76E-08	3.52E-08	5.27E-08
2536	478298.26	3769894.58	2.03E-08	4.06E-08	6.08E-08
2537	478273.52	3769874.61	2.31E-08	4.61E-08	6.92E-08
2538	478248.78	3769854.64	2.59E-08	5.18E-08	7.76E-08
2539	478224.04	3769834.68	2.86E-08	5.71E-08	8.57E-08
2540	478199.29	3769814.71	3.10E-08	6.21E-08	9.31E-08
2541	478174.55	3769794.74	3.32E-08	6.63E-08	9.95E-08
2542	478149.81	3769774.77	3.48E-08	6.97E-08	1.04E-07
2543	478125.07	3769754.8	3.60E-08	7.21E-08	1.08E-07
2544	478100.32	3769734.83	3.67E-08	7.35E-08	1.10E-07

2545	478075.58	3769714.87	3.69E-08	7.39E-08	1.11E-07
2546	478050.84	3769694.9	3.67E-08	7.33E-08	1.10E-07
2547	478026.1	3769674.93	3.60E-08	7.20E-08	1.08E-07
2548	478085.09	3769505.3	3.38E-08	6.75E-08	1.01E-07
2549	478098.07	3769476.27	3.20E-08	6.41E-08	9.61E-08
2550	478111.04	3769447.25	2.99E-08	5.98E-08	8.98E-08
2551	478124.02	3769418.22	2.76E-08	5.51E-08	8.27E-08
2552	478137	3769389.2	2.50E-08	5.01E-08	7.51E-08
2553	478149.97	3769360.17	2.24E-08	4.49E-08	6.73E-08
2554	478162.95	3769331.14	1.98E-08	3.97E-08	5.95E-08
2555	478175.92	3769302.12	1.74E-08	3.48E-08	5.22E-08
2556	478188.9	3769273.09	1.51E-08	3.02E-08	4.54E-08
2557	478201.87	3769244.06	1.31E-08	2.62E-08	3.92E-08
2558	478214.85	3769215.04	1.13E-08	2.26E-08	3.39E-08
2559	478240.8	3769156.98	8.54E-09	1.71E-08	2.56E-08
2560	478253.78	3769127.96	7.47E-09	1.49E-08	2.24E-08
2561	478266.75	3769098.93	6.59E-09	1.32E-08	1.98E-08
2562	478279.73	3769069.91	5.84E-09	1.17E-08	1.75E-08
2563	478299.19	3769026.37	4.93E-09	9.86E-09	1.48E-08
2564	478331.63	3768953.8	3.77E-09	7.53E-09	1.13E-08
2565	478344.61	3768924.77	3.40E-09	6.80E-09	1.02E-08
2566	478357.58	3768895.75	3.08E-09	6.17E-09	9.25E-09
2567	478370.56	3768866.72	2.81E-09	5.62E-09	8.44E-09
2568	478383.53	3768837.69	2.59E-09	5.17E-09	7.76E-09
2569	478846.19	3770324.26	3.18E-09	6.36E-09	9.55E-09
2570	478878.15	3770324.99	3.18E-09	6.36E-09	9.54E-09
2571	478814.13	3770473.83	2.50E-09	5.00E-09	7.51E-09
2572	478789.3	3770453.79	2.57E-09	5.15E-09	7.72E-09
2573	478764.47	3770433.75	2.65E-09	5.30E-09	7.95E-09
2574	478739.64	3770413.71	2.73E-09	5.46E-09	8.19E-09
2575	478714.81	3770393.67	2.82E-09	5.64E-09	8.45E-09
2576	478689.98	3770373.63	2.91E-09	5.82E-09	8.73E-09
2577	478665.15	3770353.59	3.01E-09	6.02E-09	9.04E-09
2578	478640.32	3770333.55	3.12E-09	6.24E-09	9.36E-09
2579	478615.49	3770313.52	3.23E-09	6.47E-09	9.70E-09
2580	478590.66	3770293.48	3.36E-09	6.71E-09	1.01E-08
2581	478565.82	3770273.44	3.49E-09	6.98E-09	1.05E-08
2582	478540.99	3770253.4	3.63E-09	7.27E-09	1.09E-08
2583	478516.16	3770233.36	3.80E-09	7.60E-09	1.14E-08
2584	478491.33	3770213.32	4.00E-09	8.00E-09	1.20E-08
2585	478466.5	3770193.28	4.24E-09	8.48E-09	1.27E-08
2586	478441.67	3770173.24	4.54E-09	9.07E-09	1.36E-08
2587	478416.84	3770153.2	4.92E-09	9.83E-09	1.47E-08
2588	478392.01	3770133.16	5.40E-09	1.08E-08	1.62E-08
2589	478367.18	3770113.12	6.02E-09	1.20E-08	1.80E-08
2590	478342.35	3770093.08	6.79E-09	1.36E-08	2.04E-08
2591	478317.52	3770073.04	7.74E-09	1.55E-08	2.32E-08
2592	478292.69	3770053	8.87E-09	1.77E-08	2.66E-08
2593	478267.86	3770032.96	1.02E-08	2.05E-08	3.07E-08
2594	478243.03	3770012.92	1.18E-08	2.36E-08	3.53E-08
2595	478218.2	3769992.88	1.35E-08	2.70E-08	4.06E-08
2596	478193.36	3769972.84	1.54E-08	3.08E-08	4.62E-08

2597	478168.53	3769952.8	1.74E-08	3.48E-08	5.22E-08
2598	478143.7	3769932.76	1.94E-08	3.89E-08	5.83E-08
2599	478118.87	3769912.72	2.15E-08	4.29E-08	6.44E-08
2600	478094.04	3769892.68	2.34E-08	4.68E-08	7.01E-08
2601	478069.21	3769872.65	2.52E-08	5.03E-08	7.55E-08
2602	478044.38	3769852.61	2.67E-08	5.34E-08	8.02E-08
2603	478019.55	3769832.57	2.80E-08	5.60E-08	8.40E-08
2604	477994.72	3769812.53	2.90E-08	5.80E-08	8.70E-08
2605	477969.89	3769792.49	2.97E-08	5.94E-08	8.91E-08
2606	477945.06	3769772.45	3.01E-08	6.01E-08	9.02E-08
2607	477870.57	3769712.33	2.93E-08	5.86E-08	8.80E-08
2608	477864.66	3769687.74	2.92E-08	5.85E-08	8.77E-08
2609	477877.68	3769658.61	2.95E-08	5.91E-08	8.86E-08
2610	477890.71	3769629.48	2.96E-08	5.93E-08	8.89E-08
2611	477942.79	3769512.96	2.70E-08	5.40E-08	8.10E-08
2612	477955.82	3769483.83	2.56E-08	5.12E-08	7.68E-08
2613	477968.84	3769454.7	2.40E-08	4.80E-08	7.20E-08
2614	477981.86	3769425.57	2.22E-08	4.45E-08	6.67E-08
2615	477994.88	3769396.44	2.04E-08	4.08E-08	6.12E-08
2616	478007.91	3769367.31	1.85E-08	3.70E-08	5.55E-08
2617	478020.93	3769338.18	1.66E-08	3.32E-08	4.98E-08
2618	478033.95	3769309.05	1.48E-08	2.96E-08	4.44E-08
2619	478046.97	3769279.92	1.31E-08	2.62E-08	3.93E-08
2620	478059.99	3769250.79	1.15E-08	2.31E-08	3.46E-08
2621	478073.02	3769221.66	1.01E-08	2.03E-08	3.04E-08
2622	478086.04	3769192.53	8.92E-09	1.78E-08	2.68E-08
2623	478099.06	3769163.4	7.87E-09	1.57E-08	2.36E-08
2624	478112.08	3769134.27	6.98E-09	1.40E-08	2.09E-08
2625	478125.1	3769105.14	6.22E-09	1.24E-08	1.87E-08
2626	478138.13	3769076.01	5.57E-09	1.11E-08	1.67E-08
2627	478151.15	3769046.88	5.02E-09	1.00E-08	1.51E-08
2628	478164.17	3769017.75	4.55E-09	9.09E-09	1.36E-08
2629	478177.19	3768988.62	4.13E-09	8.25E-09	1.24E-08
2630	478190.22	3768959.49	3.75E-09	7.51E-09	1.13E-08
2631	478222.77	3768886.66	2.98E-09	5.96E-09	8.94E-09
2632	478235.79	3768857.53	2.72E-09	5.45E-09	8.17E-09
2633	478248.81	3768828.4	2.50E-09	4.99E-09	7.49E-09
2634	478261.84	3768799.27	2.30E-09	4.60E-09	6.90E-09
2635	478274.86	3768770.14	2.13E-09	4.26E-09	6.39E-09
2636	478313.93	3768682.75	1.77E-09	3.55E-09	5.32E-09
2637	478326.95	3768653.62	1.70E-09	3.39E-09	5.09E-09
2638	478359.5	3768580.8	1.57E-09	3.14E-09	4.70E-09
2639	478842.52	3770484.22	2.47E-09	4.93E-09	7.40E-09
2640	478874.48	3770484.95	2.47E-09	4.93E-09	7.40E-09
2641	478810.56	3770633.87	2.03E-09	4.05E-09	6.08E-09
2642	478785.94	3770614	2.07E-09	4.15E-09	6.22E-09
2643	478761.32	3770594.13	2.12E-09	4.25E-09	6.37E-09
2644	478736.7	3770574.26	2.18E-09	4.35E-09	6.53E-09
2645	478712.08	3770554.39	2.23E-09	4.46E-09	6.70E-09
2646	478687.45	3770534.52	2.29E-09	4.59E-09	6.88E-09
2647	478662.83	3770514.65	2.36E-09	4.71E-09	7.07E-09
2648	478638.21	3770494.78	2.43E-09	4.85E-09	7.28E-09

2649	478613.59	3770474.9	2.50E-09	5.00E-09	7.50E-09
2650	478588.97	3770455.03	2.58E-09	5.16E-09	7.74E-09
2651	478564.34	3770435.16	2.66E-09	5.32E-09	7.98E-09
2652	478539.72	3770415.29	2.75E-09	5.50E-09	8.24E-09
2653	478515.1	3770395.42	2.84E-09	5.68E-09	8.52E-09
2654	478490.48	3770375.55	2.94E-09	5.88E-09	8.82E-09
2655	478465.86	3770355.68	3.04E-09	6.09E-09	9.13E-09
2656	478441.23	3770335.81	3.16E-09	6.33E-09	9.49E-09
2657	478416.61	3770315.94	3.30E-09	6.60E-09	9.91E-09
2658	478391.99	3770296.06	3.47E-09	6.93E-09	1.04E-08
2659	478367.37	3770276.19	3.67E-09	7.33E-09	1.10E-08
2660	478342.75	3770256.32	3.91E-09	7.82E-09	1.17E-08
2661	478318.12	3770236.45	4.21E-09	8.43E-09	1.26E-08
2662	478293.5	3770216.58	4.59E-09	9.18E-09	1.38E-08
2663	478268.88	3770196.71	5.06E-09	1.01E-08	1.52E-08
2664	478244.26	3770176.84	5.63E-09	1.13E-08	1.69E-08
2665	478219.64	3770156.97	6.31E-09	1.26E-08	1.89E-08
2666	478195.01	3770137.1	7.12E-09	1.42E-08	2.14E-08
2667	478170.39	3770117.22	8.07E-09	1.61E-08	2.42E-08
2668	478145.77	3770097.35	9.15E-09	1.83E-08	2.75E-08
2669	478121.15	3770077.48	1.04E-08	2.07E-08	3.11E-08
2670	478096.53	3770057.61	1.17E-08	2.34E-08	3.51E-08
2671	478071.9	3770037.74	1.31E-08	2.62E-08	3.93E-08
2672	478047.28	3770017.87	1.46E-08	2.92E-08	4.38E-08
2673	478022.66	3769998	1.61E-08	3.22E-08	4.84E-08
2674	477998.04	3769978.13	1.76E-08	3.52E-08	5.28E-08
2675	477973.42	3769958.25	1.91E-08	3.82E-08	5.73E-08
2676	477948.79	3769938.38	2.04E-08	4.09E-08	6.13E-08
2677	477924.17	3769918.51	2.17E-08	4.34E-08	6.51E-08
2678	477899.55	3769898.64	2.28E-08	4.56E-08	6.83E-08
2679	477874.93	3769878.77	2.37E-08	4.74E-08	7.11E-08
2680	477850.31	3769858.9	2.44E-08	4.88E-08	7.32E-08
2681	477825.68	3769839.03	2.49E-08	4.98E-08	7.46E-08
2682	477776.44	3769799.29	2.52E-08	5.04E-08	7.56E-08
2683	477751.82	3769779.41	2.51E-08	5.01E-08	7.52E-08
2684	477727.2	3769759.54	2.47E-08	4.95E-08	7.42E-08
2685	477709.03	3769725.23	2.44E-08	4.89E-08	7.33E-08
2686	477721.94	3769696.34	2.47E-08	4.94E-08	7.41E-08
2687	477734.86	3769667.46	2.48E-08	4.95E-08	7.43E-08
2688	477747.77	3769638.57	2.46E-08	4.92E-08	7.39E-08
2689	477812.33	3769494.15	2.10E-08	4.21E-08	6.31E-08
2690	477825.24	3769465.26	1.98E-08	3.97E-08	5.95E-08
2691	477838.16	3769436.38	1.85E-08	3.71E-08	5.56E-08
2692	477851.07	3769407.49	1.72E-08	3.43E-08	5.15E-08
2693	477863.98	3769378.6	1.58E-08	3.15E-08	4.73E-08
2694	477876.9	3769349.72	1.44E-08	2.87E-08	4.31E-08
2695	477889.81	3769320.83	1.30E-08	2.60E-08	3.90E-08
2696	477902.72	3769291.95	1.17E-08	2.33E-08	3.50E-08
2697	477915.63	3769263.06	1.04E-08	2.09E-08	3.13E-08
2698	477928.55	3769234.18	9.33E-09	1.87E-08	2.80E-08
2699	477941.46	3769205.29	8.33E-09	1.67E-08	2.50E-08
2700	477967.28	3769147.52	6.67E-09	1.33E-08	2.00E-08

2701	477980.2	3769118.64	5.99E-09	1.20E-08	1.80E-08
2702	477993.11	3769089.75	5.41E-09	1.08E-08	1.62E-08
2703	478006.02	3769060.86	4.91E-09	9.83E-09	1.47E-08
2704	478018.94	3769031.98	4.48E-09	8.97E-09	1.35E-08
2705	478031.85	3769003.09	4.11E-09	8.21E-09	1.23E-08
2706	478044.76	3768974.21	3.77E-09	7.54E-09	1.13E-08
2707	478057.67	3768945.32	3.47E-09	6.95E-09	1.04E-08
2708	478070.59	3768916.44	3.20E-09	6.40E-09	9.60E-09
2709	478083.5	3768887.55	2.95E-09	5.90E-09	8.86E-09
2710	478115.78	3768815.34	2.41E-09	4.83E-09	7.24E-09
2711	478128.69	3768786.45	2.23E-09	4.46E-09	6.70E-09
2712	478141.61	3768757.57	2.07E-09	4.13E-09	6.20E-09
2713	478154.52	3768728.68	1.92E-09	3.84E-09	5.76E-09
2714	478167.43	3768699.8	1.79E-09	3.58E-09	5.37E-09
2715	478212.63	3768598.7	1.48E-09	2.95E-09	4.43E-09
2716	478225.54	3768569.81	1.42E-09	2.84E-09	4.26E-09
2717	478238.45	3768540.93	1.38E-09	2.75E-09	4.13E-09
2718	478251.36	3768512.04	1.34E-09	2.68E-09	4.02E-09
2719	478264.28	3768483.16	1.31E-09	2.62E-09	3.93E-09
2720	478838.85	3770644.18	2.00E-09	4.01E-09	6.01E-09
2721	478870.81	3770644.91	2.00E-09	4.01E-09	6.01E-09
2722	478806.85	3770793.8	1.70E-09	3.40E-09	5.10E-09
2723	478782.15	3770773.86	1.73E-09	3.47E-09	5.20E-09
2724	478757.45	3770753.93	1.77E-09	3.54E-09	5.30E-09
2725	478732.74	3770733.99	1.80E-09	3.61E-09	5.41E-09
2726	478708.04	3770714.05	1.84E-09	3.69E-09	5.53E-09
2727	478683.34	3770694.12	1.88E-09	3.77E-09	5.65E-09
2728	478658.64	3770674.18	1.93E-09	3.85E-09	5.78E-09
2729	478633.93	3770654.24	1.97E-09	3.95E-09	5.92E-09
2730	478609.23	3770634.31	2.03E-09	4.05E-09	6.08E-09
2731	478584.53	3770614.37	2.08E-09	4.16E-09	6.24E-09
2732	478559.82	3770594.43	2.14E-09	4.27E-09	6.41E-09
2733	478535.12	3770574.5	2.20E-09	4.40E-09	6.59E-09
2734	478510.42	3770554.56	2.26E-09	4.52E-09	6.79E-09
2735	478485.71	3770534.62	2.33E-09	4.66E-09	6.98E-09
2736	478461.01	3770514.69	2.40E-09	4.79E-09	7.19E-09
2737	478436.31	3770494.75	2.47E-09	4.94E-09	7.40E-09
2738	478411.6	3770474.81	2.54E-09	5.09E-09	7.63E-09
2739	478386.9	3770454.88	2.63E-09	5.25E-09	7.88E-09
2740	478362.2	3770434.94	2.72E-09	5.43E-09	8.15E-09
2741	478337.5	3770415	2.82E-09	5.64E-09	8.46E-09
2742	478312.79	3770395.07	2.94E-09	5.89E-09	8.83E-09
2743	478288.09	3770375.13	3.09E-09	6.18E-09	9.26E-09
2744	478263.39	3770355.19	3.26E-09	6.52E-09	9.78E-09
2745	478238.68	3770335.26	3.48E-09	6.95E-09	1.04E-08
2746	478213.98	3770315.32	3.74E-09	7.47E-09	1.12E-08
2747	478189.28	3770295.39	4.05E-09	8.10E-09	1.22E-08
2748	478164.57	3770275.45	4.43E-09	8.87E-09	1.33E-08
2749	478139.87	3770255.51	4.89E-09	9.78E-09	1.47E-08
2750	478115.17	3770235.58	5.43E-09	1.09E-08	1.63E-08
2751	478090.46	3770215.64	6.06E-09	1.21E-08	1.82E-08
2752	478065.76	3770195.7	6.78E-09	1.36E-08	2.04E-08

2753	478041.06	3770175.77	7.60E-09	1.52E-08	2.28E-08
2754	478016.36	3770155.83	8.51E-09	1.70E-08	2.55E-08
2755	477991.65	3770135.89	9.51E-09	1.90E-08	2.85E-08
2756	477966.95	3770115.96	1.06E-08	2.12E-08	3.18E-08
2757	477942.25	3770096.02	1.17E-08	2.34E-08	3.52E-08
2758	477917.54	3770076.08	1.29E-08	2.58E-08	3.86E-08
2759	477892.84	3770056.15	1.41E-08	2.81E-08	4.22E-08
2760	477868.14	3770036.21	1.52E-08	3.05E-08	4.57E-08
2761	477843.43	3770016.27	1.64E-08	3.27E-08	4.91E-08
2762	477818.73	3769996.34	1.74E-08	3.48E-08	5.22E-08
2763	477794.03	3769976.4	1.84E-08	3.68E-08	5.52E-08
2764	477769.33	3769956.46	1.93E-08	3.85E-08	5.78E-08
2765	477744.62	3769936.53	2.00E-08	4.00E-08	6.00E-08
2766	477670.51	3769876.72	2.13E-08	4.26E-08	6.39E-08
2767	477645.81	3769856.78	2.15E-08	4.30E-08	6.44E-08
2768	477621.11	3769836.84	2.15E-08	4.30E-08	6.44E-08
2769	477596.4	3769816.91	2.13E-08	4.27E-08	6.40E-08
2770	477571.7	3769796.97	2.11E-08	4.21E-08	6.32E-08
2771	477553.48	3769762.54	2.08E-08	4.16E-08	6.24E-08
2772	477566.43	3769733.56	2.10E-08	4.20E-08	6.30E-08
2773	477579.39	3769704.58	2.11E-08	4.22E-08	6.33E-08
2774	477592.34	3769675.6	2.10E-08	4.20E-08	6.30E-08
2775	477605.3	3769646.62	2.08E-08	4.16E-08	6.24E-08
2776	477670.07	3769501.72	1.77E-08	3.54E-08	5.30E-08
2777	477683.03	3769472.74	1.67E-08	3.34E-08	5.02E-08
2778	477695.98	3769443.76	1.57E-08	3.14E-08	4.70E-08
2779	477708.94	3769414.78	1.46E-08	2.92E-08	4.38E-08
2780	477721.89	3769385.8	1.35E-08	2.70E-08	4.05E-08
2781	477734.85	3769356.82	1.24E-08	2.48E-08	3.72E-08
2782	477747.8	3769327.84	1.13E-08	2.26E-08	3.39E-08
2783	477760.76	3769298.86	1.03E-08	2.06E-08	3.09E-08
2784	477773.71	3769269.88	9.31E-09	1.86E-08	2.79E-08
2785	477786.67	3769240.9	8.41E-09	1.68E-08	2.52E-08
2786	477799.62	3769211.92	7.58E-09	1.52E-08	2.27E-08
2787	477825.53	3769153.95	6.18E-09	1.24E-08	1.85E-08
2788	477838.49	3769124.97	5.60E-09	1.12E-08	1.68E-08
2789	477851.45	3769095.99	5.10E-09	1.02E-08	1.53E-08
2790	477864.4	3769067.01	4.65E-09	9.31E-09	1.40E-08
2791	477877.36	3769038.03	4.27E-09	8.53E-09	1.28E-08
2792	477890.31	3769009.05	3.93E-09	7.87E-09	1.18E-08
2793	477903.27	3768980.07	3.64E-09	7.27E-09	1.09E-08
2794	477916.22	3768951.09	3.37E-09	6.74E-09	1.01E-08
2795	477929.18	3768922.11	3.13E-09	6.26E-09	9.40E-09
2796	477942.13	3768893.13	2.91E-09	5.83E-09	8.74E-09
2797	477955.09	3768864.15	2.71E-09	5.42E-09	8.14E-09
2798	477968.04	3768835.17	2.53E-09	5.05E-09	7.58E-09
2799	478006.91	3768748.23	2.03E-09	4.07E-09	6.10E-09
2800	478019.86	3768719.25	1.89E-09	3.79E-09	5.68E-09
2801	478032.82	3768690.27	1.77E-09	3.53E-09	5.30E-09
2802	478045.77	3768661.29	1.65E-09	3.30E-09	4.95E-09
2803	478058.73	3768632.31	1.55E-09	3.10E-09	4.64E-09
2804	478071.68	3768603.33	1.46E-09	2.92E-09	4.38E-09

2805	478104.07	3768530.87	1.29E-09	2.58E-09	3.87E-09
2806	478117.03	3768501.89	1.24E-09	2.48E-09	3.72E-09
2807	478129.98	3768472.91	1.20E-09	2.40E-09	3.60E-09
2808	478142.94	3768443.93	1.17E-09	2.34E-09	3.51E-09
2809	478155.89	3768414.95	1.14E-09	2.28E-09	3.43E-09
2810	478168.85	3768385.97	1.12E-09	2.24E-09	3.37E-09
2811	478181.8	3768356.99	1.10E-09	2.21E-09	3.31E-09
2812	478201.24	3768313.52	1.08E-09	2.17E-09	3.25E-09
2813	478835.18	3770804.13	1.68E-09	3.37E-09	5.05E-09
2814	478867.13	3770804.87	1.68E-09	3.36E-09	5.05E-09
2815	478803.15	3770953.73	1.46E-09	2.92E-09	4.38E-09
2816	478778.38	3770933.74	1.49E-09	2.97E-09	4.46E-09
2817	478753.62	3770913.75	1.51E-09	3.02E-09	4.53E-09
2818	478728.85	3770893.77	1.54E-09	3.08E-09	4.61E-09
2819	478704.08	3770873.78	1.57E-09	3.13E-09	4.70E-09
2820	478679.31	3770853.79	1.59E-09	3.19E-09	4.78E-09
2821	478654.55	3770833.8	1.63E-09	3.25E-09	4.88E-09
2822	478629.78	3770813.81	1.66E-09	3.32E-09	4.98E-09
2823	478605.01	3770793.82	1.69E-09	3.39E-09	5.08E-09
2824	478580.25	3770773.84	1.73E-09	3.46E-09	5.20E-09
2825	478555.48	3770753.85	1.77E-09	3.55E-09	5.32E-09
2826	478530.71	3770733.86	1.82E-09	3.63E-09	5.45E-09
2827	478505.94	3770713.87	1.86E-09	3.73E-09	5.59E-09
2828	478481.18	3770693.88	1.91E-09	3.82E-09	5.74E-09
2829	478456.41	3770673.89	1.96E-09	3.92E-09	5.89E-09
2830	478431.64	3770653.91	2.01E-09	4.03E-09	6.04E-09
2831	478406.88	3770633.92	2.07E-09	4.13E-09	6.20E-09
2832	478382.11	3770613.93	2.12E-09	4.24E-09	6.36E-09
2833	478357.34	3770593.94	2.18E-09	4.36E-09	6.53E-09
2834	478332.57	3770573.95	2.24E-09	4.48E-09	6.72E-09
2835	478307.81	3770553.97	2.30E-09	4.61E-09	6.91E-09
2836	478283.04	3770533.98	2.37E-09	4.75E-09	7.12E-09
2837	478258.27	3770513.99	2.45E-09	4.91E-09	7.36E-09
2838	478233.51	3770494	2.55E-09	5.10E-09	7.64E-09
2839	478208.74	3770474.01	2.66E-09	5.31E-09	7.97E-09
2840	478183.97	3770454.02	2.79E-09	5.57E-09	8.36E-09
2841	478159.2	3770434.04	2.94E-09	5.88E-09	8.83E-09
2842	478134.44	3770414.05	3.13E-09	6.26E-09	9.39E-09
2843	478109.67	3770394.06	3.35E-09	6.70E-09	1.01E-08
2844	478084.9	3770374.07	3.62E-09	7.24E-09	1.09E-08
2845	478060.14	3770354.08	3.94E-09	7.87E-09	1.18E-08
2846	478035.37	3770334.09	4.31E-09	8.62E-09	1.29E-08
2847	478010.6	3770314.11	4.74E-09	9.48E-09	1.42E-08
2848	477985.83	3770294.12	5.24E-09	1.05E-08	1.57E-08
2849	477961.07	3770274.13	5.80E-09	1.16E-08	1.74E-08
2850	477936.3	3770254.14	6.44E-09	1.29E-08	1.93E-08
2851	477911.53	3770234.15	7.15E-09	1.43E-08	2.14E-08
2852	477886.76	3770214.16	7.92E-09	1.58E-08	2.38E-08
2853	477862	3770194.18	8.74E-09	1.75E-08	2.62E-08
2854	477837.23	3770174.19	9.62E-09	1.92E-08	2.89E-08
2855	477812.46	3770154.2	1.05E-08	2.11E-08	3.16E-08
2856	477787.7	3770134.21	1.15E-08	2.29E-08	3.44E-08

2857	477762.93	3770114.22	1.24E-08	2.48E-08	3.72E-08
2858	477738.16	3770094.23	1.33E-08	2.66E-08	4.00E-08
2859	477713.39	3770074.25	1.42E-08	2.84E-08	4.26E-08
2860	477688.63	3770054.26	1.51E-08	3.01E-08	4.52E-08
2861	477663.86	3770034.27	1.58E-08	3.17E-08	4.75E-08
2862	477639.09	3770014.28	1.65E-08	3.31E-08	4.96E-08
2863	477564.79	3769954.32	1.81E-08	3.61E-08	5.42E-08
2864	477540.02	3769934.33	1.84E-08	3.67E-08	5.51E-08
2865	477515.26	3769914.34	1.86E-08	3.71E-08	5.57E-08
2866	477490.49	3769894.35	1.86E-08	3.73E-08	5.59E-08
2867	477465.72	3769874.36	1.86E-08	3.72E-08	5.59E-08
2868	477440.96	3769854.37	1.85E-08	3.70E-08	5.54E-08
2869	477416.19	3769834.39	1.82E-08	3.65E-08	5.47E-08
2870	477397.92	3769799.87	1.80E-08	3.61E-08	5.41E-08
2871	477410.9	3769770.81	1.82E-08	3.64E-08	5.46E-08
2872	477423.89	3769741.76	1.82E-08	3.65E-08	5.47E-08
2873	477436.88	3769712.7	1.82E-08	3.64E-08	5.46E-08
2874	477449.87	3769683.65	1.81E-08	3.61E-08	5.42E-08
2875	477462.86	3769654.59	1.78E-08	3.57E-08	5.35E-08
2876	477527.8	3769509.31	1.51E-08	3.02E-08	4.53E-08
2877	477540.79	3769480.26	1.43E-08	2.86E-08	4.29E-08
2878	477553.78	3769451.2	1.35E-08	2.70E-08	4.04E-08
2879	477566.77	3769422.15	1.26E-08	2.52E-08	3.78E-08
2880	477579.76	3769393.09	1.17E-08	2.35E-08	3.52E-08
2881	477592.75	3769364.03	1.09E-08	2.17E-08	3.26E-08
2882	477605.74	3769334.98	9.99E-09	2.00E-08	3.00E-08
2883	477618.73	3769305.92	9.16E-09	1.83E-08	2.75E-08
2884	477631.71	3769276.87	8.36E-09	1.67E-08	2.51E-08
2885	477644.7	3769247.81	7.62E-09	1.52E-08	2.29E-08
2886	477657.69	3769218.76	6.93E-09	1.39E-08	2.08E-08
2887	477683.67	3769160.64	5.74E-09	1.15E-08	1.72E-08
2888	477696.66	3769131.59	5.24E-09	1.05E-08	1.57E-08
2889	477709.65	3769102.53	4.79E-09	9.58E-09	1.44E-08
2890	477722.64	3769073.48	4.40E-09	8.80E-09	1.32E-08
2891	477735.63	3769044.42	4.05E-09	8.11E-09	1.22E-08
2892	477748.61	3769015.37	3.75E-09	7.50E-09	1.13E-08
2893	477761.6	3768986.31	3.48E-09	6.97E-09	1.05E-08
2894	477774.59	3768957.25	3.25E-09	6.49E-09	9.74E-09
2895	477787.58	3768928.2	3.03E-09	6.07E-09	9.10E-09
2896	477807.06	3768884.62	2.75E-09	5.50E-09	8.25E-09
2897	477820.05	3768855.56	2.58E-09	5.16E-09	7.73E-09
2898	477839.54	3768811.98	2.34E-09	4.68E-09	7.03E-09
2899	477852.52	3768782.92	2.20E-09	4.39E-09	6.59E-09
2900	477865.51	3768753.86	2.06E-09	4.12E-09	6.18E-09
2901	477956.44	3768550.47	1.32E-09	2.65E-09	3.97E-09
2902	477969.42	3768521.42	1.25E-09	2.51E-09	3.76E-09
2903	477982.41	3768492.36	1.19E-09	2.39E-09	3.58E-09
2904	477995.4	3768463.31	1.14E-09	2.29E-09	3.43E-09
2905	478008.39	3768434.25	1.10E-09	2.20E-09	3.30E-09
2906	478021.38	3768405.2	1.06E-09	2.13E-09	3.19E-09
2907	478034.37	3768376.14	1.04E-09	2.07E-09	3.11E-09
2908	478047.36	3768347.08	1.01E-09	2.03E-09	3.04E-09

2909	478060.35	3768318.03	9.93E-10	1.99E-09	2.98E-09
2910	478073.33	3768288.97	9.79E-10	1.96E-09	2.94E-09
2911	478086.32	3768259.92	9.66E-10	1.93E-09	2.90E-09
2912	478099.31	3768230.86	9.54E-10	1.91E-09	2.86E-09
2913	478112.3	3768201.81	9.45E-10	1.89E-09	2.83E-09
2914	478125.29	3768172.75	9.36E-10	1.87E-09	2.81E-09
2915	478831.51	3770964.09	1.45E-09	2.90E-09	4.35E-09
2916	478863.46	3770964.83	1.45E-09	2.90E-09	4.34E-09
2917	478917.23	3769485.22	6.47E-07	1.29E-06	1.94E-06
2918	478936.58	3769485.22	7.19E-07	1.44E-06	2.16E-06
2919	478955.93	3769485.22	7.72E-07	1.54E-06	2.32E-06
2920	478975.28	3769485.22	8.02E-07	1.60E-06	2.41E-06
2921	478994.63	3769485.22	8.09E-07	1.62E-06	2.43E-06
2922	479013.98	3769485.22	7.88E-07	1.58E-06	2.36E-06
2923	479033.33	3769485.22	7.34E-07	1.47E-06	2.20E-06
2924	479052.68	3769485.22	6.63E-07	1.33E-06	1.99E-06
2925	478917.23	3769505.22	4.26E-07	8.53E-07	1.28E-06
2926	478936.58	3769505.22	4.31E-07	8.62E-07	1.29E-06
2927	478955.93	3769505.22	4.27E-07	8.53E-07	1.28E-06
2928	478975.28	3769505.22	4.19E-07	8.39E-07	1.26E-06
2929	478994.63	3769505.22	4.09E-07	8.19E-07	1.23E-06
2930	479013.98	3769505.22	3.97E-07	7.95E-07	1.19E-06
2931	479033.33	3769505.22	3.80E-07	7.59E-07	1.14E-06
2932	479052.68	3769505.22	3.55E-07	7.11E-07	1.07E-06
2933	478917.23	3769645.22	4.52E-08	9.05E-08	1.36E-07
2934	478936.58	3769645.22	4.54E-08	9.08E-08	1.36E-07
2935	478955.93	3769645.22	4.58E-08	9.17E-08	1.37E-07
2936	478975.28	3769645.22	4.63E-08	9.26E-08	1.39E-07
2937	478994.63	3769645.22	4.67E-08	9.33E-08	1.40E-07
2938	479013.98	3769645.22	4.67E-08	9.34E-08	1.40E-07
2939	479033.33	3769645.22	4.62E-08	9.23E-08	1.39E-07
2940	479052.68	3769645.22	4.53E-08	9.05E-08	1.36E-07
2941	478917.23	3769685.22	3.20E-08	6.41E-08	9.61E-08
2942	478936.58	3769685.22	3.23E-08	6.46E-08	9.69E-08
2943	478955.93	3769685.22	3.27E-08	6.54E-08	9.81E-08
2944	478975.28	3769685.22	3.30E-08	6.60E-08	9.90E-08
2945	478994.63	3769685.22	3.32E-08	6.64E-08	9.96E-08
2946	479013.98	3769685.22	3.32E-08	6.64E-08	9.95E-08
2947	479033.33	3769685.22	3.29E-08	6.59E-08	9.88E-08
2948	479052.68	3769685.22	3.25E-08	6.50E-08	9.75E-08
2949	478917.23	3769725.22	2.41E-08	4.81E-08	7.22E-08
2950	478936.58	3769725.22	2.43E-08	4.87E-08	7.30E-08
2951	478955.93	3769725.22	2.46E-08	4.92E-08	7.38E-08
2952	478975.28	3769725.22	2.48E-08	4.96E-08	7.44E-08
2953	478994.63	3769725.22	2.48E-08	4.96E-08	7.44E-08
2954	479013.98	3769725.22	2.48E-08	4.95E-08	7.43E-08
2955	479033.33	3769725.22	2.46E-08	4.92E-08	7.38E-08
2956	479052.68	3769725.22	2.43E-08	4.86E-08	7.29E-08
2957	478917.23	3769765.22	1.88E-08	3.76E-08	5.64E-08
2958	478936.58	3769765.22	1.90E-08	3.80E-08	5.70E-08
2959	478955.93	3769765.22	1.92E-08	3.83E-08	5.75E-08
2960	478975.28	3769765.22	1.93E-08	3.86E-08	5.78E-08

2961	478994.63	3769765.22	1.93E-08	3.86E-08	5.79E-08
2962	479013.98	3769765.22	1.92E-08	3.85E-08	5.77E-08
2963	479033.33	3769765.22	1.91E-08	3.82E-08	5.72E-08
2964	479052.68	3769765.22	1.89E-08	3.77E-08	5.66E-08
2965	479072.03	3769765.22	1.86E-08	3.72E-08	5.57E-08
2966	478917.23	3769845.22	1.25E-08	2.50E-08	3.74E-08
2967	478936.58	3769845.22	1.26E-08	2.51E-08	3.77E-08
2968	478955.93	3769845.22	1.26E-08	2.53E-08	3.79E-08
2969	478975.28	3769845.22	1.27E-08	2.53E-08	3.80E-08
2970	478994.63	3769845.22	1.27E-08	2.53E-08	3.80E-08
2971	479013.98	3769845.22	1.26E-08	2.52E-08	3.78E-08
2972	479033.33	3769845.22	1.25E-08	2.50E-08	3.75E-08
2973	479052.68	3769845.22	1.24E-08	2.47E-08	3.71E-08
2974	479072.03	3769845.22	1.22E-08	2.44E-08	3.67E-08
2975	478917.23	3769925.22	8.96E-09	1.79E-08	2.69E-08
2976	478936.58	3769925.22	8.99E-09	1.80E-08	2.70E-08
2977	478955.93	3769925.22	9.01E-09	1.80E-08	2.70E-08
2978	478975.28	3769925.22	9.01E-09	1.80E-08	2.70E-08
2979	478994.63	3769925.22	8.99E-09	1.80E-08	2.70E-08
2980	479013.98	3769925.22	8.96E-09	1.79E-08	2.69E-08
2981	479033.33	3769925.22	8.90E-09	1.78E-08	2.67E-08
2982	479052.68	3769925.22	8.81E-09	1.76E-08	2.64E-08
2983	479072.03	3769925.22	8.71E-09	1.74E-08	2.61E-08
2984	478917.23	3770005.22	6.79E-09	1.36E-08	2.04E-08
2985	478936.58	3770005.22	6.81E-09	1.36E-08	2.04E-08
2986	478955.93	3770005.22	6.81E-09	1.36E-08	2.04E-08
2987	478975.28	3770005.22	6.80E-09	1.36E-08	2.04E-08
2988	478994.63	3770005.22	6.78E-09	1.36E-08	2.04E-08
2989	479013.98	3770005.22	6.75E-09	1.35E-08	2.03E-08
2990	479033.33	3770005.22	6.71E-09	1.34E-08	2.01E-08
2991	479052.68	3770005.22	6.66E-09	1.33E-08	2.00E-08
2992	479072.03	3770005.22	6.60E-09	1.32E-08	1.98E-08
2993	478917.23	3770085.22	5.38E-09	1.08E-08	1.61E-08
2994	478936.58	3770085.22	5.38E-09	1.08E-08	1.61E-08
2995	478955.93	3770085.22	5.38E-09	1.08E-08	1.61E-08
2996	478975.28	3770085.22	5.37E-09	1.07E-08	1.61E-08
2997	478994.63	3770085.22	5.35E-09	1.07E-08	1.61E-08
2998	479013.98	3770085.22	5.33E-09	1.07E-08	1.60E-08
2999	479033.33	3770085.22	5.30E-09	1.06E-08	1.59E-08
3000	479052.68	3770085.22	5.26E-09	1.05E-08	1.58E-08
3001	479072.03	3770085.22	5.22E-09	1.04E-08	1.56E-08
3002	478917.23	3770165.22	4.40E-09	8.81E-09	1.32E-08
3003	478936.58	3770165.22	4.40E-09	8.80E-09	1.32E-08
3004	478955.93	3770165.22	4.40E-09	8.79E-09	1.32E-08
3005	478975.28	3770165.22	4.39E-09	8.77E-09	1.32E-08
3006	478994.63	3770165.22	4.37E-09	8.75E-09	1.31E-08
3007	479013.98	3770165.22	4.35E-09	8.71E-09	1.31E-08
3008	479033.33	3770165.22	4.33E-09	8.66E-09	1.30E-08
3009	479052.68	3770165.22	4.30E-09	8.60E-09	1.29E-08
3010	479072.03	3770165.22	4.27E-09	8.54E-09	1.28E-08
3011	478897.88	3770325.22	3.18E-09	6.36E-09	9.54E-09
3012	478917.23	3770325.22	3.18E-09	6.36E-09	9.54E-09

3013	478936.58	3770325.22	3.18E-09	6.35E-09	9.53E-09
3014	478955.93	3770325.22	3.17E-09	6.34E-09	9.51E-09
3015	478975.28	3770325.22	3.16E-09	6.33E-09	9.49E-09
3016	478994.63	3770325.22	3.15E-09	6.31E-09	9.46E-09
3017	479013.98	3770325.22	3.14E-09	6.28E-09	9.42E-09
3018	479033.33	3770325.22	3.12E-09	6.25E-09	9.37E-09
3019	479052.68	3770325.22	3.10E-09	6.21E-09	9.31E-09
3020	479072.03	3770325.22	3.08E-09	6.17E-09	9.25E-09
3021	478897.88	3770485.22	2.46E-09	4.93E-09	7.39E-09
3022	478917.23	3770485.22	2.46E-09	4.92E-09	7.39E-09
3023	478936.58	3770485.22	2.46E-09	4.92E-09	7.38E-09
3024	478955.93	3770485.22	2.46E-09	4.91E-09	7.37E-09
3025	478975.28	3770485.22	2.45E-09	4.90E-09	7.35E-09
3026	478994.63	3770485.22	2.44E-09	4.88E-09	7.32E-09
3027	479013.98	3770485.22	2.43E-09	4.86E-09	7.30E-09
3028	479033.33	3770485.22	2.42E-09	4.84E-09	7.26E-09
3029	479052.68	3770485.22	2.41E-09	4.82E-09	7.22E-09
3030	479072.03	3770485.22	2.39E-09	4.79E-09	7.18E-09
3031	478897.88	3770645.22	2.00E-09	4.00E-09	6.00E-09
3032	478917.23	3770645.22	2.00E-09	4.00E-09	6.00E-09
3033	478936.58	3770645.22	2.00E-09	3.99E-09	5.99E-09
3034	478955.93	3770645.22	1.99E-09	3.98E-09	5.98E-09
3035	478975.28	3770645.22	1.99E-09	3.98E-09	5.97E-09
3036	478994.63	3770645.22	1.98E-09	3.97E-09	5.95E-09
3037	479013.98	3770645.22	1.98E-09	3.95E-09	5.93E-09
3038	479033.33	3770645.22	1.97E-09	3.94E-09	5.91E-09
3039	479052.68	3770645.22	1.96E-09	3.92E-09	5.88E-09
3040	479072.03	3770645.22	1.95E-09	3.90E-09	5.85E-09
3041	478897.88	3770805.22	1.68E-09	3.36E-09	5.04E-09
3042	478917.23	3770805.22	1.68E-09	3.36E-09	5.04E-09
3043	478936.58	3770805.22	1.68E-09	3.35E-09	5.03E-09
3044	478955.93	3770805.22	1.67E-09	3.35E-09	5.02E-09
3045	478975.28	3770805.22	1.67E-09	3.34E-09	5.01E-09
3046	478994.63	3770805.22	1.67E-09	3.33E-09	5.00E-09
3047	479013.98	3770805.22	1.66E-09	3.32E-09	4.98E-09
3048	479033.33	3770805.22	1.66E-09	3.31E-09	4.97E-09
3049	479052.68	3770805.22	1.65E-09	3.30E-09	4.95E-09
3050	479072.03	3770805.22	1.64E-09	3.28E-09	4.93E-09
3051	478897.88	3770965.22	1.45E-09	2.89E-09	4.34E-09
3052	478917.23	3770965.22	1.44E-09	2.89E-09	4.33E-09
3053	478936.58	3770965.22	1.44E-09	2.89E-09	4.33E-09
3054	478955.93	3770965.22	1.44E-09	2.88E-09	4.32E-09
3055	478975.28	3770965.22	1.44E-09	2.88E-09	4.31E-09
3056	478994.63	3770965.22	1.43E-09	2.87E-09	4.30E-09
3057	479013.98	3770965.22	1.43E-09	2.86E-09	4.29E-09
3058	479033.33	3770965.22	1.43E-09	2.85E-09	4.28E-09
3059	479052.68	3770965.22	1.42E-09	2.85E-09	4.27E-09
3060	479072.03	3770965.22	1.42E-09	2.83E-09	4.25E-09
3061	479200.2	3769494.4	1.75E-07	3.49E-07	5.24E-07
3062	479246.11	3769480.67	1.53E-07	3.05E-07	4.58E-07
3063	479252.15	3769450.9	1.97E-07	3.95E-07	5.92E-07
3064	479286.11	3769480.99	1.17E-07	2.34E-07	3.51E-07

3065	479170.64	3769644.6	3.47E-08	6.94E-08	1.04E-07
3066	479292.15	3769451.21	1.44E-07	2.87E-07	4.31E-07
3067	479366.11	3769481.61	7.37E-08	1.47E-07	2.21E-07
3068	479289.24	3769664.14	2.26E-08	4.53E-08	6.79E-08
3069	479269.24	3769683.98	2.09E-08	4.17E-08	6.26E-08
3070	479241.07	3769695.59	2.07E-08	4.14E-08	6.21E-08
3071	479212.9	3769707.19	2.06E-08	4.11E-08	6.17E-08
3072	479184.72	3769718.8	2.04E-08	4.08E-08	6.12E-08
3073	479156.55	3769730.4	2.02E-08	4.05E-08	6.07E-08
3074	479100.2	3769753.61	1.92E-08	3.85E-08	5.77E-08
3075	479372.14	3769451.84	8.62E-08	1.72E-07	2.59E-07
3076	479446.11	3769482.24	5.06E-08	1.01E-07	1.52E-07
3077	479434.28	3769510.32	4.54E-08	9.08E-08	1.36E-07
3078	479375.15	3769650.73	2.09E-08	4.18E-08	6.27E-08
3079	479345.59	3769720.93	1.46E-08	2.93E-08	4.39E-08
3080	479325.59	3769740.77	1.37E-08	2.74E-08	4.11E-08
3081	479297.42	3769752.38	1.37E-08	2.74E-08	4.10E-08
3082	479269.24	3769763.98	1.36E-08	2.73E-08	4.09E-08
3083	479241.07	3769775.59	1.35E-08	2.70E-08	4.05E-08
3084	479212.9	3769787.19	1.34E-08	2.68E-08	4.03E-08
3085	479184.72	3769798.8	1.33E-08	2.66E-08	3.98E-08
3086	479156.55	3769810.4	1.31E-08	2.62E-08	3.93E-08
3087	479100.2	3769833.61	1.26E-08	2.51E-08	3.77E-08
3088	479452.14	3769452.47	5.70E-08	1.14E-07	1.71E-07
3089	479452.39	3769421	6.45E-08	1.29E-07	1.93E-07
3090	479526.1	3769482.87	3.68E-08	7.35E-08	1.10E-07
3091	479514.28	3769510.95	3.38E-08	6.76E-08	1.01E-07
3092	479455.15	3769651.35	1.79E-08	3.58E-08	5.37E-08
3093	479443.32	3769679.44	1.56E-08	3.11E-08	4.67E-08
3094	479431.5	3769707.52	1.37E-08	2.73E-08	4.10E-08
3095	479401.93	3769777.72	1.02E-08	2.05E-08	3.07E-08
3096	479381.94	3769797.56	9.78E-09	1.96E-08	2.93E-08
3097	479353.76	3769809.17	9.71E-09	1.94E-08	2.91E-08
3098	479325.59	3769820.77	9.65E-09	1.93E-08	2.89E-08
3099	479297.42	3769832.38	9.64E-09	1.93E-08	2.89E-08
3100	479269.24	3769843.98	9.58E-09	1.92E-08	2.87E-08
3101	479241.07	3769855.59	9.55E-09	1.91E-08	2.86E-08
3102	479212.9	3769867.19	9.46E-09	1.89E-08	2.84E-08
3103	479184.72	3769878.8	9.38E-09	1.88E-08	2.81E-08
3104	479100.2	3769913.61	8.94E-09	1.79E-08	2.68E-08
3105	479532.14	3769453.09	4.04E-08	8.07E-08	1.21E-07
3106	479532.39	3769421.63	4.47E-08	8.93E-08	1.34E-07
3107	479606.1	3769483.49	2.77E-08	5.55E-08	8.32E-08
3108	479594.28	3769511.57	2.59E-08	5.18E-08	7.77E-08
3109	479535.15	3769651.98	1.54E-08	3.09E-08	4.63E-08
3110	479523.32	3769680.06	1.36E-08	2.73E-08	4.09E-08
3111	479511.5	3769708.14	1.21E-08	2.41E-08	3.62E-08
3112	479499.67	3769736.23	1.07E-08	2.14E-08	3.22E-08
3113	479487.84	3769764.31	9.65E-09	1.93E-08	2.89E-08
3114	479458.28	3769834.51	7.60E-09	1.52E-08	2.28E-08
3115	479438.28	3769854.35	7.26E-09	1.45E-08	2.18E-08
3116	479410.11	3769865.96	7.29E-09	1.46E-08	2.19E-08

3117	479381.94	3769877.56	7.26E-09	1.45E-08	2.18E-08
3118	479353.76	3769889.17	7.25E-09	1.45E-08	2.17E-08
3119	479325.59	3769900.77	7.24E-09	1.45E-08	2.17E-08
3120	479297.42	3769912.38	7.21E-09	1.44E-08	2.16E-08
3121	479269.24	3769923.98	7.19E-09	1.44E-08	2.16E-08
3122	479241.07	3769935.59	7.17E-09	1.43E-08	2.15E-08
3123	479212.9	3769947.19	7.11E-09	1.42E-08	2.13E-08
3124	479184.72	3769958.8	7.02E-09	1.40E-08	2.11E-08
3125	479100.2	3769993.61	6.73E-09	1.35E-08	2.02E-08
3126	479612.14	3769453.72	3.01E-08	6.02E-08	9.03E-08
3127	479612.38	3769422.25	3.29E-08	6.58E-08	9.87E-08
3128	479686.1	3769484.12	2.15E-08	4.30E-08	6.45E-08
3129	479674.27	3769512.2	2.02E-08	4.04E-08	6.06E-08
3130	479626.97	3769624.53	1.47E-08	2.94E-08	4.41E-08
3131	479615.14	3769652.61	1.33E-08	2.66E-08	3.99E-08
3132	479603.32	3769680.69	1.20E-08	2.39E-08	3.59E-08
3133	479591.49	3769708.77	1.07E-08	2.14E-08	3.21E-08
3134	479579.67	3769736.85	9.64E-09	1.93E-08	2.89E-08
3135	479567.84	3769764.93	8.71E-09	1.74E-08	2.61E-08
3136	479556.02	3769793.02	7.89E-09	1.58E-08	2.37E-08
3137	479544.19	3769821.1	7.19E-09	1.44E-08	2.16E-08
3138	479514.63	3769891.3	5.90E-09	1.18E-08	1.77E-08
3139	479494.63	3769911.14	5.69E-09	1.14E-08	1.71E-08
3140	479466.45	3769922.75	5.67E-09	1.13E-08	1.70E-08
3141	479438.28	3769934.35	5.66E-09	1.13E-08	1.70E-08
3142	479410.11	3769945.96	5.69E-09	1.14E-08	1.71E-08
3143	479381.94	3769957.56	5.68E-09	1.14E-08	1.70E-08
3144	479353.76	3769969.17	5.68E-09	1.14E-08	1.71E-08
3145	479325.59	3769980.77	5.66E-09	1.13E-08	1.70E-08
3146	479297.42	3769992.38	5.66E-09	1.13E-08	1.70E-08
3147	479269.24	3770003.98	5.62E-09	1.12E-08	1.69E-08
3148	479241.07	3770015.59	5.60E-09	1.12E-08	1.68E-08
3149	479212.9	3770027.19	5.55E-09	1.11E-08	1.67E-08
3150	479184.72	3770038.8	5.50E-09	1.10E-08	1.65E-08
3151	479100.2	3770073.61	5.30E-09	1.06E-08	1.59E-08
3152	479692.13	3769454.35	2.32E-08	4.64E-08	6.95E-08
3153	479692.38	3769422.88	2.52E-08	5.05E-08	7.57E-08
3154	479765.92	3769485.16	1.75E-08	3.50E-08	5.24E-08
3155	479753.75	3769514.07	1.65E-08	3.31E-08	4.96E-08
3156	479705.05	3769629.7	1.23E-08	2.45E-08	3.68E-08
3157	479692.88	3769658.6	1.13E-08	2.25E-08	3.38E-08
3158	479680.71	3769687.51	1.03E-08	2.06E-08	3.08E-08
3159	479668.53	3769716.42	9.35E-09	1.87E-08	2.81E-08
3160	479656.36	3769745.33	8.49E-09	1.70E-08	2.55E-08
3161	479644.19	3769774.23	7.70E-09	1.54E-08	2.31E-08
3162	479632.01	3769803.14	7.00E-09	1.40E-08	2.10E-08
3163	479619.84	3769832.05	6.39E-09	1.28E-08	1.92E-08
3164	479607.67	3769860.96	5.89E-09	1.18E-08	1.77E-08
3165	479595.49	3769889.86	5.46E-09	1.09E-08	1.64E-08
3166	479571.15	3769947.68	4.75E-09	9.50E-09	1.43E-08
3167	479550.56	3769968.1	4.61E-09	9.21E-09	1.38E-08
3168	479521.56	3769980.05	4.61E-09	9.22E-09	1.38E-08

3169	479492.56	3769992	4.60E-09	9.20E-09	1.38E-08
3170	479463.55	3770003.94	4.60E-09	9.20E-09	1.38E-08
3171	479434.55	3770015.89	4.62E-09	9.25E-09	1.39E-08
3172	479405.55	3770027.84	4.62E-09	9.23E-09	1.39E-08
3173	479376.55	3770039.78	4.62E-09	9.24E-09	1.39E-08
3174	479347.55	3770051.73	4.60E-09	9.21E-09	1.38E-08
3175	479318.55	3770063.68	4.58E-09	9.17E-09	1.37E-08
3176	479289.54	3770075.62	4.57E-09	9.15E-09	1.37E-08
3177	479260.54	3770087.57	4.54E-09	9.09E-09	1.36E-08
3178	479231.54	3770099.51	4.53E-09	9.05E-09	1.36E-08
3179	479202.54	3770111.46	4.49E-09	8.97E-09	1.35E-08
3180	479173.54	3770123.41	4.44E-09	8.88E-09	1.33E-08
3181	479772.13	3769454.97	1.87E-08	3.74E-08	5.60E-08
3182	479772.38	3769423.51	2.01E-08	4.02E-08	6.03E-08
3183	479925.95	3769486.34	1.25E-08	2.50E-08	3.75E-08
3184	479865.41	3769630.09	9.49E-09	1.90E-08	2.85E-08
3185	479853.31	3769658.84	8.87E-09	1.77E-08	2.66E-08
3186	479841.2	3769687.59	8.26E-09	1.65E-08	2.48E-08
3187	479829.09	3769716.34	7.66E-09	1.53E-08	2.30E-08
3188	479816.99	3769745.09	7.09E-09	1.42E-08	2.13E-08
3189	479804.88	3769773.84	6.54E-09	1.31E-08	1.96E-08
3190	479792.77	3769802.59	6.02E-09	1.21E-08	1.81E-08
3191	479780.66	3769831.34	5.57E-09	1.11E-08	1.67E-08
3192	479768.56	3769860.09	5.15E-09	1.03E-08	1.54E-08
3193	479756.45	3769888.84	4.77E-09	9.55E-09	1.43E-08
3194	479744.34	3769917.59	4.45E-09	8.90E-09	1.33E-08
3195	479732.24	3769946.34	4.17E-09	8.35E-09	1.25E-08
3196	479720.13	3769975.09	3.92E-09	7.84E-09	1.18E-08
3197	479708.02	3770003.84	3.70E-09	7.41E-09	1.11E-08
3198	479683.81	3770061.34	3.35E-09	6.71E-09	1.01E-08
3199	479663.33	3770081.65	3.27E-09	6.54E-09	9.81E-09
3200	479634.49	3770093.53	3.27E-09	6.54E-09	9.81E-09
3201	479605.64	3770105.41	3.27E-09	6.54E-09	9.81E-09
3202	479576.8	3770117.3	3.28E-09	6.55E-09	9.83E-09
3203	479547.96	3770129.18	3.28E-09	6.57E-09	9.85E-09
3204	479519.11	3770141.06	3.28E-09	6.56E-09	9.85E-09
3205	479490.27	3770152.94	3.28E-09	6.56E-09	9.84E-09
3206	479461.42	3770164.82	3.28E-09	6.56E-09	9.85E-09
3207	479432.58	3770176.7	3.29E-09	6.58E-09	9.87E-09
3208	479403.74	3770188.58	3.28E-09	6.57E-09	9.85E-09
3209	479374.89	3770200.47	3.28E-09	6.56E-09	9.84E-09
3210	479346.05	3770212.35	3.27E-09	6.54E-09	9.80E-09
3211	479317.2	3770224.23	3.25E-09	6.51E-09	9.76E-09
3212	479288.36	3770236.11	3.25E-09	6.49E-09	9.74E-09
3213	479259.52	3770247.99	3.23E-09	6.45E-09	9.68E-09
3214	479230.67	3770259.87	3.21E-09	6.42E-09	9.63E-09
3215	479201.83	3770271.75	3.20E-09	6.39E-09	9.59E-09
3216	479172.98	3770283.64	3.17E-09	6.35E-09	9.52E-09
3217	479932.13	3769456.23	1.32E-08	2.64E-08	3.96E-08
3218	479932.37	3769424.76	1.40E-08	2.80E-08	4.20E-08
3219	480085.97	3769487.54	9.55E-09	1.91E-08	2.87E-08
3220	480025.66	3769630.75	7.64E-09	1.53E-08	2.29E-08

