5110 TELEGRAPH AVENUE PROJECT
CEQA ANALYSIS



LSA

April 2016

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CEQA ANALYSIS

Submitted to:

City of Oakland
Bureau of Planning & Building
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, California 94612

Prepared by:

LSA Associates, Inc.
2215 Fifth Street
Berkeley, California 94710
510.540.7331

LSA

April 2016

TABLE OF CONTENTS

PROJECT DESCRIPTION 3

EXEMPTIONS 17

EXCEPTIONS TO THE EXEMPTIONS 52

PROJECTS CONSISTENT WITH A COMMUNITY PLAN, GENERAL PLAN OR ZONING 59

APPENDICES

Appendix A: 5110 Telegraph Avenue- Transportation Impact Analysis
Appendix B: 5110 Telegraph Avenue- Noise Impact Analysis
Appendix C: 5110 Telegraph Avenue- Air Quality Impact Analysis
Appendix D: 5110 Telegraph Avenue- Sun and Shadow Study

FIGURES AND TABLES

FIGURES

Figure 1: Project Location and Regional Vicinity Map 5
Figure 2: Aerial Photograph of Project Site 6
Figure 3: Site Plan 9
Figure 4: Architectural Rendering 10
Figure 5: Floor Plans: Level 1 and Mezzanine 11
Figure 6: Floor Plans: Level 2 and Level 3 12
Figure 7: Floor Plans: Level 4 and Level 5 13
Figure 8: Floor Plans: Level 6 and Roof F 14
Figure 9: 51st Street Elevation 15
Figure 10: West Elevation: Telegraph Avenue 16
Figure 11: Noise Monitoring Locations 33

TABLES

Table 1: Proposed Bicycle Parking 7
Table 2: 5110 Telegraph Avenue Trip Generation Summary 24
Table 3: Trip Generation By Travel Mode 25
Table 4: Existing Plus Project Intersection Operations Summary 26
Table 5: Ambient Noise Monitoring Results, dBA, July 28-29, 2015 32
Table 6: Meteorological Conditions During Ambient Noise Monitoring 32
Table 7: Roadway Construction Noise Model Default Noise Emission Reference Levels and Usage Factors 36
Table 8: Maximum Allowable Receiving Noise Level Standards, Residential, and Civic 37
Table 9: Project Construction Emissions in Pounds Per Day 44
Table 10: Project Operational Emissions 45
Table 11: Stationary and Mobile Sources in the Project Vicinity With SCA 20 45
Table 12: Oakland Student Generation Rates 52

PROJECT DESCRIPTION

The following describes the 5110 Telegraph Avenue Project (project). This section includes a description of the project location, the project background, the existing site conditions, the proposed project, and approvals and permits. The City of Oakland (City) is the California Environmental Quality Act (CEQA) Lead Agency for this project.

1. Project Title: 5110 Telegraph Avenue

2. Lead Agency Name and Address

City of Oakland
Bureau of Planning
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

3. Project Contact Person, Phone Number, and Email

Mike Rivera, City Planner
(510) 238-6417
mrivera@oaklandnet.com

4. Project Location: 5110 Telegraph Avenue (bounded by 51st Street, Clarke Street and Claremont Avenue)

Assessor's Parcel Numbers: 014-1226-003-03; 014-1226-004-03; 014-1226-005-02; 014-1226-006-02; 014-1226-007-02; 014-1226-008-00; 014-1226-009-01; 014-1226-009-02; 014-1226-013-00; and 014-1226-014-00

5. Project Sponsor's Name, Address, and Telephone Number

Nautilus Group, Inc.
350 Frank Ogawa Plaza, Suite 310
Oakland, CA 94612
(510) 213-6226

6. Existing General Plan Designation: Neighborhood Center and Mixed Housing Type

7. Existing Zoning: Neighborhood Commercial Zone (CN-2)

8. Existing Setting and Neighborhood Land Uses

The project site is located in North Oakland within the Temescal neighborhood, which is centered on Telegraph Avenue and generally bound by 40th Street to the south, Martin Luther King Junior Way to the west, Broadway to the east, and 55th Street to the north. The approximately 1.7-acre site is bordered by Telegraph Avenue to the west, 51st Street to the south, Clarke Street to the east, and Claremont Avenue to the north. The site is comprised of vacant parcels and a paved surface parking lot. The existing parking lot contains 104 spaces and is accessible via a driveway on Clarke Street.