3221	480013.6	3769659.39	7.23E-09	1.45E-08	2.17E-08
3222	480001.53	3769688.04	6.83E-09	1.37E-08	2.05E-08
3223	479989.47	3769716.68	6.43E-09	1.29E-08	1.93E-08
3224	479977.41	3769745.32	6.04E-09	1.21E-08	1.81E-08
3225	479965.35	3769773.97	5.66E-09	1.13E-08	1.70E-08
3226	479953.28	3769802.61	5.29E-09	1.06E-08	1.59E-08
3227	479941.22	3769831.25	4.94E-09	9.89E-09	1.48E-08
3228	479929.16	3769859.9	4.61E-09	9.23E-09	1.38E-08
3229	479917.1	3769888.54	4.31E-09	8.62E-09	1.29E-08
3230	479905.04	3769917.18	4.03E-09	8.05E-09	1.21E-08
3231	479892.97	3769945.82	3.78E-09	7.56E-09	1.13E-08
3232	479880.91	3769974.47	3.56E-09	7.12E-09	1.07E-08
3233	479868.85	3770003.11	3.36E-09	6.72E-09	1.01E-08
3234	479856.79	3770031.75	3.18E-09	6.36E-09	9.54E-09
3235	479844.73	3770060.4	3.03E-09	6.05E-09	9.08E-09
3236	479832.66	3770089.04	2.89E-09	5.78E-09	8.67E-09
3237	479820.6	3770117.68	2.77E-09	5.53E-09	8.30E-09
3238	479796.48	3770174.97	2.55E-09	5.11E-09	7.66E-09
3239	479776.08	3770195.21	2.51E-09	5.02E-09	7.53E-09
3240	479747.34	3770207.05	2.51E-09	5.03E-09	7.54E-09
3241	479718.6	3770218.88	2.51E-09	5.02E-09	7.54E-09
3242	479689.87	3770230.72	2.51E-09	5.02E-09	7.53E-09
3243	479661.13	3770242.56	2.51E-09	5.03E-09	7.54E-09
3244	479632.39	3770254.39	2.51E-09	5.03E-09	7.54E-09
3245	479603.66	3770266.23	2.51E-09	5.03E-09	7.54E-09
3246	479574.92	3770278.07	2.52E-09	5.04E-09	7.56E-09
3247	479546.18	3770289.91	2.52E-09	5.04E-09	7.57E-09
3248	479517.45	3770301.74	2.52E-09	5.04E-09	7.56E-09
3249	479488.71	3770313.58	2.52E-09	5.04E-09	7.56E-09
3250	479459.97	3770325.42	2.53E-09	5.05E-09	7.58E-09
3251	479431.24	3770337.26	2.52E-09	5.04E-09	7.56E-09
3252	479402.5	3770349.09	2.51E-09	5.03E-09	7.54E-09
3253	479373.76	3770360.93	2.51E-09	5.02E-09	7.53E-09
3254	479345.03	3770372.77	2.50E-09	5.00E-09	7.50E-09
3255	479316.29	3770384.6	2.49E-09	4.98E-09	7.47E-09
3256	479287.55	3770396.44	2.48E-09	4.96E-09	7.44E-09
3257	479258.82	3770408.28	2.48E-09	4.95E-09	7.43E-09
3258	479230.08	3770420.12	2.46E-09	4.93E-09	7.39E-09
3259	479201.34	3770431.95	2.45E-09	4.90E-09	7.36E-09
3260	479100.77	3770473.38	2.41E-09	4.82E-09	7.23E-09
3261	480092.12	3769457.48	9.98E-09	2.00E-08	2.99E-08
3262	480092.37	3769426.02	1.05E-08	2.11E-08	3.16E-08
3263	480245.98	3769488.75	7.66E-09	1.53E-08	2.30E-08
3264	480185.83	3769631.58	6.33E-09	1.27E-08	1.90E-08
3265	480173.8	3769660.15	6.04E-09	1.21E-08	1.81E-08
3266	480161.77	3769688.71	5.77E-09	1.15E-08	1.73E-08
3267	480149.74	3769717.28	5.49E-09	1.10E-08	1.65E-08
3268	480137.71	3769745.84	5.21E-09	1.04E-08	1.56E-08
3269	480125.68	3769774.41	4.94E-09	9.88E-09	1.48E-08
3270	480113.65	3769802.97	4.68E-09	9.35E-09	1.40E-08
3271	480101.63	3769831.54	4.42E-09	8.84E-09	1.33E-08
3272	480089.6	3769860.1	4.17E-09	8.34E-09	1.25E-08

3273	480077.57	3769888.67	3.93E-09	7.86E-09	1.18E-08
3274	480065.54	3769917.24	3.70E-09	7.40E-09	1.11E-08
3275	480053.51	3769945.8	3.49E-09	6.98E-09	1.05E-08
3276	480041.48	3769974.37	3.29E-09	6.58E-09	9.87E-09
3277	480029.45	3770002.93	3.11E-09	6.22E-09	9.34E-09
3278	480017.42	3770031.5	2.95E-09	5.90E-09	8.85E-09
3279	480005.39	3770060.06	2.80E-09	5.61E-09	8.41E-09
3280	479993.36	3770088.63	2.67E-09	5.34E-09	8.01E-09
3281	479981.33	3770117.19	2.55E-09	5.10E-09	7.65E-09
3282	479969.3	3770145.76	2.45E-09	4.90E-09	7.35E-09
3283	479957.27	3770174.33	2.35E-09	4.70E-09	7.05E-09
3284	479945.24	3770202.89	2.27E-09	4.53E-09	6.80E-09
3285	479933.21	3770231.46	2.19E-09	4.38E-09	6.57E-09
3286	479909.15	3770288.59	2.06E-09	4.11E-09	6.17E-09
3287	479888.81	3770308.77	2.03E-09	4.05E-09	6.08E-09
3288	479860.15	3770320.58	2.03E-09	4.06E-09	6.08E-09
3289	479831.49	3770332.38	2.03E-09	4.06E-09	6.08E-09
3290	479802.83	3770344.19	2.03E-09	4.06E-09	6.09E-09
3291	479774.17	3770355.99	2.03E-09	4.06E-09	6.09E-09
3292	479745.52	3770367.8	2.03E-09	4.06E-09	6.09E-09
3293	479716.86	3770379.6	2.03E-09	4.06E-09	6.09E-09
3294	479688.2	3770391.41	2.03E-09	4.06E-09	6.09E-09
3295	479659.54	3770403.21	2.03E-09	4.06E-09	6.10E-09
3296	479630.88	3770415.02	2.03E-09	4.07E-09	6.10E-09
3297	479602.22	3770426.82	2.03E-09	4.06E-09	6.10E-09
3298	479573.56	3770438.63	2.04E-09	4.07E-09	6.11E-09
3299	479544.9	3770450.43	2.04E-09	4.07E-09	6.11E-09
3300	479516.24	3770462.24	2.03E-09	4.07E-09	6.10E-09
3301	479487.58	3770474.04	2.03E-09	4.07E-09	6.10E-09
3302	479458.93	3770485.85	2.04E-09	4.07E-09	6.11E-09
3303	479430.27	3770497.66	2.03E-09	4.06E-09	6.10E-09
3304	479401.61	3770509.46	2.03E-09	4.05E-09	6.08E-09
3305	479372.95	3770521.27	2.02E-09	4.05E-09	6.07E-09
3306	479344.29	3770533.07	2.02E-09	4.04E-09	6.05E-09
3307	479315.63	3770544.88	2.01E-09	4.02E-09	6.03E-09
3308	479272.64	3770562.58	2.00E-09	4.01E-09	6.01E-09
3309	479100.69	3770633.41	1.96E-09	3.92E-09	5.89E-09
3310	480252.12	3769458.74	7.97E-09	1.59E-08	2.39E-08
3311	480252.36	3769427.27	8.35E-09	1.67E-08	2.50E-08
3312	480405.89	3769490.2	6.37E-09	1.27E-08	1.91E-08
3313	480357.14	3769605.98	5.57E-09	1.11E-08	1.67E-08
3314	480344.95	3769634.92	5.36E-09	1.07E-08	1.61E-08
3315	480332.76	3769663.87	5.16E-09	1.03E-08	1.55E-08
3316	480320.57	3769692.81	4.95E-09	9.89E-09	1.48E-08
3317	480308.38	3769721.76	4.74E-09	9.49E-09	1.42E-08
3318	480296.19	3769750.71	4.53E-09	9.07E-09	1.36E-08
3319	480284	3769779.65	4.33E-09	8.66E-09	1.30E-08
3320	480271.81	3769808.6	4.13E-09	8.26E-09	1.24E-08
3321	480259.62	3769837.54	3.94E-09	7.88E-09	1.18E-08
3322	480247.43	3769866.49	3.75E-09	7.50E-09	1.12E-08
3323	480235.24	3769895.43	3.56E-09	7.12E-09	1.07E-08
3324	480223.05	3769924.38	3.38E-09	6.76E-09	1.01E-08

3325	480210.86	3769953.32	3.20E-09	6.41E-09	9.61E-09
3326	480198.67	3769982.27	3.04E-09	6.07E-09	9.11E-09
3327	480186.48	3770011.21	2.88E-09	5.76E-09	8.64E-09
3328	480174.29	3770040.16	2.74E-09	5.48E-09	8.22E-09
3329	480162.11	3770069.1	2.61E-09	5.21E-09	7.82E-09
3330	480149.92	3770098.05	2.48E-09	4.97E-09	7.45E-09
3331	480137.73	3770127	2.37E-09	4.74E-09	7.11E-09
3332	480125.54	3770155.94	2.27E-09	4.54E-09	6.81E-09
3333	480113.35	3770184.89	2.18E-09	4.36E-09	6.54E-09
3334	480101.16	3770213.83	2.10E-09	4.19E-09	6.29E-09
3335	480088.97	3770242.78	2.02E-09	4.04E-09	6.07E-09
3336	480076.78	3770271.72	1.95E-09	3.91E-09	5.86E-09
3337	480064.59	3770300.67	1.89E-09	3.79E-09	5.68E-09
3338	480052.4	3770329.61	1.84E-09	3.67E-09	5.51E-09
3339	480021.93	3770401.98	1.72E-09	3.44E-09	5.16E-09
3340	480001.31	3770422.43	1.70E-09	3.40E-09	5.09E-09
3341	479972.27	3770434.39	1.70E-09	3.40E-09	5.09E-09
3342	479943.23	3770446.35	1.70E-09	3.40E-09	5.10E-09
3343	479914.19	3770458.32	1.70E-09	3.40E-09	5.10E-09
3344	479885.15	3770470.28	1.70E-09	3.40E-09	5.10E-09
3345	479856.11	3770482.24	1.70E-09	3.40E-09	5.10E-09
3346	479827.07	3770494.2	1.70E-09	3.40E-09	5.10E-09
3347	479798.03	3770506.17	1.70E-09	3.40E-09	5.11E-09
3348	479768.99	3770518.13	1.70E-09	3.40E-09	5.10E-09
3349	479739.95	3770530.09	1.70E-09	3.40E-09	5.10E-09
3350	479710.91	3770542.05	1.70E-09	3.40E-09	5.11E-09
3351	479681.87	3770554.01	1.70E-09	3.40E-09	5.11E-09
3352	479652.83	3770565.98	1.70E-09	3.40E-09	5.10E-09
3353	479623.79	3770577.94	1.70E-09	3.41E-09	5.11E-09
3354	479594.75	3770589.9	1.70E-09	3.40E-09	5.11E-09
3355	479565.71	3770601.86	1.70E-09	3.41E-09	5.11E-09
3356	479536.67	3770613.83	1.70E-09	3.41E-09	5.11E-09
3357	479507.63	3770625.79	1.70E-09	3.40E-09	5.10E-09
3358	479478.59	3770637.75	1.70E-09	3.40E-09	5.10E-09
3359	479449.55	3770649.71	1.70E-09	3.40E-09	5.11E-09
3360	479420.51	3770661.67	1.70E-09	3.40E-09	5.10E-09
3361	479391.47	3770673.64	1.70E-09	3.39E-09	5.09E-09
3362	479347.91	3770691.58	1.69E-09	3.38E-09	5.07E-09
3363	479101.07	3770793.26	1.65E-09	3.30E-09	4.95E-09
3364	480412.11	3769459.99	6.61E-09	1.32E-08	1.98E-08
3365	480412.36	3769428.52	6.90E-09	1.38E-08	2.07E-08
3366	480565.91	3769491.4	5.46E-09	1.09E-08	1.64E-08
3367	480553.76	3769520.25	5.31E-09	1.06E-08	1.59E-08
3368	480505.16	3769635.66	4.68E-09	9.37E-09	1.41E-08
3369	480493.01	3769664.51	4.52E-09	9.04E-09	1.36E-08
3370	480480.86	3769693.36	4.36E-09	8.72E-09	1.31E-08
3371	480468.71	3769722.21	4.20E-09	8.39E-09	1.26E-08
3372	480456.56	3769751.06	4.03E-09	8.07E-09	1.21E-08
3373	480444.41	3769779.91	3.88E-09	7.76E-09	1.16E-08
3374	480432.26	3769808.76	3.73E-09	7.45E-09	1.12E-08
3375	480420.11	3769837.61	3.57E-09	7.15E-09	1.07E-08
3376	480407.96	3769866.46	3.43E-09	6.85E-09	1.03E-08

3377	480395.82	3769895.31	3.28E-09	6.56E-09	9.84E-09
3378	480383.67	3769924.16	3.14E-09	6.27E-09	9.41E-09
3379	480371.52	3769953.01	2.99E-09	5.99E-09	8.98E-09
3380	480359.37	3769981.87	2.86E-09	5.72E-09	8.58E-09
3381	480347.22	3770010.72	2.73E-09	5.46E-09	8.19E-09
3382	480335.07	3770039.57	2.60E-09	5.21E-09	7.81E-09
3383	480322.92	3770068.42	2.49E-09	4.97E-09	7.46E-09
3384	480310.77	3770097.27	2.37E-09	4.75E-09	7.12E-09
3385	480298.62	3770126.12	2.27E-09	4.54E-09	6.81E-09
3386	480286.47	3770154.97	2.18E-09	4.35E-09	6.53E-09
3387	480274.32	3770183.82	2.09E-09	4.17E-09	6.26E-09
3388	480262.17	3770212.67	2.01E-09	4.01E-09	6.02E-09
3389	480250.02	3770241.52	1.93E-09	3.86E-09	5.79E-09
3390	480237.87	3770270.37	1.86E-09	3.73E-09	5.59E-09
3391	480225.72	3770299.22	1.80E-09	3.60E-09	5.41E-09
3392	480213.57	3770328.07	1.74E-09	3.49E-09	5.23E-09
3393	480201.42	3770356.92	1.69E-09	3.39E-09	5.08E-09
3394	480189.27	3770385.78	1.65E-09	3.29E-09	4.94E-09
3395	480177.12	3770414.63	1.60E-09	3.20E-09	4.80E-09
3396	480164.97	3770443.48	1.56E-09	3.12E-09	4.68E-09
3397	480140.67	3770501.18	1.49E-09	2.98E-09	4.47E-09
3398	480114.05	3770535.99	1.46E-09	2.92E-09	4.38E-09
3399	480085.11	3770547.91	1.46E-09	2.92E-09	4.38E-09
3400	480056.16	3770559.84	1.46E-09	2.93E-09	4.39E-09
3401	480027.22	3770571.76	1.46E-09	2.93E-09	4.39E-09
3402	479998.27	3770583.68	1.46E-09	2.93E-09	4.39E-09
3403	479969.33	3770595.61	1.46E-09	2.93E-09	4.39E-09
3404	479940.38	3770607.53	1.47E-09	2.93E-09	4.40E-09
3405	479911.44	3770619.45	1.46E-09	2.93E-09	4.39E-09
3406	479882.49	3770631.37	1.46E-09	2.93E-09	4.39E-09
3407	479853.55	3770643.3	1.46E-09	2.93E-09	4.39E-09
3408	479824.6	3770655.22	1.46E-09	2.93E-09	4.39E-09
3409	479795.66	3770667.14	1.46E-09	2.93E-09	4.39E-09
3410	479766.71	3770679.07	1.46E-09	2.93E-09	4.39E-09
3411	479737.77	3770690.99	1.46E-09	2.93E-09	4.39E-09
3412	479708.82	3770702.91	1.47E-09	2.93E-09	4.40E-09
3413	479679.88	3770714.84	1.47E-09	2.93E-09	4.40E-09
3414	479650.93	3770726.76	1.47E-09	2.93E-09	4.40E-09
3415	479621.99	3770738.68	1.47E-09	2.93E-09	4.40E-09
3416	479593.04	3770750.61	1.46E-09	2.93E-09	4.39E-09
3417	479564.1	3770762.53	1.47E-09	2.93E-09	4.40E-09
3418	479535.15	3770774.45	1.46E-09	2.93E-09	4.39E-09
3419	479506.21	3770786.37	1.46E-09	2.93E-09	4.39E-09
3420	479477.26	3770798.3	1.47E-09	2.93E-09	4.40E-09
3421	479448.32	3770810.22	1.46E-09	2.93E-09	4.39E-09
3422	479390.43	3770834.07	1.46E-09	2.92E-09	4.37E-09
3423	479173.34	3770923.49	1.44E-09	2.87E-09	4.31E-09
3424	480572.11	3769461.24	5.64E-09	1.13E-08	1.69E-08
3425	480572.35	3769429.78	5.86E-09	1.17E-08	1.76E-08

			T2	
			872	479041.64
			2.27E-04	4.55E-04
			Yr 1	Yr 2
1	479085.5	3769433	2.00E-02	4.00E-02
2	479102.3	3769437	1.20E-02	2.41E-02
3	479086.1	3769453	1.12E-02	2.25E-02
4	479103	3769457	7.11E-03	1.42E-02
5	479103.7	3769477	4.04E-03	8.07E-03
6	479075.1	3769498	2.76E-03	5.52E-03
7	479104.3	3769497	2.36E-03	4.73E-03
8	479079.7	3769638	3.27E-04	6.53E-04
9	479081	3769678	2.34E-04	4.67E-04
10	479082.4	3769718	1.74E-04	3.48E-04
11	479085	3769798	1.07E-04	2.14E-04
12	479087.7	3769878	7.31E-05	1.46E-04
13	479090.4	3769958	5.36E-05	1.07E-04
14	479093	3770038	4.13E-05	8.27E-05
15	479095.7	3770118	3.32E-05	6.64E-05
16	479101	3770278	2.33E-05	4.67E-05
17	479156.3	3769397	7.41E-03	1.48E-02
18	479156.3	3769378	8.06E-03	1.61E-02
19	479156.3	3769359	8.56E-03	1.71E-02
20	479156.3	3769340	8.72E-03	1.74E-02
21	479156.3	3769321	7.85E-03	1.57E-02
22	479156.3	3769302	6.05E-03	1.21E-02
23	479156.3	3769283	4.14E-03	8.29E-03
24	479156.3	3769264	2.71E-03	5.42E-03
25	479156.3	3769245	1.79E-03	3.59E-03
26	479156.3	3769226	1.23E-03	2.46E-03
27	479170.7	3769430	4.16E-03	8.33E-03
28	479176.3	3769397	5.19E-03	1.04E-02
29	479176.3	3769378	5.66E-03	1.13E-02
30	479176.3	3769359	5.93E-03	1.19E-02
31	479176.3	3769340	5.91E-03	1.18E-02
32	479176.3	3769321	5.38E-03	1.08E-02
33	479176.3	3769302	4.44E-03	8.89E-03
34	479176.3	3769283	3.38E-03	6.75E-03
35	479176.3	3769264	2.44E-03	4.89E-03
36	479176.3	3769245	1.74E-03	3.48E-03
37	479176.3	3769226	1.25E-03	2.50E-03
38	479190.7	3769430	3.16E-03	6.32E-03
39	479179.4	3769458	2.51E-03	5.01E-03
40	479160.1	3769478	2.18E-03	4.36E-03
41	479196.3	3769397	3.88E-03	7.76E-03
42	479196.3	3769378	4.21E-03	8.43E-03
43	479196.3	3769359	4.37E-03	8.73E-03
44	479196.3	3769340	4.30E-03	8.60E-03
45	479196.3	3769321	3.97E-03	7.93E-03
46	479196.3	3769302	3.41E-03	6.83E-03
47	479196.3	3769283	2.76E-03	5.52E-03
48	479196.3	3769264	2.13E-03	4.27E-03

49	479196.3	3769245	1.61E-03	3.22E-03
50	479196.3	3769226	1.21E-03	2.42E-03
51	479209.3	3769434	2.45E-03	4.89E-03
52	479202.2	3769451	2.16E-03	4.33E-03
53	479195.2	3769469	1.84E-03	3.68E-03
54	479171	3769494	1.51E-03	3.01E-03
55	479153.9	3769501	1.51E-03	3.01E-03
56	479216.3	3769417	2.64E-03	5.28E-03
57	479216.3	3769397	2.99E-03	5.97E-03
58	479216.3	3769378	3.22E-03	6.44E-03
59	479216.3	3769359	3.33E-03	6.66E-03
60	479216.3	3769340	3.28E-03	6.56E-03
61	479216.3	3769321	3.08E-03	6.15E-03
62	479216.3	3769302	2.73E-03	5.47E-03
63	479216.3	3769283	2.30E-03	4.61E-03
64	479216.3	3769264	1.87E-03	3.74E-03
65	479216.3	3769245	1.48E-03	2.95E-03
66	479216.3	3769226	1.15E-03	2.31E-03
67	479249.7	3769433	1.65E-03	3.29E-03
68	479236.6	3769465	1.36E-03	2.72E-03
69	479223.5	3769498	1.01E-03	2.02E-03
70	479256.3	3769397	1.93E-03	3.86E-03
71	479256.3	3769378	2.06E-03	4.13E-03
72	479256.3	3769359	2.13E-03	4.25E-03
73	479256.3	3769340	2.11E-03	4.22E-03
74	479256.3	3769321	2.02E-03	4.03E-03
75	479256.3	3769302	1.86E-03	3.71E-03
76	479256.3	3769283	1.65E-03	3.30E-03
77	479256.3	3769264	1.42E-03	2.85E-03
78	479256.3	3769245	1.20E-03	2.40E-03
79	479256.3	3769226	1.00E-03	2.01E-03
80	479290	3769432	1.18E-03	2.35E-03
81	479277.3	3769463	1.02E-03	2.03E-03
82	479264.7	3769495	8.15E-04	1.63E-03
83	479296.3	3769397	1.33E-03	2.67E-03
84	479296.3	3769378	1.42E-03	2.84E-03
85	479296.3	3769359	1.47E-03	2.94E-03
86	479296.3	3769340	1.47E-03	2.94E-03
87	479296.3	3769321	1.43E-03	2.86E-03
88	479296.3	3769302	1.35E-03	2.70E-03
89	479296.3	3769283	1.24E-03	2.48E-03
90	479296.3	3769264	1.11E-03	2.23E-03
91	479296.3	3769245	9.79E-04	1.96E-03
92	479296.3	3769226	8.48E-04	1.70E-03
93	479329.4	3769434	8.74E-04	1.75E-03
94	479322.6	3769451	8.24E-04	1.65E-03
95	479315.7	3769468	7.63E-04	1.53E-03
96	479308.8	3769485	6.95E-04	1.39E-03
97	479301.9	3769502	6.20E-04	1.24E-03
98	479336.3	3769417	9.09E-04	1.82E-03
99	479336.3	3769397	9.83E-04	1.97E-03
100	479336.3	3769378	1.04E-03	2.07E-03

101	479336.3	3769359	1.07E-03	2.13E-03
102	479336.3	3769340	1.07E-03	2.15E-03
103	479336.3	3769321	1.06E-03	2.12E-03
104	479336.3	3769302	1.02E-03	2.04E-03
105	479336.3	3769283	9.57E-04	1.91E-03
106	479336.3	3769264	8.84E-04	1.77E-03
107	479336.3	3769245	8.03E-04	1.61E-03
108	479336.3	3769226	7.17E-04	1.43E-03
109	479369.7	3769433	6.76E-04	1.35E-03
110	479356.4	3769466	6.06E-04	1.21E-03
111	479343.1	3769499	5.13E-04	1.03E-03
112	479222.2	3769633	2.32E-04	4.64E-04
113	479189.8	3769648	2.25E-04	4.50E-04
114	479157.4	3769662	2.24E-04	4.47E-04
115	479376.3	3769397	7.46E-04	1.49E-03
116	479376.3	3769378	7.87E-04	1.57E-03
117	479376.3	3769359	8.13E-04	1.63E-03
118	479376.3	3769340	8.22E-04	1.64E-03
119	479376.3	3769321	8.15E-04	1.63E-03
120	479376.3	3769302	7.93E-04	1.59E-03
121	479376.3	3769283	7.57E-04	1.51E-03
122	479376.3	3769264	7.12E-04	1.42E-03
123	479376.3	3769245	6.60E-04	1.32E-03
124	479376.3	3769226	6.03E-04	1.21E-03
125	479409.3	3769434	5.37E-04	1.07E-03
126	479402.2	3769451	5.15E-04	1.03E-03
127	479395.2	3769469	4.85E-04	9.70E-04
128	479388.2	3769486	4.50E-04	9.00E-04
129	479381.2	3769503	4.15E-04	8.30E-04
130	479314.8	3769633	1.88E-04	3.76E-04
131	479297.7	3769640	1.85E-04	3.69E-04
132	479280.5	3769648	1.81E-04	3.63E-04
133	479263.4	3769656	1.79E-04	3.58E-04
134	479246.2	3769663	1.77E-04	3.53E-04
135	479229.1	3769671	1.74E-04	3.49E-04
136	479212	3769678	1.72E-04	3.44E-04
137	479194.8	3769686	1.71E-04	3.42E-04
138	479177.7	3769694	1.70E-04	3.39E-04
139	479160.6	3769701	1.69E-04	3.37E-04
140	479416.3	3769417	5.54E-04	1.11E-03
141	479416.3	3769397	5.88E-04	1.18E-03
142	479416.3	3769378	6.15E-04	1.23E-03
143	479416.3	3769359	6.35E-04	1.27E-03
144	479416.3	3769340	6.47E-04	1.29E-03
145	479416.3	3769321	6.46E-04	1.29E-03
146	479416.3	3769302	6.34E-04	1.27E-03
147	479416.3	3769283	6.13E-04	1.23E-03
148	479416.3	3769264	5.85E-04	1.17E-03
149	479416.3	3769245	5.51E-04	1.10E-03
150	479416.3	3769226	5.13E-04	1.03E-03
151	479489.2	3769434	3.62E-04	7.24E-04
152	479482.1	3769452	3.49E-04	6.99E-04

153	479474.9	3769469	3.34E-04	6.68E-04
154	479467.8	3769487	3.16E-04	6.32E-04
155	479460.7	3769505	2.97E-04	5.94E-04
156	479403.7	3769646	1.43E-04	2.87E-04
157	479396.6	3769663	1.30E-04	2.60E-04
158	479372.1	3769688	1.17E-04	2.34E-04
159	479354.7	3769696	1.16E-04	2.32E-04
160	479337.3	3769704	1.14E-04	2.29E-04
161	479320	3769712	1.13E-04	2.26E-04
162	479302.6	3769719	1.12E-04	2.24E-04
163	479285.2	3769727	1.12E-04	2.24E-04
164	479267.9	3769735	1.11E-04	2.22E-04
165	479250.5	3769742	1.10E-04	2.20E-04
166	479233.1	3769750	1.09E-04	2.18E-04
167	479215.8	3769758	1.08E-04	2.16E-04
168	479198.4	3769766	1.07E-04	2.15E-04
169	479181	3769773	1.06E-04	2.13E-04
170	479163.7	3769781	1.05E-04	2.10E-04
171	479496.3	3769417	3.72E-04	7.43E-04
172	479496.3	3769397	3.93E-04	7.86E-04
173	479496.3	3769378	4.09E-04	8.18E-04
174	479496.3	3769359	4.21E-04	8.42E-04
175	479496.3	3769340	4.29E-04	8.58E-04
176	479496.3	3769321	4.32E-04	8.63E-04
177	479496.3	3769302	4.29E-04	8.59E-04
178	479496.3	3769283	4.22E-04	8.45E-04
179	479496.3	3769264	4.11E-04	8.22E-04
180	479496.3	3769245	3.96E-04	7.92E-04
181	479496.3	3769226	3.78E-04	7.56E-04
182	479569.5	3769433	2.62E-04	5.24E-04
183	479562.7	3769450	2.55E-04	5.09E-04
184	479555.9	3769467	2.46E-04	4.92E-04
185	479549.1	3769484	2.36E-04	4.71E-04
186	479542.3	3769501	2.25E-04	4.51E-04
187	479481	3769652	1.19E-04	2.38E-04
188	479474.2	3769669	1.10E-04	2.20E-04
189	479467.4	3769686	1.01E-04	2.03E-04
190	479460.6	3769703	9.36E-05	1.87E-04
191	479453.7	3769720	8.71E-05	1.74E-04
192	479430.3	3769744	8.05E-05	1.61E-04
193	479413.7	3769751	7.95E-05	1.59E-04
194	479397.1	3769758	7.87E-05	1.57E-04
195	479380.5	3769766	7.81E-05	1.56E-04
196	479364	3769773	7.77E-05	1.55E-04
197	479347.4	3769781	7.76E-05	1.55E-04
198	479330.8	3769788	7.70E-05	1.54E-04
199	479314.2	3769795	7.66E-05	1.53E-04
200	479297.6	3769803	7.64E-05	1.53E-04
201	479281	3769810	7.60E-05	1.52E-04
202	479264.4	3769817	7.55E-05	1.51E-04
203	479247.8	3769825	7.50E-05	1.50E-04
204	479231.2	3769832	7.46E-05	1.49E-04

205	479214.6	3769839	7.42E-05	1.48E-04
206	479198	3769847	7.35E-05	1.47E-04
207	479181.4	3769854	7.31E-05	1.46E-04
208	479164.8	3769862	7.24E-05	1.45E-04
209	479576.3	3769417	2.67E-04	5.35E-04
210	479576.3	3769397	2.80E-04	5.59E-04
211	479576.3	3769378	2.90E-04	5.80E-04
212	479576.3	3769359	2.99E-04	5.97E-04
213	479576.3	3769340	3.05E-04	6.09E-04
214	479576.3	3769321	3.08E-04	6.17E-04
215	479576.3	3769302	3.09E-04	6.18E-04
216	479576.3	3769283	3.07E-04	6.15E-04
217	479576.3	3769264	3.03E-04	6.06E-04
218	479576.3	3769245	2.96E-04	5.93E-04
219	479576.3	3769226	2.88E-04	5.76E-04
220	479649.4	3769434	1.98E-04	3.95E-04
221	479642.5	3769451	1.92E-04	3.85E-04
222	479635.6	3769468	1.87E-04	3.73E-04
223	479628.7	3769485	1.80E-04	3.60E-04
224	479621.8	3769502	1.73E-04	3.46E-04
225	479566.6	3769638	1.09E-04	2.18E-04
226	479559.7	3769655	1.02E-04	2.04E-04
227	479552.8	3769673	9.47E-05	1.89E-04
228	479545.9	3769690	8.81E-05	1.76E-04
229	479539	3769707	8.20E-05	1.64E-04
230	479532	3769724	7.64E-05	1.53E-04
231	479525.1	3769741	7.13E-05	1.43E-04
232	479518.2	3769758	6.67E-05	1.33E-04
233	479511.3	3769775	6.28E-05	1.26E-04
234	479487.6	3769799	5.88E-05	1.18E-04
235	479470.8	3769807	5.82E-05	1.16E-04
236	479454	3769814	5.77E-05	1.15E-04
237	479437.1	3769822	5.73E-05	1.15E-04
238	479420.3	3769829	5.70E-05	1.14E-04
239	479403.5	3769837	5.68E-05	1.14E-04
240	479386.7	3769844	5.69E-05	1.14E-04
241	479369.8	3769852	5.66E-05	1.13E-04
242	479353	3769859	5.63E-05	1.13E-04
243	479336.2	3769867	5.62E-05	1.12E-04
244	479319.3	3769874	5.61E-05	1.12E-04
245	479302.5	3769882	5.58E-05	1.12E-04
246	479285.7	3769889	5.55E-05	1.11E-04
247	479268.9	3769897	5.54E-05	1.11E-04
248	479252	3769904	5.51E-05	1.10E-04
249	479235.2	3769911	5.48E-05	1.10E-04
250	479218.4	3769919	5.45E-05	1.09E-04
251	479201.6	3769926	5.41E-05	1.08E-04
252	479184.7	3769934	5.36E-05	1.07E-04
253	479656.3	3769417	2.02E-04	4.03E-04
254	479656.3	3769397	2.10E-04	4.20E-04
255	479656.3	3769378	2.17E-04	4.35E-04
256	479656.3	3769359	2.24E-04	4.47E-04

257	479656.3	3769340	2.28E-04	4.57E-04
258	479656.3	3769321	2.32E-04	4.64E-04
259	479656.3	3769302	2.34E-04	4.67E-04
260	479656.3	3769283	2.34E-04	4.68E-04
261	479656.3	3769264	2.33E-04	4.65E-04
262	479656.3	3769245	2.30E-04	4.60E-04
263	479656.3	3769226	2.26E-04	4.52E-04
264	479729.3	3769434	1.54E-04	3.09E-04
265	479722.4	3769451	1.51E-04	3.01E-04
266	479715.4	3769468	1.46E-04	2.92E-04
267	479708.4	3769486	1.41E-04	2.82E-04
268	479701.4	3769503	1.36E-04	2.73E-04
269	479652.6	3769623	9.80E-05	1.96E-04
270	479645.6	3769641	9.29E-05	1.86E-04
271	479638.7	3769658	8.74E-05	1.75E-04
272	479631.7	3769675	8.21E-05	1.64E-04
273	479624.7	3769692	7.71E-05	1.54E-04
274	479617.7	3769710	7.23E-05	1.45E-04
275	479610.8	3769727	6.78E-05	1.36E-04
276	479603.8	3769744	6.35E-05	1.27E-04
277	479596.8	3769761	5.97E-05	1.19E-04
278	479589.8	3769779	5.64E-05	1.13E-04
279	479582.9	3769796	5.32E-05	1.06E-04
280	479575.9	3769813	5.03E-05	1.01E-04
281	479568.9	3769830	4.76E-05	9.51E-05
282	479544.9	3769855	4.48E-05	8.95E-05
283	479527.9	3769863	4.44E-05	8.89E-05
284	479510.9	3769870	4.43E-05	8.87E-05
285	479493.9	3769878	4.42E-05	8.84E-05
286	479476.9	3769885	4.40E-05	8.80E-05
287	479459.9	3769893	4.38E-05	8.75E-05
288	479442.9	3769900	4.36E-05	8.72E-05
289	479425.9	3769908	4.35E-05	8.71E-05
290	479408.9	3769916	4.37E-05	8.74E-05
291	479391.9	3769923	4.35E-05	8.71E-05
292	479374.9	3769931	4.34E-05	8.69E-05
293	479357.9	3769938	4.34E-05	8.68E-05
294	479340.9	3769946	4.33E-05	8.66E-05
295	479323.9	3769953	4.31E-05	8.62E-05
296	479306.9	3769961	4.30E-05	8.60E-05
297	479289.9	3769968	4.29E-05	8.58E-05
298	479272.9	3769976	4.27E-05	8.53E-05
299	479255.9	3769983	4.24E-05	8.48E-05
300	479238.9	3769991	4.23E-05	8.45E-05
301	479221.9	3769999	4.20E-05	8.40E-05
302	479204.9	3770006	4.17E-05	8.34E-05
303	479187.9	3770014	4.13E-05	8.27E-05
304	479736.3	3769417	1.58E-04	3.15E-04
305	479736.3	3769397	1.64E-04	3.28E-04
306	479736.3	3769378	1.70E-04	3.39E-04
307	479736.3	3769359	1.75E-04	3.49E-04
308	479736.3	3769340	1.79E-04	3.57E-04

309	479736.3	3769321	1.82E-04	3.63E-04
310	479736.3	3769302	1.84E-04	3.67E-04
311	479736.3	3769283	1.85E-04	3.70E-04
312	479736.3	3769264	1.85E-04	3.70E-04
313	479736.3	3769245	1.84E-04	3.68E-04
314	479736.3	3769226	1.82E-04	3.64E-04
315	479809.3	3769434	1.26E-04	2.51E-04
316	479802.2	3769451	1.23E-04	2.46E-04
317	479795.2	3769469	1.20E-04	2.39E-04
318	479788.2	3769486	1.16E-04	2.32E-04
319	479781.2	3769503	1.12E-04	2.25E-04
320	479731.9	3769625	8.36E-05	1.67E-04
321	479724.9	3769643	7.93E-05	1.59E-04
322	479717.9	3769660	7.53E-05	1.51E-04
323	479710.8	3769677	7.14E-05	1.43E-04
324	479703.8	3769695	6.77E-05	1.35E-04
325	479696.8	3769712	6.41E-05	1.28E-04
326	479689.7	3769729	6.07E-05	1.21E-04
327	479682.7	3769747	5.73E-05	1.15E-04
328	479675.7	3769764	5.41E-05	1.08E-04
329	479668.7	3769782	5.11E-05	1.02E-04
330	479661.6	3769799	4.84E-05	9.67E-05
331	479654.6	3769816	4.58E-05	9.17E-05
332	479647.6	3769834	4.35E-05	8.70E-05
333	479640.5	3769851	4.13E-05	8.26E-05
334	479633.5	3769868	3.93E-05	7.87E-05
335	479626.5	3769886	3.75E-05	7.51E-05
336	479602.3	3769911	3.57E-05	7.15E-05
337	479585.2	3769918	3.56E-05	7.12E-05
338	479568	3769926	3.54E-05	7.08E-05
339	479550.9	3769934	3.52E-05	7.04E-05
340	479533.7	3769941	3.51E-05	7.02E-05
341	479516.6	3769949	3.51E-05	7.02E-05
342	479499.5	3769956	3.51E-05	7.01E-05
343	479482.3	3769964	3.50E-05	6.99E-05
344	479465.2	3769972	3.49E-05	6.98E-05
345	479448.1	3769979	3.49E-05	6.98E-05
346	479430.9	3769987	3.50E-05	7.00E-05
347	479413.8	3769995	3.49E-05	6.98E-05
348	479396.6	3770002	3.48E-05	6.96E-05
349	479379.5	3770010	3.48E-05	6.95E-05
350	479362.4	3770017	3.47E-05	6.94E-05
351	479345.2	3770025	3.46E-05	6.92E-05
352	479328.1	3770033	3.45E-05	6.89E-05
353	479311	3770040	3.43E-05	6.87E-05
354	479293.8	3770048	3.43E-05	6.85E-05
355	479276.7	3770055	3.41E-05	6.82E-05
356	479259.5	3770063	3.39E-05	6.78E-05
357	479242.4	3770071	3.38E-05	6.76E-05
358	479225.3	3770078	3.36E-05	6.73E-05
359	479208.1	3770086	3.34E-05	6.68E-05
360	479191	3770093	3.32E-05	6.63E-05

361	479173.8	3770101	3.29E-05	6.58E-05
362	479816.3	3769417	1.28E-04	2.56E-04
363	479816.3	3769397	1.33E-04	2.66E-04
364	479816.3	3769378	1.37E-04	2.74E-04
365	479816.3	3769359	1.41E-04	2.82E-04
366	479816.3	3769340	1.44E-04	2.88E-04
367	479816.3	3769321	1.47E-04	2.93E-04
368	479816.3	3769302	1.49E-04	2.97E-04
369	479816.3	3769283	1.50E-04	3.00E-04
370	479816.3	3769264	1.51E-04	3.02E-04
371	479816.3	3769245	1.51E-04	3.02E-04
372	479816.3	3769226	1.50E-04	3.01E-04
373	479969.2	3769434	8.98E-05	1.80E-04
374	479962.1	3769452	8.81E-05	1.76E-04
375	479955	3769469	8.62E-05	1.72E-04
376	479947.9	3769487	8.42E-05	1.68E-04
377	479940.7	3769504	8.20E-05	1.64E-04
378	479898.1	3769610	6.72E-05	1.34E-04
379	479890.9	3769628	6.47E-05	1.29E-04
380	479883.8	3769645	6.22E-05	1.24E-04
381	479876.7	3769663	5.96E-05	1.19E-04
382	479869.6	3769680	5.72E-05	1.14E-04
383	479862.5	3769698	5.47E-05	1.09E-04
384	479855.4	3769716	5.23E-05	1.05E-04
385	479848.3	3769733	4.99E-05	9.98E-05
386	479841.1	3769751	4.76E-05	9.52E-05
387	479834	3769768	4.54E-05	9.08E-05
388	479826.9	3769786	4.33E-05	8.65E-05
389	479819.8	3769803	4.12E-05	8.24E-05
390	479812.7	3769821	3.92E-05	7.85E-05
391	479805.6	3769839	3.75E-05	7.49E-05
392	479798.5	3769856	3.58E-05	7.16E-05
393	479791.3	3769874	3.42E-05	6.83E-05
394	479784.2	3769891	3.26E-05	6.53E-05
395	479777.1	3769909	3.12E-05	6.25E-05
396	479770	3769927	2.99E-05	5.99E-05
397	479762.9	3769944	2.88E-05	5.75E-05
398	479755.8	3769962	2.77E-05	5.54E-05
399	479748.7	3769979	2.67E-05	5.34E-05
400	479741.6	3769997	2.58E-05	5.16E-05
401	479717.1	3770022	2.48E-05	4.96E-05
402	479699.8	3770030	2.47E-05	4.95E-05
403	479682.4	3770038	2.47E-05	4.94E-05
404	479665.1	3770045	2.46E-05	4.92E-05
405	479647.7	3770053	2.45E-05	4.91E-05
406	479630.4	3770061	2.45E-05	4.90E-05
407	479613.1	3770068	2.45E-05	4.90E-05
408	479595.7	3770076	2.44E-05	4.89E-05
409	479578.4	3770084	2.44E-05	4.88E-05
410	479561	3770091	2.44E-05	4.87E-05
411	479543.7	3770099	2.44E-05	4.88E-05
412	479526.4	3770107	2.44E-05	4.88E-05

413	479509	3770115	2.44E-05	4.88E-05
414	479491.7	3770122	2.43E-05	4.87E-05
415	479474.3	3770130	2.43E-05	4.86E-05
416	479457	3770138	2.43E-05	4.86E-05
417	479439.7	3770145	2.44E-05	4.87E-05
418	479422.3	3770153	2.43E-05	4.86E-05
419	479405	3770161	2.43E-05	4.85E-05
420	479387.6	3770168	2.42E-05	4.85E-05
421	479370.3	3770176	2.42E-05	4.84E-05
422	479353	3770184	2.41E-05	4.82E-05
423	479335.6	3770191	2.40E-05	4.80E-05
424	479318.3	3770199	2.39E-05	4.78E-05
425	479300.9	3770207	2.39E-05	4.77E-05
426	479283.6	3770215	2.38E-05	4.76E-05
427	479266.3	3770222	2.37E-05	4.73E-05
428	479248.9	3770230	2.36E-05	4.72E-05
429	479231.6	3770238	2.35E-05	4.70E-05
430	479214.2	3770245	2.34E-05	4.68E-05
431	479196.9	3770253	2.33E-05	4.65E-05
432	479179.6	3770261	2.31E-05	4.63E-05
433	479976.3	3769417	9.14E-05	1.83E-04
434	479976.3	3769397	9.42E-05	1.88E-04
435	479976.3	3769378	9.68E-05	1.94E-04
436	479976.3	3769359	9.93E-05	1.99E-04
437	479976.3	3769340	1.01E-04	2.03E-04
438	479976.3	3769321	1.04E-04	2.07E-04
439	479976.3	3769302	1.05E-04	2.11E-04
440	479976.3	3769283	1.07E-04	2.13E-04
441	479976.3	3769264	1.08E-04	2.15E-04
442	479976.3	3769245	1.08E-04	2.17E-04
443	479976.3	3769226	1.09E-04	2.18E-04
444	480129.3	3769434	6.88E-05	1.38E-04
445	480122.3	3769451	6.76E-05	1.35E-04
446	480115.3	3769468	6.63E-05	1.33E-04
447	480108.3	3769486	6.50E-05	1.30E-04
448	480101.3	3769503	6.36E-05	1.27E-04
449	480059.3	3769607	5.43E-05	1.09E-04
450	480052.3	3769624	5.27E-05	1.05E-04
451	480045.3	3769641	5.10E-05	1.02E-04
452	480038.4	3769659	4.94E-05	9.87E-05
453	480031.4	3769676	4.77E-05	9.54E-05
454	480024.4	3769693	4.61E-05	9.21E-05
455	480017.4	3769711	4.45E-05	8.89E-05
456	480010.4	3769728	4.29E-05	8.59E-05
457	480003.4	3769745	4.13E-05	8.27E-05
458	479996.4	3769762	3.98E-05	7.96E-05
459	479989.4	3769780	3.83E-05	7.65E-05
460	479982.4	3769797	3.68E-05	7.35E-05
461	479975.4	3769814	3.53E-05	7.06E-05
462	479968.4	3769832	3.39E-05	6.79E-05
463	479961.4	3769849	3.26E-05	6.52E-05
464	479954.4	3769866	3.13E-05	6.26E-05

465	479947.4	3769884	3.01E-05	6.02E-05
466	479940.4	3769901	2.89E-05	5.78E-05
467	479933.4	3769918	2.78E-05	5.55E-05
468	479926.4	3769935	2.67E-05	5.34E-05
469	479919.4	3769953	2.57E-05	5.14E-05
470	479912.4	3769970	2.48E-05	4.96E-05
471	479905.4	3769987	2.39E-05	4.78E-05
472	479898.4	3770005	2.31E-05	4.62E-05
473	479891.4	3770022	2.24E-05	4.47E-05
474	479884.4	3770039	2.17E-05	4.33E-05
475	479877.4	3770057	2.10E-05	4.20E-05
476	479870.4	3770074	2.04E-05	4.08E-05
477	479863.4	3770091	1.98E-05	3.96E-05
478	479856.4	3770108	1.93E-05	3.86E-05
479	479832.4	3770133	1.88E-05	3.75E-05
480	479815.3	3770141	1.87E-05	3.74E-05
481	479798.3	3770148	1.87E-05	3.73E-05
482	479781.2	3770156	1.86E-05	3.73E-05
483	479764.2	3770164	1.86E-05	3.72E-05
484	479747.1	3770171	1.86E-05	3.72E-05
485	479730.1	3770179	1.86E-05	3.72E-05
486	479713	3770186	1.86E-05	3.71E-05
487	479696	3770194	1.85E-05	3.71E-05
488	479678.9	3770201	1.85E-05	3.70E-05
489	479661.8	3770209	1.85E-05	3.70E-05
490	479644.8	3770217	1.85E-05	3.70E-05
491	479627.7	3770224	1.85E-05	3.70E-05
492	479610.7	3770232	1.85E-05	3.70E-05
493	479593.6	3770239	1.85E-05	3.69E-05
494	479576.6	3770247	1.85E-05	3.70E-05
495	479559.5	3770254	1.85E-05	3.70E-05
496	479542.5	3770262	1.85E-05	3.70E-05
497	479525.4	3770270	1.85E-05	3.69E-05
498	479508.4	3770277	1.84E-05	3.69E-05
499	479491.3	3770285	1.84E-05	3.68E-05
500	479474.2	3770292	1.84E-05	3.68E-05
501	479457.2	3770300	1.84E-05	3.69E-05
502	479440.1	3770307	1.84E-05	3.68E-05
503	479423.1	3770315	1.84E-05	3.67E-05
504	479406	3770322	1.83E-05	3.66E-05
505	479389	3770330	1.83E-05	3.66E-05
506	479371.9	3770338	1.83E-05	3.65E-05
507	479354.9	3770345	1.82E-05	3.64E-05
508	479337.8	3770353	1.81E-05	3.63E-05
509	479320.8	3770360	1.81E-05	3.62E-05
510	479303.7	3770368	1.80E-05	3.60E-05
511	479286.6	3770375	1.80E-05	3.59E-05
512	479269.6	3770383	1.79E-05	3.59E-05
513	479252.5	3770391	1.79E-05	3.58E-05
514	479235.5	3770398	1.78E-05	3.56E-05
515	479218.4	3770406	1.77E-05	3.55E-05
516	479201.4	3770413	1.77E-05	3.53E-05

517	479184.3	3770421	1.76E-05	3.53E-05
518	479167.3	3770428	1.76E-05	3.52E-05
519	480136.3	3769417	6.99E-05	1.40E-04
520	480136.3	3769397	7.18E-05	1.44E-04
521	480136.3	3769378	7.38E-05	1.48E-04
522	480136.3	3769359	7.55E-05	1.51E-04
523	480136.3	3769340	7.71E-05	1.54E-04
524	480136.3	3769321	7.86E-05	1.57E-04
525	480136.3	3769302	8.00E-05	1.60E-04
526	480136.3	3769283	8.12E-05	1.62E-04
527	480136.3	3769264	8.22E-05	1.64E-04
528	480136.3	3769245	8.30E-05	1.66E-04
529	480136.3	3769226	8.36E-05	1.67E-04
530	480289.2	3769434	5.53E-05	1.11E-04
531	480282.2	3769451	5.44E-05	1.09E-04
532	480275.1	3769469	5.34E-05	1.07E-04
533	480268.1	3769486	5.25E-05	1.05E-04
534	480261	3769504	5.14E-05	1.03E-04
535	480218.6	3769609	4.48E-05	8.95E-05
536	480211.6	3769626	4.37E-05	8.73E-05
537	480204.5	3769643	4.25E-05	8.50E-05
538	480197.5	3769661	4.13E-05	8.27E-05
539	480190.4	3769678	4.02E-05	8.03E-05
540	480183.3	3769696	3.90E-05	7.80E-05
541	480176.3	3769713	3.79E-05	7.57E-05
542	480169.2	3769731	3.67E-05	7.35E-05
543	480162.1	3769748	3.56E-05	7.12E-05
544	480155.1	3769766	3.45E-05	6.90E-05
545	480148	3769783	3.34E-05	6.68E-05
546	480141	3769801	3.23E-05	6.46E-05
547	480133.9	3769818	3.12E-05	6.25E-05
548	480126.8	3769835	3.02E-05	6.04E-05
549	480119.8	3769853	2.92E-05	5.83E-05
550	480112.7	3769870	2.82E-05	5.63E-05
551	480105.7	3769888	2.72E-05	5.44E-05
552	480098.6	3769905	2.63E-05	5.25E-05
553	480091.5	3769923	2.53E-05	5.07E-05
554	480084.5	3769940	2.44E-05	4.89E-05
555	480077.4	3769958	2.36E-05	4.72E-05
556	480070.4	3769975	2.28E-05	4.56E-05
557	480063.3	3769993	2.20E-05	4.40E-05
558	480056.2	3770010	2.13E-05	4.25E-05
559	480049.2	3770028	2.06E-05	4.12E-05
560	480042.1	3770045	1.99E-05	3.99E-05
561	480035.1	3770062	1.93E-05	3.86E-05
562	480028	3770080	1.88E-05	3.75E-05
563	480020.9	3770097	1.82E-05	3.65E-05
564	480013.9	3770115	1.77E-05	3.55E-05
565	480006.8	3770132	1.73E-05	3.45E-05
566	479999.7	3770150	1.68E-05	3.37E-05
567	479992.7	3770167	1.64E-05	3.29E-05
568	479985.6	3770185	1.60E-05	3.21E-05

569	479978.6	3770202	1.57E-05	3.14E-05
570	479971.5	3770220	1.53E-05	3.07E-05
571	479947.2	3770245	1.50E-05	2.99E-05
572	479930	3770252	1.50E-05	2.99E-05
573	479912.8	3770260	1.49E-05	2.99E-05
574	479895.6	3770268	1.49E-05	2.98E-05
575	479878.4	3770275	1.49E-05	2.98E-05
576	479861.2	3770283	1.49E-05	2.98E-05
577	479844	3770290	1.49E-05	2.98E-05
578	479826.8	3770298	1.49E-05	2.97E-05
579	479809.5	3770306	1.49E-05	2.97E-05
580	479792.3	3770313	1.49E-05	2.97E-05
581	479775.1	3770321	1.48E-05	2.97E-05
582	479757.9	3770329	1.48E-05	2.97E-05
583	479740.7	3770336	1.48E-05	2.97E-05
584	479723.5	3770344	1.48E-05	2.97E-05
585	479706.3	3770352	1.48E-05	2.96E-05
586	479689.1	3770359	1.48E-05	2.96E-05
587	479671.9	3770367	1.48E-05	2.96E-05
588	479654.6	3770374	1.48E-05	2.96E-05
589	479637.4	3770382	1.48E-05	2.96E-05
590	479620.2	3770390	1.48E-05	2.96E-05
591	479603	3770397	1.48E-05	2.95E-05
592	479585.8	3770405	1.48E-05	2.95E-05
593	479568.6	3770413	1.48E-05	2.95E-05
594	479551.4	3770420	1.48E-05	2.95E-05
595	479534.2	3770428	1.48E-05	2.95E-05
596	479517	3770436	1.47E-05	2.95E-05
597	479499.7	3770443	1.47E-05	2.94E-05
598	479482.5	3770451	1.47E-05	2.94E-05
599	479465.3	3770458	1.47E-05	2.95E-05
600	479448.1	3770466	1.47E-05	2.94E-05
601	479430.9	3770474	1.47E-05	2.93E-05
602	479413.7	3770481	1.46E-05	2.93E-05
603	479396.5	3770489	1.46E-05	2.92E-05
604	479379.3	3770497	1.46E-05	2.92E-05
605	479362.1	3770504	1.46E-05	2.91E-05
606	479344.8	3770512	1.45E-05	2.90E-05
607	479327.6	3770520	1.45E-05	2.90E-05
608	479310.4	3770527	1.44E-05	2.89E-05
609	479293.2	3770535	1.44E-05	2.89E-05
610	479276	3770542	1.44E-05	2.88E-05
611	479258.8	3770550	1.43E-05	2.87E-05
612	479241.6	3770558	1.43E-05	2.86E-05
613	479224.4	3770565	1.43E-05	2.85E-05
614	479207.2	3770573	1.42E-05	2.85E-05
615	479189.9	3770581	1.42E-05	2.84E-05
616	479172.7	3770588	1.42E-05	2.83E-05
617	480296.3	3769417	5.62E-05	1.12E-04
618	480296.3	3769397	5.76E-05	1.15E-04
619	480296.3	3769378	5.90E-05	1.18E-04
620	480296.3	3769359	6.03E-05	1.21E-04

621	480296.3	3769340	6.16E-05	1.23E-04
622	480296.3	3769321	6.27E-05	1.26E-04
623	480296.3	3769302	6.38E-05	1.28E-04
624	480296.3	3769283	6.49E-05	1.30E-04
625	480296.3	3769264	6.58E-05	1.32E-04
626	480296.3	3769245	6.66E-05	1.33E-04
627	480296.3	3769226	6.72E-05	1.34E-04
628	480449.2	3769434	4.62E-05	9.23E-05
629	480442.1	3769452	4.54E-05	9.09E-05
630	480435	3769469	4.47E-05	8.94E-05
631	480427.9	3769487	4.39E-05	8.78E-05
632	480420.8	3769504	4.31E-05	8.62E-05
633	480378.1	3769610	3.80E-05	7.60E-05
634	480371	3769628	3.72E-05	7.43E-05
635	480363.9	3769645	3.63E-05	7.26E-05
636	480356.8	3769663	3.55E-05	7.10E-05
637	480349.6	3769680	3.46E-05	6.93E-05
638	480342.5	3769698	3.38E-05	6.75E-05
639	480335.4	3769715	3.29E-05	6.58E-05
640	480328.3	3769733	3.20E-05	6.41E-05
641	480321.2	3769751	3.12E-05	6.24E-05
642	480314.1	3769768	3.04E-05	6.07E-05
643	480307	3769786	2.95E-05	5.91E-05
644	480299.9	3769803	2.87E-05	5.74E-05
645	480292.8	3769821	2.79E-05	5.58E-05
646	480285.7	3769838	2.71E-05	5.42E-05
647	480278.5	3769856	2.63E-05	5.26E-05
648	480271.4	3769874	2.55E-05	5.11E-05
649	480264.3	3769891	2.48E-05	4.96E-05
650	480257.2	3769909	2.40E-05	4.81E-05
651	480250.1	3769926	2.33E-05	4.66E-05
652	480243	3769944	2.26E-05	4.52E-05
653	480235.9	3769961	2.19E-05	4.38E-05
654	480228.8	3769979	2.12E-05	4.24E-05
655	480221.7	3769997	2.05E-05	4.11E-05
656	480214.5	3770014	1.99E-05	3.98E-05
657	480207.4	3770032	1.93E-05	3.86E-05
658	480200.3	3770049	1.87E-05	3.74E-05
659	480193.2	3770067	1.82E-05	3.64E-05
660	480186.1	3770085	1.77E-05	3.53E-05
661	480179	3770102	1.72E-05	3.43E-05
662	480171.9	3770120	1.67E-05	3.34E-05
663	480164.8	3770137	1.62E-05	3.24E-05
664	480157.7	3770155	1.58E-05	3.16E-05
665	480150.6	3770172	1.54E-05	3.08E-05
666	480143.4	3770190	1.50E-05	3.01E-05
667	480136.3	3770208	1.47E-05	2.94E-05
668	480129.2	3770225	1.43E-05	2.87E-05
669	480122.1	3770243	1.40E-05	2.81E-05
670	480115	3770260	1.37E-05	2.74E-05
671	480107.9	3770278	1.34E-05	2.69E-05
672	480100.8	3770295	1.32E-05	2.63E-05

673	480093.7	3770313	1.29E-05	2.59E-05
674	480086.6	3770331	1.27E-05	2.54E-05
675	480062.1	3770356	1.25E-05	2.49E-05
676	480044.8	3770364	1.24E-05	2.49E-05
677	480027.5	3770371	1.24E-05	2.49E-05
678	480010.1	3770379	1.24E-05	2.48E-05
679	479992.8	3770387	1.24E-05	2.48E-05
680	479975.5	3770394	1.24E-05	2.48E-05
681	479958.1	3770402	1.24E-05	2.48E-05
682	479940.8	3770410	1.24E-05	2.48E-05
683	479923.5	3770417	1.24E-05	2.48E-05
684	479906.1	3770425	1.24E-05	2.48E-05
685	479888.8	3770433	1.24E-05	2.48E-05
686	479871.5	3770440	1.24E-05	2.47E-05
687	479854.1	3770448	1.24E-05	2.47E-05
688	479836.8	3770456	1.24E-05	2.47E-05
689	479819.5	3770464	1.23E-05	2.47E-05
690	479802.1	3770471	1.23E-05	2.47E-05
691	479784.8	3770479	1.23E-05	2.47E-05
692	479767.5	3770487	1.23E-05	2.47E-05
693	479750.1	3770494	1.23E-05	2.46E-05
694	479732.8	3770502	1.23E-05	2.46E-05
695	479715.5	3770510	1.23E-05	2.46E-05
696	479698.1	3770517	1.23E-05	2.46E-05
697	479680.8	3770525	1.23E-05	2.46E-05
698	479663.5	3770533	1.23E-05	2.46E-05
699	479646.1	3770540	1.23E-05	2.46E-05
700	479628.8	3770548	1.23E-05	2.46E-05
701	479611.5	3770556	1.23E-05	2.46E-05
702	479594.1	3770564	1.23E-05	2.45E-05
703	479576.8	3770571	1.23E-05	2.45E-05
704	479559.5	3770579	1.23E-05	2.46E-05
705	479542.2	3770587	1.23E-05	2.45E-05
706	479524.8	3770594	1.22E-05	2.45E-05
707	479507.5	3770602	1.22E-05	2.45E-05
708	479490.2	3770610	1.22E-05	2.44E-05
709	479472.8	3770617	1.22E-05	2.45E-05
710	479455.5	3770625	1.22E-05	2.44E-05
711	479438.2	3770633	1.22E-05	2.44E-05
712	479420.8	3770640	1.22E-05	2.44E-05
713	479403.5	3770648	1.22E-05	2.43E-05
714	479386.2	3770656	1.21E-05	2.43E-05
715	479368.8	3770664	1.21E-05	2.42E-05
716	479351.5	3770671	1.21E-05	2.42E-05
717	479334.2	3770679	1.21E-05	2.41E-05
718	479316.8	3770687	1.21E-05	2.41E-05
719	479299.5	3770694	1.20E-05	2.40E-05
720	479282.2	3770702	1.20E-05	2.40E-05
721	479264.8	3770710	1.20E-05	2.39E-05
722	479247.5	3770717	1.19E-05	2.39E-05
723	479230.2	3770725	1.19E-05	2.39E-05
724	479212.8	3770733	1.19E-05	2.38E-05

725	479195.5	3770740	1.19E-05	2.37E-05
726	479178.2	3770748	1.19E-05	2.37E-05
727	480456.3	3769417	4.69E-05	9.38E-05
728	480456.3	3769397	4.80E-05	9.60E-05
729	480456.3	3769378	4.91E-05	9.81E-05
730	480456.3	3769359	5.01E-05	1.00E-04
731	480456.3	3769340	5.11E-05	1.02E-04
732	480456.3	3769321	5.21E-05	1.04E-04
733	480456.3	3769302	5.30E-05	1.06E-04
734	480456.3	3769283	5.38E-05	1.08E-04
735	480456.3	3769264	5.46E-05	1.09E-04
736	480456.3	3769245	5.53E-05	1.11E-04
737	480456.3	3769226	5.59E-05	1.12E-04
738	480609.2	3769434	3.95E-05	7.90E-05
739	480602	3769452	3.89E-05	7.79E-05
740	480594.9	3769470	3.83E-05	7.67E-05
741	480587.7	3769487	3.77E-05	7.54E-05
742	480580.6	3769505	3.71E-05	7.42E-05
743	480573.4	3769523	3.65E-05	7.29E-05
744	480523.4	3769646	3.19E-05	6.37E-05
745	480516.2	3769664	3.12E-05	6.23E-05
746	480509.1	3769682	3.05E-05	6.10E-05
747	480501.9	3769699	2.98E-05	5.96E-05
748	480494.8	3769717	2.91E-05	5.83E-05
749	480487.6	3769735	2.85E-05	5.69E-05
750	480480.5	3769752	2.78E-05	5.56E-05
751	480473.3	3769770	2.71E-05	5.42E-05
752	480466.2	3769788	2.65E-05	5.29E-05
753	480459	3769805	2.58E-05	5.16E-05
754	480451.9	3769823	2.52E-05	5.04E-05
755	480444.7	3769841	2.46E-05	4.91E-05
756	480437.6	3769858	2.40E-05	4.79E-05
757	480430.4	3769876	2.34E-05	4.67E-05
758	480423.3	3769894	2.27E-05	4.55E-05
759	480416.1	3769911	2.21E-05	4.43E-05
760	480409	3769929	2.16E-05	4.31E-05
761	480401.8	3769947	2.10E-05	4.19E-05
762	480394.7	3769965	2.04E-05	4.08E-05
763	480387.5	3769982	1.98E-05	3.97E-05
764	480380.4	3770000	1.93E-05	3.85E-05
765	480373.2	3770018	1.87E-05	3.75E-05
766	480366.1	3770035	1.82E-05	3.64E-05
767	480358.9	3770053	1.77E-05	3.54E-05
768	480351.8	3770071	1.72E-05	3.44E-05
769	480344.6	3770088	1.67E-05	3.35E-05
770	480337.5	3770106	1.63E-05	3.26E-05
771	480330.3	3770124	1.58E-05	3.17E-05
772	480323.2	3770141	1.54E-05	3.09E-05
773	480316	3770159	1.50E-05	3.01E-05
774	480308.9	3770177	1.47E-05	2.93E-05
775	480301.7	3770194	1.43E-05	2.86E-05
776	480294.6	3770212	1.40E-05	2.79E-05

777	480287.4	3770230	1.37E-05	2.73E-05
778	480280.3	3770247	1.33E-05	2.67E-05
779	480273.1	3770265	1.30E-05	2.61E-05
780	480265.9	3770283	1.28E-05	2.55E-05
781	480258.8	3770300	1.25E-05	2.50E-05
782	480251.6	3770318	1.22E-05	2.45E-05
783	480244.5	3770336	1.20E-05	2.40E-05
784	480237.3	3770353	1.18E-05	2.36E-05
785	480230.2	3770371	1.16E-05	2.32E-05
786	480223	3770389	1.14E-05	2.28E-05
787	480215.9	3770406	1.12E-05	2.24E-05
788	480208.7	3770424	1.10E-05	2.20E-05
789	480201.6	3770442	1.08E-05	2.17E-05
790	480177	3770467	1.07E-05	2.13E-05
791	480159.6	3770475	1.06E-05	2.13E-05
792	480142.2	3770483	1.06E-05	2.13E-05
793	480124.7	3770490	1.06E-05	2.13E-05
794	480107.3	3770498	1.06E-05	2.12E-05
795	480089.9	3770506	1.06E-05	2.12E-05
796	480072.4	3770514	1.06E-05	2.12E-05
797	480055	3770521	1.06E-05	2.12E-05
798	480037.6	3770529	1.06E-05	2.12E-05
799	480020.2	3770537	1.06E-05	2.12E-05
800	480002.7	3770545	1.06E-05	2.12E-05
801	479985.3	3770552	1.06E-05	2.12E-05
802	479967.9	3770560	1.06E-05	2.12E-05
803	479950.4	3770568	1.06E-05	2.12E-05
804	479933	3770575	1.06E-05	2.12E-05
805	479915.6	3770583	1.06E-05	2.12E-05
806	479898.2	3770591	1.06E-05	2.12E-05
807	479880.7	3770599	1.06E-05	2.12E-05
808	479863.3	3770606	1.06E-05	2.11E-05
809	479845.9	3770614	1.06E-05	2.11E-05
810	479828.4	3770622	1.06E-05	2.11E-05
811	479811	3770630	1.06E-05	2.11E-05
812	479793.6	3770637	1.06E-05	2.11E-05
813	479776.2	3770645	1.05E-05	2.11E-05
814	479758.7	3770653	1.05E-05	2.11E-05
815	479741.3	3770661	1.05E-05	2.11E-05
816	479723.9	3770668	1.05E-05	2.11E-05
817	479706.4	3770676	1.05E-05	2.11E-05
818	479689	3770684	1.05E-05	2.10E-05
819	479671.6	3770691	1.05E-05	2.10E-05
820	479654.2	3770699	1.05E-05	2.10E-05
821	479636.7	3770707	1.05E-05	2.10E-05
822	479619.3	3770715	1.05E-05	2.10E-05
823	479601.9	3770722	1.05E-05	2.10E-05
824	479584.4	3770730	1.05E-05	2.10E-05
825	479567	3770738	1.05E-05	2.10E-05
826	479549.6	3770746	1.05E-05	2.10E-05
827	479532.2	3770753	1.05E-05	2.09E-05
828	479514.7	3770761	1.05E-05	2.09E-05

829	479497.3	3770769	1.05E-05	2.09E-05
830	479479.9	3770777	1.05E-05	2.09E-05
831	479462.4	3770784	1.05E-05	2.09E-05
832	479445	3770792	1.04E-05	2.09E-05
833	479427.6	3770800	1.04E-05	2.08E-05
834	479410.2	3770807	1.04E-05	2.08E-05
835	479392.7	3770815	1.04E-05	2.08E-05
836	479375.3	3770823	1.04E-05	2.07E-05
837	479357.9	3770831	1.04E-05	2.07E-05
838	479340.4	3770838	1.03E-05	2.07E-05
839	479323	3770846	1.03E-05	2.06E-05
840	479305.6	3770854	1.03E-05	2.06E-05
841	479288.2	3770862	1.03E-05	2.06E-05
842	479270.7	3770869	1.03E-05	2.05E-05
843	479253.3	3770877	1.03E-05	2.05E-05
844	479235.9	3770885	1.02E-05	2.05E-05
845	479218.4	3770893	1.02E-05	2.04E-05
846	479201	3770900	1.02E-05	2.04E-05
847	479183.6	3770908	1.02E-05	2.04E-05
848	480616.3	3769417	4.01E-05	8.02E-05
849	480616.3	3769397	4.1E-05	8.20E-05
850	480616.3	3769378	4.19E-05	8.38E-05
851	480616.3	3769359	4.27E-05	8.55E-05
852	480616.3	3769340	4.36E-05	8.72E-05
853	480616.3	3769321	4.44E-05	8.88E-05
854	480616.3	3769302	4.52E-05	9.03E-05
855	480616.3	3769283	4.59E-05	9.17E-05
856	480616.3	3769264	4.66E-05	9.31E-05
857	480616.3	3769245	4.72E-05	9.44E-05
858	480616.3	3769226	4.78E-05	9.56E-05
859	479077.5	3769216	0.000617	1.23E-03
860	479072.7	3769235	0.000803	1.61E-03
861	479084.3	3769193	0.00047	9.39E-04
862	479155.2	3769202	0.000808	1.62E-03
863	479058.1	3769211	0.000495	9.90E-04
864	479053.3	3769230	0.000623	1.25E-03
865	479038.7	3769206	0.000407	8.13E-04
866	479033.9	3769225	0.0005	1.00E-03
867	479081.7	3769158	0.000305	6.10E-04
868	479191.2	3769197	0.00081	1.62E-03
869	479019.3	3769201	0.000338	6.76E-04
870	479014.5	3769220	0.000408	8.17E-04
871	479026.4	3769160	0.000232	4.65E-04
872	479041.6	3769150	0.000227	4.55E-04
873	479056.9	3769139	0.000222	4.43E-04
874	479072.2	3769129	0.000216	4.32E-04
875	479087.5	3769118	0.00021	4.19E-04
876	479102.8	3769108	0.000202	4.05E-04
877	479170.3	3769128	0.000323	6.46E-04
878	479182.6	3769142	0.000392	7.84E-04
879	479194.8	3769156	0.000476	9.52E-04
880	479231.7	3769198	0.000791	1.58E-03

881	479244	3769212	0.000905	1.81E-03
882	478980.5	3769192	0.000245	4.90E-04
883	478975.7	3769211	0.00029	5.79E-04
884	478987	3769151	0.000177	3.54E-04
885	479002.2	3769140	0.000175	3.49E-04
886	479017.3	3769130	0.000171	3.43E-04
887	479032.4	3769120	0.000168	3.36E-04
888	479047.5	3769109	0.000165	3.29E-04
889	479062.7	3769099	0.000161	3.22E-04
890	479077.8	3769088	0.000157	3.14E-04
891	479092.9	3769078	0.000153	3.05E-04
892	479108	3769068	0.000148	2.96E-04
893	479174.7	3769088	0.00022	4.40E-04
894	479186.9	3769102	0.000259	5.19E-04
895	479199.1	3769116	0.000307	6.14E-04
896	479211.2	3769129	0.000362	7.24E-04
897	479223.4	3769143	0.000425	8.49E-04
898	479235.5	3769157	0.000496	9.92E-04
899	479272	3769198	0.000727	1.45E-03
900	479284.1	3769212	0.000793	1.59E-03
901	478936.9	3769201	0.000219	4.37E-04
902	478934.9	3769150	0.000142	2.84E-04
903	478950.9	3769139	0.00014	2.79E-04
904	478966.9	3769128	0.000137	2.75E-04
905	478983	3769117	0.000135	2.71E-04
906	478999	3769106	0.000133	2.67E-04
907	479015	3769095	0.000131	2.62E-04
908	479031	3769084	0.000128	2.56E-04
909	479047	3769073	0.000126	2.51E-04
910	479063.1	3769062	0.000123	2.46E-04
911	479079.1	3769051	0.00012	2.40E-04
912	479095.1	3769040	0.000117	2.34E-04
913	479111.1	3769029	0.000114	2.28E-04
914	479181.8	3769051	0.000164	3.28E-04
915	479194.7	3769065	0.000191	3.82E-04
916	479207.5	3769080	0.000224	4.47E-04
917	479220.4	3769095	0.000262	5.25E-04
918	479233.3	3769109	0.000306	6.12E-04
919	479246.2	3769124	0.000355	7.11E-04
920	479259	3769138	0.000412	8.24E-04
921	479271.9	3769153	0.00047	9.39E-04
922	479310.6	3769196	0.000639	1.28E-03
923	479323.4	3769211	0.000684	1.37E-03
924	478898.1	3769191	0.000172	3.45E-04
925	478879.8	3769152	0.000119	2.38E-04
926	478895.6	3769141	0.000116	2.32E-04
927	478911.4	3769130	0.000114	2.27E-04
928	478927.2	3769119	0.000112	2.24E-04
929	478942.9	3769108	0.00011	2.21E-04
930	478958.7	3769098	0.000109	2.18E-04
931	478974.5	3769087	0.000107	2.15E-04
932	478990.3	3769076	0.000106	2.12E-04

933	479006	3769065	0.000104	2.08E-04
934	479021.8	3769054	0.000102	2.04E-04
935	479037.6	3769043	0.0001	2.01E-04
936	479053.4	3769033	9.84E-05	1.97E-04
937	479069.2	3769022	9.64E-05	1.93E-04
938	479084.9	3769011	9.41E-05	1.88E-04
939	479100.7	3769000	9.22E-05	1.84E-04
940	479198.8	3769025	0.000141	2.82E-04
941	479211.4	3769039	0.000162	3.23E-04
942	479224.1	3769054	0.000186	3.72E-04
943	479236.8	3769068	0.000214	4.28E-04
944	479249.5	3769082	0.000245	4.91E-04
945	479262.2	3769097	0.000281	5.61E-04
946	479274.9	3769111	0.00032	6.40E-04
947	479287.5	3769125	0.000361	7.21E-04
948	479300.2	3769140	0.000405	8.10E-04
949	479312.9	3769154	0.00045	9.00E-04
950	479350.9	3769197	0.000565	1.13E-03
951	479363.6	3769211	0.000588	1.18E-03
952	478840.8	3769142	9.96E-05	1.99E-04
953	478856.5	3769131	9.69E-05	1.94E-04
954	478872.1	3769121	9.48E-05	1.90E-04
955	478887.7	3769110	9.31E-05	1.86E-04
956	478903.3	3769099	9.17E-05	1.83E-04
957	478918.9	3769089	9.06E-05	1.81E-04
958	478934.5	3769078	8.95E-05	1.79E-04
959	478950.1	3769067	8.85E-05	1.77E-04
960	478965.7	3769056	8.74E-05	1.75E-04
961	478981.3	3769046	8.62E-05	1.72E-04
962	478996.9	3769035	8.48E-05	1.70E-04
963	479012.5	3769024	8.35E-05	1.67E-04
964	479028.1	3769014	8.21E-05	1.64E-04
965	479043.7	3769003	8.08E-05	1.62E-04
966	479059.3	3768992	7.93E-05	1.59E-04
967	479074.9	3768981	7.78E-05	1.56E-04
968	479090.5	3768971	7.64E-05	1.53E-04
969	479106.1	3768960	7.51E-05	1.50E-04
970	479137.3	3768939	7.25E-05	1.45E-04
971	479165.5	3768942	7.87E-05	1.57E-04
972	479203.1	3768985	0.000109	2.18E-04
973	479215.6	3768999	0.000123	2.45E-04
974	479228.2	3769013	0.000139	2.77E-04
975	479240.7	3769027	0.000157	3.14E-04
976	479253.3	3769041	0.000177	3.54E-04
977	479265.8	3769055	0.000201	4.02E-04
978	479278.3	3769070	0.000228	4.56E-04
979	479290.9	3769084	0.000258	5.15E-04
980	479303.4	3769098	0.000288	5.77E-04
981	479316	3769112	0.000321	6.41E-04
982	479328.5	3769126	0.000355	7.09E-04
983	479341.1	3769141	0.000389	7.77E-04
984	479353.6	3769155	0.000421	8.41E-04

985	479391.2	3769197	0.000491	9.83E-04
986	479403.8	3769211	0.000506	1.01E-03
987	478825.2	3769153	0.000103	2.06E-04
988	478763.6	3769123	7.45E-05	1.49E-04
989	478779.6	3769112	7.18E-05	1.44E-04
990	478795.5	3769101	6.98E-05	1.40E-04
991	478811.5	3769090	6.82E-05	1.36E-04
992	478827.4	3769079	6.69E-05	1.34E-04
993	478843.4	3769068	6.6E-05	1.32E-04
994	478859.4	3769057	6.52E-05	1.30E-04
995	478875.3	3769046	6.45E-05	1.29E-04
996	478891.3	3769035	6.4E-05	1.28E-04
997	478907.3	3769024	6.34E-05	1.27E-04
998	478923.2	3769013	6.27E-05	1.25E-04
999	478939.2	3769002	6.2E-05	1.24E-04
1000	478955.2	3768991	6.13E-05	1.23E-04
1001	478971.1	3768980	6.05E-05	1.21E-04
1002	478987.1	3768969	5.96E-05	1.19E-04
1003	479003	3768958	5.88E-05	1.18E-04
1004	479019	3768947	5.81E-05	1.16E-04
1005	479035	3768936	5.73E-05	1.15E-04
1006	479050.9	3768925	5.64E-05	1.13E-04
1007	479066.9	3768914	5.56E-05	1.11E-04
1008	479082.9	3768903	5.49E-05	1.10E-04
1009	479098.8	3768892	5.42E-05	1.08E-04
1010	479146.7	3768859	5.22E-05	1.04E-04
1011	479175.5	3768863	5.57E-05	1.11E-04
1012	479226.8	3768921	8.02E-05	1.60E-04
1013	479239.7	3768935	8.85E-05	1.77E-04
1014	479252.5	3768950	9.77E-05	1.95E-04
1015	479265.3	3768964	0.000108	2.17E-04
1016	479278.2	3768979	0.000121	2.42E-04
1017	479291	3768993	0.000135	2.69E-04
1018	479303.8	3769008	0.00015	3.00E-04
1019	479316.7	3769022	0.000166	3.33E-04
1020	479329.5	3769037	0.000185	3.70E-04
1021	479342.3	3769052	0.000205	4.10E-04
1022	479355.2	3769066	0.000226	4.52E-04
1023	479368	3769081	0.000247	4.94E-04
1024	479380.8	3769095	0.000268	5.37E-04
1025	479393.7	3769110	0.00029	5.80E-04
1026	479406.5	3769124	0.000311	6.22E-04
1027	479419.3	3769139	0.000329	6.59E-04
1028	479432.1	3769153	0.000347	6.93E-04
1029	479470.6	3769197	0.000375	7.51E-04
1030	479483.5	3769211	0.000379	7.57E-04
1031	478747.6	3769134	7.79E-05	1.56E-04
1032	478742.9	3769153	8.82E-05	1.76E-04
1033	478685.7	3769103	6.01E-05	1.20E-04
1034	478701.4	3769093	5.75E-05	1.15E-04
1035	478717.1	3769082	5.53E-05	1.11E-04
1036	478732.8	3769071	5.35E-05	1.07E-04

1037	478748.5	3769060	5.21E-05	1.04E-04
1038	478764.2	3769049	5.11E-05	1.02E-04
1039	478779.9	3769039	5.03E-05	1.01E-04
1040	478795.6	3769028	4.97E-05	9.93E-05
1041	478811.3	3769017	4.92E-05	9.84E-05
1042	478827	3769006	4.88E-05	9.77E-05
1043	478842.7	3768995	4.85E-05	9.71E-05
1044	478858.4	3768985	4.82E-05	9.64E-05
1045	478874.1	3768974	4.79E-05	9.57E-05
1046	478889.8	3768963	4.75E-05	9.50E-05
1047	478905.5	3768952	4.71E-05	9.41E-05
1048	478921.2	3768942	4.66E-05	9.32E-05
1049	478936.9	3768931	4.61E-05	9.23E-05
1050	478952.6	3768920	4.56E-05	9.12E-05
1051	478968.3	3768909	4.51E-05	9.01E-05
1052	478984	3768898	4.46E-05	8.91E-05
1053	478999.7	3768888	4.41E-05	8.82E-05
1054	479015.4	3768877	4.36E-05	8.72E-05
1055	479031.1	3768866	4.31E-05	8.62E-05
1056	479046.8	3768855	4.27E-05	8.53E-05
1057	479062.5	3768845	4.23E-05	8.46E-05
1058	479078.2	3768834	4.19E-05	8.38E-05
1059	479093.9	3768823	4.16E-05	8.31E-05
1060	479109.6	3768812	4.11E-05	8.23E-05
1061	479141.1	3768791	4.03E-05	8.06E-05
1062	479156.8	3768780	3.99E-05	7.98E-05
1063	479185.1	3768783	4.22E-05	8.43E-05
1064	479197.7	3768798	4.51E-05	9.02E-05
1065	479248.2	3768855	6.08E-05	1.22E-04
1066	479260.8	3768869	6.6E-05	1.32E-04
1067	479273.4	3768883	7.18E-05	1.44E-04
1068	479286	3768897	7.81E-05	1.56E-04
1069	479298.7	3768912	8.53E-05	1.71E-04
1070	479311.3	3768926	9.34E-05	1.87E-04
1071	479323.9	3768940	0.000102	2.05E-04
1072	479336.5	3768955	0.000112	2.25E-04
1073	479349.1	3768969	0.000123	2.46E-04
1074	479361.8	3768983	0.000134	2.69E-04
1075	479374.4	3768997	0.000147	2.93E-04
1076	479387	3769012	0.00016	3.20E-04
1077	479399.6	3769026	0.000174	3.48E-04
1078	479412.2	3769040	0.000188	3.76E-04
1079	479424.9	3769054	0.000202	4.04E-04
1080	479437.5	3769069	0.000216	4.32E-04
1081	479450.1	3769083	0.00023	4.60E-04
1082	479462.7	3769097	0.000244	4.87E-04
1083	479475.3	3769111	0.000256	5.12E-04
1084	479488	3769126	0.000267	5.35E-04
1085	479500.6	3769140	0.000277	5.53E-04
1086	479538.4	3769183	0.000292	5.85E-04
1087	479551.1	3769197	0.000293	5.85E-04
1088	479563.7	3769211	0.000291	5.82E-04

1089	478670	3769114	6.31E-05	1.26E-04
1090	478665.3	3769133	7.08E-05	1.42E-04
1091	478608.3	3769084	5.07E-05	1.01E-04
1092	478624.3	3769073	4.83E-05	9.66E-05
1093	478640.2	3769062	4.62E-05	9.24E-05
1094	478656.2	3769051	4.44E-05	8.88E-05
1095	478672.1	3769040	4.29E-05	8.57E-05
1096	478688	3769029	4.16E-05	8.32E-05
1097	478704	3769018	4.06E-05	8.13E-05
1098	478719.9	3769007	3.99E-05	7.98E-05
1099	478735.9	3768996	3.94E-05	7.87E-05
1100	478751.8	3768985	3.9E-05	7.79E-05
1101	478767.7	3768974	3.87E-05	7.74E-05
1102	478783.7	3768963	3.85E-05	7.70E-05
1103	478799.6	3768952	3.83E-05	7.66E-05
1104	478815.6	3768941	3.82E-05	7.63E-05
1105	478831.5	3768931	3.8E-05	7.60E-05
1106	478847.5	3768920	3.78E-05	7.55E-05
1107	478863.4	3768909	3.75E-05	7.50E-05
1108	478879.3	3768898	3.72E-05	7.44E-05
1109	478895.3	3768887	3.69E-05	7.38E-05
1110	478911.2	3768876	3.65E-05	7.31E-05
1111	478927.2	3768865	3.61E-05	7.23E-05
1112	478943.1	3768854	3.58E-05	7.16E-05
1113	478959	3768843	3.54E-05	7.09E-05
1114	478975	3768832	3.51E-05	7.02E-05
1115	478990.9	3768821	3.48E-05	6.96E-05
1116	479006.9	3768810	3.45E-05	6.89E-05
1117	479022.8	3768799	3.42E-05	6.84E-05
1118	479038.7	3768788	3.39E-05	6.79E-05
1119	479054.7	3768777	3.37E-05	6.75E-05
1120	479070.6	3768766	3.34E-05	6.69E-05
1121	479086.6	3768755	3.32E-05	6.64E-05
1122	479102.5	3768744	3.3E-05	6.60E-05
1123	479150.3	3768712	3.23E-05	6.46E-05
1124	479166.3	3768701	3.21E-05	6.43E-05
1125	479195	3768704	3.38E-05	6.76E-05
1126	479207.8	3768719	3.58E-05	7.16E-05
1127	479220.7	3768733	3.8E-05	7.60E-05
1128	479259.1	3768777	4.6E-05	9.19E-05
1129	479271.9	3768791	4.92E-05	9.85E-05
1130	479284.7	3768806	5.28E-05	1.06E-04
1131	479297.5	3768820	5.68E-05	1.14E-04
1132	479310.3	3768834	6.12E-05	1.22E-04
1133	479323.2	3768849	6.59E-05	1.32E-04
1134	479336	3768863	7.13E-05	1.43E-04
1135	479348.8	3768878	7.72E-05	1.54E-04
1136	479361.6	3768892	8.37E-05	1.67E-04
1137	479374.4	3768907	9.08E-05	1.82E-04
1138	479387.2	3768921	9.83E-05	1.97E-04
1139	479400	3768936	0.000107	2.13E-04
1140	479412.9	3768950	0.000116	2.31E-04

1141	479425.7	3768965	0.000125	2.49E-04
1142	479438.5	3768979	0.000134	2.68E-04
1143	479451.3	3768994	0.000144	2.88E-04
1144	479464.1	3769008	0.000155	3.09E-04
1145	479476.9	3769023	0.000165	3.30E-04
1146	479489.7	3769037	0.000176	3.51E-04
1147	479502.5	3769052	0.000186	3.72E-04
1148	479515.4	3769066	0.000195	3.90E-04
1149	479528.2	3769081	0.000204	4.07E-04
1150	479541	3769095	0.000212	4.24E-04
1151	479553.8	3769110	0.000219	4.38E-04
1152	479566.6	3769124	0.000225	4.50E-04
1153	479579.4	3769139	0.00023	4.60E-04
1154	479592.2	3769153	0.000233	4.66E-04
1155	479617.9	3769182	0.000235	4.70E-04
1156	479630.7	3769197	0.000233	4.66E-04
1157	479643.5	3769211	0.00023	4.60E-04
1158	478592.4	3769095	5.34E-05	1.07E-04
1159	478587.6	3769114	5.94E-05	1.19E-04
1160	478530.9	3769064	4.41E-05	8.82E-05
1161	478547	3769053	4.2E-05	8.41E-05
1162	478563.2	3769042	4.01E-05	8.03E-05
1163	478579.3	3769031	3.84E-05	7.68E-05
1164	478595.4	3769020	3.69E-05	7.37E-05
1165	478611.5	3769009	3.55E-05	7.11E-05
1166	478627.6	3768998	3.44E-05	6.89E-05
1167	478643.8	3768987	3.35E-05	6.70E-05
1168	478659.9	3768976	3.28E-05	6.56E-05
1169	478676	3768965	3.23E-05	6.45E-05
1170	478692.1	3768954	3.19E-05	6.37E-05
1171	478708.3	3768942	3.16E-05	6.32E-05
1172	478724.4	3768931	3.14E-05	6.29E-05
1173	478740.5	3768920	3.13E-05	6.27E-05
1174	478756.6	3768909	3.13E-05	6.25E-05
1175	478772.8	3768898	3.12E-05	6.24E-05
1176	478788.9	3768887	3.11E-05	6.22E-05
1177	478805	3768876	3.1E-05	6.20E-05
1178	478821.1	3768865	3.09E-05	6.17E-05
1179	478837.3	3768854	3.07E-05	6.14E-05
1180	478853.4	3768843	3.05E-05	6.09E-05
1181	478869.5	3768832	3.02E-05	6.04E-05
1182	478885.6	3768821	3E-05	5.99E-05
1183	478901.8	3768810	2.97E-05	5.93E-05
1184	478917.9	3768798	2.94E-05	5.88E-05
1185	478934	3768787	2.92E-05	5.83E-05
1186	478950.1	3768776	2.89E-05	5.78E-05
1187	478966.2	3768765	2.86E-05	5.72E-05
1188	478982.4	3768754	2.84E-05	5.69E-05
1189	478998.5	3768743	2.82E-05	5.65E-05
1190	479014.6	3768732	2.81E-05	5.62E-05
1191	479030.7	3768721	2.79E-05	5.58E-05
1192	479046.9	3768710	2.77E-05	5.55E-05

1193	479063	3768699	2.76E-05	5.52E-05
1194	479079.1	3768688	2.75E-05	5.50E-05
1195	479095.2	3768677	2.74E-05	5.47E-05
1196	479111.4	3768666	2.72E-05	5.45E-05
1197	479143.6	3768643	2.7E-05	5.41E-05
1198	479159.7	3768632	2.69E-05	5.39E-05
1199	479175.9	3768621	2.68E-05	5.37E-05
1200	479204.9	3768625	2.8E-05	5.61E-05
1201	479217.9	3768640	2.95E-05	5.90E-05
1202	479230.9	3768654	3.11E-05	6.21E-05
1203	479243.8	3768669	3.28E-05	6.55E-05
1204	479282.7	3768713	3.89E-05	7.77E-05
1205	479295.7	3768727	4.13E-05	8.26E-05
1206	479308.6	3768742	4.39E-05	8.77E-05
1207	479321.6	3768757	4.68E-05	9.35E-05
1208	479334.5	3768771	4.99E-05	9.97E-05
1209	479347.5	3768786	5.32E-05	1.06E-04
1210	479360.5	3768801	5.69E-05	1.14E-04
1211	479373.4	3768815	6.1E-05	1.22E-04
1212	479386.4	3768830	6.54E-05	1.31E-04
1213	479399.3	3768845	7.03E-05	1.41E-04
1214	479412.3	3768859	7.55E-05	1.51E-04
1215	479425.3	3768874	8.12E-05	1.62E-04
1216	479438.2	3768889	8.72E-05	1.74E-04
1217	479451.2	3768903	9.37E-05	1.87E-04
1218	479464.1	3768918	0.000101	2.01E-04
1219	479477.1	3768933	0.000108	2.15E-04
1220	479490.1	3768947	0.000115	2.30E-04
1221	479503	3768962	0.000123	2.46E-04
1222	479516	3768977	0.00013	2.61E-04
1223	479528.9	3768991	0.000138	2.76E-04
1224	479541.9	3769006	0.000146	2.91E-04
1225	479554.9	3769020	0.000153	3.07E-04
1226	479567.8	3769035	0.000161	3.22E-04
1227	479580.8	3769050	0.000168	3.35E-04
1228	479593.7	3769064	0.000174	3.48E-04
1229	479606.7	3769079	0.000179	3.58E-04
1230	479619.7	3769094	0.000184	3.67E-04
1231	479632.6	3769108	0.000188	3.75E-04
1232	479645.6	3769123	0.00019	3.81E-04
1233	479658.5	3769138	0.000192	3.85E-04
1234	479671.5	3769152	0.000193	3.86E-04
1235	479697.4	3769182	0.000192	3.84E-04
1236	479710.4	3769196	0.00019	3.79E-04
1237	479723.3	3769211	0.000186	3.73E-04
1238	478514.8	3769075	4.64E-05	9.28E-05
1239	478510	3769094	5.11E-05	1.02E-04
1240	478453.1	3769045	3.92E-05	7.84E-05
1241	478469	3769034	3.75E-05	7.49E-05
1242	478484.9	3769023	3.58E-05	7.16E-05
1243	478500.9	3769012	3.43E-05	6.86E-05
1244	478516.8	3769001	3.29E-05	6.58E-05

1245	478532.7	3768990	3.16E-05	6.32E-05
1246	478548.7	3768979	3.04E-05	6.09E-05
1247	478564.6	3768968	2.94E-05	5.89E-05
1248	478580.5	3768958	2.86E-05	5.72E-05
1249	478596.5	3768947	2.79E-05	5.58E-05
1250	478612.4	3768936	2.73E-05	5.47E-05
1251	478628.3	3768925	2.69E-05	5.38E-05
1252	478644.2	3768914	2.66E-05	5.32E-05
1253	478660.2	3768903	2.64E-05	5.28E-05
1254	478676.1	3768892	2.63E-05	5.25E-05
1255	478692	3768881	2.62E-05	5.24E-05
1256	478708	3768870	2.62E-05	5.23E-05
1257	478723.9	3768859	2.61E-05	5.23E-05
1258	478739.8	3768848	2.61E-05	5.22E-05
1259	478755.7	3768837	2.61E-05	5.22E-05
1260	478771.7	3768826	2.6E-05	5.21E-05
1261	478787.6	3768815	2.6E-05	5.19E-05
1262	478803.5	3768804	2.58E-05	5.17E-05
1263	478819.5	3768793	2.57E-05	5.14E-05
1264	478835.4	3768782	2.55E-05	5.11E-05
1265	478851.3	3768772	2.53E-05	5.07E-05
1266	478867.2	3768761	2.51E-05	5.03E-05
1267	478883.2	3768750	2.49E-05	4.99E-05
1268	478899.1	3768739	2.47E-05	4.95E-05
1269	478915	3768728	2.45E-05	4.91E-05
1270	478931	3768717	2.43E-05	4.87E-05
1271	478946.9	3768706	2.41E-05	4.83E-05
1272	478962.8	3768695	2.4E-05	4.80E-05
1273	478978.7	3768684	2.39E-05	4.78E-05
1274	478994.7	3768673	2.38E-05	4.75E-05
1275	479010.6	3768662	2.36E-05	4.72E-05
1276	479026.5	3768651	2.35E-05	4.71E-05
1277	479042.5	3768640	2.35E-05	4.69E-05
1278	479058.4	3768629	2.34E-05	4.67E-05
1279	479074.3	3768618	2.33E-05	4.66E-05
1280	479090.2	3768607	2.33E-05	4.65E-05
1281	479106.2	3768596	2.32E-05	4.64E-05
1282	479138	3768575	2.31E-05	4.62E-05
1283	479154	3768564	2.3E-05	4.61E-05
1284	479169.9	3768553	2.3E-05	4.60E-05
1285	479185.8	3768542	2.29E-05	4.59E-05
1286	479214.6	3768545	2.4E-05	4.79E-05
1287	479227.4	3768560	2.5E-05	5.00E-05
1288	479240.2	3768574	2.62E-05	5.25E-05
1289	479253	3768589	2.75E-05	5.49E-05
1290	479265.8	3768603	2.88E-05	5.76E-05
1291	479317	3768661	3.51E-05	7.02E-05
1292	479329.8	3768676	3.7E-05	7.40E-05
1293	479342.6	3768690	3.91E-05	7.81E-05
1294	479355.4	3768705	4.13E-05	8.26E-05
1295	479368.2	3768719	4.37E-05	8.74E-05
1296	479381	3768733	4.64E-05	9.27E-05

1297	479393.8	3768748	4.92E-05	9.83E-05
1298	479406.6	3768762	5.22E-05	1.05E-04
1299	479419.4	3768777	5.55E-05	1.11E-04
1300	479432.2	3768791	5.9E-05	1.18E-04
1301	479445	3768806	6.27E-05	1.25E-04
1302	479457.8	3768820	6.67E-05	1.33E-04
1303	479470.6	3768835	7.11E-05	1.42E-04
1304	479483.4	3768849	7.57E-05	1.51E-04
1305	479496.2	3768864	8.06E-05	1.61E-04
1306	479509	3768878	8.58E-05	1.72E-04
1307	479521.8	3768893	9.12E-05	1.82E-04
1308	479534.6	3768907	9.68E-05	1.94E-04
1309	479547.4	3768922	0.000103	2.05E-04
1310	479560.2	3768936	0.000109	2.17E-04
1311	479573	3768951	0.000115	2.29E-04
1312	479585.8	3768965	0.000121	2.41E-04
1313	479598.6	3768980	0.000126	2.52E-04
1314	479611.5	3768994	0.000132	2.63E-04
1315	479624.3	3769008	0.000137	2.74E-04
1316	479637.1	3769023	0.000142	2.84E-04
1317	479649.9	3769037	0.000147	2.94E-04
1318	479662.7	3769052	0.000151	3.02E-04
1319	479675.5	3769066	0.000155	3.10E-04
1320	479688.3	3769081	0.000158	3.16E-04
1321	479701.1	3769095	0.00016	3.20E-04
1322	479713.9	3769110	0.000162	3.23E-04
1323	479726.7	3769124	0.000163	3.25E-04
1324	479739.5	3769139	0.000163	3.26E-04
1325	479790.7	3769197	0.000157	3.13E-04
1326	479803.5	3769211	0.000154	3.07E-04
1327	478437.2	3769056	4.1E-05	8.21E-05
1328	478432.4	3769075	4.48E-05	8.96E-05
1329	478297.9	3769006	3.19E-05	6.39E-05
1330	478313.8	3768995	3.07E-05	6.15E-05
1331	478329.7	3768984	2.96E-05	5.91E-05
1332	478345.6	3768973	2.84E-05	5.69E-05
1333	478361.5	3768963	2.74E-05	5.47E-05
1334	478377.5	3768952	2.63E-05	5.27E-05
1335	478393.4	3768941	2.53E-05	5.07E-05
1336	478409.3	3768930	2.44E-05	4.88E-05
1337	478425.2	3768919	2.35E-05	4.71E-05
1338	478441.1	3768908	2.27E-05	4.55E-05
1339	478457.1	3768897	2.2E-05	4.41E-05
1340	478473	3768886	2.14E-05	4.28E-05
1341	478488.9	3768875	2.09E-05	4.18E-05
1342	478504.8	3768864	2.04E-05	4.09E-05
1343	478520.7	3768853	2.01E-05	4.02E-05
1344	478536.7	3768842	1.98E-05	3.96E-05
1345	478552.6	3768831	1.96E-05	3.92E-05
1346	478568.5	3768820	1.95E-05	3.89E-05
1347	478584.4	3768809	1.94E-05	3.88E-05
1348	478600.4	3768799	1.94E-05	3.87E-05

1349	478616.3	3768788	1.94E-05	3.87E-05
1350	478632.2	3768777	1.94E-05	3.88E-05
1351	478648.1	3768766	1.94E-05	3.88E-05
1352	478664	3768755	1.94E-05	3.89E-05
1353	478680	3768744	1.95E-05	3.89E-05
1354	478695.9	3768733	1.95E-05	3.89E-05
1355	478711.8	3768722	1.95E-05	3.89E-05
1356	478727.7	3768711	1.94E-05	3.88E-05
1357	478743.6	3768700	1.94E-05	3.87E-05
1358	478759.6	3768689	1.93E-05	3.86E-05
1359	478775.5	3768678	1.92E-05	3.84E-05
1360	478791.4	3768667	1.91E-05	3.82E-05
1361	478807.3	3768656	1.9E-05	3.79E-05
1362	478823.2	3768645	1.88E-05	3.77E-05
1363	478839.2	3768634	1.87E-05	3.74E-05
1364	478855.1	3768624	1.86E-05	3.71E-05
1365	478871	3768613	1.84E-05	3.69E-05
1366	478886.9	3768602	1.83E-05	3.67E-05
1367	478902.9	3768591	1.82E-05	3.64E-05
1368	478918.8	3768580	1.81E-05	3.62E-05
1369	478934.7	3768569	1.8E-05	3.60E-05
1370	478950.6	3768558	1.79E-05	3.59E-05
1371	478966.5	3768547	1.79E-05	3.58E-05
1372	478982.5	3768536	1.78E-05	3.57E-05
1373	478998.4	3768525	1.78E-05	3.56E-05
1374	479014.3	3768514	1.78E-05	3.55E-05
1375	479030.2	3768503	1.78E-05	3.55E-05
1376	479046.1	3768492	1.78E-05	3.55E-05
1377	479062.1	3768481	1.78E-05	3.55E-05
1378	479078	3768470	1.77E-05	3.55E-05
1379	479093.9	3768459	1.77E-05	3.55E-05
1380	479109.8	3768449	1.78E-05	3.55E-05
1381	479157.6	3768416	1.78E-05	3.55E-05
1382	479173.5	3768405	1.78E-05	3.56E-05
1383	479189.4	3768394	1.78E-05	3.56E-05
1384	479205.4	3768383	1.78E-05	3.56E-05
1385	479234.1	3768386	1.85E-05	3.70E-05
1386	479246.9	3768401	1.92E-05	3.84E-05
1387	479259.7	3768415	1.99E-05	3.98E-05
1388	479272.5	3768430	2.07E-05	4.14E-05
1389	479285.3	3768444	2.15E-05	4.29E-05
1390	479298.1	3768459	2.23E-05	4.46E-05
1391	479310.9	3768473	2.32E-05	4.64E-05
1392	479323.7	3768488	2.41E-05	4.83E-05
1393	479336.5	3768502	2.51E-05	5.02E-05
1394	479349.2	3768517	2.61E-05	5.23E-05
1395	479387.6	3768560	2.96E-05	5.93E-05
1396	479400.4	3768575	3.1E-05	6.19E-05
1397	479413.2	3768589	3.24E-05	6.47E-05
1398	479426	3768603	3.39E-05	6.77E-05
1399	479438.8	3768618	3.55E-05	7.10E-05
1400	479451.6	3768632	3.72E-05	7.43E-05

1401	479464.4	3768647	3.89E-05	7.79E-05
1402	479477.2	3768661	4.09E-05	8.17E-05
1403	479490	3768676	4.29E-05	8.59E-05
1404	479502.8	3768690	4.51E-05	9.02E-05
1405	479515.6	3768705	4.74E-05	9.49E-05
1406	479528.4	3768719	4.99E-05	9.98E-05
1407	479541.2	3768734	5.25E-05	1.05E-04
1408	479554	3768748	5.53E-05	1.11E-04
1409	479566.8	3768763	5.82E-05	1.16E-04
1410	479579.6	3768777	6.12E-05	1.22E-04
1411	479592.4	3768792	6.44E-05	1.29E-04
1412	479605.2	3768806	6.77E-05	1.35E-04
1413	479618	3768821	7.12E-05	1.42E-04
1414	479630.8	3768835	7.48E-05	1.50E-04
1415	479643.6	3768849	7.85E-05	1.57E-04
1416	479656.4	3768864	8.23E-05	1.65E-04
1417	479669.2	3768878	8.61E-05	1.72E-04
1418	479682	3768893	8.99E-05	1.80E-04
1419	479694.8	3768907	9.35E-05	1.87E-04
1420	479707.6	3768922	9.71E-05	1.94E-04
1421	479720.4	3768936	0.0001	2.01E-04
1422	479733.2	3768951	0.000104	2.08E-04
1423	479746	3768965	0.000107	2.14E-04
1424	479758.8	3768980	0.00011	2.20E-04
1425	479771.6	3768994	0.000113	2.26E-04
1426	479784.3	3769009	0.000115	2.31E-04
1427	479797.1	3769023	0.000118	2.35E-04
1428	479809.9	3769038	0.000119	2.38E-04
1429	479822.7	3769052	0.000121	2.41E-04
1430	479835.5	3769066	0.000122	2.43E-04
1431	479848.3	3769081	0.000122	2.45E-04
1432	479861.1	3769095	0.000122	2.45E-04
1433	479873.9	3769110	0.000122	2.45E-04
1434	479886.7	3769124	0.000122	2.44E-04
1435	479899.5	3769139	0.000121	2.42E-04
1436	479937.9	3769182	0.000116	2.32E-04
1437	479950.7	3769197	0.000114	2.27E-04
1438	479963.5	3769211	0.000111	2.23E-04
1439	478281.9	3769017	3.32E-05	6.63E-05
1440	478277.2	3769036	3.56E-05	7.13E-05
1441	478142.8	3768967	2.67E-05	5.34E-05
1442	478159	3768956	2.59E-05	5.17E-05
1443	478175.1	3768945	2.5E-05	5.01E-05
1444	478191.3	3768934	2.42E-05	4.84E-05
1445	478207.4	3768923	2.34E-05	4.69E-05
1446	478223.6	3768912	2.26E-05	4.53E-05
1447	478239.7	3768901	2.19E-05	4.38E-05
1448	478255.9	3768890	2.11E-05	4.22E-05
1449	478272	3768879	2.04E-05	4.08E-05
1450	478288.2	3768868	1.97E-05	3.94E-05
1451	478304.3	3768856	1.9E-05	3.81E-05
1452	478320.5	3768845	1.84E-05	3.68E-05

1453	478336.6	3768834	1.78E-05	3.57E-05
1454	478352.7	3768823	1.73E-05	3.46E-05
1455	478368.9	3768812	1.69E-05	3.37E-05
1456	478385	3768801	1.65E-05	3.29E-05
1457	478401.2	3768790	1.61E-05	3.22E-05
1458	478417.3	3768779	1.58E-05	3.16E-05
1459	478433.5	3768768	1.56E-05	3.12E-05
1460	478449.6	3768757	1.54E-05	3.08E-05
1461	478465.8	3768746	1.53E-05	3.06E-05
1462	478481.9	3768734	1.52E-05	3.04E-05
1463	478498.1	3768723	1.52E-05	3.03E-05
1464	478514.2	3768712	1.51E-05	3.03E-05
1465	478530.4	3768701	1.52E-05	3.03E-05
1466	478546.5	3768690	1.52E-05	3.04E-05
1467	478562.7	3768679	1.52E-05	3.05E-05
1468	478578.8	3768668	1.53E-05	3.05E-05
1469	478594.9	3768657	1.53E-05	3.06E-05
1470	478611.1	3768646	1.53E-05	3.07E-05
1471	478627.2	3768635	1.54E-05	3.07E-05
1472	478643.4	3768624	1.54E-05	3.07E-05
1473	478659.5	3768612	1.54E-05	3.07E-05
1474	478675.7	3768601	1.53E-05	3.07E-05
1475	478691.8	3768590	1.53E-05	3.06E-05
1476	478708	3768579	1.53E-05	3.05E-05
1477	478724.1	3768568	1.52E-05	3.04E-05
1478	478740.3	3768557	1.51E-05	3.03E-05
1479	478756.4	3768546	1.5E-05	3.01E-05
1480	478772.6	3768535	1.5E-05	2.99E-05
1481	478788.7	3768524	1.49E-05	2.97E-05
1482	478804.9	3768513	1.48E-05	2.96E-05
1483	478821	3768502	1.47E-05	2.94E-05
1484	478837.1	3768490	1.46E-05	2.92E-05
1485	478853.3	3768479	1.45E-05	2.90E-05
1486	478869.4	3768468	1.44E-05	2.89E-05
1487	478885.6	3768457	1.44E-05	2.88E-05
1488	478901.7	3768446	1.43E-05	2.87E-05
1489	478917.9	3768435	1.43E-05	2.85E-05
1490	478934	3768424	1.42E-05	2.84E-05
1491	478950.2	3768413	1.42E-05	2.84E-05
1492	478966.3	3768402	1.42E-05	2.84E-05
1493	478982.5	3768391	1.42E-05	2.84E-05
1494	478998.6	3768380	1.42E-05	2.84E-05
1495	479014.8	3768368	1.42E-05	2.83E-05
1496	479030.9	3768357	1.42E-05	2.84E-05
1497	479047	3768346	1.42E-05	2.84E-05
1498	479063.2	3768335	1.41E-05	2.83E-05
1499	479079.3	3768324	1.42E-05	2.83E-05
1500	479095.5	3768313	1.42E-05	2.84E-05
1501	479111.6	3768302	1.42E-05	2.85E-05
1502	479160.1	3768269	1.43E-05	2.87E-05
1503	479176.2	3768258	1.44E-05	2.87E-05
1504	479192.4	3768246	1.44E-05	2.88E-05

1505	479208.5	3768235	1.45E-05	2.89E-05
1506	479224.7	3768224	1.45E-05	2.90E-05
1507	479253.8	3768228	1.5E-05	3.01E-05
1508	479266.8	3768243	1.55E-05	3.11E-05
1509	479279.7	3768257	1.61E-05	3.21E-05
1510	479292.7	3768272	1.66E-05	3.32E-05
1511	479305.7	3768287	1.71E-05	3.43E-05
1512	479318.7	3768301	1.77E-05	3.54E-05
1513	479331.7	3768316	1.83E-05	3.66E-05
1514	479344.6	3768331	1.89E-05	3.78E-05
1515	479357.6	3768345	1.96E-05	3.91E-05
1516	479370.6	3768360	2.02E-05	4.04E-05
1517	479383.6	3768375	2.09E-05	4.19E-05
1518	479396.5	3768389	2.16E-05	4.33E-05
1519	479409.5	3768404	2.24E-05	4.48E-05
1520	479422.5	3768419	2.32E-05	4.64E-05
1521	479487.4	3768492	2.79E-05	5.58E-05
1522	479500.4	3768507	2.9E-05	5.80E-05
1523	479513.3	3768521	3.02E-05	6.04E-05
1524	479526.3	3768536	3.14E-05	6.29E-05
1525	479539.3	3768551	3.28E-05	6.55E-05
1526	479552.3	3768565	3.41E-05	6.83E-05
1527	479565.3	3768580	3.55E-05	7.11E-05
1528	479578.2	3768595	3.71E-05	7.41E-05
1529	479591.2	3768609	3.87E-05	7.73E-05
1530	479604.2	3768624	4.04E-05	8.07E-05
1531	479617.2	3768639	4.21E-05	8.43E-05
1532	479630.2	3768653	4.4E-05	8.79E-05
1533	479643.1	3768668	4.58E-05	9.17E-05
1534	479656.1	3768683	4.79E-05	9.58E-05
1535	479669.1	3768697	5E-05	1.00E-04
1536	479682.1	3768712	5.22E-05	1.04E-04
1537	479695	3768727	5.46E-05	1.09E-04
1538	479708	3768741	5.7E-05	1.14E-04
1539	479721	3768756	5.94E-05	1.19E-04
1540	479734	3768771	6.2E-05	1.24E-04
1541	479747	3768785	6.46E-05	1.29E-04
1542	479759.9	3768800	6.72E-05	1.34E-04
1543	479772.9	3768815	6.98E-05	1.40E-04
1544	479785.9	3768829	7.24E-05	1.45E-04
1545	479798.9	3768844	7.49E-05	1.50E-04
1546	479811.8	3768859	7.75E-05	1.55E-04
1547	479824.8	3768873	8E-05	1.60E-04
1548	479837.8	3768888	8.24E-05	1.65E-04
1549	479850.8	3768903	8.47E-05	1.69E-04
1550	479863.8	3768917	8.69E-05	1.74E-04
1551	479876.7	3768932	8.88E-05	1.78E-04
1552	479889.7	3768947	9.06E-05	1.81E-04
1553	479902.7	3768961	9.22E-05	1.84E-04
1554	479915.7	3768976	9.37E-05	1.87E-04
1555	479928.7	3768991	9.5E-05	1.90E-04
1556	479941.6	3769006	9.6E-05	1.92E-04

1557	479954.6	3769020	9.68E-05	1.94E-04
1558	479967.6	3769035	9.73E-05	1.95E-04
1559	479980.6	3769050	9.76E-05	1.95E-04
1560	479993.5	3769064	9.75E-05	1.95E-04
1561	480006.5	3769079	9.72E-05	1.94E-04
1562	480019.5	3769094	9.67E-05	1.93E-04
1563	480032.5	3769108	9.6E-05	1.92E-04
1564	480045.5	3769123	9.5E-05	1.90E-04
1565	480058.4	3769138	9.39E-05	1.88E-04
1566	480071.4	3769152	9.26E-05	1.85E-04
1567	480084.4	3769167	9.1E-05	1.82E-04
1568	480097.4	3769182	8.93E-05	1.79E-04
1569	480110.3	3769196	8.75E-05	1.75E-04
1570	480123.3	3769211	8.56E-05	1.71E-04
1571	478126.7	3768978	2.75E-05	5.51E-05
1572	478121.9	3768997	2.93E-05	5.85E-05
1573	477987.6	3768929	2.27E-05	4.55E-05
1574	478003.7	3768918	2.22E-05	4.43E-05
1575	478019.8	3768906	2.16E-05	4.31E-05
1576	478035.9	3768895	2.1E-05	4.20E-05
1577	478052	3768884	2.04E-05	4.08E-05
1578	478068.1	3768873	1.98E-05	3.97E-05
1579	478084.2	3768862	1.93E-05	3.85E-05
1580	478100.4	3768851	1.87E-05	3.74E-05
1581	478116.5	3768840	1.81E-05	3.63E-05
1582	478132.6	3768829	1.76E-05	3.52E-05
1583	478148.7	3768818	1.7E-05	3.41E-05
1584	478164.8	3768807	1.65E-05	3.30E-05
1585	478180.9	3768796	1.6E-05	3.20E-05
1586	478197	3768785	1.55E-05	3.10E-05
1587	478213.1	3768774	1.51E-05	3.01E-05
1588	478229.2	3768763	1.46E-05	2.93E-05
1589	478245.4	3768752	1.42E-05	2.85E-05
1590	478261.5	3768740	1.39E-05	2.77E-05
1591	478277.6	3768729	1.35E-05	2.71E-05
1592	478293.7	3768718	1.33E-05	2.65E-05
1593	478309.8	3768707	1.3E-05	2.60E-05
1594	478325.9	3768696	1.28E-05	2.56E-05
1595	478342	3768685	1.26E-05	2.53E-05
1596	478358.1	3768674	1.25E-05	2.50E-05
1597	478374.2	3768663	1.24E-05	2.49E-05
1598	478390.3	3768652	1.24E-05	2.48E-05
1599	478406.5	3768641	1.23E-05	2.47E-05
1600	478422.6	3768630	1.23E-05	2.47E-05
1601	478438.7	3768619	1.23E-05	2.47E-05
1602	478454.8	3768608	1.24E-05	2.47E-05
1603	478470.9	3768597	1.24E-05	2.48E-05
1604	478487	3768586	1.24E-05	2.49E-05
1605	478503.1	3768575	1.25E-05	2.50E-05
1606	478519.2	3768563	1.25E-05	2.50E-05
1607	478535.3	3768552	1.26E-05	2.51E-05
1608	478551.5	3768541	1.26E-05	2.52E-05

1609	478567.6	3768530	1.26E-05	2.52E-05
1610	478583.7	3768519	1.26E-05	2.52E-05
1611	478599.8	3768508	1.26E-05	2.52E-05
1612	478615.9	3768497	1.26E-05	2.52E-05
1613	478632	3768486	1.26E-05	2.52E-05
1614	478648.1	3768475	1.26E-05	2.51E-05
1615	478664.2	3768464	1.25E-05	2.50E-05
1616	478680.3	3768453	1.25E-05	2.49E-05
1617	478696.5	3768442	1.24E-05	2.48E-05
1618	478712.6	3768431	1.24E-05	2.47E-05
1619	478728.7	3768420	1.23E-05	2.46E-05
1620	478744.8	3768409	1.23E-05	2.45E-05
1621	478760.9	3768397	1.22E-05	2.44E-05
1622	478777	3768386	1.21E-05	2.42E-05
1623	478793.1	3768375	1.21E-05	2.41E-05
1624	478809.2	3768364	1.2E-05	2.40E-05
1625	478825.3	3768353	1.19E-05	2.39E-05
1626	478841.5	3768342	1.19E-05	2.37E-05
1627	478857.6	3768331	1.18E-05	2.37E-05
1628	478873.7	3768320	1.18E-05	2.36E-05
1629	478889.8	3768309	1.18E-05	2.35E-05
1630	478905.9	3768298	1.17E-05	2.35E-05
1631	478922	3768287	1.17E-05	2.34E-05
1632	478938.1	3768276	1.17E-05	2.34E-05
1633	478954.2	3768265	1.17E-05	2.34E-05
1634	478970.3	3768254	1.17E-05	2.34E-05
1635	478986.5	3768243	1.16E-05	2.32E-05
1636	479002.6	3768231	1.16E-05	2.32E-05
1637	479018.7	3768220	1.16E-05	2.33E-05
1638	479034.8	3768209	1.17E-05	2.33E-05
1639	479050.9	3768198	1.17E-05	2.34E-05
1640	479067	3768187	1.18E-05	2.35E-05
1641	479083.1	3768176	1.18E-05	2.35E-05
1642	479099.2	3768165	1.18E-05	2.36E-05
1643	479163.7	3768121	1.2E-05	2.39E-05
1644	479179.8	3768110	1.2E-05	2.40E-05
1645	479195.9	3768099	1.21E-05	2.41E-05
1646	479212	3768088	1.21E-05	2.43E-05
1647	479228.1	3768077	1.22E-05	2.44E-05
1648	479244.2	3768065	1.22E-05	2.45E-05
1649	479273.3	3768069	1.27E-05	2.53E-05
1650	479286.2	3768084	1.3E-05	2.61E-05
1651	479299.2	3768098	1.34E-05	2.68E-05
1652	479312.1	3768113	1.38E-05	2.76E-05
1653	479325.1	3768128	1.42E-05	2.84E-05
1654	479338	3768142	1.46E-05	2.93E-05
1655	479351	3768157	1.51E-05	3.01E-05
1656	479363.9	3768172	1.55E-05	3.10E-05
1657	479376.9	3768186	1.59E-05	3.19E-05
1658	479389.8	3768201	1.64E-05	3.28E-05
1659	479402.8	3768215	1.69E-05	3.37E-05
1660	479415.7	3768230	1.74E-05	3.47E-05

1661	479428.7	3768245	1.79E-05	3.57E-05
1662	479441.6	3768259	1.84E-05	3.68E-05
1663	479454.6	3768274	1.89E-05	3.79E-05
1664	479467.5	3768289	1.95E-05	3.90E-05
1665	479480.5	3768303	2.01E-05	4.02E-05
1666	479493.4	3768318	2.07E-05	4.15E-05
1667	479506.4	3768333	2.14E-05	4.28E-05
1668	479519.3	3768347	2.21E-05	4.42E-05
1669	479597	3768435	2.7E-05	5.41E-05
1670	479610	3768450	2.8E-05	5.60E-05
1671	479622.9	3768464	2.9E-05	5.80E-05
1672	479635.9	3768479	3E-05	6.01E-05
1673	479648.8	3768494	3.11E-05	6.22E-05
1674	479661.8	3768508	3.22E-05	6.45E-05
1675	479674.7	3768523	3.34E-05	6.68E-05
1676	479687.7	3768538	3.46E-05	6.92E-05
1677	479700.6	3768552	3.59E-05	7.18E-05
1678	479713.6	3768567	3.73E-05	7.45E-05
1679	479726.5	3768581	3.86E-05	7.73E-05
1680	479739.5	3768596	4.01E-05	8.01E-05
1681	479752.4	3768611	4.16E-05	8.32E-05
1682	479765.4	3768625	4.32E-05	8.64E-05
1683	479778.3	3768640	4.49E-05	8.97E-05
1684	479791.3	3768655	4.66E-05	9.32E-05
1685	479804.2	3768669	4.84E-05	9.67E-05
1686	479817.2	3768684	5.02E-05	1.00E-04
1687	479830.1	3768699	5.2E-05	1.04E-04
1688	479843.1	3768713	5.39E-05	1.08E-04
1689	479856	3768728	5.57E-05	1.11E-04
1690	479869	3768742	5.76E-05	1.15E-04
1691	479881.9	3768757	5.96E-05	1.19E-04
1692	479894.9	3768772	6.15E-05	1.23E-04
1693	479907.8	3768786	6.33E-05	1.27E-04
1694	479920.8	3768801	6.52E-05	1.30E-04
1695	479933.7	3768816	6.69E-05	1.34E-04
1696	479946.7	3768830	6.86E-05	1.37E-04
1697	479959.6	3768845	7.03E-05	1.41E-04
1698	479972.6	3768860	7.19E-05	1.44E-04
1699	479985.5	3768874	7.34E-05	1.47E-04
1700	479998.5	3768889	7.48E-05	1.50E-04
1701	480011.4	3768904	7.6E-05	1.52E-04
1702	480024.4	3768918	7.72E-05	1.54E-04
1703	480037.3	3768933	7.82E-05	1.56E-04
1704	480050.3	3768947	7.9E-05	1.58E-04
1705	480063.2	3768962	7.97E-05	1.59E-04
1706	480076.2	3768977	8.02E-05	1.60E-04
1707	480089.1	3768991	8.06E-05	1.61E-04
1708	480102.1	3769006	8.08E-05	1.62E-04
1709	480115	3769021	8.09E-05	1.62E-04
1710	480128	3769035	8.07E-05	1.61E-04
1711	480140.9	3769050	8.05E-05	1.61E-04
1712	480153.9	3769065	8E-05	1.60E-04

1713	480166.8	3769079	7.94E-05	1.59E-04
1714	480179.8	3769094	7.86E-05	1.57E-04
1715	480192.7	3769108	7.77E-05	1.55E-04
1716	480205.7	3769123	7.67E-05	1.53E-04
1717	480218.6	3769138	7.55E-05	1.51E-04
1718	480231.6	3769152	7.43E-05	1.49E-04
1719	480244.5	3769167	7.31E-05	1.46E-04
1720	480257.5	3769182	7.17E-05	1.43E-04
1721	480270.4	3769196	7.02E-05	1.40E-04
1722	480283.4	3769211	6.87E-05	1.37E-04
1723	477971.5	3768940	2.33E-05	4.67E-05
1724	477966.7	3768959	2.46E-05	4.92E-05
1725	477832.3	3768890	1.97E-05	3.93E-05
1726	477848.4	3768879	1.92E-05	3.85E-05
1727	477864.5	3768868	1.88E-05	3.76E-05
1728	477880.6	3768857	1.84E-05	3.68E-05
1729	477896.7	3768846	1.8E-05	3.59E-05
1730	477912.7	3768835	1.75E-05	3.51E-05
1731	477928.8	3768824	1.71E-05	3.42E-05
1732	477944.9	3768813	1.67E-05	3.34E-05
1733	477961	3768801	1.63E-05	3.25E-05
1734	477977.1	3768790	1.58E-05	3.17E-05
1735	477993.2	3768779	1.54E-05	3.08E-05
1736	478009.2	3768768	1.5E-05	3.00E-05
1737	478025.3	3768757	1.46E-05	2.91E-05
1738	478041.4	3768746	1.42E-05	2.83E-05
1739	478057.5	3768735	1.38E-05	2.75E-05
1740	478073.6	3768724	1.34E-05	2.68E-05
1741	478089.7	3768713	1.3E-05	2.60E-05
1742	478105.7	3768702	1.27E-05	2.53E-05
1743	478121.8	3768691	1.23E-05	2.46E-05
1744	478137.9	3768680	1.2E-05	2.40E-05
1745	478154	3768669	1.17E-05	2.34E-05
1746	478170.1	3768658	1.15E-05	2.29E-05
1747	478186.2	3768647	1.12E-05	2.24E-05
1748	478202.2	3768636	1.1E-05	2.20E-05
1749	478218.3	3768625	1.08E-05	2.17E-05
1750	478234.4	3768614	1.07E-05	2.14E-05
1751	478250.5	3768603	1.06E-05	2.12E-05
1752	478266.6	3768592	1.05E-05	2.10E-05
1753	478282.7	3768581	1.04E-05	2.08E-05
1754	478298.7	3768569	1.04E-05	2.07E-05
1755	478314.8	3768558	1.03E-05	2.07E-05
1756	478330.9	3768547	1.03E-05	2.07E-05
1757	478347	3768536	1.03E-05	2.07E-05
1758	478363.1	3768525	1.04E-05	2.07E-05
1759	478379.2	3768514	1.04E-05	2.08E-05
1760	478395.3	3768503	1.04E-05	2.09E-05
1761	478411.3	3768492	1.05E-05	2.09E-05
1762	478427.4	3768481	1.05E-05	2.10E-05
1763	478443.5	3768470	1.05E-05	2.11E-05
1764	478459.6	3768459	1.06E-05	2.11E-05

1765	478475.7	3768448	1.06E-05	2.12E-05
1766	478491.8	3768437	1.06E-05	2.13E-05
1767	478507.8	3768426	1.06E-05	2.13E-05
1768	478523.9	3768415	1.07E-05	2.13E-05
1769	478540	3768404	1.07E-05	2.13E-05
1770	478556.1	3768393	1.06E-05	2.13E-05
1771	478572.2	3768382	1.06E-05	2.13E-05
1772	478588.3	3768371	1.06E-05	2.13E-05
1773	478604.3	3768360	1.06E-05	2.12E-05
1774	478620.4	3768349	1.06E-05	2.11E-05
1775	478636.5	3768337	1.05E-05	2.11E-05
1776	478652.6	3768326	1.05E-05	2.10E-05
1777	478668.7	3768315	1.05E-05	2.09E-05
1778	478684.8	3768304	1.04E-05	2.08E-05
1779	478700.8	3768293	1.04E-05	2.07E-05
1780	478716.9	3768282	1.03E-05	2.06E-05
1781	478733	3768271	1.03E-05	2.05E-05
1782	478749.1	3768260	1.02E-05	2.05E-05
1783	478765.2	3768249	1.02E-05	2.03E-05
1784	478781.3	3768238	1.01E-05	2.03E-05
1785	478797.3	3768227	1.01E-05	2.02E-05
1786	478813.4	3768216	1.01E-05	2.01E-05
1787	478829.5	3768205	1E-05	2.01E-05
1788	478845.6	3768194	1E-05	2.00E-05
1789	478861.7	3768183	9.97E-06	1.99E-05
1790	478877.8	3768172	9.95E-06	1.99E-05
1791	478893.9	3768161	9.88E-06	1.98E-05
1792	478909.9	3768150	9.85E-06	1.97E-05
1793	478926	3768139	9.84E-06	1.97E-05
1794	478942.1	3768128	9.84E-06	1.97E-05
1795	478958.2	3768117	9.85E-06	1.97E-05
1796	478974.3	3768106	9.84E-06	1.97E-05
1797	478990.4	3768094	9.84E-06	1.97E-05
1798	479006.4	3768083	9.82E-06	1.96E-05
1799	479022.5	3768072	9.85E-06	1.97E-05
1800	479038.6	3768061	9.88E-06	1.98E-05
1801	479054.7	3768050	9.91E-06	1.98E-05
1802	479070.8	3768039	9.93E-06	1.99E-05
1803	479086.9	3768028	9.97E-06	1.99E-05
1804	479102.9	3768017	1E-05	2.00E-05
1805	479151.2	3767984	1.02E-05	2.04E-05
1806	479167.3	3767973	1.02E-05	2.05E-05
1807	479183.4	3767962	1.03E-05	2.06E-05
1808	479199.4	3767951	1.03E-05	2.07E-05
1809	479215.5	3767940	1.04E-05	2.08E-05
1810	479231.6	3767929	1.05E-05	2.09E-05
1811	479247.7	3767918	1.05E-05	2.10E-05
1812	479263.8	3767907	1.06E-05	2.11E-05
1813	479292.8	3767910	1.09E-05	2.18E-05
1814	479305.7	3767925	1.12E-05	2.24E-05
1815	479318.6	3767939	1.15E-05	2.30E-05
1816	479331.6	3767954	1.18E-05	2.36E-05

1817	479344.5	3767969	1.21E-05	2.43E-05
1818	479357.4	3767983	1.24E-05	2.49E-05
1819	479370.4	3767998	1.28E-05	2.55E-05
1820	479383.3	3768013	1.31E-05	2.62E-05
1821	479396.2	3768027	1.34E-05	2.69E-05
1822	479409.1	3768042	1.38E-05	2.76E-05
1823	479422.1	3768056	1.41E-05	2.83E-05
1824	479435	3768071	1.45E-05	2.90E-05
1825	479447.9	3768086	1.49E-05	2.97E-05
1826	479460.9	3768100	1.52E-05	3.04E-05
1827	479473.8	3768115	1.56E-05	3.12E-05
1828	479486.7	3768129	1.6E-05	3.20E-05
1829	479499.6	3768144	1.64E-05	3.28E-05
1830	479512.6	3768159	1.68E-05	3.37E-05
1831	479525.5	3768173	1.73E-05	3.45E-05
1832	479538.4	3768188	1.77E-05	3.55E-05
1833	479551.4	3768203	1.82E-05	3.64E-05
1834	479564.3	3768217	1.87E-05	3.74E-05
1835	479577.2	3768232	1.93E-05	3.85E-05
1836	479590.1	3768246	1.98E-05	3.96E-05
1837	479603.1	3768261	2.04E-05	4.08E-05
1838	479616	3768276	2.1E-05	4.20E-05
1839	479628.9	3768290	2.16E-05	4.33E-05
1840	479641.8	3768305	2.23E-05	4.46E-05
1841	479654.8	3768319	2.3E-05	4.59E-05
1842	479667.7	3768334	2.37E-05	4.74E-05
1843	479719.4	3768393	2.69E-05	5.37E-05
1844	479732.3	3768407	2.77E-05	5.54E-05
1845	479745.3	3768422	2.86E-05	5.71E-05
1846	479758.2	3768436	2.94E-05	5.89E-05
1847	479771.1	3768451	3.04E-05	6.08E-05
1848	479784.1	3768466	3.13E-05	6.27E-05
1849	479797	3768480	3.24E-05	6.47E-05
1850	479809.9	3768495	3.34E-05	6.68E-05
1851	479822.8	3768509	3.45E-05	6.90E-05
1852	479835.8	3768524	3.56E-05	7.13E-05
1853	479848.7	3768539	3.68E-05	7.37E-05
1854	479861.6	3768553	3.81E-05	7.62E-05
1855	479874.5	3768568	3.94E-05	7.88E-05
1856	479887.5	3768583	4.07E-05	8.14E-05
1857	479900.4	3768597	4.21E-05	8.42E-05
1858	479913.3	3768612	4.35E-05	8.70E-05
1859	479926.3	3768626	4.49E-05	8.98E-05
1860	479939.2	3768641	4.63E-05	9.26E-05
1861	479952.1	3768656	4.77E-05	9.54E-05
1862	479965	3768670	4.92E-05	9.83E-05
1863	479978	3768685	5.06E-05	1.01E-04
1864	479990.9	3768699	5.2E-05	1.04E-04
1865	480003.8	3768714	5.34E-05	1.07E-04
1866	480016.8	3768729	5.48E-05	1.10E-04
1867	480029.7	3768743	5.62E-05	1.12E-04
1868	480042.6	3768758	5.76E-05	1.15E-04

1869	480055.5	3768773	5.89E-05	1.18E-04
1870	480068.5	3768787	6.02E-05	1.20E-04
1871	480081.4	3768802	6.14E-05	1.23E-04
1872	480094.3	3768816	6.26E-05	1.25E-04
1873	480107.3	3768831	6.36E-05	1.27E-04
1874	480120.2	3768846	6.46E-05	1.29E-04
1875	480133.1	3768860	6.56E-05	1.31E-04
1876	480146	3768875	6.64E-05	1.33E-04
1877	480159	3768889	6.7E-05	1.34E-04
1878	480171.9	3768904	6.76E-05	1.35E-04
1879	480184.8	3768919	6.81E-05	1.36E-04
1880	480197.7	3768933	6.85E-05	1.37E-04
1881	480210.7	3768948	6.88E-05	1.38E-04
1882	480223.6	3768963	6.9E-05	1.38E-04
1883	480236.5	3768977	6.9E-05	1.38E-04
1884	480249.5	3768992	6.9E-05	1.38E-04
1885	480262.4	3769006	6.88E-05	1.38E-04
1886	480275.3	3769021	6.85E-05	1.37E-04
1887	480288.2	3769036	6.8E-05	1.36E-04
1888	480301.2	3769050	6.76E-05	1.35E-04
1889	480314.1	3769065	6.7E-05	1.34E-04
1890	480327	3769079	6.62E-05	1.32E-04
1891	480340	3769094	6.54E-05	1.31E-04
1892	480352.9	3769109	6.46E-05	1.29E-04
1893	480365.8	3769123	6.37E-05	1.27E-04
1894	480378.7	3769138	6.27E-05	1.25E-04
1895	480391.7	3769153	6.17E-05	1.23E-04
1896	480404.6	3769167	6.06E-05	1.21E-04
1897	480417.5	3769182	5.95E-05	1.19E-04
1898	480430.4	3769196	5.84E-05	1.17E-04
1899	480443.4	3769211	5.72E-05	1.14E-04
1900	477816.2	3768901	2.01E-05	4.02E-05
1901	477811.5	3768920	2.1E-05	4.20E-05
1902	477677.1	3768851	1.72E-05	3.44E-05
1903	477693.1	3768840	1.69E-05	3.38E-05
1904	477709.2	3768829	1.66E-05	3.31E-05
1905	477725.3	3768818	1.63E-05	3.25E-05
1906	477741.3	3768807	1.59E-05	3.19E-05
1907	477757.4	3768796	1.56E-05	3.12E-05
1908	477773.4	3768785	1.53E-05	3.06E-05
1909	477789.5	3768774	1.5E-05	2.99E-05
1910	477805.6	3768763	1.46E-05	2.93E-05
1911	477821.6	3768752	1.43E-05	2.87E-05
1912	477837.7	3768741	1.4E-05	2.80E-05
1913	477853.8	3768730	1.37E-05	2.73E-05
1914	477869.8	3768719	1.33E-05	2.67E-05
1915	477885.9	3768708	1.3E-05	2.60E-05
1916	477901.9	3768697	1.27E-05	2.54E-05
1917	477918	3768686	1.24E-05	2.47E-05
1918	477934.1	3768675	1.21E-05	2.41E-05
1919	477950.1	3768664	1.17E-05	2.35E-05
1920	477966.2	3768653	1.14E-05	2.29E-05

1921	477982.3	3768641	1.11E-05	2.23E-05
1922	477998.3	3768630	1.09E-05	2.17E-05
1923	478014.4	3768619	1.06E-05	2.12E-05
1924	478030.4	3768608	1.03E-05	2.07E-05
1925	478046.5	3768597	1.01E-05	2.02E-05
1926	478062.6	3768586	9.89E-06	1.98E-05
1927	478078.6	3768575	9.71E-06	1.94E-05
1928	478094.7	3768564	9.53E-06	1.91E-05
1929	478110.8	3768553	9.38E-06	1.88E-05
1930	478126.8	3768542	9.24E-06	1.85E-05
1931	478142.9	3768531	9.13E-06	1.83E-05
1932	478158.9	3768520	9.05E-06	1.81E-05
1933	478175	3768509	8.98E-06	1.80E-05
1934	478191.1	3768498	8.92E-06	1.78E-05
1935	478207.1	3768487	8.89E-06	1.78E-05
1936	478223.2	3768476	8.87E-06	1.77E-05
1937	478239.3	3768465	8.87E-06	1.77E-05
1938	478255.3	3768454	8.88E-06	1.78E-05
1939	478271.4	3768443	8.89E-06	1.78E-05
1940	478287.4	3768432	8.91E-06	1.78E-05
1941	478303.5	3768421	8.94E-06	1.79E-05
1942	478319.6	3768410	8.97E-06	1.79E-05
1943	478335.6	3768399	9.01E-06	1.80E-05
1944	478351.7	3768388	9.04E-06	1.81E-05
1945	478367.8	3768377	9.07E-06	1.81E-05
1946	478383.8	3768366	9.1E-06	1.82E-05
1947	478399.9	3768355	9.13E-06	1.83E-05
1948	478415.9	3768344	9.15E-06	1.83E-05
1949	478432	3768333	9.17E-06	1.83E-05
1950	478448.1	3768322	9.18E-06	1.84E-05
1951	478464.1	3768311	9.19E-06	1.84E-05
1952	478480.2	3768299	9.19E-06	1.84E-05
1953	478496.3	3768288	9.19E-06	1.84E-05
1954	478512.3	3768277	9.18E-06	1.84E-05
1955	478528.4	3768266	9.17E-06	1.83E-05
1956	478544.4	3768255	9.15E-06	1.83E-05
1957	478560.5	3768244	9.13E-06	1.83E-05
1958	478576.6	3768233	9.12E-06	1.82E-05
1959	478592.6	3768222	9.09E-06	1.82E-05
1960	478608.7	3768211	9.06E-06	1.81E-05
1961	478624.8	3768200	9.03E-06	1.81E-05
1962	478640.8	3768189	8.99E-06	1.80E-05
1963	478656.9	3768178	8.96E-06	1.79E-05
1964	478673	3768167	8.93E-06	1.79E-05
1965	478689	3768156	8.89E-06	1.78E-05
1966	478705.1	3768145	8.85E-06	1.77E-05
1967	478721.1	3768134	8.82E-06	1.76E-05
1968	478737.2	3768123	8.78E-06	1.76E-05
1969	478753.3	3768112	8.76E-06	1.75E-05
1970	478769.3	3768101	8.72E-06	1.74E-05
1971	478785.4	3768090	8.69E-06	1.74E-05
1972	478801.5	3768079	8.67E-06	1.73E-05

1973	478817.5	3768068	8.65E-06	1.73E-05
1974	478833.6	3768057	8.59E-06	1.72E-05
1975	478849.6	3768046	8.57E-06	1.71E-05
1976	478865.7	3768035	8.55E-06	1.71E-05
1977	478881.8	3768024	8.54E-06	1.71E-05
1978	478897.8	3768013	8.52E-06	1.70E-05
1979	478913.9	3768002	8.51E-06	1.70E-05
1980	478930	3767991	8.48E-06	1.70E-05
1981	478946	3767980	8.48E-06	1.70E-05
1982	478962.1	3767968	8.47E-06	1.69E-05
1983	478978.1	3767957	8.48E-06	1.70E-05
1984	478994.2	3767946	8.5E-06	1.70E-05
1985	479010.3	3767935	8.52E-06	1.70E-05
1986	479026.3	3767924	8.55E-06	1.71E-05
1987	479042.4	3767913	8.57E-06	1.71E-05
1988	479058.5	3767902	8.59E-06	1.72E-05
1989	479074.5	3767891	8.63E-06	1.73E-05
1990	479090.6	3767880	8.67E-06	1.73E-05
1991	479106.6	3767869	8.7E-06	1.74E-05
1992	479154.8	3767836	8.86E-06	1.77E-05
1993	479170.9	3767825	8.92E-06	1.78E-05
1994	479187	3767814	8.97E-06	1.79E-05
1995	479203	3767803	9.02E-06	1.80E-05
1996	479219.1	3767792	9.08E-06	1.82E-05
1997	479235.1	3767781	9.13E-06	1.83E-05
1998	479251.2	3767770	9.19E-06	1.84E-05
1999	479267.3	3767759	9.24E-06	1.85E-05
2000	479283.3	3767748	9.29E-06	1.86E-05
2001	479312.3	3767751	9.58E-06	1.92E-05
2002	479325.2	3767766	9.81E-06	1.96E-05
2003	479338.1	3767781	1.01E-05	2.01E-05
2004	479351	3767795	1.03E-05	2.06E-05
2005	479364	3767810	1.06E-05	2.11E-05
2006	479376.9	3767824	1.08E-05	2.16E-05
2007	479389.8	3767839	1.11E-05	2.22E-05
2008	479402.7	3767854	1.13E-05	2.27E-05
2009	479415.6	3767868	1.16E-05	2.32E-05
2010	479428.5	3767883	1.19E-05	2.38E-05
2011	479441.4	3767897	1.22E-05	2.43E-05
2012	479454.3	3767912	1.24E-05	2.49E-05
2013	479467.2	3767927	1.27E-05	2.54E-05
2014	479480.1	3767941	1.3E-05	2.60E-05
2015	479493.1	3767956	1.33E-05	2.66E-05
2016	479506	3767970	1.36E-05	2.71E-05
2017	479518.9	3767985	1.39E-05	2.77E-05
2018	479531.8	3768000	1.42E-05	2.84E-05
2019	479544.7	3768014	1.45E-05	2.90E-05
2020	479557.6	3768029	1.48E-05	2.96E-05
2021	479570.5	3768043	1.52E-05	3.03E-05
2022	479583.4	3768058	1.55E-05	3.10E-05
2023	479596.3	3768073	1.59E-05	3.17E-05
2024	479609.3	3768087	1.63E-05	3.25E-05

2025	479622.2	3768102	1.66E-05	3.33E-05
2026	479635.1	3768116	1.71E-05	3.41E-05
2027	479648	3768131	1.75E-05	3.50E-05
2028	479660.9	3768145	1.79E-05	3.59E-05
2029	479673.8	3768160	1.84E-05	3.69E-05
2030	479686.7	3768175	1.89E-05	3.78E-05
2031	479699.6	3768189	1.94E-05	3.89E-05
2032	479712.5	3768204	2E-05	3.99E-05
2033	479725.5	3768218	2.05E-05	4.10E-05
2034	479738.4	3768233	2.11E-05	4.21E-05
2035	479751.3	3768248	2.17E-05	4.33E-05
2036	479764.2	3768262	2.23E-05	4.45E-05
2037	479777.1	3768277	2.29E-05	4.58E-05
2038	479790	3768291	2.35E-05	4.71E-05
2039	479802.9	3768306	2.42E-05	4.84E-05
2040	479815.8	3768321	2.49E-05	4.97E-05
2041	479828.7	3768335	2.56E-05	5.11E-05
2042	479880.4	3768394	2.86E-05	5.71E-05
2043	479893.3	3768408	2.94E-05	5.88E-05
2044	479906.2	3768423	3.03E-05	6.06E-05
2045	479919.1	3768437	3.12E-05	6.24E-05
2046	479932	3768452	3.21E-05	6.43E-05
2047	479944.9	3768467	3.31E-05	6.62E-05
2048	479957.9	3768481	3.41E-05	6.82E-05
2049	479970.8	3768496	3.52E-05	7.03E-05
2050	479983.7	3768510	3.62E-05	7.24E-05
2051	479996.6	3768525	3.73E-05	7.46E-05
2052	480009.5	3768540	3.84E-05	7.68E-05
2053	480022.4	3768554	3.95E-05	7.90E-05
2054	480035.3	3768569	4.06E-05	8.12E-05
2055	480048.2	3768583	4.18E-05	8.35E-05
2056	480061.1	3768598	4.29E-05	8.58E-05
2057	480074	3768613	4.41E-05	8.81E-05
2058	480087	3768627	4.52E-05	9.04E-05
2059	480099.9	3768642	4.63E-05	9.26E-05
2060	480112.8	3768656	4.74E-05	9.48E-05
2061	480125.7	3768671	4.85E-05	9.71E-05
2062	480138.6	3768686	4.96E-05	9.92E-05
2063	480151.5	3768700	5.07E-05	1.01E-04
2064	480164.4	3768715	5.17E-05	1.03E-04
2065	480177.3	3768729	5.27E-05	1.05E-04
2066	480190.2	3768744	5.36E-05	1.07E-04
2067	480203.2	3768759	5.45E-05	1.09E-04
2068	480216.1	3768773	5.54E-05	1.11E-04
2069	480229	3768788	5.62E-05	1.12E-04
2070	480241.9	3768802	5.7E-05	1.14E-04
2071	480254.8	3768817	5.76E-05	1.15E-04
2072	480267.7	3768831	5.82E-05	1.16E-04
2073	480280.6	3768846	5.88E-05	1.18E-04
2074	480293.5	3768861	5.92E-05	1.18E-04
2075	480306.4	3768875	5.96E-05	1.19E-04
2076	480319.4	3768890	5.99E-05	1.20E-04

2077	480332.3	3768904	6.01E-05	1.20E-04
2078	480345.2	3768919	6.03E-05	1.21E-04
2079	480358.1	3768934	6.03E-05	1.21E-04
2080	480371	3768948	6.03E-05	1.21E-04
2081	480383.9	3768963	6.02E-05	1.20E-04
2082	480396.8	3768977	6E-05	1.20E-04
2083	480409.7	3768992	5.97E-05	1.19E-04
2084	480422.6	3769007	5.93E-05	1.19E-04
2085	480435.6	3769021	5.89E-05	1.18E-04
2086	480448.5	3769036	5.84E-05	1.17E-04
2087	480461.4	3769050	5.79E-05	1.16E-04
2088	480474.3	3769065	5.72E-05	1.14E-04
2089	480487.2	3769080	5.65E-05	1.13E-04
2090	480500.1	3769094	5.58E-05	1.12E-04
2091	480513	3769109	5.51E-05	1.10E-04
2092	480525.9	3769123	5.43E-05	1.09E-04
2093	480538.8	3769138	5.34E-05	1.07E-04
2094	480551.8	3769153	5.25E-05	1.05E-04
2095	480564.7	3769167	5.16E-05	1.03E-04
2096	480577.6	3769182	5.07E-05	1.01E-04
2097	480590.5	3769196	4.97E-05	9.95E-05
2098	480603.4	3769211	4.88E-05	9.76E-05
2099	477661	3768862	1.75E-05	3.51E-05
2100	477656.3	3768881	1.82E-05	3.65E-05
2101	478291.7	3768985	2.94E-05	5.89E-05
2102	478139.1	3768937	2.42E-05	4.84E-05
2103	477986.6	3768888	2.04E-05	4.08E-05
2104	477834	3768840	1.75E-05	3.50E-05
2105	477681.5	3768792	1.52E-05	3.05E-05
2106	478850.2	3769100	7.93E-05	1.59E-04
2107	478781.1	3769060	5.54E-05	1.11E-04
2108	478573.8	3768939	2.68E-05	5.35E-05
2109	478504.7	3768899	2.26E-05	4.52E-05
2110	478228.2	3768738	1.37E-05	2.75E-05
2111	478090	3768657	1.14E-05	2.29E-05
2112	477951.8	3768577	9.76E-06	1.95E-05
2113	477813.6	3768496	8.49E-06	1.70E-05
2114	479064	3769252	0.00099	1.98E-03
2115	479038.9	3769256	0.00084	1.68E-03
2116	479021.2	3769247	0.000619	1.24E-03
2117	479003.4	3769238	0.000475	9.51E-04
2118	478840.5	3769118	8.54E-05	1.71E-04
2119	478769.5	3769081	5.98E-05	1.20E-04
2120	478698.5	3769044	4.5E-05	9.00E-05
2121	478683.9	3769072	5.06E-05	1.01E-04
2122	478612.9	3769035	3.99E-05	7.98E-05
2123	478491.1	3768923	2.43E-05	4.86E-05
2124	478478.2	3768947	2.63E-05	5.27E-05
2125	478350.3	3768847	1.86E-05	3.71E-05
2126	478336.2	3768874	2.01E-05	4.02E-05
2127	478186.9	3768814	1.68E-05	3.37E-05
2128	478066.5	3768700	1.26E-05	2.52E-05

2129	478080.5	3768674	1.19E-05	2.38E-05
2130	477923.9	3768627	1.09E-05	2.17E-05
2131	477936.5	3768604	1.03E-05	2.07E-05
2132	477910.2	3768653	1.15E-05	2.30E-05
2133	477782.6	3768552	9.46E-06	1.89E-05
2134	477796.8	3768526	9E-06	1.80E-05
2135	477768.2	3768579	9.99E-06	2.00E-05
2136	479051.7	3769274	0.001358	2.72E-03
2137	479028.2	3769274	0.001065	2.13E-03
2138	479011.2	3769263	0.000748	1.50E-03
2139	478960.1	3769232	0.00034	6.79E-04
2140	478755.6	3769106	6.67E-05	1.33E-04
2141	479040.4	3769290	0.001835	3.67E-03
2142	478985.8	3769262	0.000613	1.23E-03
2143	478923	3769213	0.000232	4.64E-04
2144	478592.4	3768921	2.57E-05	5.13E-05
2145	478529.6	3768872	2.12E-05	4.24E-05
2146	478278.3	3768674	1.21E-05	2.41E-05
2147	478263.3	3768693	1.25E-05	2.49E-05
2148	478152.6	3768575	9.79E-06	1.96E-05
2149	478137.6	3768594	1.01E-05	2.02E-05
2150	478027	3768475	8.2E-06	1.64E-05
2151	478012	3768494	8.42E-06	1.68E-05
2152	477901.3	3768376	7.01E-06	1.40E-05
2153	477886.3	3768395	7.19E-06	1.44E-05
2154	479026.7	3769306	0.002596	5.19E-03
2155	479011.6	3769293	0.001479	2.96E-03
2156	478996.6	3769280	0.000939	1.88E-03
2157	478943.9	3769249	0.000395	7.91E-04
2158	478416.4	3768759	1.51E-05	3.03E-05
2159	478295.8	3768653	1.17E-05	2.34E-05
2160	478175.3	3768548	9.46E-06	1.89E-05
2161	478054.7	3768443	7.89E-06	1.58E-05
2162	478039.7	3768460	8.04E-06	1.61E-05
2163	477934.1	3768338	6.75E-06	1.35E-05
2164	477919.1	3768355	6.85E-06	1.37E-05
2165	479012.6	3769321	0.003225	6.45E-03
2166	478998.9	3769306	0.001812	3.62E-03
2167	478975.9	3769300	0.001239	2.48E-03
2168	478971.5	3769277	0.000736	1.47E-03
2169	478907.3	3769228	0.000257	5.14E-04
2170	478879.9	3769199	0.000173	3.46E-04
2171	478624.5	3768890	2.44E-05	4.87E-05
2172	478605.8	3768907	2.5E-05	5.00E-05
2173	478460	3768715	1.44E-05	2.89E-05
2174	478441.3	3768732	1.46E-05	2.93E-05
2175	478350.3	3768598	1.12E-05	2.23E-05
2176	478331.7	3768616	1.13E-05	2.26E-05
2177	478222	3768499	9.09E-06	1.82E-05
2178	478131	3768365	7.55E-06	1.51E-05
2179	478112.4	3768383	7.59E-06	1.52E-05
2180	478021.4	3768249	6.46E-06	1.29E-05

2181	478002.7	3768266	6.49E-06	1.30E-05
2182	478995.9	3769336	0.003465	6.93E-03
2183	478983.2	3769320	0.002066	4.13E-03
2184	478961.2	3769312	0.001376	2.75E-03
2185	478957.8	3769289	0.000846	1.69E-03
2186	478923	3769266	0.00046	9.20E-04
2187	478483.9	3768695	1.43E-05	2.86E-05
2188	478382.2	3768571	1.11E-05	2.22E-05
2189	478178.8	3768324	7.54E-06	1.51E-05
2190	478160.1	3768340	7.53E-06	1.51E-05
2191	478077	3768201	6.47E-06	1.29E-05
2192	478058.4	3768216	6.46E-06	1.29E-05
2193	478981.1	3769347	0.003392	6.78E-03
2194	478651.5	3768870	2.4E-05	4.81E-05
2195	478511.9	3768674	1.43E-05	2.86E-05
2196	478418.9	3768544	1.11E-05	2.22E-05
2197	478232.8	3768284	7.61E-06	1.52E-05
2198	478139.7	3768154	6.55E-06	1.31E-05
2199	478957.6	3769339	0.002143	4.29E-03
2200	478946.3	3769322	0.001432	2.86E-03
2201	478935	3769306	0.000971	1.94E-03
2202	478889.8	3769240	0.000279	5.58E-04
2203	478156.3	3768142	6.57E-06	1.31E-05
2204	478957	3769362	0.003149	6.30E-03
2205	478906.2	3769276	0.000496	9.91E-04
2206	478676.8	3768854	2.41E-05	4.82E-05
2207	478554.9	3768647	1.45E-05	2.89E-05
2208	478473.7	3768510	1.13E-05	2.26E-05
2209	478311.2	3768234	7.75E-06	1.55E-05
2210	478229.9	3768096	6.68E-06	1.34E-05
2211	478932.8	3769354	0.002096	4.19E-03
2212	478922.4	3769337	0.00146	2.92E-03
2213	478912	3769320	0.00103	2.06E-03
2214	478870.2	3769251	0.000301	6.01E-04
2215	478862.5	3769209	0.000182	3.63E-04
2216	478807.6	3769149	9.62E-05	1.92E-04
2217	478528.8	3768663	1.43E-05	2.87E-05
2218	478452.4	3768522	1.12E-05	2.24E-05
2219	478287.7	3768248	7.71E-06	1.54E-05
2220	478265.3	3768262	7.66E-06	1.53E-05
2221	478205.3	3768111	6.64E-06	1.33E-05
2222	478181.8	3768125	6.61E-06	1.32E-05
2223	478930.8	3769377	0.003121	6.24E-03
2224	478886.1	3769287	0.000534	1.07E-03
2225	478579.3	3768636	1.46E-05	2.92E-05
2226	478507.7	3768493	1.14E-05	2.29E-05
2227	478364.5	3768206	7.87E-06	1.57E-05
2228	478292.9	3768063	6.77E-06	1.35E-05
2229	478909.9	3769388	0.003184	6.37E-03
2230	478910.9	3769365	0.002095	4.19E-03
2231	478901.7	3769347	0.001468	2.94E-03
2232	478892.5	3769329	0.00105	2.10E-03

2233	478863.9	3769299	0.000572	1.14E-03
2234	478845.5	3769263	0.000324	6.49E-04
2235	478837.3	3769223	0.000194	3.89E-04
2236	478808.7	3769192	0.000135	2.71E-04
2237	478790.3	3769157	9.82E-05	1.96E-04
2238	478340.7	3768218	7.82E-06	1.56E-05
2239	478268.1	3768076	6.74E-06	1.35E-05
2240	478248.5	3768086	6.71E-06	1.34E-05
2241	478893.6	3769396	0.003159	6.32E-03
2242	478884.5	3769378	0.00216	4.32E-03
2243	478875.4	3769360	0.001523	3.05E-03
2244	478866.3	3769343	0.0011	2.20E-03
2245	478811.7	3769236	0.000211	4.21E-04
2246	478739	3769093	6.05E-05	1.21E-04
2247	478835.4	3769313	0.000619	1.24E-03
2248	478817.8	3769277	0.000356	7.12E-04
2249	478782.8	3769205	0.000145	2.90E-04
2250	478675	3768946	3.04E-05	6.08E-05
2251	478862.2	3769412	0.002887	5.77E-03
2252	478868.3	3769386	0.002159	4.32E-03
2253	478837.1	3769403	0.002097	4.19E-03
2254	478858.8	3769368	0.00155	3.10E-03
2255	478827.6	3769385	0.001593	3.19E-03
2256	478849.3	3769351	0.001133	2.27E-03
2257	478818.1	3769368	0.001203	2.41E-03
2258	478814.8	3769324	0.000661	1.32E-03
2259	478783.5	3769341	0.000721	1.44E-03
2260	478795.8	3769289	0.000387	7.74E-04
2261	478764.6	3769306	0.000433	8.66E-04
2262	478792.4	3769245	0.000225	4.50E-04
2263	478761.2	3769262	0.000254	5.09E-04
2264	478757.8	3769218	0.000158	3.15E-04
2265	478726.6	3769235	0.000177	3.54E-04
2266	478707.6	3769200	0.000123	2.46E-04
2267	478716.5	3769104	6.25E-05	1.25E-04
2268	478650.3	3768959	3.06E-05	6.12E-05
2269	478625	3768972	3.12E-05	6.24E-05
2270	478593.8	3768989	3.24E-05	6.48E-05
2271	478587	3768902	2.41E-05	4.83E-05
2272	478555.8	3768918	2.47E-05	4.94E-05
2273	478441.9	3768707	1.4E-05	2.81E-05
2274	478397.2	3768549	1.1E-05	2.19E-05
2275	478245.4	3768268	7.59E-06	1.52E-05
2276	478214.2	3768285	7.51E-06	1.50E-05
2277	478865.5	3769484	0.003235	6.47E-03
2278	478897.4	3769485	0.004001	8.00E-03
2279	478839.5	3769496	0.002518	5.04E-03
2280	478865	3769504	0.002612	5.22E-03
2281	478897	3769505	0.002877	5.75E-03
2282	478837.2	3769515	0.002097	4.19E-03
2283	478803	3769487	0.002159	4.32E-03
2284	478815.6	3769518	0.001892	3.78E-03

2285	478783	3769492	0.001911	3.82E-03
2286	478800.6	3769419	0.001852	3.70E-03
2287	478788.3	3769516	0.001735	3.47E-03
2288	478764.6	3769497	0.001713	3.43E-03
2289	478790.1	3769404	0.001521	3.04E-03
2290	478738	3769516	0.001427	2.85E-03
2291	478720.2	3769483	0.001405	2.81E-03
2292	478745.5	3769426	0.001367	2.73E-03
2293	478758.2	3769398	0.001188	2.38E-03
2294	478770.9	3769369	0.000955	1.91E-03
2295	478687.1	3769516	0.001174	2.35E-03
2296	478681.3	3769492	0.001179	2.36E-03
2297	478706.9	3769435	0.001162	2.32E-03
2298	478719.7	3769406	0.001038	2.08E-03
2299	478732.5	3769377	0.000861	1.72E-03
2300	478745.3	3769349	0.000673	1.35E-03
2301	478861.8	3769644	0.000341	6.82E-04
2302	478893.8	3769645	0.000321	6.42E-04
2303	478832.6	3769674	0.000264	5.29E-04
2304	478808	3769654	0.000352	7.03E-04
2305	478642.5	3769501	0.00101	2.02E-03
2306	478681.1	3769415	0.000915	1.83E-03
2307	478694	3769386	0.000781	1.56E-03
2308	478706.9	3769357	0.00063	1.26E-03
2309	478719.8	3769328	0.000486	9.72E-04
2310	478732.7	3769299	0.000364	7.28E-04
2311	478860.9	3769684	0.000229	4.58E-04
2312	478892.8	3769685	0.000224	4.47E-04
2313	478831.6	3769714	0.000184	3.68E-04
2314	478807	3769694	0.00023	4.59E-04
2315	478782.3	3769674	0.000302	6.05E-04
2316	478757.6	3769654	0.000406	8.13E-04
2317	478603.6	3769510	0.000876	1.75E-03
2318	478642.5	3769423	0.000813	1.63E-03
2319	478655.4	3769395	0.000711	1.42E-03
2320	478668.3	3769366	0.000589	1.18E-03
2321	478681.3	3769337	0.000466	9.32E-04
2322	478694.2	3769308	0.000358	7.16E-04
2323	478707.2	3769279	0.00027	5.40E-04
2324	478860	3769724	0.000167	3.34E-04
2325	478891.9	3769725	0.000167	3.33E-04
2326	478830.7	3769754	0.000138	2.76E-04
2327	478805.9	3769734	0.000163	3.25E-04
2328	478781.2	3769714	0.000202	4.05E-04
2329	478756.4	3769694	0.000264	5.27E-04
2330	478731.6	3769674	0.000349	6.98E-04
2331	478706.9	3769654	0.000454	9.08E-04
2332	478564.7	3769520	0.000771	1.54E-03
2333	478577.7	3769491	0.000789	1.58E-03
2334	478603.7	3769432	0.000726	1.45E-03
2335	478616.7	3769403	0.000648	1.30E-03
2336	478629.7	3769374	0.00055	1.10E-03

2337	478642.7	3769345	0.000447	8.94E-04
2338	478655.7	3769316	0.000351	7.01E-04
2339	478668.7	3769287	0.00027	5.40E-04
2340	478681.6	3769258	0.000206	4.12E-04
2341	478694.6	3769229	0.000158	3.16E-04
2342	478859	3769764	0.000129	2.58E-04
2343	478891	3769765	0.00013	2.60E-04
2344	478829.2	3769834	8.87E-05	1.77E-04
2345	478805.2	3769815	9.75E-05	1.95E-04
2346	478781.1	3769795	0.00011	2.20E-04
2347	478757.1	3769776	0.000129	2.57E-04
2348	478733	3769757	0.000157	3.14E-04
2349	478709	3769737	0.000198	3.96E-04
2350	478684.9	3769718	0.000253	5.07E-04
2351	478660.8	3769698	0.000322	6.43E-04
2352	478636.8	3769679	0.000397	7.95E-04
2353	478612.7	3769660	0.000473	9.47E-04
2354	478588.7	3769640	0.000541	1.08E-03
2355	478499.4	3769511	0.000629	1.26E-03
2356	478537.2	3769426	0.000552	1.10E-03
2357	478549.8	3769398	0.000492	9.84E-04
2358	478562.4	3769369	0.000422	8.44E-04
2359	478575.1	3769341	0.000351	7.02E-04
2360	478587.7	3769313	0.000284	5.69E-04
2361	478600.3	3769285	0.000226	4.53E-04
2362	478612.9	3769257	0.000179	3.58E-04
2363	478625.5	3769228	0.000142	2.84E-04
2364	478638.1	3769200	0.000113	2.27E-04
2365	478857.2	3769844	8.55E-05	1.71E-04
2366	478889.2	3769845	8.65E-05	1.73E-04
2367	478827.3	3769914	6.36E-05	1.27E-04
2368	478803	3769895	6.81E-05	1.36E-04
2369	478778.7	3769875	7.36E-05	1.47E-04
2370	478754.5	3769855	8.1E-05	1.62E-04
2371	478730.2	3769836	9.15E-05	1.83E-04
2372	478706	3769816	0.000107	2.14E-04
2373	478681.7	3769797	0.000129	2.59E-04
2374	478657.4	3769777	0.000161	3.22E-04
2375	478633.2	3769758	0.000202	4.03E-04
2376	478608.9	3769738	0.000252	5.03E-04
2377	478584.6	3769718	0.000308	6.15E-04
2378	478560.4	3769699	0.000365	7.30E-04
2379	478536.1	3769679	0.000419	8.39E-04
2380	478511.9	3769660	0.000465	9.29E-04
2381	478487.6	3769640	0.000497	9.95E-04
2382	478421.8	3769529	0.000518	1.04E-03
2383	478434.5	3769500	0.000515	1.03E-03
2384	478472.7	3769415	0.000427	8.54E-04
2385	478485.4	3769387	0.000377	7.54E-04
2386	478498.1	3769358	0.000324	6.47E-04
2387	478510.8	3769330	0.000271	5.41E-04
2388	478523.6	3769301	0.000222	4.44E-04

2389	478536.3	3769273	0.00018	3.59E-04
2390	478549	3769244	0.000145	2.90E-04
2391	478561.7	3769216	0.000117	2.35E-04
2392	478574.5	3769187	9.58E-05	1.92E-04
2393	478587.2	3769159	7.92E-05	1.58E-04
2394	478599.9	3769130	6.63E-05	1.33E-04
2395	478612.6	3769102	5.62E-05	1.12E-04
2396	478855.4	3769924	6.18E-05	1.24E-04
2397	478887.3	3769925	6.23E-05	1.25E-04
2398	478825.4	3769994	4.84E-05	9.67E-05
2399	478800.9	3769974	5.12E-05	1.02E-04
2400	478776.5	3769955	5.44E-05	1.09E-04
2401	478752.1	3769935	5.81E-05	1.16E-04
2402	478727.7	3769915	6.29E-05	1.26E-04
2403	478703.3	3769896	6.94E-05	1.39E-04
2404	478678.9	3769876	7.85E-05	1.57E-04
2405	478654.5	3769856	9.14E-05	1.83E-04
2406	478630.1	3769837	0.00011	2.19E-04
2407	478605.6	3769817	0.000134	2.68E-04
2408	478581.2	3769797	0.000165	3.31E-04
2409	478556.8	3769777	0.000203	4.06E-04
2410	478532.4	3769758	0.000246	4.92E-04
2411	478508	3769738	0.000291	5.81E-04
2412	478483.6	3769718	0.000334	6.68E-04
2413	478459.2	3769699	0.000373	7.46E-04
2414	478434.7	3769679	0.000405	8.09E-04
2415	478410.3	3769659	0.000426	8.53E-04
2416	478385.9	3769639	0.000437	8.75E-04
2417	478395.3	3769433	0.000373	7.47E-04
2418	478408.1	3769404	0.000337	6.74E-04
2419	478420.9	3769375	0.000297	5.93E-04
2420	478433.7	3769347	0.000255	5.11E-04
2421	478446.5	3769318	0.000215	4.31E-04
2422	478459.3	3769289	0.000179	3.58E-04
2423	478472.1	3769261	0.000147	2.94E-04
2424	478484.9	3769232	0.000121	2.42E-04
2425	478497.7	3769204	9.96E-05	1.99E-04
2426	478523.3	3769146	6.96E-05	1.39E-04
2427	478536.1	3769118	5.9E-05	1.18E-04
2428	478548.9	3769089	5.06E-05	1.01E-04
2429	478853.5	3770004	4.72E-05	9.44E-05
2430	478885.5	3770005	4.74E-05	9.48E-05
2431	478823.5	3770074	3.84E-05	7.67E-05
2432	478798.9	3770054	4.03E-05	8.06E-05
2433	478774.4	3770034	4.24E-05	8.49E-05
2434	478749.9	3770015	4.48E-05	8.96E-05
2435	478725.4	3769995	4.75E-05	9.50E-05
2436	478700.8	3769975	5.08E-05	1.02E-04
2437	478676.3	3769955	5.51E-05	1.10E-04
2438	478651.8	3769936	6.08E-05	1.22E-04
2439	478627.3	3769916	6.87E-05	1.37E-04
2440	478602.7	3769896	7.97E-05	1.59E-04

2441	478578.2	3769876	9.46E-05	1.89E-04
2442	478553.7	3769856	0.000114	2.28E-04
2443	478529.1	3769837	0.000139	2.78E-04
2444	478504.6	3769817	0.000168	3.37E-04
2445	478480.1	3769797	0.000201	4.02E-04
2446	478455.6	3769777	0.000236	4.73E-04
2447	478431	3769757	0.000272	5.43E-04
2448	478406.5	3769738	0.000305	6.09E-04
2449	478382	3769718	0.000333	6.66E-04
2450	478357.5	3769698	0.000356	7.11E-04
2451	478332.9	3769678	0.00037	7.40E-04
2452	478308.4	3769658	0.000377	7.55E-04
2453	478283.9	3769639	0.000377	7.53E-04
2454	478330.7	3769422	0.000303	6.06E-04
2455	478343.6	3769393	0.000272	5.44E-04
2456	478356.4	3769364	0.000239	4.79E-04
2457	478369.3	3769336	0.000206	4.13E-04
2458	478382.2	3769307	0.000175	3.51E-04
2459	478395	3769278	0.000147	2.95E-04
2460	478407.9	3769249	0.000123	2.46E-04
2461	478420.7	3769220	0.000103	2.06E-04
2462	478433.6	3769192	8.61E-05	1.72E-04
2463	478446.5	3769163	7.27E-05	1.45E-04
2464	478459.3	3769134	6.2E-05	1.24E-04
2465	478472.2	3769105	5.33E-05	1.07E-04
2466	478485.1	3769077	4.61E-05	9.23E-05
2467	478497.9	3769048	4.03E-05	8.05E-05
2468	478536.5	3768962	2.83E-05	5.66E-05
2469	478851.7	3770084	3.75E-05	7.50E-05
2470	478883.7	3770085	3.76E-05	7.52E-05
2471	478821.6	3770154	3.14E-05	6.29E-05
2472	478797	3770134	3.29E-05	6.57E-05
2473	478772.4	3770114	3.44E-05	6.87E-05
2474	478747.7	3770094	3.6E-05	7.20E-05
2475	478723.1	3770075	3.78E-05	7.56E-05
2476	478698.5	3770055	3.98E-05	7.97E-05
2477	478673.9	3770035	4.22E-05	8.45E-05
2478	478649.3	3770015	4.52E-05	9.04E-05
2479	478624.7	3769995	4.9E-05	9.81E-05
2480	478600.1	3769975	5.41E-05	1.08E-04
2481	478575.4	3769955	6.11E-05	1.22E-04
2482	478550.8	3769935	7.05E-05	1.41E-04
2483	478526.2	3769916	8.3E-05	1.66E-04
2484	478501.6	3769896	9.89E-05	1.98E-04
2485	478477	3769876	0.000119	2.37E-04
2486	478452.4	3769856	0.000142	2.84E-04
2487	478427.8	3769836	0.000168	3.37E-04
2488	478403.1	3769816	0.000197	3.93E-04
2489	478378.5	3769796	0.000225	4.51E-04
2490	478353.9	3769777	0.000253	5.06E-04
2491	478329.3	3769757	0.000278	5.56E-04
2492	478304.7	3769737	0.000299	5.98E-04

2493	478280.1	3769717	0.000315	6.30E-04
2494	478255.5	3769697	0.000325	6.50E-04
2495	478230.8	3769677	0.00033	6.59E-04
2496	478206.2	3769657	0.000328	6.57E-04
2497	478181.6	3769638	0.000322	6.45E-04
2498	478253.2	3769440	0.000273	5.45E-04
2499	478266.1	3769411	0.000249	4.98E-04
2500	478279	3769382	0.000223	4.46E-04
2501	478291.9	3769353	0.000196	3.93E-04
2502	478304.8	3769324	0.00017	3.41E-04
2503	478317.8	3769296	0.000146	2.92E-04
2504	478330.7	3769267	0.000124	2.48E-04
2505	478343.6	3769238	0.000105	2.10E-04
2506	478356.5	3769209	8.87E-05	1.77E-04
2507	478382.3	3769151	6.47E-05	1.29E-04
2508	478395.2	3769122	5.58E-05	1.12E-04
2509	478408.1	3769093	4.85E-05	9.70E-05
2510	478433.9	3769036	3.74E-05	7.48E-05
2511	478446.8	3769007	3.31E-05	6.62E-05
2512	478459.8	3768978	2.94E-05	5.89E-05
2513	478849.9	3770164	3.08E-05	6.16E-05
2514	478881.8	3770165	3.08E-05	6.17E-05
2515	478817.9	3770314	2.27E-05	4.54E-05
2516	478793.1	3770294	2.35E-05	4.70E-05
2517	478768.4	3770274	2.44E-05	4.87E-05
2518	478743.6	3770254	2.53E-05	5.06E-05
2519	478718.9	3770234	2.63E-05	5.26E-05
2520	478694.1	3770214	2.73E-05	5.47E-05
2521	478669.4	3770194	2.85E-05	5.70E-05
2522	478644.7	3770174	2.98E-05	5.95E-05
2523	478619.9	3770154	3.12E-05	6.24E-05
2524	478595.2	3770134	3.28E-05	6.56E-05
2525	478570.4	3770114	3.48E-05	6.95E-05
2526	478545.7	3770094	3.72E-05	7.45E-05
2527	478520.9	3770074	4.04E-05	8.08E-05
2528	478496.2	3770054	4.45E-05	8.91E-05
2529	478471.5	3770034	5E-05	9.99E-05
2530	478446.7	3770014	5.7E-05	1.14E-04
2531	478422	3769994	6.6E-05	1.32E-04
2532	478397.2	3769974	7.7E-05	1.54E-04
2533	478372.5	3769954	9.03E-05	1.81E-04
2534	478347.8	3769935	0.000106	2.12E-04
2535	478323	3769915	0.000123	2.47E-04
2536	478298.3	3769895	0.000142	2.84E-04
2537	478273.5	3769875	0.000162	3.23E-04
2538	478248.8	3769855	0.000181	3.63E-04
2539	478224	3769835	0.0002	4.01E-04
2540	478199.3	3769815	0.000218	4.35E-04
2541	478174.6	3769795	0.000232	4.65E-04
2542	478149.8	3769775	0.000244	4.88E-04
2543	478125.1	3769755	0.000253	5.05E-04
2544	478100.3	3769735	0.000258	5.15E-04

2545	478075.6	3769715	0.000259	5.18E-04
2546	478050.8	3769695	0.000257	5.14E-04
2547	478026.1	3769675	0.000252	5.05E-04
2548	478085.1	3769505	0.000237	4.74E-04
2549	478098.1	3769476	0.000225	4.49E-04
2550	478111	3769447	0.00021	4.20E-04
2551	478124	3769418	0.000193	3.87E-04
2552	478137	3769389	0.000176	3.51E-04
2553	478150	3769360	0.000157	3.15E-04
2554	478163	3769331	0.000139	2.78E-04
2555	478175.9	3769302	0.000122	2.44E-04
2556	478188.9	3769273	0.000106	2.12E-04
2557	478201.9	3769244	9.17E-05	1.83E-04
2558	478214.9	3769215	7.93E-05	1.59E-04
2559	478240.8	3769157	5.98E-05	1.20E-04
2560	478253.8	3769128	5.24E-05	1.05E-04
2561	478266.8	3769099	4.62E-05	9.24E-05
2562	478279.7	3769070	4.1E-05	8.19E-05
2563	478299.2	3769026	3.46E-05	6.91E-05
2564	478331.6	3768954	2.64E-05	5.28E-05
2565	478344.6	3768925	2.38E-05	4.77E-05
2566	478357.6	3768896	2.16E-05	4.32E-05
2567	478370.6	3768867	1.97E-05	3.94E-05
2568	478383.5	3768838	1.81E-05	3.63E-05
2569	478846.2	3770324	2.23E-05	4.46E-05
2570	478878.2	3770325	2.23E-05	4.46E-05
2571	478814.1	3770474	1.75E-05	3.51E-05
2572	478789.3	3770454	1.8E-05	3.61E-05
2573	478764.5	3770434	1.86E-05	3.72E-05
2574	478739.6	3770414	1.91E-05	3.83E-05
2575	478714.8	3770394	1.98E-05	3.95E-05
2576	478690	3770374	2.04E-05	4.08E-05
2577	478665.2	3770354	2.11E-05	4.22E-05
2578	478640.3	3770334	2.19E-05	4.37E-05
2579	478615.5	3770314	2.27E-05	4.53E-05
2580	478590.7	3770293	2.35E-05	4.71E-05
2581	478565.8	3770273	2.45E-05	4.89E-05
2582	478541	3770253	2.55E-05	5.10E-05
2583	478516.2	3770233	2.66E-05	5.33E-05
2584	478491.3	3770213	2.8E-05	5.61E-05
2585	478466.5	3770193	2.97E-05	5.94E-05
2586	478441.7	3770173	3.18E-05	6.36E-05
2587	478416.8	3770153	3.45E-05	6.89E-05
2588	478392	3770133	3.79E-05	7.57E-05
2589	478367.2	3770113	4.22E-05	8.44E-05
2590	478342.4	3770093	4.76E-05	9.52E-05
2591	478317.5	3770073	5.42E-05	1.08E-04
2592	478292.7	3770053	6.22E-05	1.24E-04
2593	478267.9	3770033	7.17E-05	1.43E-04
2594	478243	3770013	8.26E-05	1.65E-04
2595	478218.2	3769993	9.48E-05	1.90E-04
2596	478193.4	3769973	0.000108	2.16E-04

2597	478168.5	3769953	0.000122	2.44E-04
2598	478143.7	3769933	0.000136	2.73E-04
2599	478118.9	3769913	0.000151	3.01E-04
2600	478094	3769893	0.000164	3.28E-04
2601	478069.2	3769873	0.000176	3.53E-04
2602	478044.4	3769853	0.000187	3.75E-04
2603	478019.6	3769833	0.000196	3.93E-04
2604	477994.7	3769813	0.000203	4.07E-04
2605	477969.9	3769792	0.000208	4.16E-04
2606	477945.1	3769772	0.000211	4.22E-04
2607	477870.6	3769712	0.000206	4.11E-04
2608	477864.7	3769688	0.000205	4.10E-04
2609	477877.7	3769659	0.000207	4.14E-04
2610	477890.7	3769629	0.000208	4.16E-04
2611	477942.8	3769513	0.000189	3.79E-04
2612	477955.8	3769484	0.000179	3.59E-04
2613	477968.8	3769455	0.000168	3.37E-04
2614	477981.9	3769426	0.000156	3.12E-04
2615	477994.9	3769396	0.000143	2.86E-04
2616	478007.9	3769367	0.00013	2.59E-04
2617	478020.9	3769338	0.000116	2.33E-04
2618	478034	3769309	0.000104	2.07E-04
2619	478047	3769280	9.18E-05	1.84E-04
2620	478060	3769251	8.09E-05	1.62E-04
2621	478073	3769222	7.11E-05	1.42E-04
2622	478086	3769193	6.25E-05	1.25E-04
2623	478099.1	3769163	5.52E-05	1.10E-04
2624	478112.1	3769134	4.89E-05	9.78E-05
2625	478125.1	3769105	4.36E-05	8.72E-05
2626	478138.1	3769076	3.91E-05	7.81E-05
2627	478151.2	3769047	3.52E-05	7.05E-05
2628	478164.2	3769018	3.19E-05	6.38E-05
2629	478177.2	3768989	2.89E-05	5.79E-05
2630	478190.2	3768959	2.63E-05	5.26E-05
2631	478222.8	3768887	2.09E-05	4.18E-05
2632	478235.8	3768858	1.91E-05	3.82E-05
2633	478248.8	3768828	1.75E-05	3.50E-05
2634	478261.8	3768799	1.61E-05	3.23E-05
2635	478274.9	3768770	1.49E-05	2.99E-05
2636	478313.9	3768683	1.24E-05	2.49E-05
2637	478327	3768654	1.19E-05	2.38E-05
2638	478359.5	3768581	1.1E-05	2.20E-05
2639	478842.5	3770484	1.73E-05	3.46E-05
2640	478874.5	3770485	1.73E-05	3.46E-05
2641	478810.6	3770634	1.42E-05	2.84E-05
2642	478785.9	3770614	1.45E-05	2.91E-05
2643	478761.3	3770594	1.49E-05	2.98E-05
2644	478736.7	3770574	1.53E-05	3.05E-05
2645	478712.1	3770554	1.57E-05	3.13E-05
2646	478687.5	3770535	1.61E-05	3.22E-05
2647	478662.8	3770515	1.65E-05	3.30E-05
2648	478638.2	3770495	1.7E-05	3.40E-05

2649	478613.6	3770475	1.75E-05	3.51E-05
2650	478589	3770455	1.81E-05	3.62E-05
2651	478564.3	3770435	1.87E-05	3.73E-05
2652	478539.7	3770415	1.93E-05	3.85E-05
2653	478515.1	3770395	1.99E-05	3.98E-05
2654	478490.5	3770376	2.06E-05	4.12E-05
2655	478465.9	3770356	2.14E-05	4.27E-05
2656	478441.2	3770336	2.22E-05	4.44E-05
2657	478416.6	3770316	2.32E-05	4.63E-05
2658	478392	3770296	2.43E-05	4.86E-05
2659	478367.4	3770276	2.57E-05	5.14E-05
2660	478342.8	3770256	2.74E-05	5.48E-05
2661	478318.1	3770236	2.95E-05	5.91E-05
2662	478293.5	3770217	3.22E-05	6.44E-05
2663	478268.9	3770197	3.55E-05	7.09E-05
2664	478244.3	3770177	3.95E-05	7.89E-05
2665	478219.6	3770157	4.42E-05	8.85E-05
2666	478195	3770137	4.99E-05	9.98E-05
2667	478170.4	3770117	5.66E-05	1.13E-04
2668	478145.8	3770097	6.42E-05	1.28E-04
2669	478121.2	3770077	7.27E-05	1.45E-04
2670	478096.5	3770058	8.19E-05	1.64E-04
2671	478071.9	3770038	9.19E-05	1.84E-04
2672	478047.3	3770018	0.000102	2.05E-04
2673	478022.7	3769998	0.000113	2.26E-04
2674	477998	3769978	0.000124	2.47E-04
2675	477973.4	3769958	0.000134	2.68E-04
2676	477948.8	3769938	0.000143	2.87E-04
2677	477924.2	3769919	0.000152	3.04E-04
2678	477899.6	3769899	0.00016	3.19E-04
2679	477874.9	3769879	0.000166	3.32E-04
2680	477850.3	3769859	0.000171	3.42E-04
2681	477825.7	3769839	0.000174	3.49E-04
2682	477776.4	3769799	0.000177	3.54E-04
2683	477751.8	3769779	0.000176	3.52E-04
2684	477727.2	3769760	0.000173	3.47E-04
2685	477709	3769725	0.000171	3.43E-04
2686	477721.9	3769696	0.000173	3.46E-04
2687	477734.9	3769667	0.000174	3.47E-04
2688	477747.8	3769639	0.000173	3.45E-04
2689	477812.3	3769494	0.000148	2.95E-04
2690	477825.2	3769465	0.000139	2.78E-04
2691	477838.2	3769436	0.00013	2.60E-04
2692	477851.1	3769407	0.00012	2.41E-04
2693	477864	3769379	0.000111	2.21E-04
2694	477876.9	3769350	0.000101	2.01E-04
2695	477889.8	3769321	9.11E-05	1.82E-04
2696	477902.7	3769292	8.18E-05	1.64E-04
2697	477915.6	3769263	7.33E-05	1.47E-04
2698	477928.6	3769234	6.54E-05	1.31E-04
2699	477941.5	3769205	5.84E-05	1.17E-04
2700	477967.3	3769148	4.67E-05	9.35E-05

2701	477980.2	3769119	4.2E-05	8.40E-05
2702	477993.1	3769090	3.79E-05	7.59E-05
2703	478006	3769061	3.45E-05	6.89E-05
2704	478018.9	3769032	3.14E-05	6.29E-05
2705	478031.9	3769003	2.88E-05	5.76E-05
2706	478044.8	3768974	2.64E-05	5.29E-05
2707	478057.7	3768945	2.44E-05	4.87E-05
2708	478070.6	3768916	2.24E-05	4.49E-05
2709	478083.5	3768888	2.07E-05	4.14E-05
2710	478115.8	3768815	1.69E-05	3.39E-05
2711	478128.7	3768786	1.56E-05	3.13E-05
2712	478141.6	3768758	1.45E-05	2.90E-05
2713	478154.5	3768729	1.35E-05	2.69E-05
2714	478167.4	3768700	1.26E-05	2.51E-05
2715	478212.6	3768599	1.04E-05	2.07E-05
2716	478225.5	3768570	9.96E-06	1.99E-05
2717	478238.5	3768541	9.65E-06	1.93E-05
2718	478251.4	3768512	9.4E-06	1.88E-05
2719	478264.3	3768483	9.19E-06	1.84E-05
2720	478838.9	3770644	1.41E-05	2.81E-05
2721	478870.8	3770645	1.4E-05	2.81E-05
2722	478806.9	3770794	1.19E-05	2.38E-05
2723	478782.2	3770774	1.22E-05	2.43E-05
2724	478757.5	3770754	1.24E-05	2.48E-05
2725	478732.7	3770734	1.27E-05	2.53E-05
2726	478708	3770714	1.29E-05	2.58E-05
2727	478683.3	3770694	1.32E-05	2.64E-05
2728	478658.6	3770674	1.35E-05	2.70E-05
2729	478633.9	3770654	1.38E-05	2.77E-05
2730	478609.2	3770634	1.42E-05	2.84E-05
2731	478584.5	3770614	1.46E-05	2.92E-05
2732	478559.8	3770594	1.5E-05	3.00E-05
2733	478535.1	3770575	1.54E-05	3.08E-05
2734	478510.4	3770555	1.59E-05	3.17E-05
2735	478485.7	3770535	1.63E-05	3.26E-05
2736	478461	3770515	1.68E-05	3.36E-05
2737	478436.3	3770495	1.73E-05	3.46E-05
2738	478411.6	3770475	1.78E-05	3.57E-05
2739	478386.9	3770455	1.84E-05	3.68E-05
2740	478362.2	3770435	1.9E-05	3.81E-05
2741	478337.5	3770415	1.98E-05	3.96E-05
2742	478312.8	3770395	2.06E-05	4.13E-05
2743	478288.1	3770375	2.16E-05	4.33E-05
2744	478263.4	3770355	2.29E-05	4.57E-05
2745	478238.7	3770335	2.44E-05	4.87E-05
2746	478214	3770315	2.62E-05	5.24E-05
2747	478189.3	3770295	2.84E-05	5.68E-05
2748	478164.6	3770275	3.11E-05	6.22E-05
2749	478139.9	3770256	3.43E-05	6.86E-05
2750	478115.2	3770236	3.81E-05	7.61E-05
2751	478090.5	3770216	4.25E-05	8.50E-05
2752	478065.8	3770196	4.76E-05	9.51E-05

2753	478041.1	3770176	5.33E-05	1.07E-04
2754	478016.4	3770156	5.97E-05	1.19E-04
2755	477991.7	3770136	6.67E-05	1.33E-04
2756	477967	3770116	7.42E-05	1.48E-04
2757	477942.3	3770096	8.22E-05	1.64E-04
2758	477917.5	3770076	9.03E-05	1.81E-04
2759	477892.8	3770056	9.86E-05	1.97E-04
2760	477868.1	3770036	0.000107	2.14E-04
2761	477843.4	3770016	0.000115	2.29E-04
2762	477818.7	3769996	0.000122	2.44E-04
2763	477794	3769976	0.000129	2.58E-04
2764	477769.3	3769956	0.000135	2.70E-04
2765	477744.6	3769937	0.00014	2.80E-04
2766	477670.5	3769877	0.000149	2.99E-04
2767	477645.8	3769857	0.000151	3.01E-04
2768	477621.1	3769837	0.000151	3.01E-04
2769	477596.4	3769817	0.00015	2.99E-04
2770	477571.7	3769797	0.000148	2.95E-04
2771	477553.5	3769763	0.000146	2.92E-04
2772	477566.4	3769734	0.000147	2.95E-04
2773	477579.4	3769705	0.000148	2.96E-04
2774	477592.3	3769676	0.000147	2.95E-04
2775	477605.3	3769647	0.000146	2.92E-04
2776	477670.1	3769502	0.000124	2.48E-04
2777	477683	3769473	0.000117	2.34E-04
2778	477696	3769444	0.00011	2.20E-04
2779	477708.9	3769415	0.000102	2.05E-04
2780	477721.9	3769386	9.46E-05	1.89E-04
2781	477734.9	3769357	8.69E-05	1.74E-04
2782	477747.8	3769328	7.93E-05	1.59E-04
2783	477760.8	3769299	7.22E-05	1.44E-04
2784	477773.7	3769270	6.53E-05	1.31E-04
2785	477786.7	3769241	5.89E-05	1.18E-04
2786	477799.6	3769212	5.31E-05	1.06E-04
2787	477825.5	3769154	4.33E-05	8.67E-05
2788	477838.5	3769125	3.93E-05	7.85E-05
2789	477851.5	3769096	3.57E-05	7.15E-05
2790	477864.4	3769067	3.26E-05	6.52E-05
2791	477877.4	3769038	2.99E-05	5.98E-05
2792	477890.3	3769009	2.76E-05	5.52E-05
2793	477903.3	3768980	2.55E-05	5.10E-05
2794	477916.2	3768951	2.36E-05	4.73E-05
2795	477929.2	3768922	2.2E-05	4.39E-05
2796	477942.1	3768893	2.04E-05	4.09E-05
2797	477955.1	3768864	1.9E-05	3.80E-05
2798	477968	3768835	1.77E-05	3.54E-05
2799	478006.9	3768748	1.43E-05	2.85E-05
2800	478019.9	3768719	1.33E-05	2.66E-05
2801	478032.8	3768690	1.24E-05	2.48E-05
2802	478045.8	3768661	1.16E-05	2.32E-05
2803	478058.7	3768632	1.09E-05	2.17E-05
2804	478071.7	3768603	1.02E-05	2.05E-05

2805	478104.1	3768531	9.04E-06	1.81E-05
2806	478117	3768502	8.69E-06	1.74E-05
2807	478130	3768473	8.42E-06	1.68E-05
2808	478142.9	3768444	8.19E-06	1.64E-05
2809	478155.9	3768415	8.01E-06	1.60E-05
2810	478168.9	3768386	7.87E-06	1.57E-05
2811	478181.8	3768357	7.75E-06	1.55E-05
2812	478201.2	3768314	7.59E-06	1.52E-05
2813	478835.2	3770804	1.18E-05	2.36E-05
2814	478867.1	3770805	1.18E-05	2.36E-05
2815	478803.2	3770954	1.02E-05	2.05E-05
2816	478778.4	3770934	1.04E-05	2.08E-05
2817	478753.6	3770914	1.06E-05	2.12E-05
2818	478728.9	3770894	1.08E-05	2.16E-05
2819	478704.1	3770874	1.1E-05	2.19E-05
2820	478679.3	3770854	1.12E-05	2.24E-05
2821	478654.6	3770834	1.14E-05	2.28E-05
2822	478629.8	3770814	1.16E-05	2.33E-05
2823	478605	3770794	1.19E-05	2.38E-05
2824	478580.3	3770774	1.21E-05	2.43E-05
2825	478555.5	3770754	1.24E-05	2.49E-05
2826	478530.7	3770734	1.27E-05	2.55E-05
2827	478505.9	3770714	1.31E-05	2.61E-05
2828	478481.2	3770694	1.34E-05	2.68E-05
2829	478456.4	3770674	1.38E-05	2.75E-05
2830	478431.6	3770654	1.41E-05	2.82E-05
2831	478406.9	3770634	1.45E-05	2.90E-05
2832	478382.1	3770614	1.49E-05	2.97E-05
2833	478357.3	3770594	1.53E-05	3.05E-05
2834	478332.6	3770574	1.57E-05	3.14E-05
2835	478307.8	3770554	1.61E-05	3.23E-05
2836	478283	3770534	1.66E-05	3.33E-05
2837	478258.3	3770514	1.72E-05	3.44E-05
2838	478233.5	3770494	1.79E-05	3.57E-05
2839	478208.7	3770474	1.86E-05	3.72E-05
2840	478184	3770454	1.95E-05	3.91E-05
2841	478159.2	3770434	2.06E-05	4.13E-05
2842	478134.4	3770414	2.19E-05	4.39E-05
2843	478109.7	3770394	2.35E-05	4.70E-05
2844	478084.9	3770374	2.54E-05	5.08E-05
2845	478060.1	3770354	2.76E-05	5.52E-05
2846	478035.4	3770334	3.02E-05	6.04E-05
2847	478010.6	3770314	3.32E-05	6.65E-05
2848	477985.8	3770294	3.67E-05	7.35E-05
2849	477961.1	3770274	4.07E-05	8.14E-05
2850	477936.3	3770254	4.52E-05	9.03E-05
2851	477911.5	3770234	5.01E-05	1.00E-04
2852	477886.8	3770214	5.55E-05	1.11E-04
2853	477862	3770194	6.13E-05	1.23E-04
2854	477837.2	3770174	6.74E-05	1.35E-04
2855	477812.5	3770154	7.38E-05	1.48E-04
2856	477787.7	3770134	8.04E-05	1.61E-04

2857	477762.9	3770114	8.69E-05	1.74E-04
2858	477738.2	3770094	9.34E-05	1.87E-04
2859	477713.4	3770074	9.96E-05	1.99E-04
2860	477688.6	3770054	0.000106	2.11E-04
2861	477663.9	3770034	0.000111	2.22E-04
2862	477639.1	3770014	0.000116	2.32E-04
2863	477564.8	3769954	0.000127	2.53E-04
2864	477540	3769934	0.000129	2.58E-04
2865	477515.3	3769914	0.00013	2.60E-04
2866	477490.5	3769894	0.000131	2.61E-04
2867	477465.7	3769874	0.000131	2.61E-04
2868	477441	3769854	0.00013	2.59E-04
2869	477416.2	3769834	0.000128	2.56E-04
2870	477397.9	3769800	0.000127	2.53E-04
2871	477410.9	3769771	0.000128	2.55E-04
2872	477423.9	3769742	0.000128	2.56E-04
2873	477436.9	3769713	0.000128	2.55E-04
2874	477449.9	3769684	0.000127	2.53E-04
2875	477462.9	3769655	0.000125	2.50E-04
2876	477527.8	3769509	0.000106	2.12E-04
2877	477540.8	3769480	0.0001	2.01E-04
2878	477553.8	3769451	9.45E-05	1.89E-04
2879	477566.8	3769422	8.84E-05	1.77E-04
2880	477579.8	3769393	8.23E-05	1.65E-04
2881	477592.8	3769364	7.61E-05	1.52E-04
2882	477605.7	3769335	7.01E-05	1.40E-04
2883	477618.7	3769306	6.42E-05	1.28E-04
2884	477631.7	3769277	5.86E-05	1.17E-04
2885	477644.7	3769248	5.34E-05	1.07E-04
2886	477657.7	3769219	4.86E-05	9.72E-05
2887	477683.7	3769161	4.03E-05	8.05E-05
2888	477696.7	3769132	3.67E-05	7.34E-05
2889	477709.7	3769103	3.36E-05	6.72E-05
2890	477722.6	3769073	3.09E-05	6.17E-05
2891	477735.6	3769044	2.84E-05	5.69E-05
2892	477748.6	3769015	2.63E-05	5.26E-05
2893	477761.6	3768986	2.44E-05	4.89E-05
2894	477774.6	3768957	2.28E-05	4.55E-05
2895	477787.6	3768928	2.13E-05	4.25E-05
2896	477807.1	3768885	1.93E-05	3.86E-05
2897	477820.1	3768856	1.81E-05	3.61E-05
2898	477839.5	3768812	1.64E-05	3.28E-05
2899	477852.5	3768783	1.54E-05	3.08E-05
2900	477865.5	3768754	1.44E-05	2.89E-05
2901	477956.4	3768550	9.27E-06	1.85E-05
2902	477969.4	3768521	8.79E-06	1.76E-05
2903	477982.4	3768492	8.37E-06	1.67E-05
2904	477995.4	3768463	8.01E-06	1.60E-05
2905	478008.4	3768434	7.71E-06	1.54E-05
2906	478021.4	3768405	7.46E-06	1.49E-05
2907	478034.4	3768376	7.26E-06	1.45E-05
2908	478047.4	3768347	7.1E-06	1.42E-05

2909	478060.4	3768318	6.96E-06	1.39E-05
2910	478073.3	3768289	6.86E-06	1.37E-05
2911	478086.3	3768260	6.77E-06	1.35E-05
2912	478099.3	3768231	6.69E-06	1.34E-05
2913	478112.3	3768202	6.63E-06	1.33E-05
2914	478125.3	3768173	6.56E-06	1.31E-05
2915	478831.5	3770964	1.02E-05	2.03E-05
2916	478863.5	3770965	1.02E-05	2.03E-05
2917	478917.2	3769485	0.004537	9.07E-03
2918	478936.6	3769485	0.005043	1.01E-02
2919	478955.9	3769485	0.005413	1.08E-02
2920	478975.3	3769485	0.005626	1.13E-02
2921	478994.6	3769485	0.005672	1.13E-02
2922	479014	3769485	0.005524	1.10E-02
2923	479033.3	3769485	0.005146	1.03E-02
2924	479052.7	3769485	0.004645	9.29E-03
2925	478917.2	3769505	0.00299	5.98E-03
2926	478936.6	3769505	0.003022	6.04E-03
2927	478955.9	3769505	0.002991	5.98E-03
2928	478975.3	3769505	0.00294	5.88E-03
2929	478994.6	3769505	0.00287	5.74E-03
2930	479014	3769505	0.002786	5.57E-03
2931	479033.3	3769505	0.002662	5.32E-03
2932	479052.7	3769505	0.002492	4.98E-03
2933	478917.2	3769645	0.000317	6.34E-04
2934	478936.6	3769645	0.000318	6.36E-04
2935	478955.9	3769645	0.000321	6.43E-04
2936	478975.3	3769645	0.000325	6.50E-04
2937	478994.6	3769645	0.000327	6.54E-04
2938	479014	3769645	0.000327	6.55E-04
2939	479033.3	3769645	0.000324	6.48E-04
2940	479052.7	3769645	0.000317	6.35E-04
2941	478917.2	3769685	0.000225	4.49E-04
2942	478936.6	3769685	0.000226	4.53E-04
2943	478955.9	3769685	0.000229	4.58E-04
2944	478975.3	3769685	0.000231	4.63E-04
2945	478994.6	3769685	0.000233	4.65E-04
2946	479014	3769685	0.000233	4.65E-04
2947	479033.3	3769685	0.000231	4.62E-04
2948	479052.7	3769685	0.000228	4.56E-04
2949	478917.2	3769725	0.000169	3.37E-04
2950	478936.6	3769725	0.000171	3.41E-04
2951	478955.9	3769725	0.000173	3.45E-04
2952	478975.3	3769725	0.000174	3.48E-04
2953	478994.6	3769725	0.000174	3.48E-04
2954	479014	3769725	0.000174	3.47E-04
2955	479033.3	3769725	0.000172	3.45E-04
2956	479052.7	3769725	0.00017	3.41E-04
2957	478917.2	3769765	0.000132	2.64E-04
2958	478936.6	3769765	0.000133	2.66E-04
2959	478955.9	3769765	0.000134	2.69E-04
2960	478975.3	3769765	0.000135	2.70E-04

2961	478994.6	3769765	0.000135	2.71E-04
2962	479014	3769765	0.000135	2.70E-04
2963	479033.3	3769765	0.000134	2.68E-04
2964	479052.7	3769765	0.000132	2.65E-04
2965	479072	3769765	0.00013	2.61E-04
2966	478917.2	3769845	8.75E-05	1.75E-04
2967	478936.6	3769845	8.81E-05	1.76E-04
2968	478955.9	3769845	8.85E-05	1.77E-04
2969	478975.3	3769845	8.87E-05	1.77E-04
2970	478994.6	3769845	8.87E-05	1.77E-04
2971	479014	3769845	8.83E-05	1.77E-04
2972	479033.3	3769845	8.76E-05	1.75E-04
2973	479052.7	3769845	8.68E-05	1.74E-04
2974	479072	3769845	8.57E-05	1.71E-04
2975	478917.2	3769925	6.28E-05	1.26E-04
2976	478936.6	3769925	6.3E-05	1.26E-04
2977	478955.9	3769925	6.32E-05	1.26E-04
2978	478975.3	3769925	6.32E-05	1.26E-04
2979	478994.6	3769925	6.3E-05	1.26E-04
2980	479014	3769925	6.28E-05	1.26E-04
2981	479033.3	3769925	6.24E-05	1.25E-04
2982	479052.7	3769925	6.17E-05	1.23E-04
2983	479072	3769925	6.11E-05	1.22E-04
2984	478917.2	3770005	4.76E-05	9.53E-05
2985	478936.6	3770005	4.77E-05	9.54E-05
2986	478955.9	3770005	4.77E-05	9.55E-05
2987	478975.3	3770005	4.77E-05	9.54E-05
2988	478994.6	3770005	4.76E-05	9.51E-05
2989	479014	3770005	4.74E-05	9.47E-05
2990	479033.3	3770005	4.71E-05	9.41E-05
2991	479052.7	3770005	4.67E-05	9.34E-05
2992	479072	3770005	4.62E-05	9.25E-05
2993	478917.2	3770085	3.77E-05	7.54E-05
2994	478936.6	3770085	3.77E-05	7.55E-05
2995	478955.9	3770085	3.77E-05	7.54E-05
2996	478975.3	3770085	3.76E-05	7.53E-05
2997	478994.6	3770085	3.75E-05	7.51E-05
2998	479014	3770085	3.74E-05	7.47E-05
2999	479033.3	3770085	3.72E-05	7.43E-05
3000	479052.7	3770085	3.69E-05	7.38E-05
3001	479072	3770085	3.66E-05	7.31E-05
3002	478917.2	3770165	3.09E-05	6.17E-05
3003	478936.6	3770165	3.09E-05	6.17E-05
3004	478955.9	3770165	3.08E-05	6.17E-05
3005	478975.3	3770165	3.08E-05	6.15E-05
3006	478994.6	3770165	3.07E-05	6.13E-05
3007	479014	3770165	3.05E-05	6.11E-05
3008	479033.3	3770165	3.04E-05	6.07E-05
3009	479052.7	3770165	3.02E-05	6.03E-05
3010	479072	3770165	2.99E-05	5.99E-05
3011	478897.9	3770325	2.23E-05	4.46E-05
3012	478917.2	3770325	2.23E-05	4.46E-05

3013	478936.6	3770325	2.23E-05	4.45E-05
3014	478955.9	3770325	2.22E-05	4.45E-05
3015	478975.3	3770325	2.22E-05	4.44E-05
3016	478994.6	3770325	2.21E-05	4.42E-05
3017	479014	3770325	2.2E-05	4.40E-05
3018	479033.3	3770325	2.19E-05	4.38E-05
3019	479052.7	3770325	2.18E-05	4.35E-05
3020	479072	3770325	2.16E-05	4.32E-05
3021	478897.9	3770485	1.73E-05	3.46E-05
3022	478917.2	3770485	1.73E-05	3.45E-05
3023	478936.6	3770485	1.72E-05	3.45E-05
3024	478955.9	3770485	1.72E-05	3.44E-05
3025	478975.3	3770485	1.72E-05	3.43E-05
3026	478994.6	3770485	1.71E-05	3.42E-05
3027	479014	3770485	1.71E-05	3.41E-05
3028	479033.3	3770485	1.7E-05	3.40E-05
3029	479052.7	3770485	1.69E-05	3.38E-05
3030	479072	3770485	1.68E-05	3.36E-05
3031	478897.9	3770645	1.4E-05	2.81E-05
3032	478917.2	3770645	1.4E-05	2.80E-05
3033	478936.6	3770645	1.4E-05	2.80E-05
3034	478955.9	3770645	1.4E-05	2.79E-05
3035	478975.3	3770645	1.39E-05	2.79E-05
3036	478994.6	3770645	1.39E-05	2.78E-05
3037	479014	3770645	1.39E-05	2.77E-05
3038	479033.3	3770645	1.38E-05	2.76E-05
3039	479052.7	3770645	1.37E-05	2.75E-05
3040	479072	3770645	1.37E-05	2.74E-05
3041	478897.9	3770805	1.18E-05	2.36E-05
3042	478917.2	3770805	1.18E-05	2.35E-05
3043	478936.6	3770805	1.18E-05	2.35E-05
3044	478955.9	3770805	1.17E-05	2.35E-05
3045	478975.3	3770805	1.17E-05	2.34E-05
3046	478994.6	3770805	1.17E-05	2.34E-05
3047	479014	3770805	1.16E-05	2.33E-05
3048	479033.3	3770805	1.16E-05	2.32E-05
3049	479052.7	3770805	1.16E-05	2.31E-05
3050	479072	3770805	1.15E-05	2.30E-05
3051	478897.9	3770965	1.01E-05	2.03E-05
3052	478917.2	3770965	1.01E-05	2.03E-05
3053	478936.6	3770965	1.01E-05	2.02E-05
3054	478955.9	3770965	1.01E-05	2.02E-05
3055	478975.3	3770965	1.01E-05	2.02E-05
3056	478994.6	3770965	1.01E-05	2.01E-05
3057	479014	3770965	1E-05	2.01E-05
3058	479033.3	3770965	1E-05	2.00E-05
3059	479052.7	3770965	9.97E-06	1.99E-05
3060	479072	3770965	9.94E-06	1.99E-05
3061	479200.2	3769494	0.001224	2.45E-03
3062	479246.1	3769481	0.00107	2.14E-03
3063	479252.2	3769451	0.001385	2.77E-03
3064	479286.1	3769481	0.000821	1.64E-03

3065	479170.6	3769645	0.000243	4.87E-04
3066	479292.2	3769451	0.001008	2.02E-03
3067	479366.1	3769482	0.000517	1.03E-03
3068	479289.2	3769664	0.000159	3.17E-04
3069	479269.2	3769684	0.000146	2.93E-04
3070	479241.1	3769696	0.000145	2.90E-04
3071	479212.9	3769707	0.000144	2.88E-04
3072	479184.7	3769719	0.000143	2.86E-04
3073	479156.6	3769730	0.000142	2.84E-04
3074	479100.2	3769754	0.000135	2.70E-04
3075	479372.1	3769452	0.000604	1.21E-03
3076	479446.1	3769482	0.000355	7.10E-04
3077	479434.3	3769510	0.000318	6.37E-04
3078	479375.2	3769651	0.000147	2.93E-04
3079	479345.6	3769721	0.000103	2.05E-04
3080	479325.6	3769741	9.61E-05	1.92E-04
3081	479297.4	3769752	9.59E-05	1.92E-04
3082	479269.2	3769764	9.55E-05	1.91E-04
3083	479241.1	3769776	9.48E-05	1.90E-04
3084	479212.9	3769787	9.41E-05	1.88E-04
3085	479184.7	3769799	9.31E-05	1.86E-04
3086	479156.6	3769810	9.18E-05	1.84E-04
3087	479100.2	3769834	8.8E-05	1.76E-04
3088	479452.1	3769452	0.0004	7.99E-04
3089	479452.4	3769421	0.000452	9.04E-04
3090	479526.1	3769483	0.000258	5.16E-04
3091	479514.3	3769511	0.000237	4.74E-04
3092	479455.2	3769651	0.000126	2.51E-04
3093	479443.3	3769679	0.000109	2.18E-04
3094	479431.5	3769708	9.57E-05	1.91E-04
3095	479401.9	3769778	7.18E-05	1.44E-04
3096	479381.9	3769798	6.86E-05	1.37E-04
3097	479353.8	3769809	6.81E-05	1.36E-04
3098	479325.6	3769821	6.77E-05	1.35E-04
3099	479297.4	3769832	6.76E-05	1.35E-04
3100	479269.2	3769844	6.72E-05	1.34E-04
3101	479241.1	3769856	6.69E-05	1.34E-04
3102	479212.9	3769867	6.64E-05	1.33E-04
3103	479184.7	3769879	6.58E-05	1.32E-04
3104	479100.2	3769914	6.27E-05	1.25E-04
3105	479532.1	3769453	0.000283	5.66E-04
3106	479532.4	3769422	0.000313	6.26E-04
3107	479606.1	3769483	0.000194	3.89E-04
3108	479594.3	3769512	0.000182	3.63E-04
3109	479535.2	3769652	0.000108	2.16E-04
3110	479523.3	3769680	9.56E-05	1.91E-04
3111	479511.5	3769708	8.46E-05	1.69E-04
3112	479499.7	3769736	7.52E-05	1.50E-04
3113	479487.8	3769764	6.76E-05	1.35E-04
3114	479458.3	3769835	5.33E-05	1.07E-04
3115	479438.3	3769854	5.09E-05	1.02E-04
3116	479410.1	3769866	5.11E-05	1.02E-04

3117	479381.9	3769878	5.09E-05	1.02E-04
3118	479353.8	3769889	5.08E-05	1.02E-04
3119	479325.6	3769901	5.08E-05	1.02E-04
3120	479297.4	3769912	5.06E-05	1.01E-04
3121	479269.2	3769924	5.04E-05	1.01E-04
3122	479241.1	3769936	5.02E-05	1.00E-04
3123	479212.9	3769947	4.98E-05	9.97E-05
3124	479184.7	3769959	4.92E-05	9.85E-05
3125	479100.2	3769994	4.72E-05	9.43E-05
3126	479612.1	3769454	0.000211	4.22E-04
3127	479612.4	3769422	0.000231	4.61E-04
3128	479686.1	3769484	0.000151	3.02E-04
3129	479674.3	3769512	0.000142	2.83E-04
3130	479627	3769625	0.000103	2.06E-04
3131	479615.1	3769653	9.33E-05	1.87E-04
3132	479603.3	3769681	8.38E-05	1.68E-04
3133	479591.5	3769709	7.51E-05	1.50E-04
3134	479579.7	3769737	6.76E-05	1.35E-04
3135	479567.8	3769765	6.1E-05	1.22E-04
3136	479556	3769793	5.53E-05	1.11E-04
3137	479544.2	3769821	5.04E-05	1.01E-04
3138	479514.6	3769891	4.13E-05	8.27E-05
3139	479494.6	3769911	3.99E-05	7.99E-05
3140	479466.5	3769923	3.98E-05	7.95E-05
3141	479438.3	3769934	3.97E-05	7.93E-05
3142	479410.1	3769946	3.99E-05	7.98E-05
3143	479381.9	3769958	3.98E-05	7.96E-05
3144	479353.8	3769969	3.99E-05	7.97E-05
3145	479325.6	3769981	3.97E-05	7.94E-05
3146	479297.4	3769992	3.97E-05	7.93E-05
3147	479269.2	3770004	3.94E-05	7.89E-05
3148	479241.1	3770016	3.92E-05	7.85E-05
3149	479212.9	3770027	3.89E-05	7.79E-05
3150	479184.7	3770039	3.85E-05	7.71E-05
3151	479100.2	3770074	3.72E-05	7.43E-05
3152	479692.1	3769454	0.000163	3.25E-04
3153	479692.4	3769423	0.000177	3.54E-04
3154	479765.9	3769485	0.000123	2.45E-04
3155	479753.8	3769514	0.000116	2.32E-04
3156	479705.1	3769630	8.6E-05	1.72E-04
3157	479692.9	3769659	7.9E-05	1.58E-04
3158	479680.7	3769688	7.21E-05	1.44E-04
3159	479668.5	3769716	6.56E-05	1.31E-04
3160	479656.4	3769745	5.95E-05	1.19E-04
3161	479644.2	3769774	5.4E-05	1.08E-04
3162	479632	3769803	4.91E-05	9.82E-05
3163	479619.8	3769832	4.48E-05	8.96E-05
3164	479607.7	3769861	4.13E-05	8.26E-05
3165	479595.5	3769890	3.82E-05	7.65E-05
3166	479571.2	3769948	3.33E-05	6.66E-05
3167	479550.6	3769968	3.23E-05	6.46E-05
3168	479521.6	3769980	3.23E-05	6.47E-05

3169	479492.6	3769992	3.23E-05	6.45E-05
3170	479463.6	3770004	3.22E-05	6.45E-05
3171	479434.6	3770016	3.24E-05	6.48E-05
3172	479405.6	3770028	3.24E-05	6.47E-05
3173	479376.6	3770040	3.24E-05	6.48E-05
3174	479347.6	3770052	3.23E-05	6.46E-05
3175	479318.6	3770064	3.21E-05	6.43E-05
3176	479289.5	3770076	3.21E-05	6.41E-05
3177	479260.5	3770088	3.19E-05	6.37E-05
3178	479231.5	3770100	3.17E-05	6.35E-05
3179	479202.5	3770111	3.15E-05	6.29E-05
3180	479173.5	3770123	3.11E-05	6.23E-05
3181	479772.1	3769455	0.000131	2.62E-04
3182	479772.4	3769424	0.000141	2.82E-04
3183	479926	3769486	8.77E-05	1.75E-04
3184	479865.4	3769630	6.65E-05	1.33E-04
3185	479853.3	3769659	6.22E-05	1.24E-04
3186	479841.2	3769688	5.79E-05	1.16E-04
3187	479829.1	3769716	5.37E-05	1.07E-04
3188	479817	3769745	4.97E-05	9.94E-05
3189	479804.9	3769774	4.58E-05	9.16E-05
3190	479792.8	3769803	4.22E-05	8.45E-05
3191	479780.7	3769831	3.9E-05	7.81E-05
3192	479768.6	3769860	3.61E-05	7.22E-05
3193	479756.5	3769889	3.35E-05	6.69E-05
3194	479744.3	3769918	3.12E-05	6.24E-05
3195	479732.2	3769946	2.93E-05	5.85E-05
3196	479720.1	3769975	2.75E-05	5.50E-05
3197	479708	3770004	2.6E-05	5.19E-05
3198	479683.8	3770061	2.35E-05	4.70E-05
3199	479663.3	3770082	2.29E-05	4.59E-05
3200	479634.5	3770094	2.29E-05	4.59E-05
3201	479605.6	3770105	2.29E-05	4.59E-05
3202	479576.8	3770117	2.3E-05	4.60E-05
3203	479548	3770129	2.3E-05	4.60E-05
3204	479519.1	3770141	2.3E-05	4.60E-05
3205	479490.3	3770153	2.3E-05	4.60E-05
3206	479461.4	3770165	2.3E-05	4.60E-05
3207	479432.6	3770177	2.31E-05	4.61E-05
3208	479403.7	3770189	2.3E-05	4.61E-05
3209	479374.9	3770200	2.3E-05	4.60E-05
3210	479346.1	3770212	2.29E-05	4.58E-05
3211	479317.2	3770224	2.28E-05	4.56E-05
3212	479288.4	3770236	2.28E-05	4.55E-05
3213	479259.5	3770248	2.26E-05	4.53E-05
3214	479230.7	3770260	2.25E-05	4.50E-05
3215	479201.8	3770272	2.24E-05	4.48E-05
3216	479173	3770284	2.23E-05	4.45E-05
3217	479932.1	3769456	9.25E-05	1.85E-04
3218	479932.4	3769425	9.81E-05	1.96E-04
3219	480086	3769488	6.7E-05	1.34E-04
3220	480025.7	3769631	5.36E-05	1.07E-04

3221	480013.6	3769659	5.07E-05	1.01E-04
3222	480001.5	3769688	4.79E-05	9.57E-05
3223	479989.5	3769717	4.51E-05	9.02E-05
3224	479977.4	3769745	4.23E-05	8.46E-05
3225	479965.4	3769774	3.97E-05	7.93E-05
3226	479953.3	3769803	3.71E-05	7.42E-05
3227	479941.2	3769831	3.47E-05	6.93E-05
3228	479929.2	3769860	3.24E-05	6.47E-05
3229	479917.1	3769889	3.02E-05	6.04E-05
3230	479905	3769917	2.82E-05	5.65E-05
3231	479893	3769946	2.65E-05	5.30E-05
3232	479880.9	3769974	2.5E-05	4.99E-05
3233	479868.9	3770003	2.35E-05	4.71E-05
3234	479856.8	3770032	2.23E-05	4.46E-05
3235	479844.7	3770060	2.12E-05	4.24E-05
3236	479832.7	3770089	2.03E-05	4.05E-05
3237	479820.6	3770118	1.94E-05	3.88E-05
3238	479796.5	3770175	1.79E-05	3.58E-05
3239	479776.1	3770195	1.76E-05	3.52E-05
3240	479747.3	3770207	1.76E-05	3.52E-05
3241	479718.6	3770219	1.76E-05	3.52E-05
3242	479689.9	3770231	1.76E-05	3.52E-05
3243	479661.1	3770243	1.76E-05	3.52E-05
3244	479632.4	3770254	1.76E-05	3.53E-05
3245	479603.7	3770266	1.76E-05	3.52E-05
3246	479574.9	3770278	1.77E-05	3.53E-05
3247	479546.2	3770290	1.77E-05	3.54E-05
3248	479517.5	3770302	1.77E-05	3.53E-05
3249	479488.7	3770314	1.77E-05	3.53E-05
3250	479460	3770325	1.77E-05	3.54E-05
3251	479431.2	3770337	1.77E-05	3.53E-05
3252	479402.5	3770349	1.76E-05	3.53E-05
3253	479373.8	3770361	1.76E-05	3.52E-05
3254	479345	3770373	1.75E-05	3.51E-05
3255	479316.3	3770385	1.75E-05	3.49E-05
3256	479287.6	3770396	1.74E-05	3.48E-05
3257	479258.8	3770408	1.74E-05	3.47E-05
3258	479230.1	3770420	1.73E-05	3.46E-05
3259	479201.3	3770432	1.72E-05	3.44E-05
3260	479100.8	3770473	1.69E-05	3.38E-05
3261	480092.1	3769457	7E-05	1.40E-04
3262	480092.4	3769426	7.38E-05	1.48E-04
3263	480246	3769489	5.37E-05	1.07E-04
3264	480185.8	3769632	4.44E-05	8.87E-05
3265	480173.8	3769660	4.24E-05	8.47E-05
3266	480161.8	3769689	4.04E-05	8.09E-05
3267	480149.7	3769717	3.85E-05	7.70E-05
3268	480137.7	3769746	3.65E-05	7.31E-05
3269	480125.7	3769774	3.46E-05	6.93E-05
3270	480113.7	3769803	3.28E-05	6.56E-05
3271	480101.6	3769832	3.1E-05	6.20E-05
3272	480089.6	3769860	2.92E-05	5.85E-05

3273	480077.6	3769889	2.76E-05	5.51E-05
3274	480065.5	3769917	2.6E-05	5.19E-05
3275	480053.5	3769946	2.45E-05	4.89E-05
3276	480041.5	3769974	2.31E-05	4.61E-05
3277	480029.5	3770003	2.18E-05	4.36E-05
3278	480017.4	3770032	2.07E-05	4.14E-05
3279	480005.4	3770060	1.97E-05	3.93E-05
3280	479993.4	3770089	1.87E-05	3.74E-05
3281	479981.3	3770117	1.79E-05	3.58E-05
3282	479969.3	3770146	1.72E-05	3.43E-05
3283	479957.3	3770174	1.65E-05	3.30E-05
3284	479945.2	3770203	1.59E-05	3.18E-05
3285	479933.2	3770231	1.54E-05	3.07E-05
3286	479909.2	3770289	1.44E-05	2.88E-05
3287	479888.8	3770309	1.42E-05	2.84E-05
3288	479860.2	3770321	1.42E-05	2.84E-05
3289	479831.5	3770332	1.42E-05	2.84E-05
3290	479802.8	3770344	1.42E-05	2.85E-05
3291	479774.2	3770356	1.42E-05	2.85E-05
3292	479745.5	3770368	1.42E-05	2.85E-05
3293	479716.9	3770380	1.42E-05	2.85E-05
3294	479688.2	3770391	1.42E-05	2.85E-05
3295	479659.5	3770403	1.42E-05	2.85E-05
3296	479630.9	3770415	1.43E-05	2.85E-05
3297	479602.2	3770427	1.42E-05	2.85E-05
3298	479573.6	3770439	1.43E-05	2.85E-05
3299	479544.9	3770450	1.43E-05	2.86E-05
3300	479516.2	3770462	1.43E-05	2.85E-05
3301	479487.6	3770474	1.43E-05	2.85E-05
3302	479458.9	3770486	1.43E-05	2.86E-05
3303	479430.3	3770498	1.42E-05	2.85E-05
3304	479401.6	3770509	1.42E-05	2.84E-05
3305	479373	3770521	1.42E-05	2.84E-05
3306	479344.3	3770533	1.41E-05	2.83E-05
3307	479315.6	3770545	1.41E-05	2.82E-05
3308	479272.6	3770563	1.41E-05	2.81E-05
3309	479100.7	3770633	1.38E-05	2.75E-05
3310	480252.1	3769459	5.59E-05	1.12E-04
3311	480252.4	3769427	5.85E-05	1.17E-04
3312	480405.9	3769490	4.47E-05	8.93E-05
3313	480357.1	3769606	3.9E-05	7.81E-05
3314	480345	3769635	3.76E-05	7.52E-05
3315	480332.8	3769664	3.62E-05	7.23E-05
3316	480320.6	3769693	3.47E-05	6.94E-05
3317	480308.4	3769722	3.33E-05	6.65E-05
3318	480296.2	3769751	3.18E-05	6.36E-05
3319	480284	3769780	3.04E-05	6.07E-05
3320	480271.8	3769809	2.9E-05	5.79E-05
3321	480259.6	3769838	2.76E-05	5.52E-05
3322	480247.4	3769866	2.63E-05	5.26E-05
3323	480235.2	3769895	2.5E-05	4.99E-05
3324	480223.1	3769924	2.37E-05	4.74E-05

3325	480210.9	3769953	2.25E-05	4.49E-05
3326	480198.7	3769982	2.13E-05	4.26E-05
3327	480186.5	3770011	2.02E-05	4.04E-05
3328	480174.3	3770040	1.92E-05	3.84E-05
3329	480162.1	3770069	1.83E-05	3.66E-05
3330	480149.9	3770098	1.74E-05	3.48E-05
3331	480137.7	3770127	1.66E-05	3.33E-05
3332	480125.5	3770156	1.59E-05	3.19E-05
3333	480113.4	3770185	1.53E-05	3.06E-05
3334	480101.2	3770214	1.47E-05	2.94E-05
3335	480089	3770243	1.42E-05	2.84E-05
3336	480076.8	3770272	1.37E-05	2.74E-05
3337	480064.6	3770301	1.33E-05	2.65E-05
3338	480052.4	3770330	1.29E-05	2.58E-05
3339	480021.9	3770402	1.21E-05	2.41E-05
3340	480001.3	3770422	1.19E-05	2.38E-05
3341	479972.3	3770434	1.19E-05	2.38E-05
3342	479943.2	3770446	1.19E-05	2.38E-05
3343	479914.2	3770458	1.19E-05	2.39E-05
3344	479885.2	3770470	1.19E-05	2.39E-05
3345	479856.1	3770482	1.19E-05	2.39E-05
3346	479827.1	3770494	1.19E-05	2.39E-05
3347	479798	3770506	1.19E-05	2.39E-05
3348	479769	3770518	1.19E-05	2.39E-05
3349	479740	3770530	1.19E-05	2.39E-05
3350	479710.9	3770542	1.19E-05	2.39E-05
3351	479681.9	3770554	1.19E-05	2.39E-05
3352	479652.8	3770566	1.19E-05	2.39E-05
3353	479623.8	3770578	1.19E-05	2.39E-05
3354	479594.8	3770590	1.19E-05	2.39E-05
3355	479565.7	3770602	1.2E-05	2.39E-05
3356	479536.7	3770614	1.19E-05	2.39E-05
3357	479507.6	3770626	1.19E-05	2.39E-05
3358	479478.6	3770638	1.19E-05	2.39E-05
3359	479449.6	3770650	1.19E-05	2.39E-05
3360	479420.5	3770662	1.19E-05	2.38E-05
3361	479391.5	3770674	1.19E-05	2.38E-05
3362	479347.9	3770692	1.18E-05	2.37E-05
3363	479101.1	3770793	1.16E-05	2.32E-05
3364	480412.1	3769460	4.64E-05	9.27E-05
3365	480412.4	3769429	4.84E-05	9.67E-05
3366	480565.9	3769491	3.83E-05	7.65E-05
3367	480553.8	3769520	3.72E-05	7.45E-05
3368	480505.2	3769636	3.28E-05	6.57E-05
3369	480493	3769665	3.17E-05	6.34E-05
3370	480480.9	3769693	3.06E-05	6.11E-05
3371	480468.7	3769722	2.94E-05	5.88E-05
3372	480456.6	3769751	2.83E-05	5.66E-05
3373	480444.4	3769780	2.72E-05	5.44E-05
3374	480432.3	3769809	2.61E-05	5.23E-05
3375	480420.1	3769838	2.51E-05	5.01E-05
3376	480408	3769866	2.4E-05	4.80E-05

3377	480395.8	3769895	2.3E-05	4.60E-05
3378	480383.7	3769924	2.2E-05	4.40E-05
3379	480371.5	3769953	2.1E-05	4.20E-05
3380	480359.4	3769982	2.01E-05	4.01E-05
3381	480347.2	3770011	1.91E-05	3.83E-05
3382	480335.1	3770040	1.83E-05	3.65E-05
3383	480322.9	3770068	1.74E-05	3.49E-05
3384	480310.8	3770097	1.66E-05	3.33E-05
3385	480298.6	3770126	1.59E-05	3.18E-05
3386	480286.5	3770155	1.53E-05	3.05E-05
3387	480274.3	3770184	1.46E-05	2.93E-05
3388	480262.2	3770213	1.41E-05	2.81E-05
3389	480250	3770242	1.35E-05	2.71E-05
3390	480237.9	3770270	1.31E-05	2.61E-05
3391	480225.7	3770299	1.26E-05	2.53E-05
3392	480213.6	3770328	1.22E-05	2.45E-05
3393	480201.4	3770357	1.19E-05	2.37E-05
3394	480189.3	3770386	1.15E-05	2.31E-05
3395	480177.1	3770415	1.12E-05	2.25E-05
3396	480165	3770443	1.09E-05	2.19E-05
3397	480140.7	3770501	1.05E-05	2.09E-05
3398	480114.1	3770536	1.02E-05	2.05E-05
3399	480085.1	3770548	1.02E-05	2.05E-05
3400	480056.2	3770560	1.03E-05	2.05E-05
3401	480027.2	3770572	1.03E-05	2.05E-05
3402	479998.3	3770584	1.03E-05	2.05E-05
3403	479969.3	3770596	1.03E-05	2.05E-05
3404	479940.4	3770608	1.03E-05	2.05E-05
3405	479911.4	3770619	1.03E-05	2.05E-05
3406	479882.5	3770631	1.03E-05	2.05E-05
3407	479853.6	3770643	1.03E-05	2.05E-05
3408	479824.6	3770655	1.03E-05	2.05E-05
3409	479795.7	3770667	1.03E-05	2.05E-05
3410	479766.7	3770679	1.03E-05	2.05E-05
3411	479737.8	3770691	1.03E-05	2.05E-05
3412	479708.8	3770703	1.03E-05	2.05E-05
3413	479679.9	3770715	1.03E-05	2.05E-05
3414	479650.9	3770727	1.03E-05	2.06E-05
3415	479622	3770739	1.03E-05	2.05E-05
3416	479593	3770751	1.03E-05	2.05E-05
3417	479564.1	3770763	1.03E-05	2.06E-05
3418	479535.2	3770774	1.03E-05	2.05E-05
3419	479506.2	3770786	1.03E-05	2.05E-05
3420	479477.3	3770798	1.03E-05	2.06E-05
3421	479448.3	3770810	1.03E-05	2.05E-05
3422	479390.4	3770834	1.02E-05	2.04E-05
3423	479173.3	3770923	1.01E-05	2.01E-05
3424	480572.1	3769461	3.96E-05	7.91E-05
3425	480572.4	3769430	4.11E-05	8.22E-05

PM 10				
Tons/Yr	T2	T3	T4i	
Year 1	0.02	0	0	0
Year 2	0.04	0	0	0
Year 3	0	0	0	0
Year 4	0	0	0	0

Hotel	3755.4	0.609089
Pad A	961	0.155865
Pad B	1449.2	0.235046
Total	6165.6	1

PM 10				
Lbs /Yr	T2	T3	T4i	0
Year 1	40	0	0	0
Year 2	80	0	0	0
Year 3	0	0	0	0
Year 4	0	0	0	0

PM 10				
% Chng	T2	T3	T4i	0
Year 1	100%	0%	0%	0%
Year 2	100%	0%	0%	0%
Year 3	0%	0%	0%	0%
Year 4	0%	0%	0%	0%

HARP Adjustment						
24	X	7	X	52	=	3.88
9		5		50		

```

** Lakes Environmental AERMOD MPI
**
*****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 13.0.0
** Lakes Environmental Software Inc.
** Date: 8/3/2025
** File: D:\LSA\2025\20242064\Construction\Construction.ADI
**
*****
**
**
*****
** AERMOD Control Pathway
*****
**
**
CO STARTING
  TITLEONE D:\LSA\2025\20242064\Construction\Construction.isc
  MODELOPT DFAULT CONC
  AVERTIME 1 PERIOD
  URBANOPT 2193656
  POLLUTID OTHER
  RUNORNOT RUN
  ERRORFIL Construction.err
CO FINISHED
**
*****
** AERMOD Source Pathway
*****
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
  LOCATION HOTEL      AREAPOLY   478965.632  3769448.258      352.140
  LOCATION PAD_A      AREAPOLY   479066.107  3769414.830      353.000
  LOCATION PADB       AREAPOLY   479103.355  3769355.615      353.780
** Source Parameters **
  SRCPARAM HOTEL      0.0001621897      3.048      8
  AREAVERT HOTEL      478965.632  3769448.258  478965.632  3769417.886
  AREAVERT HOTEL      478994.475  3769402.796  479022.746  3769400.695
  AREAVERT HOTEL      479050.061  3769400.695  479051.589  3769403.369
  AREAVERT HOTEL      479051.780  3769446.157  479049.106  3769447.685
  SRCPARAM PAD_A      0.0001621901      3.048      4
  AREAVERT PAD_A      479066.107  3769414.830  479095.332  3769414.830
  AREAVERT PAD_A      479094.759  3769381.975  479065.151  3769382.357
  SRCPARAM PADB       0.0001621943      3.048      4
  AREAVERT PADB       479103.355  3769355.615  479102.782  3769309.771
  AREAVERT PADB       479089.029  3769312.254  479051.780  3769357.716
  URBANSRC ALL
** Variable Emissions Type: "By Hour / Day (HRDOW)"
** Variable Emission Scenario: "Const"
** WeekDays:
  EMISFACT HOTEL      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
  EMISFACT HOTEL      HRDOW 1.0 1.0 1.0 1.0 1.0 1.0
  EMISFACT HOTEL      HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
  EMISFACT HOTEL      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
  EMISFACT HOTEL      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0

```

```

EMISFACT HOTEL      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT HOTEL      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT HOTEL      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
EMISFACT HOTEL      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT HOTEL      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT HOTEL      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT HOTEL      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
EMISFACT PAD_A      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAD_A      HRDOW 1.0 1.0 1.0 1.0 1.0 1.0
EMISFACT PAD_A      HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT PAD_A      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
EMISFACT PAD_A      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAD_A      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAD_A      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAD_A      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
EMISFACT PAD_A      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAD_A      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAD_A      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAD_A      HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** WeekDays:
EMISFACT PADB       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PADB       HRDOW 1.0 1.0 1.0 1.0 1.0 1.0
EMISFACT PADB       HRDOW 1.0 1.0 1.0 0.0 0.0 0.0
EMISFACT PADB       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Saturday:
EMISFACT PADB       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PADB       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PADB       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PADB       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
** Sunday:
EMISFACT PADB       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PADB       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PADB       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PADB       HRDOW 0.0 0.0 0.0 0.0 0.0 0.0
SRCGROUP ALL
SO FINISHED
**
*****
** AERMOD Receptor Pathway
*****
**
**
RE STARTING
  INCLUDED Construction.rou
RE FINISHED
**
*****
** AERMOD Meteorology Pathway
*****
**
**
ME STARTING
SURFFILE "..\Redland Met\RDLD_V11_trimmed.sfc"
PROFFILE "..\Redland Met\RDLD_V11_trimmed.PFL"
SURFDATA 3102 2018
UAIRDATA 3190 2018
SITEDATA 60714003 2018
PROFBASE 475.0 METERS

```

```
ME FINISHED
**
*****
** AERMOD Output Pathway
*****
**
**
OU STARTING
  RECTABLE ALLAVE 1ST
  RECTABLE 1 1ST
** Auto-Generated Plotfiles
  PLOTFILE 1 ALL 1ST Construction.AD\01H1GALL.PLT 31
  PLOTFILE PERIOD ALL Construction.AD\PE00GALL.PLT 32
  SUMMFILE Construction.sum
OU FINISHED
```

*** Message Summary For AERMOD Model Setup ***

----- Summary of Total Messages -----

```
A Total of      0 Fatal Error Message(s)
A Total of      2 Warning Message(s)
A Total of      0 Informational Message(s)
```

```
***** FATAL ERROR MESSAGES *****
      ***   NONE   ***
```

```
***** WARNING MESSAGES *****
ME W186      124      MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used      0.50
ME W187      124      MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
```

```
*****
*** SETUP Finishes Successfully ***
*****
```


*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** MODEL SETUP OPTIONS SUMMARY ***

** Model Options Selected:

- * Model Uses Regulatory DEFAULT Options
- * Model Is Setup For Calculation of Average CONCentration Values.
- * NO GAS DEPOSITION Data Provided.
- * NO PARTICLE DEPOSITION Data Provided.
- * Model Uses NO DRY DEPLETION. DDPLETE = F
- * Model Uses NO WET DEPLETION. WETDPLT = F
- * Stack-tip Downwash.
- * Model Accounts for ELEVated Terrain Effects.
- * Use Calms Processing Routine.
- * Use Missing Data Processing Routine.
- * No Exponential Decay.
- * Model Uses URBAN Dispersion Algorithm for the SBL for 3 Source(s),
for Total of 1 Urban Area(s):
Urban Population = 2193656.0 ; Urban Roughness Length = 1.000 m
- * Urban Roughness Length of 1.0 Meter Used.
- * ADJ_U* - Use ADJ_U* option for SBL in AERMET
- * CCVR_Sub - Meteorological data includes CCVR substitutions
- * TEMP_Sub - Meteorological data includes TEMP substitutions
- * Model Assumes No FLAGPOLE Receptor Heights.
- * The User Specified a Pollutant Type of: OTHER

**Model Calculates 1 Short Term Average(s) of: 1-HR
and Calculates PERIOD Averages

**This Run Includes: 3 Source(s); 1 Source Group(s); and 3425 Receptor(s)

with: 0 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 0 VOLUME source(s)
and: 3 AREA type source(s)
and: 0 LINE source(s)
and: 0 RLINE/RLINEXT source(s)
and: 0 OPENPIT source(s)
and: 0 BUOYANT LINE source(s) with a total of 0 line(s)
and: 0 SWPOINT source(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 22112

**Output Options Selected:

- Model Outputs Tables of PERIOD Averages by Receptor
- Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
- Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)
- Model Outputs Separate Summary File of High Ranked Values (SUMMFILE Keyword)

**NOTE: The Following Flags May Appear Following CONC Values: c for Calm Hours
m for Missing Hours
b for Both Calm and Missing Hours

**Misc. Inputs: Base Elev. for Pot. Temp. Profile (m MSL) = 475.00 ; Decay Coef. = 0.000 ; Rot. Angle = 0.0
Emission Units = GRAMS/SEC ; Emission Rate Unit Factor = 0.10000E+07

Output Units = MICROGRAMS/M**3

**Approximate Storage Requirements of Model = 3.9 MB of RAM.

**Input Runstream File: aermod.inp

**Output Print File: aermod.out

**Detailed Error/Message File: Construction.err

**File for Summary of Results: Construction.sum

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** AREAPOLY SOURCE DATA ***

SOURCE	NUMBER	EMISSION RATE	LOCATION OF AREA		BASE	RELEASE	NUMBER	INIT.	URBAN	EMISSION RATE	AIRCRAFT
ID	PART.	(GRAMS/SEC	X	Y	ELEV.	HEIGHT	OF VERTS.	SZ	SOURCE	SCALAR VARY	
	CATS.	/METER**2)	(METERS)	(METERS)	(METERS)	(METERS)		(METERS)		BY	
HOTEL	0	0.16219E-03	478965.6	3769448.3	352.1	3.05	8	0.00	YES	HRDOW	NO
PAD_A	0	0.16219E-03	479066.1	3769414.8	353.0	3.05	4	0.00	YES	HRDOW	NO
PAD_B	0	0.16219E-03	479103.4	3769355.6	353.8	3.05	4	0.00	YES	HRDOW	NO

*** AERMOD - VERSION 24142 ***
*** AERMET - VERSION 22112 ***

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
-----	-----
ALL	
HOTEL	
, PAD_A	
, PADB	
,	

*** AERMOD - VERSION 24142 ***
*** AERMET - VERSION 22112 ***

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*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** SOURCE IDs DEFINED AS URBAN SOURCES ***

URBAN ID	URBAN POP	SOURCE IDs
-----	-----	-----
2193656.	HOTEL	, PAD_A , PADB ,

*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = HOTEL ; SOURCE TYPE = AREAPOLY :															
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.1000E+01	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = PAD_A ; SOURCE TYPE = AREAPOLY :															
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.1000E+01	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW) *

SOURCE ID = PADB ; SOURCE TYPE = AREAPOLY :															
HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR	HRDOW	SCALAR
DAY OF WEEK = WEEKDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.1000E+01	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SATURDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = SUNDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00	14	.0000E+00	15	.0000E+00	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

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*** MODELOPTs:      RegDFAULT  CONC  ELEV  URBAN  ADJ  U*
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[illegible]

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54, 3.09, 5.14, 8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

 *** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: ..\Redland Met\RDLD_V11_trimmed.sfc
Profile file: ..\Redland Met\RDLD_V11_trimmed.PFL
Surface format: FREE
Profile format: FREE
Surface station no.: 3102
 Name: UNKNOWN
 Year: 2018

Upper air station no.: 3190
 Name: UNKNOWN
 Year: 2018

Met Version: 22112

First 24 hours of scalar data					H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O	LEN	Z0	BOWEN	ALBEDO	REF	WS	WD	HT	REF	TA	HT
YR	MO	DY	JDY	HR																		
18	01	01	1	01	-3.0	0.077	-9.000	-9.000	-999.	51.	13.2	0.07	3.55	1.00	1.00	106.	10.0	280.6	9.0			
18	01	01	1	02	-3.2	0.079	-9.000	-9.000	-999.	53.	13.4	0.07	3.55	1.00	1.04	108.	10.0	280.4	9.0			
18	01	01	1	03	-3.2	0.080	-9.000	-9.000	-999.	54.	13.4	0.07	3.55	1.00	1.05	101.	10.0	280.6	9.0			
18	01	01	1	04	-3.8	0.085	-9.000	-9.000	-999.	59.	14.0	0.07	3.55	1.00	1.14	100.	10.0	281.3	9.0			
18	01	01	1	05	-3.3	0.080	-9.000	-9.000	-999.	55.	13.5	0.07	3.55	1.00	1.06	103.	10.0	280.6	9.0			
18	01	01	1	06	-4.2	0.089	-9.000	-9.000	-999.	63.	14.5	0.07	3.55	1.00	1.21	103.	10.0	280.3	9.0			
18	01	01	1	07	-3.8	0.086	-9.000	-9.000	-999.	60.	14.1	0.07	3.55	1.00	1.15	102.	10.0	280.3	9.0			
18	01	01	1	08	-1.8	0.067	-9.000	-9.000	-999.	41.	14.3	0.07	3.55	0.54	0.91	99.	10.0	282.0	9.0			
18	01	01	1	09	45.8	0.078	0.526	0.019	109.	52.	-1.0	0.07	3.55	0.33	0.50	122.	10.0	286.0	9.0			
18	01	01	1	10	105.5	0.246	0.845	0.012	197.	293.	-12.2	0.41	3.55	0.26	1.33	189.	7.9	291.9	9.0			
18	01	01	1	11	145.4	0.136	1.094	0.011	311.	126.	-1.5	0.08	3.55	0.23	0.91	307.	10.0	293.6	9.0			
18	01	01	1	12	163.8	0.170	1.275	0.008	436.	169.	-2.6	0.06	3.55	0.22	1.41	290.	10.0	293.8	9.0			
18	01	01	1	13	47.9	0.103	0.874	0.008	480.	80.	-2.0	0.07	3.55	0.22	0.76	242.	10.0	295.5	9.0			
18	01	01	1	14	41.0	0.076	0.851	0.007	515.	51.	-1.0	0.08	3.55	0.24	0.47	308.	10.0	296.5	9.0			
18	01	01	1	15	96.2	0.117	1.179	0.007	585.	97.	-1.4	0.07	3.55	0.27	0.82	265.	10.0	297.2	9.0			
18	01	01	1	16	36.3	0.127	0.867	0.006	618.	108.	-4.8	0.08	3.55	0.36	1.05	323.	10.0	296.7	9.0			
18	01	01	1	17	-1.1	0.058	-9.000	-9.000	-999.	35.	15.5	0.07	3.55	0.65	0.52	105.	10.0	294.9	9.0			
18	01	01	1	18	-1.7	0.065	-9.000	-9.000	-999.	40.	14.1	0.07	3.55	1.00	0.67	110.	10.0	291.0	9.0			
18	01	01	1	19	-3.0	0.077	-9.000	-9.000	-999.	51.	13.3	0.07	3.55	1.00	1.00	100.	10.0	288.4	9.0			
18	01	01	1	20	-3.0	0.077	-9.000	-9.000	-999.	51.	13.3	0.07	3.55	1.00	1.00	99.	10.0	287.0	9.0			
18	01	01	1	21	-3.2	0.079	-9.000	-9.000	-999.	54.	13.5	0.07	3.55	1.00	1.05	108.	10.0	286.0	9.0			
18	01	01	1	22	-2.2	0.069	-9.000	-9.000	-999.	44.	13.3	0.07	3.55	1.00	0.81	111.	10.0	285.1	9.0			
18	01	01	1	23	-3.9	0.087	-9.000	-9.000	-999.	61.	14.3	0.07	3.55	1.00	1.17	102.	10.0	284.9	9.0			
18	01	01	1	24	-3.3	0.081	-9.000	-9.000	-999.	55.	13.6	0.07	3.55	1.00	1.07	108.	10.0	284.7	9.0			

First hour of profile data					HEIGHT	F	WDIR	WSPD	AMB	TMP	sigmaA	sigmaW	sigmaV
18	01	01	01		9.0	0	-999.	-99.00	280.6	99.0	-99.00	-99.00	
18	01	01	01		10.0	1	106.	1.00	-999.0	99.0	-99.00	-99.00	

F indicates top of profile (=1) or below (=0)

*** MODELOPTs: RegDFault CONC ELEV URBAN ADJ U*

*** THE SUMMARY OF MAXIMUM PERIOD (43800 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC					RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)					OF TYPE	NETWORK GRID-ID
ALL	1ST HIGHEST VALUE IS	44.81637	AT (	479085.48,	3769432.66,	353.19,	353.19,	0.00)	DC				
	2ND HIGHEST VALUE IS	26.96123	AT (	479102.33,	3769437.04,	353.75,	353.75,	0.00)	DC				
	3RD HIGHEST VALUE IS	25.16782	AT (	479086.14,	3769452.65,	353.21,	353.21,	0.00)	DC				
	4TH HIGHEST VALUE IS	19.53419	AT (	479156.30,	3769340.17,	354.07,	354.07,	0.00)	DC				
	5TH HIGHEST VALUE IS	19.16383	AT (	479156.30,	3769359.27,	354.42,	354.42,	0.00)	DC				
	6TH HIGHEST VALUE IS	18.06403	AT (	479156.30,	3769378.36,	354.55,	354.55,	0.00)	DC				
	7TH HIGHEST VALUE IS	17.59294	AT (	479156.30,	3769321.07,	354.00,	354.00,	0.00)	DC				
	8TH HIGHEST VALUE IS	16.60641	AT (	479156.30,	3769397.46,	354.55,	354.55,	0.00)	DC				
	9TH HIGHEST VALUE IS	15.93070	AT (	479103.00,	3769457.02,	353.79,	353.79,	0.00)	DC				
	10TH HIGHEST VALUE IS	13.55432	AT (	479156.30,	3769301.97,	354.00,	354.00,	0.00)	DC				

```

*** RECEPTOR TYPES:  GC = GRIDCART
                       GP = GRIDPOLR
                       DC = DISCCART
                       DP = DISCPOLR

```

*** MODELOPTs: RegDEFAULT CONC ELEV URBAN ADJ_U*

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

 ** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC		DATE (YYMMDDHH)	RECEPTOR	(XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	NETWORK GRID-ID		

ALL	HIGH	1ST HIGH VALUE IS	1306.08908	ON 18092507: AT (	478975.28,	3769485.22,	352.98,	352.98,	0.00)	DC

*** RECEPTOR TYPES: GC = GRIDCART
 GP = GRIDPOLR
 DC = DISCCART
 DP = DISCPOLR

*** AERMOD - VERSION 24142 *** *** D:\LSA\2025\20242064\Construction\Construction.isc
*** AERMET - VERSION 22112 *** ***

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*** MODELOPTs: RegDFAULT CONC ELEV URBAN ADJ_U*

*** Message Summary : AERMOD Model Execution ***

----- Summary of Total Messages -----

A Total of 0 Fatal Error Message(s)
A Total of 4 Warning Message(s)
A Total of 511 Informational Message(s)

A Total of 43800 Hours Were Processed

A Total of 40 Calm Hours Identified

A Total of 471 Missing Hours Identified (1.08 Percent)

***** FATAL ERROR MESSAGES *****
*** NONE ***

***** WARNING MESSAGES *****
ME W186 124 MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used 0.50
ME W187 124 MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 21010101
MX W450 17521 CHKDAT: Record Out of Sequence in Meteorological File at: 1 year gap

*** AERMOD Finishes Successfully ***

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully

RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 1

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 1
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 0

PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: False
Fish: False
Homegrown crops: True
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

INHALATION

Daily breathing rate: RMP

****Worker Adjustment Factors****

Worker adjustment factors enabled: NO

****Fraction at time at home****

3rd Trimester to 16 years: ON
16 years to 70 years: ON

SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02
Soil mixing depth (m): 0.01
Dermal climate: Mixed

HOMEGROWN CROP PATHWAY SETTINGS

Household type: HouseholdsthatGarden
Fraction leafy: 0.137
Fraction exposed: 0.137
Fraction protected: 0.137
Fraction root: 0.137

TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.

Tier2 - What was changed: ED or start age changed|

Calculating cancer risk

Cancer risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Sensitive_Year1_CancerRisk.csv

Cancer risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Sensitive_Year1_CancerRiskSumByRec.csv

Calculating chronic risk

Chronic risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Sensitive_Year1_NCChronicRisk.csv

Chronic risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Sensitive_Year1_NCChronicRiskSumByRec.csv

Calculating acute risk

Acute risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Sensitive_Year1_NCAcuteRisk.csv

Acute risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Sensitive_Year1_NCAcuteRiskSumByRec.csv

HRA ran successfully

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully

RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: 1
Total Exposure Duration: 1

Exposure Duration Bin Distribution
3rd Trimester Bin: 0
0<2 Years Bin: 1
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 0

PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: False
Fish: False
Homegrown crops: True
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

INHALATION

Daily breathing rate: RMP

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: ON
16 years to 70 years: ON

SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02

Soil mixing depth (m): 0.01

Dermal climate: Mixed

HOMEGROWN CROP PATHWAY SETTINGS

Household type: HouseholdsthatGarden

Fraction leafy: 0.137

Fraction exposed: 0.137

Fraction protected: 0.137

Fraction root: 0.137

TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.

Tier2 - What was changed: ED or start age changed|

Calculating cancer risk

Cancer risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Sensitive_Year2_CancerRisk.csv

Cancer risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Sensitive_Year2_CancerRiskSumByRec.csv

Calculating chronic risk

Chronic risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Sensitive_Year2_NCChronicRisk.csv

Chronic risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Sensitive_Year2_NCChronicRiskSumByRec.csv

Calculating acute risk

Acute risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Sensitive_Year2_NCAcuteRisk.csv

Acute risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Sensitive_Year2_NCAcuteRiskSumByRec.csv

HRA ran successfully

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully

RISK SCENARIO SETTINGS

Receptor Type: Worker
Scenario: All
Calculation Method: Derived

EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: 16
Total Exposure Duration: 1

Exposure Duration Bin Distribution
3rd Trimester Bin: 0
0<2 Years Bin: 0
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 1
16 to 70 Years Bin: 0

PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

INHALATION

Daily breathing rate: Moderate8HR

****Worker Adjustment Factors****

Worker adjustment factors enabled: NO

****Fraction at time at home****

3rd Trimester to 16 years: OFF
16 years to 70 years: OFF

SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02

Soil mixing depth (m): 0.01

Dermal climate: Mixed

TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.

Tier2 - What was changed: ED or start age changed|

Calculating cancer risk

Cancer risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Worker_Year1_CancerRisk.csv

Cancer risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Worker_Year1_CancerRiskSumByRec.csv

Calculating chronic risk

Chronic risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Worker_Year1_NCChronicRisk.csv

Chronic risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Worker_Year1_NCChronicRiskSumByRec.csv

Calculating acute risk

Acute risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Worker_Year1_NCAcuteRisk.csv

Acute risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Worker_Year1_NCAcuteRiskSumByRec.csv

HRA ran successfully

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully

RISK SCENARIO SETTINGS

Receptor Type: Worker
Scenario: All
Calculation Method: Derived

EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: 17
Total Exposure Duration: 1

Exposure Duration Bin Distribution
3rd Trimester Bin: 0
0<2 Years Bin: 0
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 1
16 to 70 Years Bin: 0

PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

INHALATION

Daily breathing rate: Moderate8HR

Worker Adjustment Factors

Worker adjustment factors enabled: NO

Fraction at time at home

3rd Trimester to 16 years: OFF

16 years to 70 years: OFF

SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02

Soil mixing depth (m): 0.01

Dermal climate: Mixed

TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.

Tier2 - What was changed: ED or start age changed|

Calculating cancer risk

Cancer risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Worker_Year2_CancerRisk.csv

Cancer risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Worker_Year2_CancerRiskSumByRec.csv

Calculating chronic risk

Chronic risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Worker_Year2_NCChronicRisk.csv

Chronic risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Worker_Year2_NCChronicRiskSumByRec.csv

Calculating acute risk

Acute risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Worker_Year2_NCAcuteRisk.csv

Acute risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_Worker_Year2_NCAcuteRiskSumByRec.csv

HRA ran successfully

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully

RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: 4
Total Exposure Duration: 1

Exposure Duration Bin Distribution
3rd Trimester Bin: 0
0<2 Years Bin: 0
2<9 Years Bin: 1
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 0

PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: False
Fish: False
Homegrown crops: True
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

INHALATION

Daily breathing rate: RMP

Worker Adjustment Factors

Worker adjustment factors enabled: NO

Fraction at time at home

3rd Trimester to 16 years: OFF

16 years to 70 years: OFF

SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02
Soil mixing depth (m): 0.01
Dermal climate: Mixed

HOMEGROWN CROP PATHWAY SETTINGS

Household type: HouseholdsthatGarden
Fraction leafy: 0.137
Fraction exposed: 0.137
Fraction protected: 0.137
Fraction root: 0.137

TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.

Tier2 - What was changed: ED or start age changed|

Calculating cancer risk

Cancer risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_School_Year1_CancerRisk.csv

Cancer risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_School_Year1_CancerRiskSumByRec.csv

Calculating chronic risk

Chronic risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_School_Year1_NCChronicRisk.csv

Chronic risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_School_Year1_NCChronicRiskSumByRec.csv

Calculating acute risk

Acute risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_School_Year1_NCAcuteRisk.csv

Acute risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_School_Year1_NCAcuteRiskSumByRec.csv

HRA ran successfully

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully

RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: All
Calculation Method: Derived

EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: 5
Total Exposure Duration: 1

Exposure Duration Bin Distribution
3rd Trimester Bin: 0
0<2 Years Bin: 0
2<9 Years Bin: 1
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 0

PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: False
Fish: False
Homegrown crops: True
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

INHALATION

Daily breathing rate: RMP

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: OFF

SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.02
Soil mixing depth (m): 0.01
Dermal climate: Mixed

HOMEOWN CROP PATHWAY SETTINGS

Household type: HouseholdsthatGarden
Fraction leafy: 0.137
Fraction exposed: 0.137
Fraction protected: 0.137
Fraction root: 0.137

TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.

Tier2 - What was changed: ED or start age changed|

Calculating cancer risk

Cancer risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_School_Year2_CancerRisk.csv

Cancer risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_School_Year2_CancerRiskSumByRec.csv

Calculating chronic risk

Chronic risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_School_Year2_NCChronicRisk.csv

Chronic risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_School_Year2_NCChronicRiskSumByRec.csv

Calculating acute risk

Acute risk breakdown by pollutant and receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_School_Year2_NCAcuteRisk.csv

Acute risk total by receptor saved to:

D:\LSA\2025\20242064\HARP_CONST\hra\Const_School_Year2_NCAcuteRiskSumByRec.csv

HRA ran successfully

PROJECT INFORMATION

HARP Version: 22118

Project Name: HARP_CONST

Project Output Directory: D:\LSA\2025\20242064\HARP_CONST

HARP Database: NA

FACILITY INFORMATION

Origin

X (m):0

Y (m):0

Zone:1

No. of Sources:0

No. of Buildings:0

EMISSION INVENTORY

No. of Pollutants:1

No. of Background Pollutants:0

Emissions

ScrID	StkID	ProID	PolID	PolAbbrev	Multi	Annual Ems	MaxHr Ems
MWAF					(lbs/yr)	(lbs/hr)	

Const	0	0	9901	DieselExhPM	3.88	80	0	1

Background

PolID	PolAbbrev	Conc (ug/m^3)	MWAF

Ground level concentration files (\glc\)

9901MAXHR.txt

9901PER.txt

POLLUTANT HEALTH INFORMATION

Health Database: D:\HARP2\Tables\HEALTH17320.mdb

Health Table Version: HEALTH25003

Official: True

PolID	PolAbbrev	InhCancer	OralCancer	AcuteREL	InhChronicREL	OralChronicREL
InhChronic8HRREL						

9901	DieselExhPM	1.1		5		

AIR DISPERSION MODELING INFORMATION

Versions used in HARP. All executables were obtained from USEPA's Support Center for Regulatory Atmospheric Modeling website (<http://www.epa.gov/scram001/>)

AERMOD: 18081

AERMAP: 18081

BPIPPRM: 04274

AERPLOT: 13329

METEOROLOGICAL INFORMATION

Version:

Surface File:
Profile File:
Surface Station:
Upper Station:
On-Site Station:

LIST OF AIR DISPERSION FILES

AERMOD Input File:
AERMOD Output File:
AERMOD Error File:
Plotfile list

LIST OF RISK ASSESSMENT FILES

Health risk analysis files (\hra\)

Const_Sensitive_Year1_CancerRisk.csv
Const_Sensitive_Year1_CancerRiskSumByRec.csv
Const_Sensitive_Year1_GLCList.csv
Const_Sensitive_Year1_HRAInput.hra
Const_Sensitive_Year1_NCAcuteRisk.csv
Const_Sensitive_Year1_NCAcuteRiskSumByRec.csv
Const_Sensitive_Year1_NCChronicRisk.csv
Const_Sensitive_Year1_NCChronicRiskSumByRec.csv
Const_Sensitive_Year1_Output.txt
Const_Sensitive_Year1_PathwayRec.csv
Const_Sensitive_Year1_PolDB.csv
Const_Sensitive_Year2_CancerRisk.csv
Const_Sensitive_Year2_CancerRiskSumByRec.csv
Const_Sensitive_Year2_GLCList.csv
Const_Sensitive_Year2_HRAInput.hra
Const_Sensitive_Year2_NCAcuteRisk.csv
Const_Sensitive_Year2_NCAcuteRiskSumByRec.csv
Const_Sensitive_Year2_NCChronicRisk.csv
Const_Sensitive_Year2_NCChronicRiskSumByRec.csv
Const_Sensitive_Year2_Output.txt
Const_Sensitive_Year2_PathwayRec.csv
Const_Sensitive_Year2_PolDB.csv
Const_Worker_Year1_CancerRisk.csv
Const_Worker_Year1_CancerRiskSumByRec.csv
Const_Worker_Year1_GLCList.csv
Const_Worker_Year1_HRAInput.hra
Const_Worker_Year1_NCAcuteRisk.csv
Const_Worker_Year1_NCAcuteRiskSumByRec.csv
Const_Worker_Year1_NCChronicRisk.csv
Const_Worker_Year1_NCChronicRiskSumByRec.csv
Const_Worker_Year1_Output.txt
Const_Worker_Year1_PathwayRec.csv
Const_Worker_Year1_PolDB.csv
Const_Worker_Year2_CancerRisk.csv
Const_Worker_Year2_CancerRiskSumByRec.csv
Const_Worker_Year2_GLCList.csv
Const_Worker_Year2_HRAInput.hra
Const_Worker_Year2_NCAcuteRisk.csv
Const_Worker_Year2_NCAcuteRiskSumByRec.csv
Const_Worker_Year2_NCChronicRisk.csv
Const_Worker_Year2_NCChronicRiskSumByRec.csv
Const_Worker_Year2_Output.txt

Const_Worker_Year2_PathwayRec.csv

Const_Worker_Year2_PolDB.csv

Spatial averaging files (\sa\)

ATTACHMENT E

REVISED NOISE STUDY

913 California Street

Noise Impact Study

City of Redlands, CA

Prepared for:
John Heimann
HDG
51 Modesto
Irvine, CA 92602

Prepared by:

MD Acoustics, LLC
Francisco Irarrazabal
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Date: 8/6/2025



Noise Study Reports | Vibration Studies | Air Quality | Greenhouse Gas | Health Risk Assessments

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1.0 Introduction

1.1 Purpose of Analysis and Study Objectives

This noise assessment was prepared to evaluate the potential noise impacts for the project study area and to recommend noise mitigation measures, if necessary, to minimize the potential noise impacts. The assessment was conducted and compared to the noise standards set forth by the Federal, State, and Local agencies. Consistent with the City's Noise Guidelines, the project must demonstrate compliance with the applicable noise criterion as outlined within the City of Redlands Noise Element and Municipal Code.

The following is provided in this report:

- A description of the study area and the proposed project;
- Information regarding the fundamentals of noise;
- A description of the local noise guidelines and standards;
- An analysis of traffic noise impacts to the sensitive receptors and the project site; and
- An analysis of construction noise impacts.

1.2 Site Location and Study Area

The project site is located near the southwest corner of California Street and I-10 Redlands Freeway in the City of Redlands, CA. Additionally, it is located out of the San Bernardino International Airport (SBIA) noise contours (according to Figures 4-6 of the Eastgate Air Cargo Facility Final Environmental Assessment published by the SBIAA on July 2, 2019) and also is out of the Redlands Municipal Airport noise contours (according to Figure 7-7 from the City's General Plan). See Exhibit A for the location.

Existing land uses surrounding the Project site include:

- North: Southern California Regional Rail Authority (SCAX) railroad;
- East: Commercial land uses across Redlands Blvd;
- South: Multi-family residential across drainage canal; and
- West: Single-family residential land uses across drainage canal.

1.3 Proposed Project Description

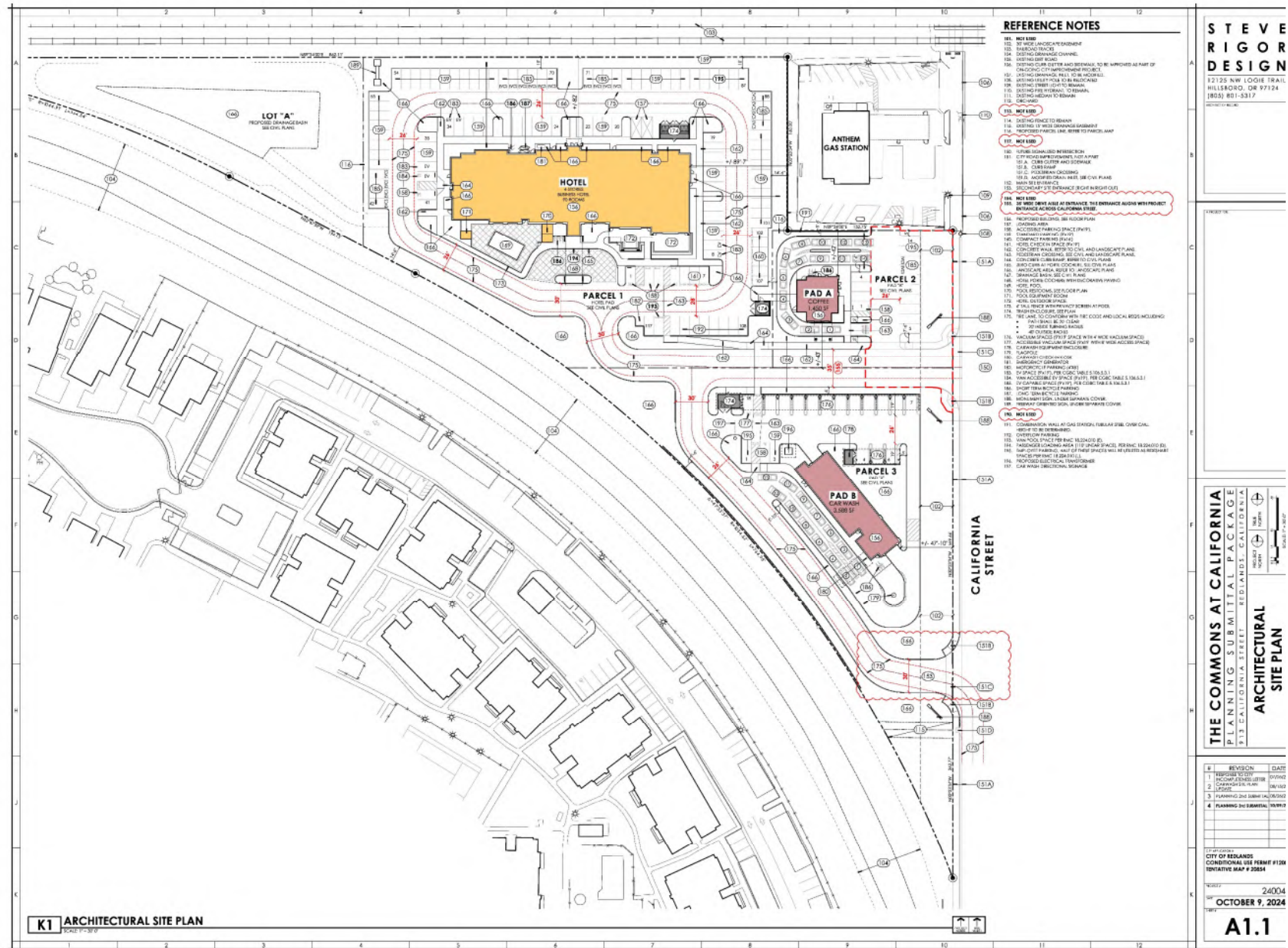
The proposed project consists of a commercial center including a hotel, a coffee shop restaurant, and an express car wash. The proposed project will provide a hotel building with 90 rooms, 56,515 SF and 119 parking spaces. Also, a coffee shop restaurant with 1,450 SF, and 14 parking spaces. Finally, 3,588 SF of car wash with 22 parking spaces. Primary access to the project site will be from California Street. Exhibit B provides the Site Plan.

Exhibit A Location Map



Exhibit B

Site Plan



2.0 Fundamentals of Noise

This section of the report provides basic information about noise and presents some of the terms used within the report.

2.1 Sound, Noise, and Acoustics

Sound is a disturbance created by a moving or vibrating source and is capable of being detected by the hearing organs. Sound may be thought of as mechanical energy of a moving object transmitted by pressure waves through a medium to a human ear. For traffic or stationary noise, the medium of concern is air. *Noise* is defined as sound that is loud, unpleasant, unexpected, or unwanted.

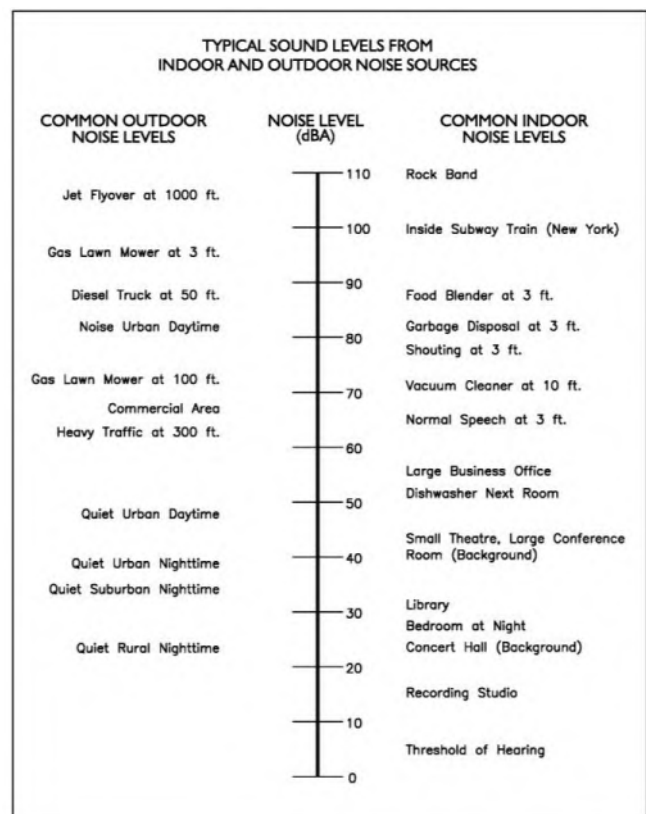
2.2 Frequency and Hertz

A continuous sound is described by its *frequency* (pitch) and its *amplitude* (loudness). Frequency relates to the number of pressure oscillations per second. Low-frequency sounds are low in pitch (bass sounding) and high-frequency sounds are high in pitch (squeak). These oscillations per second (cycles) are commonly referred to as Hertz (Hz). The human ear can hear from the bass pitch starting at 20 Hz to the high pitch of 20,000 Hz.

2.3 Sound Pressure Levels and Decibels

The *amplitude* of a sound determines its loudness. The loudness of sound increases or decreases as the amplitude increases or decreases. Sound pressure amplitude is measure in units of micro-Newton per square inch meter (N/m²), also called micro-Pascal (μPa). One μPa is approximately one hundred billionths (0.0000000001) of normal atmospheric pressure. Sound pressure level (SPL or L_p) is used to describe in logarithmic units the ratio of actual sound pressures to a reference pressure squared. These units are called decibels abbreviated dB. Exhibit C illustrates references sound levels for different noise sources.

Exhibit C: Typical A-Weighted Noise Levels



2.4 Addition of Decibels

Because decibels are on a logarithmic scale, sound pressure levels cannot be added or subtracted by simple plus or minus addition. When two sounds or equal SPL are combined, they will produce an SPL 3 dB greater than the original single SPL. In other words, sound energy must be doubled to produce a 3 dB increase. If two sounds differ by approximately 10 dB, the higher sound level is the predominant sound.

2.5 Sensitive Receptors

Noise-sensitive land uses include residential (single and multi-family dwellings, mobile home parks, dormitories, and similar uses); transient lodging (including hotels, motels, and similar uses); hospitals, nursing homes, convalescent hospitals, and other facilities for long-term medical care; public or private educational facilities, libraries, churches, and places of public assembly.

2.6 Human Response to Changes in Noise Levels

In general, the healthy human ear is most sensitive to sounds between 1,000 Hz and 5,000 Hz, (A-weighted scale) and it perceives a sound within that range as being more intense than a sound with a higher or lower frequency with the same magnitude. For purposes of this report as well as with most environmental documents, the A-scale weighting is typically reported in terms of A-weighted decibel (dBA). Typically, the human ear can barely perceive a change in noise level of 3 dB. A change in 5 dB is readily perceptible, and a change in 10 dB is perceived as being twice or half as loud. As previously discussed, a doubling of sound energy results in a 3 dB increase in sound, which means that a doubling of sound energy (e.g. doubling the volume of traffic on a highway) would result in a barely perceptible change in sound level.

Table 1: Decibel Changes and Loudness

Changes in Intensity Level, dBA	Changes in Apparent Loudness
1	Not perceptible
3	Just perceptible
5	Clearly noticeable
10	Twice (or half) as loud
Source: https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm	

2.7 Noise Descriptors

Noise in our daily environment fluctuates over time. Some noise levels occur in regular patterns, others are random. Some noise levels are constant while others are sporadic. Noise descriptors were created to describe the different time-varying noise levels.

A-Weighted Sound Level: The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high-frequency components of the sound in a manner similar to the response of the human ear. A numerical method of rating human judgment of loudness.

Ambient Noise Level: The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Community Noise Equivalent Level (CNEL): The average equivalent A-weighted sound level during a 24-hour day, obtained after the addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and ten (10) decibels to sound levels in the night before 7:00 AM and after 10:00 PM.

Decibel (dB): A unit for measuring the amplitude of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

dB(A): A-weighted sound level (see definition above).

Equivalent Sound Level (LEQ): The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time-varying noise level. The energy average noise level during the sample period.

Habitable Room: Any room meeting the requirements of the Uniform Building Code or other applicable regulations which is intended to be used for sleeping, living, cooking, or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms, and similar spaces.

L(n): The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 in the sound level exceeded 10 percent of the sample time. Similarly, L50, L90, and L99, etc.

Noise: Any unwanted sound or sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "...excessive undesirable sound...".

Outdoor Living Area: Outdoor spaces that are associated with residential land uses typically used for passive recreational activities or other noise-sensitive uses. Such spaces include patio areas, barbecue areas, jacuzzi areas, etc. associated with residential uses; outdoor patient recovery or resting areas associated with hospitals, convalescent hospitals, or rest homes; outdoor areas associated with places of worship which have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for educational purposes which may be adversely impacted by noise. Outdoor areas usually not included in this definition are: front yard areas, driveways, greenbelts, maintenance areas and storage areas associated with residential land uses; exterior areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term social gatherings; and, outdoor areas associated with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas).

Percent Noise Levels: See L(n).

Sound Level (Noise Level): The weighted sound pressure level obtained by use of a sound level meter having a standard frequency filter for attenuating part of the sound spectrum.

Sound Level Meter: An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement and determination of noise and sound levels.

Single Event Noise Exposure Level (SENEL): The dB(A) level which, if it lasted for one second, would produce the same A-weighted sound energy as the actual event.

2.8 Traffic Noise Prediction

Noise levels associated with traffic depends on a variety of factors: volume of traffic; the speed of traffic; auto, medium truck (2-axle), and heavy truck percentage (3-axle and greater); and sound propagation. Higher traffic volume, speeds, and truck percentages equate to a louder volume in noise. A doubling of the Average Daily Traffic (ADT) along a roadway will increase noise levels by approximately 3 dB; reasons for this are discussed in the sections above.

2.9 Sound Propagation

As sound propagates from a source it spreads geometrically. Sound from a small, localized source (i.e., a point source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates at a rate of 6 dB per doubling of distance. The movement of vehicles down a roadway makes the source of the sound appear to propagate from a line (i.e., line source) rather than a point source. This line source results in the noise propagating from a roadway in a cylindrical spreading versus a spherical spreading that results from a point source. The sound level attenuates for a line source at a rate of 3 dB per doubling of distance.

As noise propagates from the source, it is affected by the ground and atmosphere. Noise models use hard site (reflective surfaces) and soft site (absorptive surfaces) to help calculate predicted noise levels. Hard site conditions assume no excessive ground absorption between the noise source and the receiver. Soft site conditions such as grass, soft dirt, or landscaping attenuate noise at a rate of 1.5 dB per doubling of distance. When added to the geometric spreading, the excess ground attenuation results in an overall noise attenuation of 4.5 dB per doubling of distance for a line source and 7.5 dB per doubling of distance for a point source.

Research has demonstrated that atmospheric conditions can have a significant effect on noise levels when noise receivers are located 200 feet from a noise source. Wind, temperature, air humidity, and turbulence can further impact how far sound can travel.

3.0 Ground-Borne Vibration Fundamentals

3.1 Vibration Descriptors

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

Several different methods are used to quantify vibration amplitude.

PPV – Known as the peak particle velocity (PPV) which is the maximum instantaneous peak in vibration velocity, typically given in inches per second.

RMS – Known as root mean squared (RMS) can be used to denote vibration amplitude

VdB – A commonly used abbreviation to describe the vibration level (VdB) for a vibration source.

3.2 Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Outdoor sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration. To counter the effects of ground-borne vibration, the Federal Transit Administration (FTA) has published guidance relative to vibration impacts. According to the FTA, fragile buildings can be exposed to ground-borne vibration levels of 0.3 inches per second without experiencing structural damage.

There are three main types of vibration propagation: surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wavefront, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wavefront. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wavefront. However, unlike P-waves, the particle motion is transverse, or side-to-side and perpendicular to the direction of propagation. As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be effective enough for screening purposes to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 Regulatory Setting

The proposed project is located in the City of Redlands, California, and noise regulations are addressed through the efforts of various federal, state, and local government agencies. The agencies responsible for regulating noise are discussed below.

4.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Publicize noise emission standards for interstate commerce
- Assist state and local abatement efforts
- Promote noise education and research

The Federal Office of Noise Abatement and Control (ONAC) was originally tasked with implementing the Noise Control Act. However, it was eventually eliminated leaving other federal agencies and committees to develop noise policies and programs. Some examples of these agencies are as follows: The Department of Transportation (DOT) assumed a significant role in noise control through its various agencies. The Federal Aviation Agency (FAA) is responsible for regulating noise from aircraft and airports. The Federal Highway Administration (FHWA) is responsible for regulating noise from the interstate highway system. The Occupational Safety and Health Administration (OSHA) is responsible for the prohibition of excessive noise exposure to workers. The Housing and Urban Development (HUD) is responsible for establishing noise regulations as it relates to exterior/interior noise levels for new HUD-assisted housing developments near high noise areas.

The federal government advocates that local jurisdictions use their land use regulatory authority to arrange new developments in such a way that “noise sensitive” uses are either prohibited from being constructed adjacent to a highway or that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

Since the federal government has preempted the setting of standards for noise levels that can be emitted by the transportation source, the City is restricted to regulating the noise generated by the transportation system through nuisance abatement ordinances and land use planning.

4.2 State Regulations

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the “Land Use Compatibility for Community Noise Environments Matrix.” The matrix allows the local jurisdiction to delineate the compatibility of sensitive uses with various incremental levels of noise.

The State of California has established noise insulation standards as outlined in Title 24 and the Uniform Building Code (UBC) which in some cases requires acoustical analyses to outline exterior noise levels and to ensure interior noise levels do not exceed the interior threshold. The State mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general plan.

The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable as illustrated in Exhibit D.

Exhibit D: Land Use Compatibility Guidelines

TABLE 7-10: NOISE/LAND USE COMPATIBILITY MATRIX AND INTERPRETATION (MEASURE U TABLE 9.1)									
Land Use Categories		Community Noise Equivalent Level (CNEL)							
Categories	Uses	<	60	65	70	75	80	85	>
RESIDENTIAL	Single Family, Duplex Multiple Family	A	C	C	C	D	D	D	
RESIDENTIAL	Mobile Homes	A	C	C	C	D	D	D	
COMMERCIAL Regional, District	Hotel, Motel, Transient Lodging	A	A	B	B	C	C	D	
COMMERCIAL Regional, Village District, Special	Commercial Retail, Bank, Restaurant, Movie Theater, Mixed Uses with residential units	A	A	A	A	B	B	C	
COMMERCIAL INDUSTRIAL INSTITUTIONAL	Office Building, Research & Dev., Professional Offices, City Office Building	A	A	A	B	B	C	D	
COMMERCIAL Recreation INSTITUTIONAL Civic Center	Amphitheater, Concert Hall, Auditorium, Meeting Hall	B	B	C	C	D	D	D	
COMMERCIAL Recreation	Childrens Amusement Park, Miniature Golf Course, Go-cart Track, Equestrian Center, Sports Club	A	A	A	A	B	B	B	
COMMERCIAL General, Special INDUSTRIAL, INSTITUTIONAL	Automobile Service Station, Auto Dealership, Manufacturing, Warehousing, Wholesale, Utilities	A	A	A	A	B	B	B	
INSTITUTIONAL General	Hospital, Church, Library, Schools Classroom	A	A	B	C	C	D	D	
OPEN SPACE	Parks	A	A	A	B	C	D	D	
OPEN SPACE	Golf Course, Cemeteries, Nature Centers, Wildlife Reserves, Wildlife Habitat	A	A	A	A	B	C	C	
AGRICULTURE	Agriculture	A	A	A	A	A	A	A	
Zone A CLEARLY COMPATIBLE		Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.							
Zone B NORMALLY COMPATIBLE		New construction or development should be undertaken only after detailed analysis of the noise reduction requirements are made and needed noise insulation features in the design are determined. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice.							
Zone C NORMALLY INCOMPATIBLE		New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in the design.							
Zone D CLEARLY INCOMPATIBLE		New construction or development should generally not be undertaken.							
Source: Mestre Greve Associates; Guidelines for the Preparation and Content of the Noise Element of the General Plan, prepared by the California Department of Health Services in coordination with The Governor's Office of Planning and Research. Adapted to the City of Redlands' standards.									

Source: 2035 General Plan

4.3 City of Redlands Noise Regulations

The City of Redlands outlines its noise regulations and standards within the Municipal Code and the City of Redlands General Plan.

City of Redlands General Plan

Applicable policies and standards governing environmental noise in the City are set forth in the General Plan Noise Element. Table 7-11 of the Redlands Noise Element outlines the interior and exterior noise standards for community noise environments. According to Table 7-11, noise limits for commercial land uses are 45 dBA CNEL interior and 65 dBA CNEL exterior for the hotel and 55 dBA CNEL interior for the restaurant and commercial uses. It should be noted that if exterior levels exceed this limit, the architectural design should be such that interior noise levels are not greater than 45 dBA. The project will be compared to these noise limits.

In addition to the noise standards, the City has outlined goals, policies and implementation measures to reduce potential noise impacts and are presented below:

Goals, Policies, and Implementation Measures

Policies, goals and implementation program measures from the Noise Element that would mitigate potential impacts on noise include the following.

- 9.0e: Use the criteria specified in GP Table 9.1 [Table 7-10] to assess the compatibility of proposed land uses with the projected noise environment, and apply the noise standards in GP Table 9.2 [Table 7-11], which prescribe interior and exterior noise standards in relation to specific land uses. Do not approve projects that would not comply with the standards in GP Table 9.2 [Table 7-1].

These tables are the primary tools which allow the City to ensure noise-integrated planning for compatibility between land uses and outdoor noise.

- 9.0f: Require a noise impact evaluation based on noise measurements at the site for all projects in Noise Referral Zones (B, C, or D) as shown on GP Table 9.1 [Table 7-10] and on GP Figure 9.1 [Figure 7-9] or as determined from tables in the Appendix, as part of the project review process. Should measurements indicate that unacceptable noise levels will be created or experienced, require mitigation measures based on a detailed technical study prepared by a qualified acoustical engineer (i.e., a Registered Professional Engineer in the State of California with a minimum of three years experience in acoustics).
- 9.0h: Require construction of barriers to mitigate sound emissions where necessary or where feasible, and encourage use of walls and berms to protect residential or other noise sensitive land uses that are adjacent to major roads, commercial, or industrial areas.
- 9.0k: Ensure the effective enforcement of City, State and federal noise levels by all appropriate City departments.

- 9.0s: Require mitigation to ensure that indoor noise levels for residential living spaces not exceed 45 dB LDN/CNEL due to the combined effect of all exterior noise sources.
- The Uniform Building Code (specifically, the California Administrative Code, Title 24, Part 6, Division T25, Chapter 1, Subchapter 1, Article 4, Sections T25 28) requires that "Interior community noise levels (CNEL/LDN) with windows closed, attributable to exterior sources shall not exceed an annual CNEL or LDN of 45 dB in any habitable room." The code requires that this standard be applied to all new hotels, motels, apartment houses and dwellings other than detached single family dwellings.*
- Policy 9-s sets the maximum acceptable interior noise level at 45 CNEL. The Noise Referral Zones (65 CNEL) delineate areas within which tests to ensure compliance are to be required for new structures.*
- 9.0t: Require proposed commercial projects near existing residential land use to demonstrate compliance with the Community Noise Ordinance prior to approval of the project.
- 9.0v: Consider the following impacts as possibly "significant":
- An increase in exposure of four or more dB if the resulting noise level would exceed that described as clearly compatible for the affected land use, as established in GP Table 9.1 [Table 7-10] and GP Table 9.2 [Table 7-11];
 - Any increase of six dB or more, due to the potential for adverse community response.
- 9.0w: Limit hours for all construction or demolition work where site-related noise is audible beyond the site boundary.
- 9.0x: Work with Caltrans to establish sound walls along freeways where appropriate.
- 9.0y: Minimize impacts of loud trucks by requiring that maximum noise levels due to single events be controlled to 50 dB in bedrooms and 55 dB in other habitable spaces.

City of Redlands – Noise Ordinance

Chapter 8.06 of the noise ordinance outlines the City's community noise control and establishes the exterior noise limits for stationary noise sources.

Section 8.06.070.A. The noise standards for the categories of land uses identified in table 1 of this section shall, unless otherwise specifically indicated, apply to all such property within a designated zone.

Table 2: Table 1 Section 8.06.070

Maximum Permissible Sound Levels By Receiving Land Uses		
Receiving Land Use Category	Time Period	Noise
Single-family residential districts	10:00 P.M. – 7:00 A.M.	50
	7:00 A.M. – 10:00 P.M.	60
Multi-family residential districts; public space; institutional	10:00 P.M. – 7:00 A.M.	50
	7:00 A.M. – 10:00 P.M.	60
Commercial	10:00 P.M. – 7:00 A.M.	60
	7:00 A.M. – 10:00 P.M.	65
Industrial	Any time	75

Section 8.06.070.B. No person shall operate, or cause to be operated, any source of sound at any location within the city or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person which causes the noise level when measured on any other property to exceed:

1. The noise standard for that land use specified in table 1 of this section for a cumulative period of more than thirty (30) minutes in any hour; or
2. The noise standard specified in table 1 of this section plus five (5) dB for a cumulative period of more than fifteen (15) minutes in any hour; or
3. The noise standard specified in table 1 of this section plus ten (10) dB for a cumulative period of more than five (5) minutes in any hour; or
4. The noise standard specified in table 1 of this section plus fifteen (15) dB for a cumulative period of more than one minute in any hour; or
5. The noise standard specified in table 1 of this section plus twenty (20) dB or the maximum measured ambient level, for any period of time.

Section 8.06.070.C. If the measured ambient level exceeds the allowable noise exposure standard within any of the first four (4) noise limit categories above, the allowable noise exposure standard shall be adjusted in five (5) dB increments in each category as appropriate to encompass or reflect said ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under this category shall be increased to reflect the maximum ambient noise level.

Section 8.06.090 The following acts, and the causing or permitting thereof, are declared to be in violation of this chapter

Section 8.06.090.F. Construction And/Or Demolition: Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between weekday

hours of six o'clock (6:00) P.M. and seven o'clock (7:00) A.M., including Saturdays, or at any time on Sundays or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work by public service utilities, the city or another governmental entity. All mobile or stationary internal combustion engine powered equipment or machinery shall be equipped with exhaust and air intake silencers in proper working order, or suitable to meet the standards set forth herein.

Section 8.06.090.G. Vibration: Operating or permitting the operation of any device that creates a vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at one hundred fifty feet (150') from the source if on a public space or public right of way.

Vibration Threshold Guidelines (Caltrans)

Table 3 below shows the vibration damage thresholds summarized in the Transportation and Construction Vibration Guidance Manual by Caltrans.

Table 3: Guideline Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5
Source: Table 19, Transportation and Construction Vibration Guidance Manual, Caltrans, Sept. 2013. Note: Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.		

5.0 Study Method and Procedure

The following section describes the noise modeling procedures and assumptions used for this assessment.

5.1 Noise Measurement Procedure and Criteria

Noise measurements are taken to determine the existing noise levels. A noise receiver or receptor is any location in the noise analysis in which noise might produce an impact. The following criteria are used to select measurement locations and receptors:

- Locations expected to receive the highest noise impacts, such as the first row of houses
- Locations that are acoustically representative and equivalent of the area of concern
- Human land usage
- Sites clear of major obstruction and contamination

All measurement equipment meets American National Standards Institute (ANSI) specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA). MD noise measurement procedures are presented below:

- The sound level meter was calibrated (Piccolo-II) before and after the measurement
- Following the calibration of equipment, a windscreen was placed over the microphone
- Frequency weighting was set on “A” and slow response
- Results of the noise measurements were recorded on field data sheets
- Temperature and sky conditions were observed and documented

5.2 Construction Vibration Calculation

Construction activities can produce vibration that may be felt by adjacent land uses. The construction of the proposed project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a bulldozer. A large bulldozer has a vibration impact of 0.089 inches per second peak particle velocity (PPV) at 25 feet which is perceptible but below any risk to architectural damage.

The fundamental equation used to calculate vibration propagation through average soil conditions and distance is as follows:

$$PPV_{\text{equipment}} = PPV_{\text{ref}} (100/D_{\text{rec}})^n$$

Where: PPV_{ref} = reference PPV at 100ft.

D_{rec} = distance from equipment to receiver in ft.

$n = 1.1$ (the value related to the attenuation rate through ground)

5.3 SoundPLAN Noise Model (Operational Noise)

SoundPLAN acoustical modeling software was utilized to model project operational noise at nearby sensitive receptors. The SoundPLAN software utilizes algorithms (based on the inverse square law) to calculate noise level projections. It allows the user to input specific noise sources, spectral content, sound barriers, building placement, topography, and sensitive receptor locations. It also calculates noise level increases due to the reflection of noise from hard surfaces.

Measured and referenced sound level data was utilized to model the various stationary on-site noise sources associated with project operation, (i.e., dryer blowers, vacuum turbine, idling cars, parking movements, drive-thru and HVAC).

Noise associated with the on-site sources was modeled using SoundPLAN methodology, which takes into consideration the car wash equipment, overall trip generation, number of parking spaces, and estimates the number of movements per hour per parking space. The car wash tunnel is approximately 130 feet long with a 12-foot-tall by 14-foot-wide entrance, and a 10-foot-tall by 10-foot-wide exit opening. Also, the blowers (14 MacNeil blowers) were modeled at 10 to 12 feet high as point sources. The blowers will be located approximately 5 to 10 feet inside the exit of the tunnel. Additionally, the vacuum bays were modeled as point sources. The additional on-site sources were the car parking lots, which were modeled as 1 movement per space per hour. Besides, the car lane for drive-thru was modeled as continuous line sources with idling cars. Finally, the pool area at the hotel patio was also modeled as an area source, considering a typical group of 30 individuals that can generate noise levels of approximately 62 dBA at 12 feet. Modeling assumptions are summarized in Table 4. SoundPLAN noise modeling input and results are provided in Appendix B.

Table 4: SoundPLAN Modeling Assumptions

Noise Source	Source Type	Reference Sound Level (dBA, Leq)	Distance to Reference Source (ft)
Drive-Thru Speaker	Point Source	65	5
Idling Car	Point Source	67	5
HVAC	Point Source	67	3
14 MacNeil Dryers	Point Source, inside tunnel	97	5
Vacuum Bay	Point Source	71	2
Vacuum Turbine	Point Source, inside enclosure	43	3

Source: MD Acoustics. Aug 2020. See Appendix B for noise reference data.

5.4 Traffic Noise Prediction Modeling

The FHWA Traffic Noise Prediction Model (FHWA-RD-77-108) was utilized to model future traffic noise levels on the project site and existing and existing plus project traffic noise volumes along roadways

affected by project-generated vehicle traffic. The FHWA model arrives at the predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL).

Project-generated vehicle traffic can potentially result in an increase in ambient noise levels. To determine the project's noise impact on the surrounding land uses, MD generated noise contours for existing ADT and existing plus project conditions. Table 5 indicates the roadway parameters and vehicle distribution utilized for the modeling. Noise contours are used to characterize sound levels experienced at a set distance from the centerline of a subject roadway. They are intended to represent a worst-case scenario and do not consider structures, sound walls, topography, and/or other sound-attenuating features that may further reduce the actual noise level. Noise contours are developed for comparative purposes and are used to demonstrate potential increases/decreases along subject roadways because of a project. The referenced traffic data and traffic noise calculation worksheet outputs are located in Appendix C. The following parameters are considered for traffic noise calculation:

- Roadway classification – (e.g., freeway, major arterial, arterial, secondary, collector, etc.),
- Roadway Active Width – (distance between the center of the outermost travel lanes on each side of the roadway)
- Average Daily Traffic Volumes (ADT), Speeds, Percentages of autos, medium and heavy trucks
- Roadway grade and angle of view
- Site Conditions (e.g., soft vs. hard)
- Percentage of total ADT which flows each hour throughout a 24-hour period

Table 5: Roadway Parameters and Vehicle Distribution

Roadway	Existing ADT ¹	Existing + Project ADT ²	Speed (MPH)	Site Conditions
California St	19,500	20,500	40	Hard
Redlands Blvd	21,300	21,700	40	Hard
Arterial Motor-Vehicle Type ³	Daytime % (7AM to 7 PM)	Evening % (7 PM to 10 PM)	Night % (10 PM to 7 AM)	Total % of Traffic Flow
Automobiles	75.5	14.0	10.4	92.00
Medium Trucks	48.0	2.0	50.0	3.00
Heavy Trucks	48.0	2.0	50.0	5.00
Notes:				
¹ 913 California Street Mixed-Use Center, Traffic Impact Analysis, Ganddini May 1, 2024				
² Project trip generation provided in the traffic study prepared by Ganddini, May 1, 2024.				
³ Riverside County Required Traffic Noise Modeling Parameters, Office of Industrial Hygiene, November 22, 2000.				

5.5 Construction Noise Modeling

Construction noise associated with the proposed project was calculated utilizing methodology presented in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (2018) together with several key construction parameters including distance to each sensitive receiver, equipment usage, percent usage factor, and baseline parameters for the project site. Construction

activities are anticipated to include four phases site preparation, grading, building construction, and paving.

Construction noise levels were calculated for each phase based on the CalEEMod Air Quality Model assumptions provided by a similar previous project. All equipment was assumed to be situated at the center of the project site. Construction worksheets are provided in Appendix D.

6.0 Existing Noise Environment

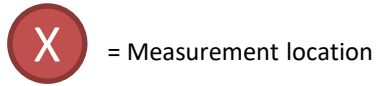
One (1) 24-hour noise measurement was conducted at the project site to document the existing noise environment. The measurements include the 1-hour Leq, Lmin, Lmax, and other statistical data (e.g. L2, L8). The results of the noise measurement are presented in Table 6. Noise measurement field sheets are provided in Appendix A.

Table 6: Long-Term Noise Measurement Data for (LT1) (dBA)¹

Date	Time	1-Hour dB(A)							
		L _{EQ}	L _{MAX}	L _{MIN}	L ₂	L ₈	L ₂₅	L ₅₀	L ₉₀
1/23/2024	12AM-1AM	57.2	73.1	51.0	62.4	59.2	57.3	55.9	53.8
1/23/2024	1AM-2AM	54.8	70.7	48.6	60.0	56.8	54.9	53.5	51.4
1/23/2024	2AM-3AM	53.5	69.4	47.3	58.7	55.5	53.6	52.2	50.1
1/23/2024	3AM-4AM	51.8	67.7	45.6	57.0	53.8	51.9	50.5	48.4
1/23/2024	4AM-5AM	52.8	68.7	46.6	58.0	54.8	52.9	51.5	49.4
1/23/2024	5AM-6AM	56.6	72.5	50.4	61.8	58.6	56.7	55.3	53.2
1/23/2024	6AM-7AM	63.0	78.9	56.8	68.2	65.0	63.1	61.7	59.6
1/23/2024	7AM-8AM	65.3	81.2	59.1	70.5	67.3	65.4	64.0	61.9
1/23/2024	8AM-9AM	63.4	79.3	57.2	68.6	65.4	63.5	62.1	60.0
1/23/2024	9AM-10AM	62.4	78.3	56.2	67.6	64.4	62.5	61.1	59.0
1/23/2024	10AM-11AM	62.3	78.2	56.1	67.5	64.3	62.4	61.0	58.9
1/23/2024	11AM-12PM	62.5	78.4	56.3	67.7	64.5	62.6	61.2	59.1
1/23/2024	12PM-1PM	62.6	78.5	56.4	67.8	64.6	62.7	61.3	59.2
1/23/2024	1PM-2PM	62.7	78.6	56.5	67.9	64.7	62.8	61.4	59.3
1/23/2024	2PM-3PM	62.9	78.8	56.7	68.1	64.9	63.0	61.6	59.5
1/23/2024	3PM-4PM	64.1	80.0	57.9	69.3	66.1	64.2	62.8	60.7
1/23/2024	4PM-5PM	65.6	81.5	59.4	70.8	67.6	65.7	64.3	62.2
1/23/2024	5PM-6PM	65.3	81.2	59.1	70.5	67.3	65.4	64.0	61.9
1/23/2024	6PM-7PM	63.5	79.4	57.3	68.7	65.5	63.6	62.2	60.1
1/23/2024	7PM-8PM	62.2	78.1	56.0	67.4	64.2	62.3	60.9	58.8
1/23/2024	8PM-9PM	61.1	77.0	54.9	66.3	63.1	61.2	59.8	57.7
1/23/2024	9PM-10PM	60.4	76.3	54.2	65.6	62.4	60.5	59.1	57.0
1/23/2024	10PM-11PM	59.4	75.3	53.2	64.6	61.4	59.5	58.1	56.0
1/23/2024	11PM-12AM	58.8	74.7	52.6	64.0	60.8	58.9	57.5	55.4
CNEL		66.0							
Notes:									
¹ Long-term noise monitoring location (LT1) is illustrated in Exhibit E.									

The data presented in Table 6 and the field notes provided in Appendix A, indicate that ambient noise levels in the project vicinity range between 52 and 66 dBA Leq, with an average of 64 dBA for daytime hours and 58 dBA for nighttime. The overall CNEL was 66 dBA CNEL. The field data indicates that the freeway is the dominant noise source.

Measurement Locations



7.0 Future Noise Environment Impacts and Mitigation

This assessment analyzes future noise impacts on sensitive receptors and the project and compares the results to the City's Noise Standards. The analysis details the estimated exterior noise levels associated with traffic from adjacent roadway sources. The City has established different significance thresholds for different types of noise impacts.

7.1 Off-Site Traffic Noise Impact

The potential off-site noise impacts caused by the increase in vehicular traffic as a result of the project were calculated at a distance of 50 feet from affected road segments. The noise levels at 50 feet both with and without project-generated vehicle traffic were compared and the increase was calculated. The distance to the 55, 60, 65, and 70 dBA CNEL noise contours are also provided for reference (Appendix C). Noise contours were calculated for the following scenarios and conditions:

- Existing Condition: This scenario refers to the existing year traffic noise condition and is demonstrated in Table 7.
- Existing + Project Condition: This scenario refers to the existing year plus project traffic noise condition and is demonstrated in Table 7.

As shown in Table 7, the addition of project-generated traffic to California Street, and Redlands Blvd would result in negligible increases in ambient noise levels and would not be significant.

Table 7: Change in Existing Noise Levels as a Result of Project Generated Traffic

Roadway	Segment	Modeled Noise Levels (dBA CNEL) at 50 feet from the Centerline			
		Existing without Project	Existing with Project	Change in Noise Level	Increase of 3 dB or more ²
California St	North of Redlands	71.6	71.8	0.2	No
Redlands Blvd	East of California	75.7	75.7	0.0	No
Notes: ¹ FHWA roadway noise modeling worksheets are provided in Appendix C. ² Typical CEQA significance threshold					

7.2 On-Site Traffic Noise Impact

Exterior Noise

The Project location is currently within the normally acceptable range for the land use proposed. The most sensitive use and also closest to the major noise sources is the hotel building. As shown in Section 6 of this report the noise level at the site is expected to be 66 dBA CNEL. Since the hotel building is located closer to the railroad and freeway, the City's General Plan Figure 7-9 is used as a reference to set the ambient noise to 70 dBA CNEL at the hotel location.

The outdoor noise level at sensitive receivers within the hotel area (i.e., the pool area) is expected to be shielded from the highway and railroad noise by the architectural layout design of the hotel building (see Exhibit B with the updated site plan). The building provides acoustical shielding from the railroad and freeway and will obstruct the line of sight to both the patio and pool area. It is anticipated that the four (4) story hotel will provide a minimum of 10 dBA of insertion loss (conservatively) to the areas which would lower the exterior noise level from 70 dBA CNEL to approximately 60 dBA CNEL. MD has provided the calculations in Appendix C. Table 7-11 from the City's General Plan Noise Element defines the exterior noise limits for hotels, motels, and transient lodging at 65 dBA CNEL. Therefore, the noise limit in the hotel's outdoor noise-sensitive areas complies with the City's exterior noise level requirements and will have a less-than-significant impact.

Interior Noise

In order to achieve the City's 45 dBA interior noise requirement for the hotel use, the project will require a building shell design that achieves STC-30 or higher ($70 - 45 = 25 + 5\text{dBA}$ for construction defects).

Prior to the occupancy for building permits the application shall conduct an exterior to interior noise analysis for the hotel that evaluates the building shell design to ensure compliance to the 45 dBA interior noise requirement.

7.3 Noise Impacts to Off-Site Receptors Due to Stationary Noise Sources

The residential land use located southwest of the project site is a sensitive receptor that may be affected by project operational noise. Worst-case operational noise was modeled using SoundPLAN acoustical modeling software. Four (4) receptors were modeled. Receivers R1 and R2 represent multi-family sites across the canal, and receptors R3 represent the commercial area east of the project site. A receptor is denoted by a yellow dot. All yellow dots represent either an existing building, a property line, or a potential human use space such as an outdoor sensitive area (courtyard, patio, backyard, etc.). The results are in Table 8.

Project Operational Noise Levels

Worst-case "project only" exterior operational noise is presented on Exhibit F. Operational noise levels are expected to range between 48 and 56 dBA Leq. The residential receiver R1 reaches 52 dBA Leq.

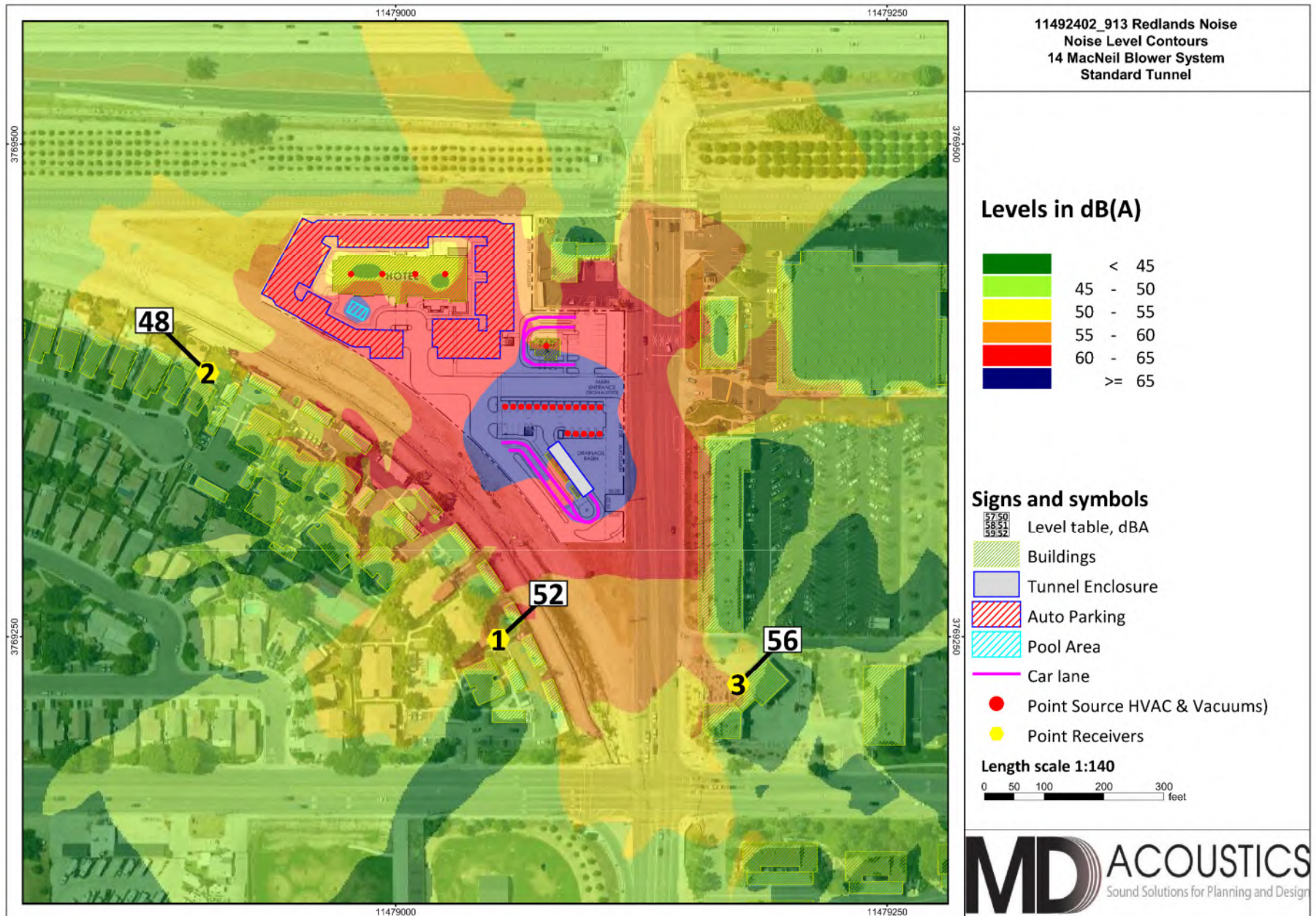
Project Plus Ambient Operational Noise Levels

Existing plus project noise level projections are anticipated to reach up to 64 dBA Leq at the nearest residential receptor and up to 65 dBA Leq at the nonresidential receptors. The project-generated operational noise is expected to increase by a maximum of 1 dB at the adjacent nonresidential sites and 0 dB at the residential site. This does not exceed the noise ordinance; therefore, the impact is less than significant.

Table 8: Operational Noise Levels (dBA, CNEL)

Receptor ¹	Existing Ambient Noise Level (dBA, Leq) ²	Project Noise Level (dBA, Leq) ³	Total Combined Noise Level (dBA, Leq)	Land Use Noise Limit (dBA, Leq) ⁴	Change in Noise Level as Result of Project
	Day	Day	Day	Day	Day
R1	64	52	64	65	0
R2		48	64		0
R3		56	65	65	1
Notes:					
¹ Receptors 1 and 2 are multi-family, and R3 is commercial.					
² LT1 Leq average daytime hours					
³ See Exhibit F for the operational noise level projections at said receptors.					
⁴ Section 8.06.070.C If the ambient level exceeds the limit, the allowable standard shall be adjusted in five dB increments.					

Exhibit F Project Leq Operational Noise Levels



8.0 Construction Noise and Vibration Impacts

The degree of construction noise may vary for different areas of the project site and also vary depending on the construction activities. Project construction will occur in four phases: site preparation, grading, building construction, and paving. This section summarizes and discusses noise and ground-borne vibration modeling efforts, impact analysis, and mitigation, if necessary.

8.1 Construction Noise

Typical construction equipment noise levels are presented in Table 9.

Table 9: Typical Construction Equipment Noise Levels¹

EQUIPMENT POWERED BY INTERNAL COMBUSTION ENGINES	
Type	Noise Levels (dBA) at 50 Feet
Earth Moving	
Compactors (Ground)	80
Front Loaders	80
Backhoes	80
Tractors	84
Scrapers, Graders	85
Pavers	85
Trucks	84
Materials Handling	
Concrete Mixers	85
Concrete Pumps	82
Cranes	85
Stationary	
Pumps	77
Generators	82
Compressors	80
IMPACT EQUIPMENT	
Type	Noise Levels (dBA) at 50 Feet
Concrete Saws	90
Vibratory Pile Driver	95
Notes: ¹ Referenced Noise Levels from the FHWA Construction Noise Handbook	

Construction noise associated with each phase of the project was calculated at nearby sensitive receptors utilizing methodology presented in the Federal Highway Administration (FHWA) Construction Noise Model together with several key construction parameters including distance to each sensitive receiver, equipment usage, percent usage factor, and baseline parameters for the project site.

Construction equipment typically moves back and forth across the site, and it is an industry-standard to use the acoustical center of the site to model average construction noise levels.

Construction activities are anticipated to include four phases site preparation, grading, building construction, and architectural coating. Noise levels associated with each phase are shown in Table 10. The construction noise calculation output worksheet is located in Appendix D.

Table 10: Construction Noise Level by Phase (dBA, Leq)

Activity	Noise Levels at Receivers	
	Southwestern Residences	East Commercial
Site Preparation	67	67
Grading	67	66
Building Construction	66	66
Paving	69	68
Arch Coating	57	56
Note: Construction Modeling Worksheets are provided in Appendix D.		

As shown in Table 10, project construction noise will range between 57 to 69 dBA Leq at the existing southwestern residential property, 56 to 68 dBA Leq at the eastern businesses façade.

The Project will be required to adhere to Section 8.06.120.G of the City of Redlands Municipal Code which outlines the allowed times for construction. Construction noise is exempt but shall be conducted during the allowed hour between 7:00 A.M and 6:00 PM on weekdays, including Saturdays, with no activities on Sundays or federal holidays. This impact is less than significant. No mitigation is required.

8.2 Construction Vibration

The thresholds from the Caltrans Transportation and Construction Induced Vibration Guidance Manual in Table 3 (Section 4.3) provide general thresholds and guidelines for the vibration damage potential from vibratory impacts.

Table 11 gives approximate vibration levels for particular construction activities. This data provides a reasonable estimate for a wide range of soil conditions.

<Table 11, next page>

Table 11: Vibration Source Levels for Construction Equipment

Equipment	Peak Particle Velocity	Approximate Vibration Level
	(inches/second) at 25 feet	LV (dVB) at 25 feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 upper range	105
	0.170 typical	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
(slurry wall)	0.017 in rock	75
Vibratory Roller	0.21	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58
Source: Transit Noise and Vibration Impact Assessment, Federal Transit Administration, May 2018.		

The nearest existing building is 165 feet west of the project site. At this distance, a large bulldozer would yield a worst-case 0.011 PPV (in/sec), which would not be perceptible or result in architectural damage. The impact is less than significant. No mitigation is required. The ground-borne vibration worksheet is provided in Appendix E.

9.0 CEQA Analysis

The California Environmental Quality Act Guidelines (Appendix D) establishes thresholds for noise impact analysis as presented below:

(a) Would the project result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise Code, or applicable standards of other agencies?

Transportation Noise Impacts

Transportation noise impacts would be considered significant if the existing plus project levels are expected to increase by more than 3 dB. Compared to existing traffic noise levels, future traffic volumes are expected to increase 0.2 dBA CNEL at existing land uses. The impact is therefore less than significant.

Stationary Noise Sources

Stationary noise impacts would be considered significant if they result in exceedances of Table 8.06.070 from the Municipal Code and General Plan (Table 7-11). Implementation of the proposed project may result in stationary noise related to speakerphones, cars, car wash equipment, pedestrian noise at the hotel pool area, and mechanical equipment from the project site.

Operational noise levels are expected to reach 48 to 56 dBA Leq at the adjacent commercial and residential receptors. The project does not exceed the City's noise ordinance as project design features will abate the noise impact to below the City's noise limit as the various sensitive receptor locations. Therefore, the impact would be less than significant.

Construction Noise and Vibration

Construction noise will be significant if construction activities occur outside of the permitted construction hours specified in Section 8.06.120.G of the City of Redlands Municipal Code which outlines the allowed times for construction. Construction noise is exempt but shall be conducted during the allowed hour between 7:00 A.M and 6:00 PM on weekdays, including Saturdays, with no activities on Sundays or federal holidays.

Noise due to construction will result in short-term noise impacts associated with construction activities.

The paving phase of on-site construction activities will generate the highest temporary noise levels. The loudest construction equipment on the site will be tractors, graders, scrapers, and dozers. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full power operation followed by 3 or 4 minutes at lower power settings. The maximum Leq level for the loudest phase of construction is expected to be 69 dBA Leq at the nearest existing adjacent commercial building.

b) Generate excessive ground-borne vibration or ground-borne noise levels?

Construction vibration will be significant if vibration exceeds levels that would result in structural damage to existing buildings. Construction activity is not anticipated to occur within 50 feet of sensitive receptors. At a distance of 165 feet, the nearest commercial building to the project property line, a large bulldozer would yield a worst-case 0.011 PPV (in/sec), which is below the threshold of perception or any risk of damage. The project may result in temporary daytime residential annoyance. Construction activity is not expected to fall within the limits of structural damage, and therefore, the impact is less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The nearest airport to the project site is the San Bernardino International Airport. The Airport is approximately 2 miles to the north of the project. The project would be located outside the noise contours of San Bernardino International Airport. Therefore, no substantial noise exposure from airport noise would occur and it would have no impact.

10.0 References

City of Redlands, CA

2035 General Plan
Municipal Code

California Department of Transportation (Caltrans)

2013 Transportation and Construction Induced Vibration Guidance Manual.
2018 Technical Noise Supplement to the Traffic Noise Analysis Protocol. Sept.

Federal Highway Administration (FHWA)

2006 Construction Noise Handbook

Federal Transit Administration (FTA)

2018 Transit Noise and Vibration Impact Assessment Manual

Governor's Office of Planning and Research

State of California General Plan Guidelines, 1998

Ganddini

2024 913 California Street Mixed-Use Center Traffic Impact Analysis

SoundPLAN International, LLC

2019 SoundPLAN Essential 8.1 Manual.

Appendix A:
Field Measurement Data

24-Hour Continuous Noise Measurement Datasheet

Project:	913 California St Redlands	Site Observations:	Meter was located at the center of the site, about 115 feet from California St CL and approx. 650 from I-10 Hwy. The site is vacant and vegetation is observed. The railroad is about 350 feet from the meter location.
Site Address/Location:	I-10 & California St		
Date:	1/25/2024		
Field Tech/Engineer:	Jason Schuyler / Francisco Irarrazabal;		
General Location:	115' from California St CL		
Sound Meter:	XL2, NTi	SN: A2A-05967-EO	
Settings:	A-weighted, slow, 1-min, 24-hour duration		
Meteorological Con.:	Temps high 50's daytime, winds 0 to 3 mph, cloudy		
Site ID:	LT-1		

Site Topo: Flat
Ground Type: Vacant lot with dirt and vegetation

Noise Source(s) w/ Distance:

1 - 115' from California St CL

1 - 650' from Hwy I-10 CL

Figure 1: LT Monitoring Locations



Figure 2: LT-1 Photo



24-Hour Noise Measurement Datasheet - Cont.

Project: 913 California St Redlands
Site Address/Location: I-10 & California St
Site ID: LT-1

Day: 1 of 1

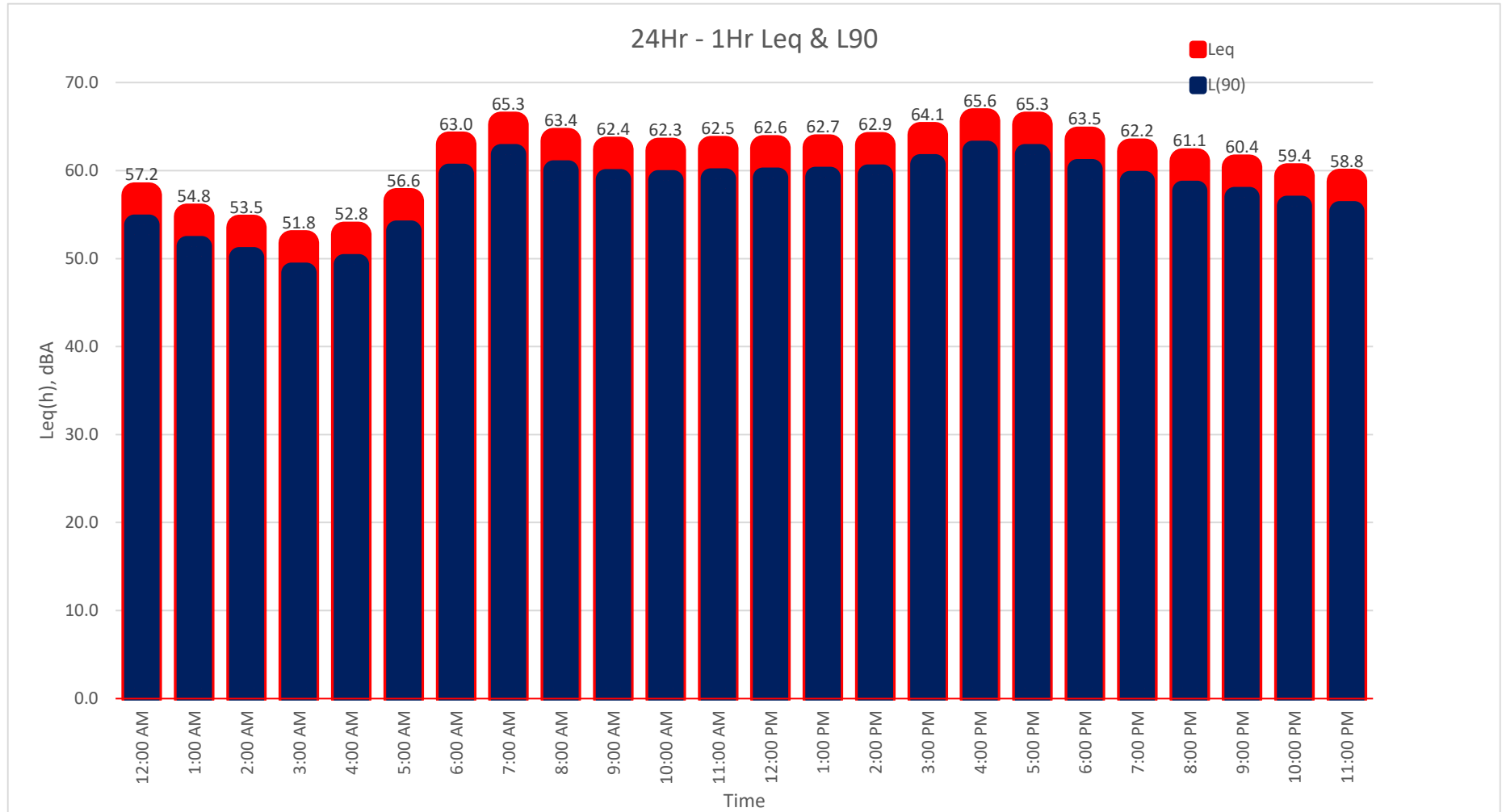
Date	Start	Stop	Leq	Lmax	Lmin	L2	L8	L25	L50	L90
1/25/2024	12:00 AM	1:00 AM	57.2	73.1	51.0	62.4	59.2	57.3	55.9	53.8
1/25/2024	1:00 AM	2:00 AM	54.8	70.7	48.6	60.0	56.8	54.9	53.5	51.4
1/25/2024	2:00 AM	3:00 AM	53.5	69.4	47.3	58.7	55.5	53.6	52.2	50.1
1/25/2024	3:00 AM	4:00 AM	51.8	67.7	45.6	57.0	53.8	51.9	50.5	48.4
1/25/2024	4:00 AM	5:00 AM	52.8	68.7	46.6	58.0	54.8	52.9	51.5	49.4
1/25/2024	5:00 AM	6:00 AM	56.6	72.5	50.4	61.8	58.6	56.7	55.3	53.2
1/25/2024	6:00 AM	7:00 AM	63.0	78.9	56.8	68.2	65.0	63.1	61.7	59.6
1/25/2024	7:00 AM	8:00 AM	65.3	81.2	59.1	70.5	67.3	65.4	64.0	61.9
1/25/2024	8:00 AM	9:00 AM	63.4	79.3	57.2	68.6	65.4	63.5	62.1	60.0
1/25/2024	9:00 AM	10:00 AM	62.4	78.3	56.2	67.6	64.4	62.5	61.1	59.0
1/25/2024	10:00 AM	11:00 AM	62.3	78.2	56.1	67.5	64.3	62.4	61.0	58.9
1/25/2024	11:00 AM	12:00 PM	62.5	78.4	56.3	67.7	64.5	62.6	61.2	59.1
1/25/2024	12:00 PM	1:00 PM	62.6	78.5	56.4	67.8	64.6	62.7	61.3	59.2
1/25/2024	1:00 PM	2:00 PM	62.7	78.6	56.5	67.9	64.7	62.8	61.4	59.3
1/25/2024	2:00 PM	3:00 PM	62.9	78.8	56.7	68.1	64.9	63.0	61.6	59.5
1/25/2024	3:00 PM	4:00 PM	64.1	80.0	57.9	69.3	66.1	64.2	62.8	60.7
1/25/2024	4:00 PM	5:00 PM	65.6	81.5	59.4	70.8	67.6	65.7	64.3	62.2
1/25/2024	5:00 PM	6:00 PM	65.3	81.2	59.1	70.5	67.3	65.4	64.0	61.9
1/25/2024	6:00 PM	7:00 PM	63.5	79.4	57.3	68.7	65.5	63.6	62.2	60.1
1/25/2024	7:00 PM	8:00 PM	62.2	78.1	56.0	67.4	64.2	62.3	60.9	58.8
1/25/2024	8:00 PM	9:00 PM	61.1	77.0	54.9	66.3	63.1	61.2	59.8	57.7
1/25/2024	9:00 PM	10:00 PM	60.4	76.3	54.2	65.6	62.4	60.5	59.1	57.0
1/25/2024	10:00 PM	11:00 PM	59.4	75.3	53.2	64.6	61.4	59.5	58.1	56.0
1/25/2024	11:00 PM	12:00 AM	58.8	74.7	52.6	64.0	60.8	58.9	57.5	55.4

CNEL 66.0

24-Hour Continuous Noise Measurement Datasheet - Cont.

Project: 913 California St Redlands
Site Address/Location: I-10 & California St
Site ID: LT-1

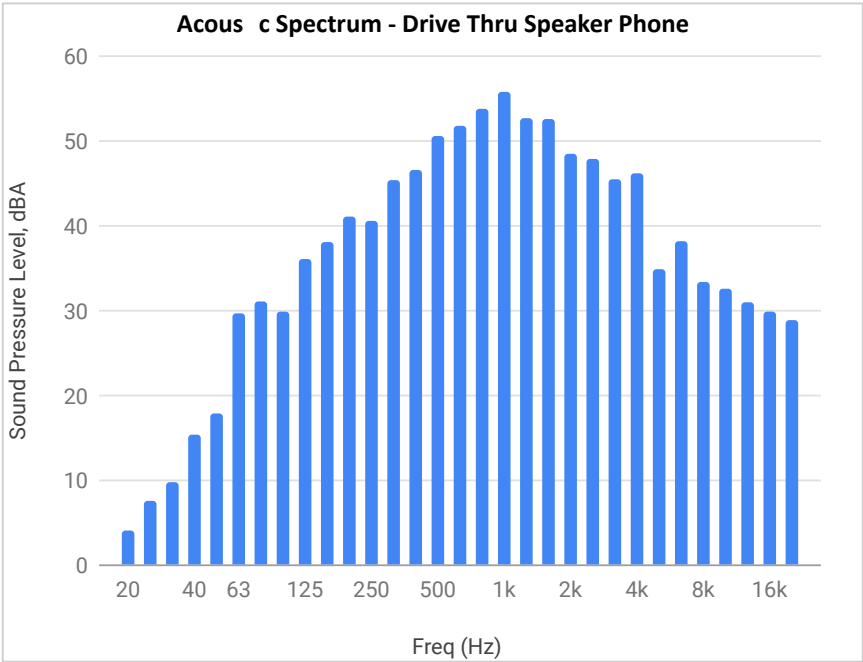
Day: 1 of 1



Appendix B:
SoundPLAN Noise Modeling Data

Project:	Whataburger	Site Observations:																									
Job Number:	0792-2021-01	3-feet from drive-thru speakerphone																									
Site Address/Location:	20151 S. Ellsworth Road																										
Date:	03/09/2021																										
Field Tech/Engineer:	Robert Pearson																										
Source/System:	Drive Thru Speaker Phone																										
General Location:	3-feet																										
Sound Meter:	NTi	SN: A2A-16164-E0																									
Settings:	A-weighted, Slow, 1-sec, 10-sec duration																										
Meteorological Cond.:	Clear Skies, 60 degrees		<table><tr><td>Leq</td><td>Lmin</td><td>Lmax</td></tr><tr><td>62.1</td><td>56.5</td><td>66.8</td></tr></table>			Leq	Lmin	Lmax	62.1	56.5	66.8	<table><tr><td>Ln 2</td><td>Ln 5</td><td>Ln 10</td><td>Ln 50</td><td>Ln 90</td><td>Ln 99</td></tr><tr><td>0.0</td><td>68.0</td><td>66.2</td><td>58.5</td><td>55.7</td><td>0.0</td></tr></table>				Ln 2	Ln 5	Ln 10	Ln 50	Ln 90	Ln 99	0.0	68.0	66.2	58.5	55.7	0.0
Leq	Lmin	Lmax																									
62.1	56.5	66.8																									
Ln 2	Ln 5	Ln 10	Ln 50	Ln 90	Ln 99																						
0.0	68.0	66.2	58.5	55.7	0.0																						

Source/System	Overall Source	Overall dB(A)	3rd Octave Band Data (dBA)																														
			20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1k	12.5k	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
Drive Thru Speaker Phone	Drive Thru Spea	62.1	4.2	7.7	9.9	15.5	18.0	29.8	31.2	30.0	36.2	38.2	41.2	40.7	45.5	46.7	50.7	51.9	53.9	55.9	52.8	52.7	48.6	48.0	45.6	46.3	35.0	38.3	33.5	32.7	31.1	30.0	29.0



Project:	Sound Library	Site Observations:
Job Number:	0000-2020-02	Clear sky, measurements were performed at 3' from source.
Site Address/Location:	Gilbert, AZ	
Date:	09/18/2018	
Field Tech/Engineer:	Robert Pearson	
Source/System:	Carrier 50TFQ0006 - 5 Ton	
General Location:	Measured @ 3'	
Sound Meter:	NTi XL2	SN: A2A-05967-E0
Settings:	A-weighted, slow, 1-sec, 10-sec duration	
Meteorological Conditions:	90 degrees, 0 mph wind	

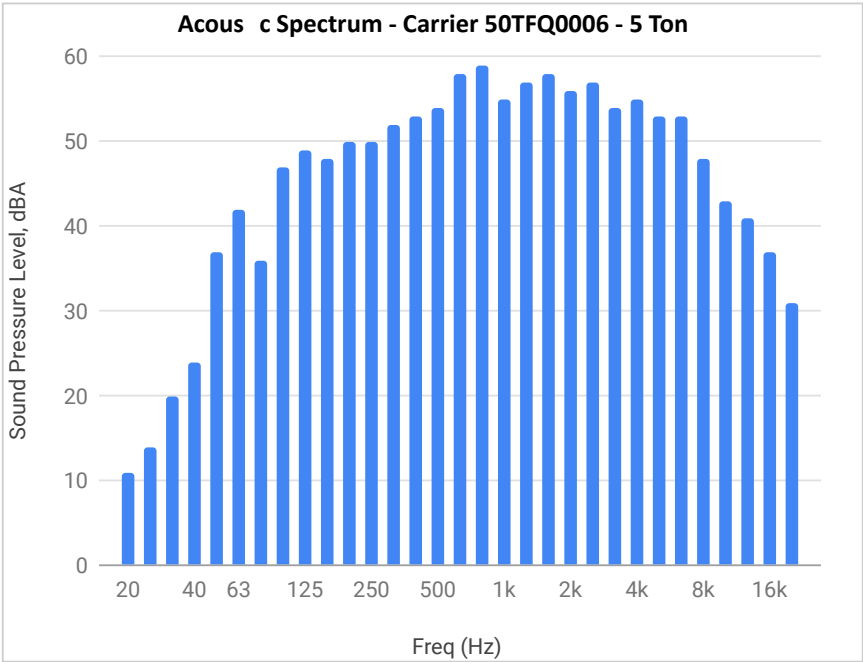
Leq	Lmin	Lmax
67.7	66.9	68.5

Ln 2	Ln 8	Ln 25	Ln 50	Ln 90	Ln 99
0.0	0.0	0.0	0.0	0.0	0.0

Table 1: Summary Measurement Data

Source/System	Overall Source	Overall dB(A)	3rd Octave Band Data (dBA)																														
			20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1k	12.5	1.6k	2k	2.5k	3.15	4k	5k	6.3k	8k	10k	12.5	16k	20k
Carrier 50TFQ0006 - 5 Ton	HVAC	67.7	11.0	14.0	20.0	24.0	37.0	42.0	36.0	47.0	49.0	48.0	50.0	50.0	52.0	53.0	54.0	58.0	59.0	55.0	57.0	58.0	56.0	57.0	54.0	55.0	53.0	53.0	48.0	43.0	41.0	37.0	31.0

Figure 1: Commercial Air Conditioner - Carrier 50TFQ0006 - 5 Ton



Project: Car idle Ref Level
Site Location: Gilbert, AZ
Date: 9/18/2018
Field Tech/Engineer: Robert Pearson
Source/System: Hyundai Sonata

Site Observations:

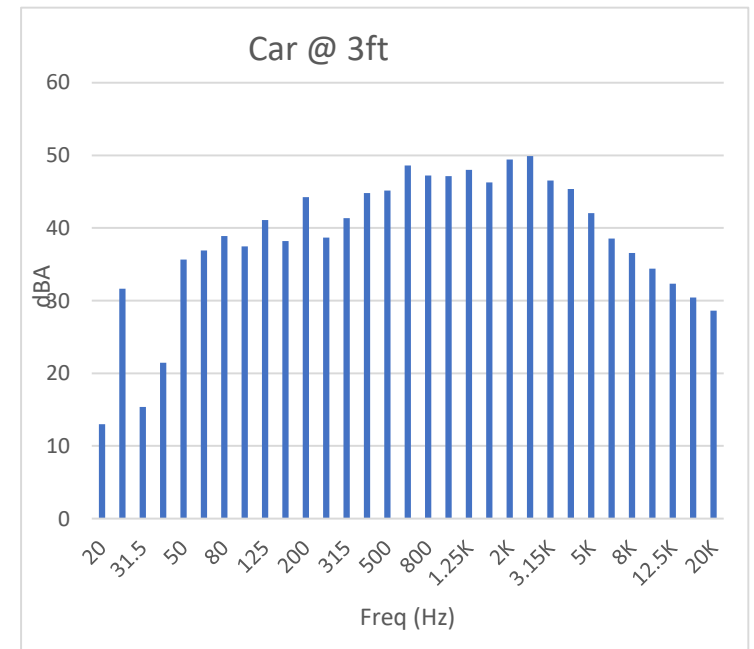
Clear sky, measurements were performed at 3ft of source. Two measurements taken one in the front and one in the back and then Averaged out.

Location: Parking Lot
Sound Meter: NTi XL2 **SN:** A2A-05967-E0
Settings: A-weighted, slow, 1-sec, 10-sec duration
Meteorological Cond.: 90 degrees F, 0 mph wind

Table 1: Summary Measurement Data

Source	System	Overall dB(A)	3rd Octave Band Data (dBA)																														
			20	25	32	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1K	1.25K	1.6K	2K	2.5K	3.15K	4K	5K	6.3K	8K	10K	12.5K	16K	20K
Hyundai Sonata	Motor/Tailpipe	58.7	13	32	15	21	36	37	39	37	41	38	44	39	41	45	45	49	47	47	48	46	49	50	47	45	42	39	37	34	32	30	29

Figure 1: Example Measurement Position



Project:

SuperStar Valencia Rd Tucson

Job Number:

02222124

Site Address/Location:

1511 W Valencia Rd

Date:

12/16/2021

Field Tech/Engineer:

Robert Pearson

Source/System:

MacNeil Tech 21 - 15 Blowers

General Location:

Measured @ 5'

Sound Meter:

XL2 NTi

SN: A2A-16164-E0

Settings:

Meteorological Cond.:

Site Observations:

Meter 5.5' off ground a 5' from edge of blower

Leq	Lmin	Lmax
96.6	96.3	97.0

Ln 1	Ln 5	Ln 10	Ln 50	Ln 90	Ln 99
97.1	97.0	96.9	96.5	96.2	0.0

			Table 1: Summary Measurement Data																														
Source/System	Overall Source	Overall dB(A)	3rd Octave Band Data (dBA)																														
			20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1k	12.5k	1.6k	2k	2.5k	3.15k	4k	5k	6.3k	8k	10k	12.5k	16k	20k
MacNeil Tech 21 - 15 Blowers	Car Wash Blower	96.6	18.0	26.9	35.5	47.8	53.4	58.4	57.7	62.3	65.4	66.6	74.0	82.7	78.6	86.0	85.0	88.5	85.6	87.6	88.5	85.0	84.5	83.0	81.4	80.3	79.4	77.6	74.1	70.0	65.4	60.2	53.9

Figure 1:

Acoustic Spectrum - MacNeil Tech 21 - 15 Blowers

Freq (Hz)	Sound Pressure Level (dBA)
20	18
25	27
31.5	35
40	48
50	53
63	58
80	57
100	62
125	65
160	66
200	74
250	83
315	79
400	88
500	85
630	88
800	85
1k	87
1.25k	88
1.6k	85
2k	84
2.5k	83
3.15k	81
4k	80
5k	79
6.3k	77
8k	74
10k	70
12.5k	65
16k	60
20k	54

Project: SuperStar Car Wash Chula Vista
Site Location: 1555 W Warner Rd, Gilbert, AZ 85233
Date: 4/5/2018
Field Tech/Engineer: Robert Pearson
Source/System: Vacutec System

Site Observations:

Clear sky, measurements were performed within 1.5ft of source. Measurements were performed while the vacuum was positioned at three (3) different positions. Holstered, unholstered and inside a car. This data is utilized for acoustic modeling purposes and represents an average sound level at a vacuum station.

Location: Vac Bay 1
Sound Meter: NTi XL2 **SN:** A2A-05967-E0
Settings: A-weighted, slow, 1-sec, 10-sec duration
Meteorological Cond.: 80 degrees F, 2 mph wind

Table 1: Summary Measurement Data

Source	System	Overall dB(A)	3rd Octave Band Data (dBA)																														
			20	25	31.5	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1K	1.25K	1.6K	2K	2.5K	3.15K	4K	5K	6.3K	8K	10K	12.5K	16K	20K
Vacutec (Holstered)	Vacuum	63.3	9	17	22	29	31	35	40	41	44	43	46	48	47	49	51	51	51	52	53	52	52	50	52	53	50	47	47	48	45	39	30
Vacutec (Unholstered)	Vacuum	80.7	6	19	22	28	34	37	40	43	47	46	48	48	48	49	54	55	58	58	62	65	68	70	74	75	73	69	67	65	63	60	55
Vacutec (Inside Car)	Vacuum	69.6	16	28	31	38	42	45	49	51	52	55	60	61	57	55	59	53	55	56	54	57	57	57	57	55	54	51	48	46	42	36	
Average Level*	Vacuum	76.3	13	24	28	34	38	41	45	47	49	51	56	57	53	52	56	54	56	56	59	61	64	66	69	70	68	64	62	60	58	55	50

* Refers to the logarithmic average of all measurements. This measurement represents an average of the multiple vacuum positions.

Figure 1: Example Measurement Position

Figure 1: Holstered



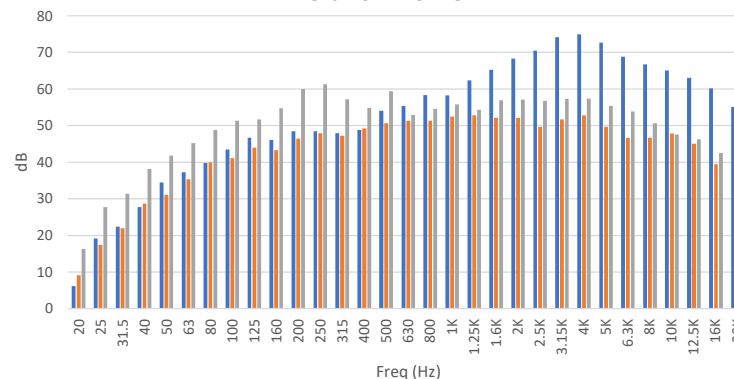
Figure 2: Unholstered



Figure 3: Inside Car



1.5ft from Nozzle





SOUND LEVEL METER READINGS

MODEL: FT-DD-T340HP4 (40hp VACSTAR TURBINE VACUUM PRODUCER)

READING ONE: 43 DB-A, 3 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

READING TWO: 36 DB-A, 10 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

READING THREE: 24 DB-A, 20 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

READING FOUR: 12 DB-A, 30 FEET FROM TURBINE @ 45° ANGLE
AND NO BACKGROUND NOISE OR OUTSIDE INTERFERENCE.

NOTE: THESE READINGS WERE TAKEN OUTSIDE OF 8'x10'x8' CINDER BLOCK ENCLOSURE WITH CONCRETE SLAB AND WOOD JOIST ROOF.

SOUND LEVEL METER USED:

SIMPSON MODEL #40003 – MSHA APPROVED.
MEETS OSHA & WALSH-HEALY REQUIREMENTS FOR NOISE CONTROL.
CONFORMS TO ANSI S1.4-1983, IEC 651 SPECS FOR METER TYPE.

Vacutech
1350 Hi-Tech Drive, Sheridan WY, 82801
PHONE: (800) 917-9444 FAX: (303) 675-1988
EMAIL: info@vacutechllc
WEB SITE: vacutechllc.com

913 Redlands Noise

Contribution level - 001 - 913 Redlands: Outdoor SP

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Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB	
Receiver R1	FI G	Lr,lim	dB(A)	Leq,d 52.3 dB(A)	Sigma(Leq,d) 0.0 dB(A)
Default industrial noise	Point		15.1	0.0	
Default industrial noise	Point		14.9	0.0	
Default industrial noise	Point		13.7	0.0	
Default industrial noise	Point		13.6	0.0	
Default industrial noise	Point		20.0	0.0	
Default industrial noise	Line		24.3	0.0	
Default industrial noise	Line		15.1	0.0	
Default parking lot noise	PLot		31.6	0.0	
Default industrial noise	Line		29.0	0.0	
Default industrial noise	Line		26.7	0.0	
Default industrial noise	Point		17.2	0.0	
Default industrial noise	Point		18.9	0.0	
Default industrial noise	Point		22.6	0.0	
Default industrial noise	Point		22.7	0.0	
Default industrial noise	Point		21.0	0.0	
Default industrial noise	Point		20.9	0.0	
Default industrial noise	Point		19.3	0.0	
Default industrial noise	Point		10.4	0.0	
Default industrial noise	Point		10.0	0.0	
Default industrial noise	Point		6.5	0.0	
Default industrial noise	Point		5.7	0.0	
Default industrial noise	Point		5.9	0.0	
Default industrial noise	Point		12.7	0.0	
Default industrial noise	Point		12.6	0.0	
Default industrial noise	Point		14.2	0.0	
Default industrial noise	Point		13.9	0.0	
Default industrial noise	Point		14.1	0.0	
Default industrial noise	Point		15.5	0.0	
Default industrial noise	Area		27.5	0.0	
Default industrial noise	Area		51.3	0.0	
Default industrial noise	Area		-13.1	0.0	
Default industrial noise	Area		35.0	0.0	
Default industrial noise	Area		-4.9	0.0	
Default industrial noise	Area		-6.8	0.0	
Default industrial noise	Area		44.8	0.0	
Default industrial noise	Area		-3.0	0.0	
Receiver R2	FI G	Lr,lim	dB(A)	Leq,d 47.6 dB(A)	Sigma(Leq,d) 0.0 dB(A)
Default industrial noise	Point		23.0	0.0	
Default industrial noise	Point		21.4	0.0	
Default industrial noise	Point		20.4	0.0	
Default industrial noise	Point		19.5	0.0	
Default industrial noise	Point		18.0	0.0	
Default industrial noise	Line		26.4	0.0	

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913 Redlands Noise

Contribution level - 001 - 913 Redlands: Outdoor SP

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Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB	
Default industrial noise	Line		22.4	0.0	
Default parking lot noise	PLot		42.9	0.0	
Default industrial noise	Line		16.2	0.0	
Default industrial noise	Line		13.8	0.0	
Default industrial noise	Point		14.9	0.0	
Default industrial noise	Point		14.8	0.0	
Default industrial noise	Point		14.8	0.0	
Default industrial noise	Point		16.8	0.0	
Default industrial noise	Point		16.7	0.0	
Default industrial noise	Point		15.5	0.0	
Default industrial noise	Point		15.4	0.0	
Default industrial noise	Point		17.0	0.0	
Default industrial noise	Point		16.2	0.0	
Default industrial noise	Point		14.8	0.0	
Default industrial noise	Point		14.5	0.0	
Default industrial noise	Point		14.4	0.0	
Default industrial noise	Point		13.1	0.0	
Default industrial noise	Point		13.2	0.0	
Default industrial noise	Point		13.9	0.0	
Default industrial noise	Point		11.6	0.0	
Default industrial noise	Point		12.8	0.0	
Default industrial noise	Point		15.0	0.0	
Default industrial noise	Area		41.8	0.0	
Default industrial noise	Area		40.1	0.0	
Default industrial noise	Area		-29.7	0.0	
Default industrial noise	Area		11.8	0.0	
Default industrial noise	Area		-12.2	0.0	
Default industrial noise	Area		-6.0	0.0	
Default industrial noise	Area		40.6	0.0	
Default industrial noise	Area		-9.3	0.0	
Receiver R3 FI G Lr,lim dB(A) Leq,d 56.2 dB(A) Sigma(Leq,d) 0.0 dB(A)					
Default industrial noise	Point		15.1	0.0	
Default industrial noise	Point		17.0	0.0	
Default industrial noise	Point		13.8	0.0	
Default industrial noise	Point		15.1	0.0	
Default industrial noise	Point		18.5	0.0	
Default industrial noise	Line		24.3	0.0	
Default industrial noise	Line		15.8	0.0	
Default parking lot noise	PLot		33.2	0.0	
Default industrial noise	Line		33.6	0.0	
Default industrial noise	Line		31.2	0.0	
Default industrial noise	Point		11.8	0.0	
Default industrial noise	Point		16.8	0.0	
Default industrial noise	Point		15.5	0.0	
Default industrial noise	Point		15.0	0.0	

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913 Redlands Noise
Contribution level - 001 - 913 Redlands: Outdoor SP

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Source group	Source ty	Tr. lane	Leq,d dB(A)	A dB	
Default industrial noise	Point		21.3	0.0	
Default industrial noise	Point		21.8	0.0	
Default industrial noise	Point		20.4	0.0	
Default industrial noise	Point		20.1	0.0	
Default industrial noise	Point		20.1	0.0	
Default industrial noise	Point		20.2	0.0	
Default industrial noise	Point		20.2	0.0	
Default industrial noise	Point		12.8	0.0	
Default industrial noise	Point		21.0	0.0	
Default industrial noise	Point		21.0	0.0	
Default industrial noise	Point		20.9	0.0	
Default industrial noise	Point		21.1	0.0	
Default industrial noise	Point		21.3	0.0	
Default industrial noise	Point		19.4	0.0	
Default industrial noise	Area		35.7	0.0	
Default industrial noise	Area		55.9	0.0	
Default industrial noise	Area		-6.5	0.0	
Default industrial noise	Area		41.8	0.0	
Default industrial noise	Area		-1.9	0.0	
Default industrial noise	Area		-11.7	0.0	
Default industrial noise	Area		33.4	0.0	
Default industrial noise	Area		-1.1	0.0	

913 Redlands Noise **Octave spectra of the sources in dB(A) - 001 - 913 Redlands: Outdoor SP**

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Name	Source type	I or A m,m²	Li dB(A)	R'w dB	L'w dB(A)	Lw dB(A)	KI dB	KT dB	LwMax dB(A)	DO-Wall dB	Time histogram	Emission spectrum	63Hz dB(A)	125Hz dB(A)	250Hz dB(A)	500Hz dB(A)	1kHz dB(A)	2kHz dB(A)	4kHz dB(A)	8kHz dB(A)	16kHz dB(A)
Auto Parking	PLot	3953.85			55.9	91.9	0.0	0.0		0	100%/24h	Typical spectrum	75.2	86.8	79.3	83.8	83.9	84.3	81.6	75.4	62.6
001 - 14 MacNeil - Standard Tunnel-Facade 01	Area	24.31	78.5	57.0	27.0	40.9	0.0	0.0		3	100%/24h	1082_Facade 01	30.6	24.7	36.0	38.1	24.7	15.5	5.1	-6.8	
001 - 14 MacNeil - Standard Tunnel-Facade 02	Area	182.06	88.0	57.0	34.1	56.7	0.0	0.0		3	100%/24h	1083_Facade 02	47.3	41.8	50.2	54.2	44.3	38.7	31.9	27.0	
001 - 14 MacNeil - Standard Tunnel-Facade 03	Area	30.63	92.4	57.0	38.2	53.1	0.0	0.0		3	100%/24h	1084_Facade 03	43.6	38.2	46.4	50.5	41.0	35.6	29.0	24.7	
001 - 14 MacNeil - Standard Tunnel-Facade 04	Area	182.06	88.0	57.0	34.1	56.7	0.0	0.0		3	100%/24h	1085_Facade 04	47.3	41.8	50.2	54.1	44.3	38.7	31.9	27.0	
001 - 14 MacNeil - Standard Tunnel-Roof 01	Area	201.88	87.7	0.0	87.7	110.7	0.0	0.0		0	100%/24h	1080_Roof 01_	77.1	85.7	96.1	106.1	105.4	104.0	100.4	93.9	
001 - 14 MacNeil - Standard Tunnel-Transmissive area 01	Area	9.29	94.1	0.0	94.1	103.8	0.0	0.0		3	100%/24h	1068_Transmissive area 01_	70.0	78.6	88.9	99.0	98.4	97.1	93.6	87.6	
001 - 14 MacNeil - Standard Tunnel-Transmissive area 01	Area	15.61	76.8	0.0	76.8	88.7	0.0	0.0		3	100%/24h	1069_Transmissive area 01_	56.9	65.2	78.7	86.6	82.0	75.9	67.6	53.8	
Car lane	Line	28.22			62.8	77.3	0.0	0.0		0	100%/24h	Drive-Thru - Idling Car @ 6ft	61.3	62.8	66.3	70.0	70.9	72.1	68.6	60.4	54.0
Car lane	Line	71.08			62.8	81.3	0.0	0.0		0	100%/24h	Drive-Thru - Idling Car @ 6ft	65.3	66.8	70.3	74.0	74.9	76.1	72.6	64.4	58.0
Car lane	Line	82.58			62.8	82.0	0.0	0.0		0	100%/24h	Drive-Thru - Idling Car @ 6ft	66.0	67.5	71.0	74.7	75.5	76.8	73.2	65.0	58.7
Car lane	Line	55.70			62.8	80.3	0.0	0.0		0	100%/24h	Drive-Thru - Idling Car @ 6ft	64.3	65.8	69.3	73.0	73.8	75.0	71.5	63.3	57.0
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9

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913 Redlands Noise

Octave spectra of the sources in dB(A) - 001 - 913 Redlands: Outdoor SP

3

Name	Source type	I or A m,m²	Li dB(A)	R'w dB	L'w dB(A)	Lw dB(A)	KI dB	KT dB	LwMax dB(A)	DO-Wall dB	Time histogram	Emission spectrum	63Hz dB(A)	125Hz dB(A)	250Hz dB(A)	500Hz dB(A)	1kHz dB(A)	2kHz dB(A)	4kHz dB(A)	8kHz dB(A)	16kHz dB(A)
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9

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913 Redlands Noise

Octave spectra of the sources in dB(A) - 001 - 913 Redlands: Outdoor SP

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Name	Source type	I or A m,m²	Li dB(A)	R'w dB	L'w dB(A)	Lw dB(A)	KI dB	KT dB	LwMax dB(A)	DO-Wall dB	Time histogram	Emission spectrum	63Hz dB(A)	125Hz dB(A)	250Hz dB(A)	500Hz dB(A)	1kHz dB(A)	2kHz dB(A)	4kHz dB(A)	8kHz dB(A)	16kHz dB(A)
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
HVAC	Point				74.9	74.9	0.0	0.0		0	100%/24h	HVAC: 67.7dB @ 3ft - Carrier 50TFQ0006 -	52.0	60.5	62.9	67.2	69.5	69.1	66.1	61.2	48.9
Pool	Area	55.28			70.4	87.8	0.0	0.0		0	100%/24h	Open-air swimming pool = 90.9dBA		68.2	71.4	77.3	85.0	82.9	72.0	61.3	

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913 Redlands Noise Contribution spectra - 001 - 913 Redlands: Outdoor SP

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Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz		
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	
Receiver R1 FI G Lr,lim dB(A) Leq,d 52.3 dB(A) Sigma(Leq,d) 0.0 dB(A)																																	
Leq,d	31.6					20.5			28.5			16.7			21.3			22.5			23.4			15.6			-7.8				-65.2		
Leq,d	-13.1					-16.7			-26.7			-19.7			-20.2			-23.3			-33.1			-46.6			-69.6						
Leq,d	-4.9					-9.5			-20.4			-16.6			-15.0			-9.3			-14.9			-26.0			-45.9						
Leq,d	-6.8					-9.4			-19.7			-16.3			-14.0			-22.2			-18.6			-29.7			-49.5						
Leq,d	-3.0					-5.8			-15.8			-11.6			-10.2			-14.7			-20.6			-30.7			-45.9						
Leq,d	51.3					23.4			27.8			35.1			41.8			48.2			46.2			38.3			18.3						
Leq,d	44.8					16.0			19.7			23.5			31.9			32.1			43.6			35.6			13.9						
Leq,d	35.0					9.8			14.1			22.3			27.3			32.8			26.6			15.2			-9.7						
Leq,d	15.1	-3.0	-20.2	-14.5	0.2	0.8	2.5	-2.3	1.3	-2.1	-0.3	-5.7	-4.1	-0.1	-0.6	3.0	4.3	3.9	4.8	3.4	5.7	5.7	1.2	-2.9	-9.0	-16.7	-25.4	-38.0	-53.1	-72.5	-95.1		
Leq,d	24.3	3.1	-14.1	-8.2	7.0	7.8	9.7	5.1	8.9	6.0	7.6	2.4	4.2	8.2	8.0	11.8	13.5	13.7	14.5	13.2	15.6	15.9	11.6	7.9	2.2	-4.9	-12.9	-24.5	-38.3	-56.0	-76.4		
Leq,d	29.0	9.1	-9.7	-4.0	10.7	11.3	13.0	9.1	12.6	9.1	11.1	5.5	6.9	10.4	9.9	13.9	16.6	18.1	19.4	18.6	21.2	21.7	17.7	14.4	9.4	3.5	-2.6	-11.3	-21.0	-32.9	-45.8		
Leq,d	26.7	7.6	-11.0	-5.2	9.5	10.2	11.9	7.8	11.4	8.1	10.3	4.9	6.4	10.1	9.7	13.4	15.7	15.5	16.2	15.5	18.2	18.6	14.6	11.2	6.2	0.3	-5.8	-14.5	-24.3	-36.6	-50.1		
Leq,d	12.7	-32.1	-26.9	-23.9	-11.9	-8.0	-15.0	-7.2	-6.2	-8.2	-9.7	-10.6	-9.6	-9.6	-9.6	-4.6	6.0	2.1	3.7	5.4	3.0	3.1	-1.4	-2.5	-7.7	-12.5	-24.6	-39.4	-53.8	-72.2	-94.5		
Leq,d	12.6	-32.3	-27.2	-24.2	-12.3	-8.4	-15.4	-7.5	-6.6	-8.6	-10.0	-11.0	-10.0	-10.0	-9.9	-7.0	5.6	2.4	4.0	5.6	2.9	2.9	-1.6	-2.7	-8.0	-12.9	-25.0	-39.9	-54.0	-71.8	-93.6		
Leq,d	5.9	-32.3	-27.1	-24.1	-12.0	-8.1	-15.0	-7.3	-6.3	-8.3	-9.7	-10.6	-9.6	-9.6	-9.6	-6.6	-3.0	-4.6	-3.8	-3.0	-6.5	-7.2	-12.2	-12.7	-18.1	-22.8	-33.9	-47.1	-60.0	-78.1			
Leq,d	5.7	-32.2	-27.1	-24.0	-12.0	-8.0	-15.0	-7.2	-6.3	-8.3	-9.8	-10.7	-9.7	-9.7	-9.6	-6.7	-3.0	-5.0	-4.2	-3.4	-6.9	-7.2	-11.1	-12.8	-18.3	-22.8	-33.8	-46.9	-59.5	-77.4			
Leq,d	15.5	-28.3	-22.5	-18.7	-5.9	-1.2	-7.4	1.1	2.7	1.2	-0.8	-1.3	0.0	0.4	0.6	3.9	7.4	4.1	5.4	6.7	3.7	3.5	-1.2	-2.6	-8.0	-12.8	-24.0	-37.2	-49.7	-67.3	-90.0		
Leq,d	14.1	-32.3	-27.4	-24.5	-12.7	-8.9	-16.0	-8.2	-7.3	-9.3	-11.3	-12.3	-11.3	-11.3	-11.3	-2.5	7.7	3.4	5.1	7.0	4.4	4.4	-0.1	-1.3	-6.7	-11.9	-24.4	-39.5	-53.3	-70.1	-91.2		
Leq,d	13.9	-32.6	-27.6	-24.7	-12.8	-9.0	-16.0	-8.2	-7.3	-9.3	-10.9	-11.9	-10.9	-10.9	-10.9	-7.9	7.4	3.2	5.0	6.8	4.2	4.4	-0.1	-1.1	-6.5	-11.7	-24.2	-39.4	-53.5	-70.7	-91.9		
Leq,d	14.2	-32.5	-27.4	-24.5	-12.6	-8.7	-15.7	-7.9	-6.9	-9.0	-10.4	-11.4	-10.4	-10.4	-10.4	-7.4	7.6	3.9	5.6	7.3	4.6	4.7	0.2	-1.0	-6.4	-11.5	-24.0	-39.2	-53.6	-71.2	-92.7		
Leq,d	20.0	-35.0	-28.9	-24.9	-11.9	-6.8	-12.7	-3.9	-1.8	-2.7	-1.1	-0.7	1.8	3.5	5.6	10.2	12.8	8.7	10.8	11.7	9.3	9.9	5.6	4.9	0.1	-4.1	-15.2	-29.0	-43.3	-63.7	-90.1		
Leq,d	17.2	-28.4	-22.5	-18.7	-5.8	-1.1	-7.3	1.3	3.0	1.7	-0.2	-0.6	1.0	1.6	2.1	5.6	9.5	5.9	7.4	8.8	5.9	5.8	1.2	0.0	-5.0	-9.3	-20.2	-33.1	-45.5	-63.2	-86.0		
Leq,d	18.9	-28.4	-22.5	-18.7	-5.8	-1.0	-7.2	1.4	3.2	1.9	0.0	-0.2	1.5	2.3	3.0	6.6	10.9	7.4	9.1	10.9	8.3	8.6	4.6	4.0	-0.3	-3.7	-13.7	-25.8	-37.6	-54.6	-76.8		
Leq,d	13.6	-34.0	-28.2	-24.5	-11.8	-7.1	-13.4	-5.1	-3.5	-4.9	-4.1	-4.4	-0.6	0.1	0.8	4.4	6.5	1.9	3.4	4.8	1.7	1.8	-3.4	-5.5	-12.0	-18.4	-32.4	-50.0	-69.0	-95.0			
Leq,d	15.1	-34.7	-28.9	-25.2	-12.5	-7.8	-14.0	-5.7	-3.9	-5.2	-4.2	-2.3	-0.5	0.4	1.3	5.1	7.5	3.2	5.7	6.8	4.3	4.2	-0.7	-2.3	-8.4	-14.5	-28.3	-45.8	-65.0	-91.6			
Leq,d	14.9	-33.9	-28.1	-24.3	-11.6	-6.9	-13.1	-4.7	-3.1	-4.4	-3.5	-3.6	-0.1	0.8	1.6	5.4	7.7	3.4	5.7	6.3	3.5	3.3	-1.5	-3.2	-9.2	-15.1	-28.7	-45.9	-64.6	-90.5			
Leq,d	13.7	-34.0	-28.3	-24.5	-11.8	-7.2	-13.5	-5.2	-3.6	-5.0	-4.1	-4.4	-0.6	0.2	0.9	4.5	6.6	2.1	3.6	4.9	1.8	1.6	-3.6	-5.6	-12.0	-18.4	-32.4	-50.0	-69.1	-95.2			
Leq,d	22.6	-27.1	-21.1	-17.1	-4.1	0.8	-5.2	3.7	5.6	4.5	1.6	1.7	3.6	4.8	5.8	9.7	14.8	11.0	13.0	14.9	12.4	12.9	8.9	8.5	4.4	1.1	-8.7	-20.6	-32.3	-49.2	-71.3		
Leq,d	19.3	-30.1	-24.4	-20.8	-8.3	-3.8	-10.2	-1.9	-0.5	-2.1	-4.9	-5.5	-4.3	-3.9	2.8	6.6	11.6	8.5	10.3	12.1	9.5	9.6	5.3	4.3	-0.8	-5.5	-17.4	-32.3	-47.7	-68.5	-93.7		
Leq,d	10.4	-30.9	-25.5	-22.3	-10.1	-6.0	-12.9	-5.0	-3.9	-5.9	-8.4	-9.3	-8.3	-8.2	-8.2	-4.3	-1.5	0.4	1.8	3.5	0.6	0.5	-4.1	-5.5	-10.9	-16.3	-28.8	-43.6	-57.1	-75.0	-97.9		
Leq,d	10.0	-31.5	-26.3	-23.3	-11.3	-7.3	-14.3	-6.5	-5.5	-7.5	-9.5	-10.4	-9.4	-9.4	-9.4	-5.1	-1.1	0.0	1.5	3.1	0.3	0.6	-4.1	-5.2	-10.9	-16.5	-29.2	-44.3	-58.1	-76.0	-98.9		
Leq,d	6.5	-32.0	-26.8	-23.8	-11.8	-7.8	-14.8	-7.0	-6.1	-8.1	-9.7	-10.7	-9.7	-9.6	-9.6	-6.7	-2.6	-3.8	-2.9	-2.0	-5.5	-5.9	-10.3	-12.3	-18.1	-22.9	-33.9	-46.7	-59.1	-76.8	-99.8		
Leq,d	22.7	-27.2	-21.1	-17.1	-4.1	0.8	-5.2	3.6	5.6	4.5	1.6	1.6	3.6	4.8	5.7	9.7	14.8	11.0	13.0	14.8	12.4	12.9	10.0	9.4	5.1	1.6	-8.4	-20.6	-32.5	-49.5	-71.6		
Leq,d	21.0	-27.2	-22.9	-19.0	-6.2	-1.5	-7.7	0.9	2.7	1.4	-0.7	-1.0	0.7	1.6	2.3	6.0	13.6	9.9	11.8	13.6	11.1	11.4	7.2	6.5	1.8	-2.1	-12.7	-25.4	-37.7	-55.0	-77.5		
Leq,d	20.9	-29.3	-23.4	-19.5	-6.7	-1.9	-8.0	0.6	2.3	1.0	-1.1	-1.3	0.3	4.2	5.0	8.8	13.5	10.0	11.7	13.3	10.7	10.8	6.4	5.5	0.5	-3.9	-15.3	-29.2	-43.0	-61.7	-85.2		

913 Redlands Noise Contribution spectra - 001 - 913 Redlands: Outdoor SP

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Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz	
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Leq,d	27.5							2.4	5.3	9.6	6.8	6.8	8.2	10.1	11.6	14.7	19.1	19.6	21.2	20.4	16.9	12.5	5.4	-2.7	-11.7	-22.7	-33.9	-46.7				
Receiver R2 FI G Lr,lim dB(A) Leq,d 47.6 dB(A) Sigma(Leq,d) 0.0 dB(A)																																
Leq,d	42.9					27.5			37.9			27.4			33.1			36.0			36.5			31.9			19.2				-10.0	
Leq,d	-29.7					-32.4			-43.9			-36.2			-36.8			-49.7			-58.9			-74.5								
Leq,d	-12.2					-14.2			-25.2			-21.6			-19.9			-29.5			-35.5			-46.7			-68.5					
Leq,d	-6.0					-9.0			-18.4			-14.2			-12.1			-21.7			-30.7			-35.7			-58.6					
Leq,d	-9.3					-12.2			-22.4			-17.3			-15.3			-25.6			-32.6			-45.4			-67.5					
Leq,d	40.1					16.3			20.2			27.9			35.2			35.4			33.7			25.0			-0.5					
Leq,d	40.6					18.1			22.7			27.7			35.8			35.6			34.6			25.7			1.2					
Leq,d	11.8					-8.1			-5.8			2.5			8.2			6.6			2.0			-11.6			-43.4					
Leq,d	22.4	-0.3	-17.3	-11.3	3.7	4.7	6.7	2.1	6.0	3.3	4.5	-0.6	1.3	5.4	5.3	9.1	11.3	11.1	12.3	11.9	14.5	14.7	10.8	7.5	1.5	-6.2	-15.1	-28.2	-44.1	-64.5	-88.2	
Leq,d	26.4	3.8	-13.2	-7.2	7.8	8.8	10.8	6.2	10.1	7.4	8.8	3.7	5.5	9.7	9.6	13.4	15.7	15.5	16.5	15.6	18.1	18.5	14.2	10.5	4.5	-3.0	-11.6	-24.3	-40.0	-60.2	-83.6	
Leq,d	16.2	0.8	-16.3	-10.6	4.0	4.6	6.1	0.9	4.4	0.7	2.9	-2.9	-1.9	1.4	0.5	3.5	3.2	2.5	4.6	3.4	5.5	5.3	0.5	-3.9	-10.5	-18.8	-28.5	-42.6	-59.9	-81.7		
Leq,d	13.8	-0.6	-17.8	-12.1	2.5	3.0	4.5	-0.8	2.4	-1.4	0.6	-4.7	-3.4	-0.3	-1.3	1.9	1.4	0.8	1.4	-0.6	1.1	0.6	-4.4	-9.2	-16.1	-24.7	-34.8	-49.0	-66.2	-87.9		
Leq,d	13.1	-33.1	-27.2	-23.3	-10.5	-5.7	-11.9	-4.0	-2.4	-3.9	-6.0	-6.7	-5.6	-5.3	-5.2	-1.1	2.2	-2.9	-2.0	7.0	4.1	4.0	2.7	1.1	-4.9	-11.2	-25.4	-43.9	-64.6	-93.4		
Leq,d	13.2	-33.0	-27.0	-23.2	-10.3	-5.6	-11.8	-3.9	-2.3	-3.8	-6.0	-6.7	-5.5	-5.3	-5.2	-1.1	2.2	-2.9	-2.0	7.1	4.3	4.1	2.9	1.3	-4.7	-10.8	-24.9	-43.1	-63.6	-92.0		
Leq,d	14.4	-30.9	-26.0	-22.1	-9.3	-4.5	-10.7	-2.8	-1.1	-2.4	-4.5	-4.8	-3.3	-1.8	-1.4	1.9	5.8	1.2	2.4	3.7	6.5	6.4	1.8	0.2	-5.7	-11.7	-25.6	-43.4	-63.3	-90.9		
Leq,d	14.5	-30.8	-25.8	-22.0	-9.2	-4.4	-10.6	-2.6	-0.9	-2.2	-4.4	-4.7	-3.2	-1.7	-1.4	1.9	5.9	1.2	2.5	3.8	6.6	6.5	2.0	0.4	-5.4	-11.3	-25.1	-42.7	-62.3	-89.5		
Leq,d	15.0	-28.9	-24.0	-20.2	-7.4	-2.7	-8.9	-0.7	0.9	-0.5	-2.8	-3.3	-2.0	-1.1	-0.9	2.3	6.3	1.5	2.6	3.8	6.9	6.9	2.4	1.2	-4.1	-9.2	-21.6	-37.4	-54.2	-77.3		
Leq,d	12.8	-32.5	-26.6	-22.8	-10.0	-5.2	-11.5	-3.5	-2.0	-3.5	-5.7	-6.5	-5.4	-5.2	-5.1	-1.0	2.2	-2.9	-2.0	-1.1	-4.5	8.1	3.5	2.0	-3.8	-9.6	-23.3	-41.0	-60.6	-87.8		
Leq,d	11.6	-32.7	-26.8	-22.9	-10.1	-5.3	-11.6	-3.6	-2.1	-3.7	-5.8	-6.5	-5.4	-5.2	-5.1	-1.1	2.2	-2.9	-2.0	-1.1	-4.6	5.9	1.2	-0.3	-6.1	-12.0	-25.7	-43.4	-63.1	-90.4		
Leq,d	13.9	-32.8	-26.9	-23.0	-10.2	-5.4	-11.7	-3.8	-2.2	-3.7	-5.9	-6.6	-5.5	-5.3	-5.1	-1.1	2.2	-2.9	-2.0	7.2	4.4	7.8	3.1	1.6	-4.4	-10.4	-24.4	-42.4	-62.6	-90.6		
Leq,d	18.0	-36.2	-30.2	-26.2	-13.1	-8.2	-14.1	-5.4	-3.4	-4.4	-1.9	-1.8	0.2	1.3	2.6	7.0	10.2	7.5	9.3	10.2	7.7	7.9	3.6	2.7	-2.3	-7.0	-18.9	-34.0	-50.1	-72.8		
Leq,d	14.9	-29.1	-24.2	-20.4	-7.6	-2.9	-9.1	-0.9	0.7	-0.7	-3.0	-3.5	-2.1	-1.2	-1.0	2.2	6.2	1.4	2.6	3.7	6.8	6.8	2.2	1.0	-4.4	-9.5	-22.1	-38.1	-55.2	-75.1		
Leq,d	14.8	-29.3	-24.3	-20.5	-7.8	-3.0	-9.3	-1.1	0.6	-0.9	-3.1	-3.6	-2.2	-1.3	-1.0	2.2	6.2	1.4	2.6	3.8	6.6	6.6	2.1	0.8	-4.7	-9.9	-22.6	-38.8	-56.1	-80.0		
Leq,d	19.5	-33.9	-27.8	-23.9	-10.9	-5.9	-11.9	-3.1	1.1	0.1	1.3	1.4	3.3	4.3	5.3	9.3	11.9	7.8	9.7	10.8	8.6	9.1	5.4	5.2	1.4	-1.5	-11.2	-23.7	-36.0	-53.8	-77.7	
Leq,d	23.0	-30.5	-24.4	-20.5	-7.5	-2.5	-8.5	0.4	4.5	3.5	4.6	4.6	6.6	7.7	8.7	12.6	15.0	10.9	12.8	14.5	12.2	12.8	9.0	9.0	5.3	2.7	-6.0	-16.5	-25.9	-39.8	-58.0	
Leq,d	21.4	-31.7	-25.7	-21.7	-8.7	-3.7	-9.7	-0.9	3.3	2.2	3.4	3.4	5.4	6.4	7.4	11.4	13.8	9.7	11.6	12.6	10.3	10.8	7.1	7.0	3.1	0.3	-9.0	-20.0	-30.6	-45.9	-65.9	
Leq,d	20.4	-32.9	-26.9	-22.9	-9.9	-4.9	-10.9	-2.1	2.1	1.0	2.3	2.3	4.3	5.3	6.3	10.2	12.7	8.6	10.6	11.6	9.3	9.9	6.1	6.0	2.1	-0.8	-10.0	-21.6	-33.5	-50.6	-72.8	
Leq,d	14.8	-29.4	-24.5	-20.7	-7.9	-3.2	-9.4	-1.3	0.4	-1.0	-3.3	-3.7	-2.3	-1.1	-0.8	2.4	6.3	1.5	2.7	3.9	0.7	7.9	3.3	2.1	-3.3	-8.4	-21.1	-37.1	-54.4	-78.6		
Leq,d	15.4	-30.1	-25.2	-21.4	-8.6	-3.8	-10.0	-1.9	-0.3	-1.6	-3.8	-4.2	-2.8	-1.4	-0.6	2.6	6.5	1.8	2.9	9.0	6.2	6.1	1.4	-0.1	-5.8	-11.5	-24.9	-42.1	-60.8	-86.6		
Leq,d	17.0	-30.3	-25.3	-21.5	-8.7	-4.0	-10.2	-2.1	-0.4	-1.8	-3.9	-4.3	-2.9	-1.5	-1.1	2.1	6.1	1.4	2.6	11.6	8.9	8.9	4.3	2.9	-2.8	-8.4	-21.9	-39.0	-57.9	-84.3		
Leq,d	16.2	-30.4	-25.5	-21.7	-8.9	-4.1	-10.3	-2.3	-0.6	-1.9	-4.1	-4.5	-3.0	-1.6	-1.2	2.1	6.0	1.3	2.5	8.6	8.8	8.7	4.1	2.7	-3.1	-8.8	-22.4	-39.8	-59.0	-85.7		
Leq,d	14.8	-30.6	-25.6	-21.8	-9.0	-4.3	-10.5	-2.4	-0.7	-2.1	-4.2	-4.6	-3.1	-1.6	-1.3	2.0	6.0	1.3	2.5	3.8	6.7	6.7	3.9	2.4	-3.4	-9.3	-22.9	-40.6	-60.1	-87.2		
Leq,d	16.8	-29.6	-24.7	-20.9	-8.1	-3.3	-9.6	-1.4	0.2	-1.2	-3.4	-3.8	-2.4	-1.1	-0.8	2.4	6.3	1.5	7.6	9.2	6.5	9.5	5.0	3.8	-1.7	-7.0	-19.8	-36.2	-54.1	-78.9		
Leq,d	16.7	-29.8	-24.9	-21.0	-8.2	-3.5	-9.7	-1.6	0.1	-1.3	-3.5	-4.0	-2.5	-1.2	-0.9	2.3	6.2	1.5	2.6	9.1	6.3	10.1	6.3	4.9	-0.7	-6.3	-19.6	-36.4	-54.8	-80.2		

MD Acoustics LLC 4960 S Gilbert Rd Chandler AZ 85249 USA

913 Redlands Noise Contribution spectra - 001 - 913 Redlands: Outdoor SP

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Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz	
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
Leq,d	15.5	-30.0	-25.0	-21.2	-8.4	-3.7	-9.9	-1.8	-0.1	-1.5	-3.7	-4.1	-2.6	-1.3	-0.5	2.7	6.5	1.8	3.0	9.1	6.3	6.5	1.8	0.4	-5.4	-11.0	-24.3	-41.3	-59.7	-85.2		
Leq,d	41.8							12.4	16.6	19.7	16.1	14.6	16.5	19.4	21.8	25.9	32.9	34.3	35.5	35.1	32.4	29.3	24.2	18.9	13.3	7.0	1.7	-3.7				
Receiver R3 FI G Lr,lim dB(A) Leq,d 56.2 dB(A) Sigma(Leq,d) 0.0 dB(A)																																
Leq,d	33.2					18.0			26.8			18.0			23.8			27.2			28.1			19.0			-10.0			-85.3		
Leq,d	-6.5					-16.7			-24.4			-12.7			-8.8			-20.0			-29.5			-43.3			-66.8					
Leq,d	-1.9					-6.4			-14.7			-8.5			-6.8			-17.7			-17.8			-30.9			-55.1					
Leq,d	-11.7					-14.7			-25.1			-19.2			-18.0			-26.6			-33.7			-44.9			-63.8					
Leq,d	-1.1					-9.0			-17.6			-7.5			-4.0			-13.0			-19.8			-30.2			-47.0					
Leq,d	55.9					21.4			28.3			40.9			50.6			51.5			49.9			42.5			23.4					
Leq,d	33.4					10.5			13.3			19.6			27.3			29.3			27.7			20.0			-0.5					
Leq,d	41.8					10.7			17.2			29.4			38.7			37.4			31.4			19.8			-5.5					
Leq,d	15.8	-6.6	-24.0	-18.5	-3.9	-3.5	-2.1	-7.5	-4.3	-8.2	-2.8	-7.5	-6.0	-1.6	-1.3	3.5	4.9	5.0	6.5	6.1	8.3	8.2	3.3	-1.4	-8.7	-18.0	-29.4	-45.8	-66.2	-92.3		
Leq,d	24.3	-0.5	-17.7	-12.0	2.7	3.4	5.2	0.0	3.4	-0.2	5.1	2.0	4.0	7.9	7.7	11.5	13.7	13.6	15.0	14.5	16.8	16.7	12.1	7.5	0.7	-8.3	-19.0	-34.5	-53.8	-78.5		
Leq,d	33.6	6.2	-10.7	-4.8	10.2	11.2	13.2	9.9	13.9	11.1	13.4	10.3	12.3	16.6	16.7	20.6	22.8	23.4	24.4	23.2	25.8	26.1	22.0	18.4	13.0	6.2	-1.3	-12.0	-24.3	-39.7	-56.9	
Leq,d	31.2	4.3	-12.7	-6.7	8.3	9.2	11.2	8.0	12.0	9.0	11.1	7.9	10.0	14.2	14.3	18.3	20.4	21.0	21.9	20.8	23.4	23.7	19.6	15.9	10.3	3.4	-4.2	-15.2	-28.0	-43.9	-61.6	
Leq,d	21.0	-31.1	-25.3	-21.5	-8.8	-4.2	-10.6	-2.5	-1.2	-3.0	-0.9	0.9	2.9	4.0	4.9	8.7	13.9	9.7	11.6	13.5	10.9	11.2	6.9	6.1	1.2	-3.2	-14.8	-29.4	-44.7	-66.4	-94.5	
Leq,d	21.0	-31.1	-25.2	-21.4	-8.6	-4.0	-10.3	-2.2	-0.8	-2.5	-0.8	0.9	3.0	4.0	4.9	8.7	13.9	9.7	11.6	13.4	10.8	11.1	6.8	5.9	1.0	-3.4	-15.1	-29.8	-45.2	-67.1	-95.4	
Leq,d	12.8	-31.9	-26.1	-22.4	-9.7	-5.2	-11.7	-3.8	-2.6	-4.5	-3.9	-4.6	-3.4	-3.2	-3.0	0.0	2.3	1.5	3.2	5.0	2.7	3.4	-0.4	-1.9	-7.8	-13.8	-27.7	-45.3	-63.8	-87.5		
Leq,d	20.2	-31.8	-26.0	-22.3	-9.6	-5.0	-11.4	-3.5	-2.2	-4.1	-1.7	0.1	2.2	3.3	4.1	8.0	13.2	9.0	10.9	12.7	10.1	10.3	6.0	5.0	-0.2	-5.0	-17.1	-32.5	-48.9	-72.1		
Leq,d	19.4	-32.4	-26.5	-22.6	-9.8	-5.1	-11.4	-2.5	-1.0	-2.5	-4.8	-0.5	1.5	2.7	3.7	7.5	12.3	8.4	10.2	11.9	9.2	9.3	4.7	3.4	-2.1	-7.5	-20.5	-37.2	-55.5	-81.2		
Leq,d	21.3	-31.1	-25.2	-21.3	-8.4	-3.6	-9.8	-1.3	0.4	-1.0	-0.2	1.2	3.2	4.3	5.2	8.9	14.0	9.8	12.0	14.1	11.4	11.5	7.1	6.0	0.8	-3.9	-15.9	-30.9	-46.9	-69.4	-98.5	
Leq,d	21.1	-31.1	-25.2	-21.3	-8.5	-3.7	-9.9	-1.7	-0.1	-1.5	-0.4	1.0	3.1	4.2	5.1	8.8	13.9	9.7	11.8	13.5	10.9	11.1	6.8	5.8	0.8	-3.8	-15.7	-30.6	-46.3	-68.7	-97.4	
Leq,d	20.9	-31.0	-25.1	-21.3	-8.5	-3.8	-10.1	-1.9	-0.4	-2.0	-0.6	1.0	3.0	4.1	4.9	8.7	13.9	9.6	11.5	13.3	10.8	11.0	6.7	5.8	0.9	-3.7	-15.4	-30.2	-45.8	-67.9	-96.4	
Leq,d	18.5	-35.0	-29.1	-25.2	-12.4	-7.7	-14.0	-5.7	-4.2	-5.8	-2.4	-1.0	1.0	2.3	3.9	9.1	11.5	7.8	9.5	10.3	7.5	7.5	2.8	1.2	-4.6	-10.6	-24.3	-41.9	-61.5	-88.9		
Leq,d	11.8	-32.6	-26.7	-23.0	-10.3	-5.9	-12.5	-3.7	-2.7	-4.6	-6.8	-5.9	-4.9	-4.8	-4.8	-1.9	0.6	-4.6	3.4	5.1	2.3	2.2	-2.4	-3.9	-9.8	-15.7	-29.5	-47.2	-67.6	-95.2		
Leq,d	16.8	-33.0	-27.3	-23.8	-11.3	-7.1	-13.9	-6.1	-5.2	-7.3	-9.3	-7.8	-6.8	-6.8	-6.8	3.4	6.0	1.7	9.2	11.0	8.2	8.2	3.5	1.9	-4.0	-10.1	-23.9	-42.2	-63.0	-91.3		
Leq,d	15.1	-36.8	-30.8	-26.9	-13.9	-9.0	-15.1	-6.5	-4.8	-6.0	-5.2	-2.7	-1.0	0.1	0.9	4.5	6.9	2.5	4.0	8.5	5.5	5.1	-0.1	-2.5	-9.6	-17.5	-33.9	-55.4	-80.2			
Leq,d	15.1	-40.3	-34.3	-30.3	-17.3	-12.3	-18.3	-7.7	-5.7	-6.8	-5.4	-3.0	-1.0	0.1	1.1	5.0	7.7	3.6	5.5	6.6	4.5	4.7	0.4	-0.6	-7.8	-15.8	-32.6	-54.7	-80.7			
Leq,d	17.0	-40.1	-34.0	-30.0	-17.0	-12.1	-18.1	-7.4	-5.4	-6.5	-5.1	-2.6	-0.6	0.5	1.6	5.6	8.4	4.5	6.7	10.0	8.5	8.1	2.9	0.6	-6.6	-14.4	-31.0	-52.8	-78.0			
Leq,d	13.8	-37.2	-31.2	-27.3	-14.5	-9.7	-15.9	-7.3	-5.7	-7.1	-6.1	-3.3	-1.5	-0.5	0.3	4.1	6.6	2.3	4.0	5.7	2.8	2.5	-2.7	-5.0	-11.9	-19.4	-35.5	-56.4	-80.5			
Leq,d	15.5	-34.4	-29.1	-25.8	-13.7	-9.7	-16.8	-8.7	-7.8	-9.9	-11.8	-9.0	-8.1	-8.1	-8.1	3.2	5.8	1.5	7.7	9.5	6.7	6.7	2.0	0.4	-5.6	-11.8	-25.9	-43.9	-63.8	-91.7		
Leq,d	20.4	-31.8	-25.9	-22.0	-9.2	-4.4	-10.6	-2.5	-0.9	-2.4	-1.2	0.3	2.3	3.4	4.2	8.0	13.1	8.9	11.3	13.1	10.4	10.5	6.0	4.8	-0.6	-5.7	-18.2	-34.0	-51.1	-75.1		
Leq,d	20.1	-31.8	-25.9	-22.0	-9.2	-4.5	-10.8	-2.7	-1.2	-2.8	-1.4	0.2	2.2	3.4	4.2	8.0	13.1	8.9	10.8	12.5	9.9	10.1	5.7	4.6	-0.4	-5.3	-17.8	-33.6	-50.5	-74.3		
Leq,d	20.1	-31.8	-25.9	-22.1	-9.3	-4.6	-11.0	-2.9	-1.5	-3.2	-1.5	0.1	2.2	3.3	4.1	7.9	13.1	8.9	10.8	12.6	10.0	10.1	5.8	4.7	-0.5	-5.4	-17.6	-33.2	-50.0	-73.6		
Leq,d	20.2	-31.8	-25.9	-22.2	-9.4	-4.8	-11.2	-3.2	-1.9	-3.6	-1.6	0.1	2.2	3.3	4.1	7.9	13.1	8.9	10.8	12.6	10.1	10.2	5.9	4.8	-0.3	-5.2	-17.4	-32.8	-49.4	-72.8		
Leq,d	15.0	-31.9	-26.0	-22.1	-9.2	-4.3	-10.4	-2.0	-0.3	-1.6	-3.6	-3.0	-1.6	-0.9	-0.4	3.1	7.3	2.8	5.6	7.1	4.3	4.1	0.6	-1.1	-7.1	-12.9	-26.0	-42.0	-58.9	-82.5		

913 Redlands Noise
Contribution spectra - 001 - 913 Redlands: Outdoor SP

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Time slice	Sum	25Hz	31.5Hz	40Hz	50Hz	63Hz	80Hz	100Hz	125Hz	160Hz	200Hz	250Hz	315Hz	400Hz	500Hz	630Hz	800Hz	1kHz	1.25kHz	1.6kHz	2kHz	2.5kHz	3.15kHz	4kHz	5kHz	6.3kHz	8kHz	10kHz	12.5kHz	16kHz	20kHz	
	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	
Leq,d	21.3	-31.8	-25.9	-22.0	-9.1	-4.3	-10.4	-2.0	-0.3	-1.7	-3.7	0.4	2.5	3.6	4.4	8.2	13.3	9.1	12.7	14.4	11.7	11.8	7.2	5.9	0.3	-5.1	-18.0	-34.3	-51.8	-76.3		
Leq,d	21.8	-31.8	-25.9	-22.0	-9.1	-4.3	-10.5	-2.1	-0.5	-1.9	-1.0	0.4	2.4	3.5	4.3	8.0	13.2	10.2	13.5	15.2	12.5	12.6	8.0	6.7	1.1	-4.4	-17.3	-33.7	-51.3	-75.7		
Leq,d	35.7							3.5	6.8	11.4	7.8	8.0	11.0	14.0	16.2	20.1	27.5	28.8	29.5	28.9	25.7	21.8	15.1	7.3	-1.8	-13.5	-26.5	-43.3				

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Appendix C:
FHWA Roadway Noise Modeling Worksheets

Noise Input Data

Observer Distance (ft):

470



Distance to Wall(ft):

10



Height of Wall (ft):

40



Barrier:

Wall



Height of Observer:

5



Height of Noise:

5



Observer Elevation (ft):

0



Noise Elevation (ft):

0



Drop-off:

3 dBA per distance doubling



OUTPUT

	Distance	Leq	Lmax	L2	L8	L25	L50
Reference Level	470	70	70	70	70	70	70
Projected Level	470	70	70	70	70	70	70
Adjusted Level	470	50	50	50	50	50	50

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT: 913 California St Redlands
ROADWAY: California St north of Redlands Blvd
LOCATION: 913 California St, Redlands CA

JOB #: 1149-2024-02
DATE: 10-May-24
ENGINEER: F. Irarrazabal

NOISE INPUT DATA Existing

ROADWAY CONDITIONS

ADT = 19,500
SPEED = 40
PK HR % = 10
NEAR LANE/FAR LANE DIS = 48
ROAD ELEVATION = 0.0
GRADE = 0.0 %
PK HR VOL = 1,950

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 30
RECEIVER HEIGHT = 5.0
WALL DISTANCE FROM RECEIVER = 20
PAD ELEVATION = 0.0
ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS

AUTOMOBILES = 10
MEDIUM TRUCKS = 10 (10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS = 10

WALL INFORMATION

HTH WALL: 0.0
AMBIENT= 0.0
BARRIER = 0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.755	0.140	0.104	0.9200
MEDIUM TRUCKS	0.480	0.020	0.500	0.0300
HEAVY TRUCKS	0.480	0.020	0.500	0.0500

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	43.97	- -
MEDIUM TRUCKS	4.0	43.87	- -
HEAVY TRUCKS	8.0	43.97	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.1	67.0	65.8	59.7	68.1	68.8
MEDIUM TRUCKS	63.2	59.2	51.4	60.6	66.8	66.8
HEAVY TRUCKS	70.2	66.2	58.5	67.7	73.8	73.8
NOISE LEVELS (dBA)	73.1	70.0	66.6	69.0	75.5	75.6

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.1	67.0	65.8	59.7	68.1	68.8
MEDIUM TRUCKS	63.2	59.2	51.4	60.6	66.8	66.8
HEAVY TRUCKS	70.2	66.2	58.5	67.7	73.8	73.8
NOISE LEVELS (dBA)	73.1	70.0	66.6	69.0	75.5	75.6

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	183	578	1827	5779
LDN	177	558	1765	5582

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT: 913 California St Redlands
ROADWAY: California St north of Redlands Blvd
LOCATION: 913 California St, Redlands CA

JOB #: 1149-2024-02
DATE: 10-May-24
ENGINEER: F. Irarrazabal

NOISE INPUT DATA Existing + Project

ROADWAY CONDITIONS

ADT = 20,500
SPEED = 40
PK HR % = 10
NEAR LANE/FAR LANE DIS = 48
ROAD ELEVATION = 0.0
GRADE = 0.0 %
PK HR VOL = 2,050

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 30
RECEIVER HEIGHT = 5.0
WALL DISTANCE FROM RECEIVER = 20
PAD ELEVATION = 0.0
ROADWAY VIEW: LF ANGLE = -90
RT ANGLE = 90
DF ANGLE = 180

SITE CONDITIONS

AUTOMOBILES = 10
MEDIUM TRUCKS = 10 (10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS = 10

WALL INFORMATION

HTH WALL: 0.0
AMBIENT = 0.0
BARRIER = 0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.755	0.140	0.104	0.9200
MEDIUM TRUCKS	0.480	0.020	0.500	0.0300
HEAVY TRUCKS	0.480	0.020	0.500	0.0500

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	43.97	--
MEDIUM TRUCKS	4.0	43.87	--
HEAVY TRUCKS	8.0	43.97	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.3	67.3	66.0	59.9	68.3	69.0
MEDIUM TRUCKS	63.4	59.4	51.6	60.8	67.0	67.0
HEAVY TRUCKS	70.4	66.5	58.7	67.9	74.0	74.1
NOISE LEVELS (dBA)	73.4	70.3	66.8	69.2	75.7	75.8

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.3	67.3	66.0	59.9	68.3	69.0
MEDIUM TRUCKS	63.4	59.4	51.6	60.8	67.0	67.0
HEAVY TRUCKS	70.4	66.5	58.7	67.9	74.0	74.1
NOISE LEVELS (dBA)	73.4	70.3	66.8	69.2	75.7	75.8

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	192	608	1921	6075
LDN	186	587	1856	5869

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT: 913 California St Redlands
ROADWAY: Redlands Blvd east of California
LOCATION: 913 California St, Redlands CA

JOB #: 1149-2024-02
DATE: 10-May-24
ENGINEER: F. Irarrazabal

NOISE INPUT DATA Existing

ROADWAY CONDITIONS

ADT = 21,300
SPEED = 40
PK HR % = 10
NEAR LANE/FAR LANE DIS = 48
ROAD ELEVATION = 0.0
GRADE = 0.0 %
PK HR VOL = 2,130

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
DIST C/L TO WALL = 30
RECEIVER HEIGHT = 5.0
WALL DISTANCE FROM RECEIVER = 20
PAD ELEVATION = 0.0
ROADWAY VIEW: LF ANGLE= -90
RT ANGLE= 90
DF ANGLE= 180

SITE CONDITIONS

AUTOMOBILES = 10
MEDIUM TRUCKS = 10 (10 = HARD SITE, 15 = SOFT SITE)
HEAVY TRUCKS = 10

WALL INFORMATION

HTH WALL: 0.0
AMBIENT= 0.0
BARRIER = 0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.755	0.140	0.104	0.9200
MEDIUM TRUCKS	0.480	0.020	0.500	0.0300
HEAVY TRUCKS	0.480	0.020	0.500	0.0500

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	43.97	- -
MEDIUM TRUCKS	4.0	43.87	- -
HEAVY TRUCKS	8.0	43.97	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.4	67.4	66.1	60.1	68.5	69.1
MEDIUM TRUCKS	63.5	59.6	51.8	61.0	67.1	67.2
HEAVY TRUCKS	70.6	66.6	58.8	68.0	74.2	74.2
NOISE LEVELS (dBA)	73.5	70.4	67.0	69.4	75.9	76.0

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.4	67.4	66.1	60.1	68.5	69.1
MEDIUM TRUCKS	63.5	59.6	51.8	61.0	67.1	67.2
HEAVY TRUCKS	70.6	66.6	58.8	68.0	74.2	74.2
NOISE LEVELS (dBA)	73.5	70.4	67.0	69.4	75.9	76.0

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	200	631	1996	6312
LDN	193	610	1928	6098

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

PROJECT: 913 California St Redlands
 ROADWAY: Redlands Blvd easat of California St
 LOCATION: 913 California St, Redlands CA

JOB #: 1149-2024-02
 DATE: 10-May-24
 ENGINEER: F. Irarrazabal

NOISE INPUT DATA Existing + Project

ROADWAY CONDITIONS

ADT = 21,700
 SPEED = 40
 PK HR % = 10
 NEAR LANE/FAR LANE DIS = 48
 ROAD ELEVATION = 0.0
 GRADE = 0.0 %
 PK HR VOL = 2,170

RECEIVER INPUT DATA

RECEIVER DISTANCE = 50
 DIST C/L TO WALL = 30
 RECEIVER HEIGHT = 5.0
 WALL DISTANCE FROM RECEIVER = 20
 PAD ELEVATION = 0.0
 ROADWAY VIEW: LF ANGLE= -90
 RT ANGLE= 90
 DF ANGLE= 180

SITE CONDITIONS

AUTOMOBILES = 10
 MEDIUM TRUCKS = 10 (10 = HARD SITE, 15 = SOFT SITE)
 HEAVY TRUCKS = 10

WALL INFORMATION

HTH WALL: 0.0
 AMBIENT= 0.0
 BARRIER = 0 (0 = WALL, 1 = BERM)

VEHICLE MIX DATA

VEHICLE TYPE	DAY	EVENING	NIGHT	DAILY
AUTOMOBILES	0.755	0.140	0.104	0.9200
MEDIUM TRUCKS	0.480	0.020	0.500	0.0300
HEAVY TRUCKS	0.480	0.020	0.500	0.0500

MISC. VEHICLE INFO

VEHICLE TYPE	HEIGHT	SLE DISTANCE	GRADE ADJUSTMENT
AUTOMOBILES	2.0	43.97	--
MEDIUM TRUCKS	4.0	43.87	--
HEAVY TRUCKS	8.0	43.97	0.00

NOISE OUTPUT DATA

NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.5	67.5	66.2	60.2	68.6	69.2
MEDIUM TRUCKS	63.6	59.6	51.9	61.1	67.2	67.3
HEAVY TRUCKS	70.7	66.7	58.9	68.1	74.3	74.3
NOISE LEVELS (dBA)	73.6	70.5	67.1	69.4	75.9	76.1

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)

VEHICLE TYPE	PK HR LEQ	DAY LEQ	EVEN LEQ	NIGHT LEQ	LDN	CNEL
AUTOMOBILES	69.5	67.5	66.2	60.2	68.6	69.2
MEDIUM TRUCKS	63.6	59.6	51.9	61.1	67.2	67.3
HEAVY TRUCKS	70.7	66.7	58.9	68.1	74.3	74.3
NOISE LEVELS (dBA)	73.6	70.5	67.1	69.4	75.9	76.1

NOISE CONTOUR (FT)

NOISE LEVELS	70 dBA	65 dBA	60 dBA	55 dBA
CNEL	203	643	2034	6431
LDN	196	621	1964	6212

Appendix D:
Construction Noise Modeling Output

Receptor - 315 ft to the Southwest of property line

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA ¹	Edge of Site to Receptor, feet	Center of Site to Receptor, feet	Item Usage Percent ¹	Ground Factor ²	Usage Factor	Receptor Item Lmax, dBA	Recptor. Item Leq, dBA	Muffler
SITE PREP										
Tractors/Loaders/Backhoes	4	80	175	315	37	0.5	0.37	66.4	55.7	40.7
Rubber Tired Dozer	3	85	175	315	40	0.5	0.40	71.4	61.0	46.0
							Log Sum	72.6	67.2	47.2
GRADE										
Excavator	1	85	175	315	38	0.5	0.38	71.4	60.8	45.8
Rubber Tired Dozer	1	85	175	315	40	0.5	0.40	71.4	61.0	46.0
Graders	1	85	175	315	40	0.5	0.40	71.4	61.0	46.0
Tractor/Loader/Backhoe	3	80	175	315	37	0.5	0.37	66.4	55.7	40.7
								76.6	66.9	51.1
BUILD										
Crane	1	81	175	315	20	0.5	0.20	67.4	54.0	39.0
Forklifts	3	65	175	315	20	0.5	0.20	51.4	38.0	23.0
Generator Set	1	81	175	315	74	0.5	0.74	67.4	59.7	44.7
Tractor/Loader/Backhoe	3	84	175	315	40	0.5	0.40	70.4	60.0	45.0
Welder	1	73	175	315	40	0.5	0.40	59.4	49.0	49.0
								73.6	66.3	51.8
PAVE										
Tractor/Loader/Backhoe	1	80	175	315	37	0.5	0.37	66.4	55.7	40.7
Pavers	1	85	175	315	42	0.5	0.42	71.4	61.2	46.2
Rollers	1	85	175	315	38	0.5	0.38	71.4	60.8	45.8
Paving Equipment	2	85	175	315	36	0.5	0.36	71.4	60.6	45.6
Cement and Mortar Mixers	2	85	175	315	40	0.5	0.40	71.4	61.0	46.0
								77.7	68.9	52.3
ARCH COATING										
Air Compressor	1	80	175	315	48	0.5	0.48	66.4	56.8	41.8

Receptor - 335 ft to the East of property line

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA ¹	Edge of Site to Receptor, feet	Center of Site to Receptor, feet	Item Usage Percent ¹	Ground Factor ²	Usage Factor	Receptor Item Lmax, dBA	Recptor. Item Leq, dBA	Muffler
SITE PREP										
Tractors/Loaders/Backhoes	4	80	140	335	37	0.5	0.37	68.8	55.0	40.0
Rubber Tired Dozer	3	85	140	335	40	0.5	0.40	73.8	60.4	45.4
							Log Sum	75.0	66.6	46.5
GRADE										
Excavator	1	85	140	335	38	0.5	0.38	73.8	60.1	45.1
Rubber Tired Dozer	1	85	140	335	40	0.5	0.40	73.8	60.4	45.4
Graders	1	85	140	335	40	0.5	0.40	73.8	60.4	45.4
Tractor/Loader/Backhoe	3	80	140	335	37	0.5	0.37	68.8	55.0	40.0
								79.0	66.2	50.5
BUILD										
Crane	1	81	140	335	20	0.5	0.20	69.8	53.4	38.4
Forklifts	3	65	140	335	20	0.5	0.20	53.8	37.4	22.4
Generator Set	1	81	140	335	74	0.5	0.74	69.8	59.0	44.0
Tractor/Loader/Backhoe	3	84	140	335	40	0.5	0.40	72.8	59.4	44.4
Welder	1	73	140	335	40	0.5	0.40	61.8	48.4	48.4
								76.0	65.7	51.1
PAVE										
Tractor/Loader/Backhoe	1	80	140	335	37	0.5	0.37	68.8	55.0	40.0
Pavers	1	85	140	335	42	0.5	0.42	73.8	60.6	45.6
Rollers	1	85	140	335	38	0.5	0.38	73.8	60.1	45.1
Paving Equipment	2	85	140	335	36	0.5	0.36	73.8	59.9	44.9
Cement and Mortar Mixers	2	85	140	335	40	0.5	0.40	73.8	60.4	45.4
								80.2	68.2	51.6
ARCH COATING										
Air Compressor	1	80	140	335	48	0.5	0.48	68.8	56.2	41.2

Appendix E:
Construction Vibration Modeling Output

VIBRATION LEVEL IMPACT

Project: 913 California Street Date: 8/6/25
Source: Large Bulldozer
Scenario: Unmitigated
Location: 175 feet to the west of the project site
Address: 913 California Street, Redlands, CA
PPV = $PPV_{ref}(25/D)^n$ (in/sec)

DATA INPUT

Equipment = 2 Large Bulldozer INPUT SECTION IN BLUE
Type
PPVref = 0.089 Reference PPV (in/sec) at 25 ft.
D = 165.00 Distance from Equipment to Receiver (ft)
n = 1.10 Vibration attenuation rate through the ground

Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.

DATA OUT RESULTS

PPV = 0.011 IN/SEC OUTPUT IN RED