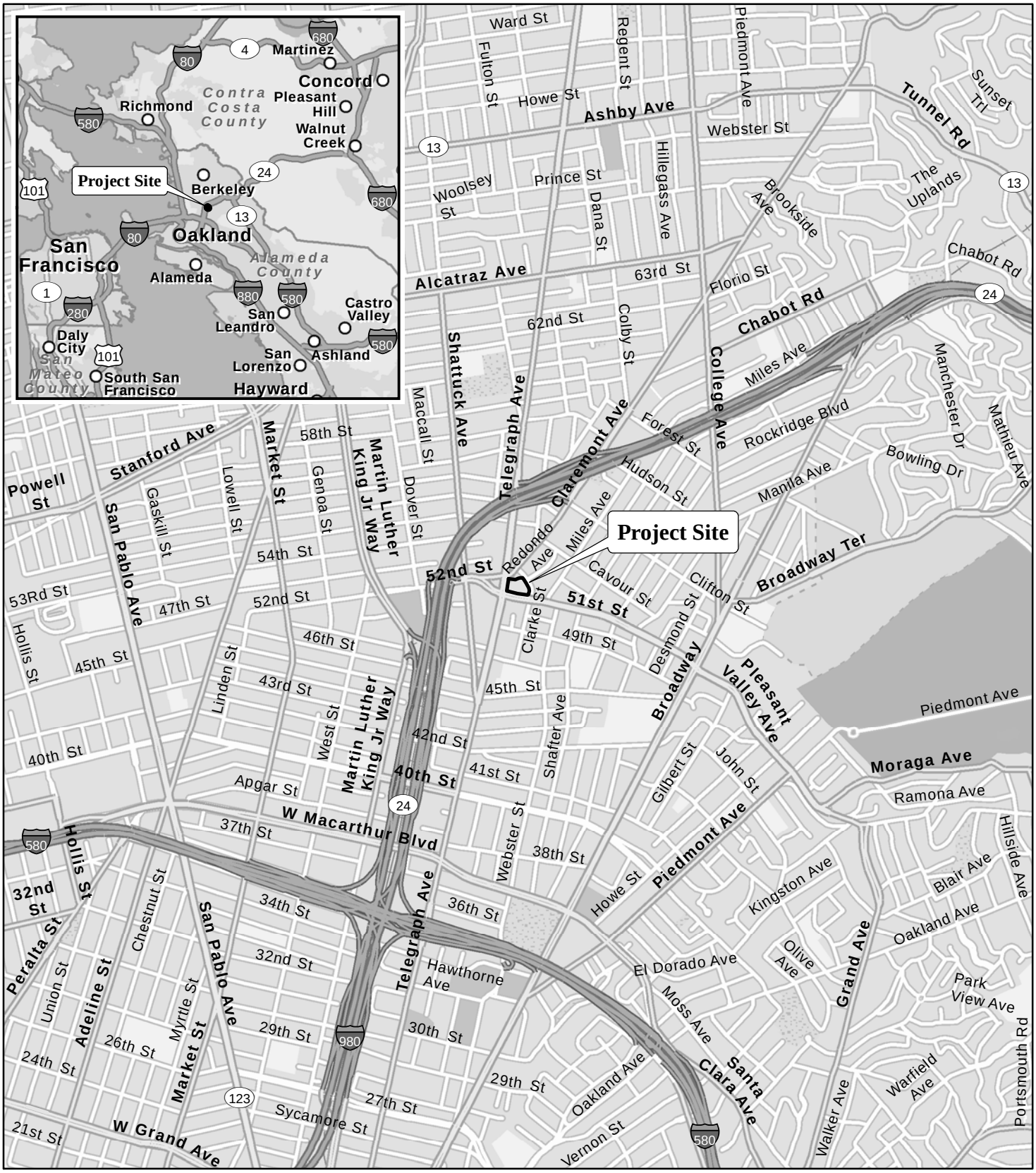
The parking lot is currently used for staff parking by Children's Hospital and Research Center Oakland (CHRCO). Over the years, the vacant parcel has been used for the sale of seasonal items (e.g., pumpkins and Christmas trees).

The project site is surrounded by a variety of uses including residential, commercial, institutional, and a park. A four-story multi-family residential building directly borders the site to the north. Frog Park and one- to two-story multi-family residential buildings are located to the east of the site across Clarke Street. A fire station, multi-family residential, and commercial uses are located south of the project site across 51st Street. A two-story shopping center is located across Telegraph Avenue, directly west of the site. Further south and north of the project site, Telegraph Avenue includes a variety of commercial, retail, civic, and residential uses. The project site is also located within close proximity (approximately 0.7 miles) to the MacArthur BART (Bay Area Rapid Transit) Station. Figure 1 depicts the site's regional and local context. Figure 2 depicts an aerial view of the project site and its vicinity.

9. Description of the Project

The proposed project includes construction of a four- to six-story residential and commercial mixed-use building with an underground parking garage. The proposed mixed-use building would consist of approximately 33,800 square feet of commercial space, a maximum of 204 residential units, of which 11 would be low-income units (under the City's Density Bonus regulations), and a garage with 297 vehicular parking spaces and 204 bicycle parking spaces. Based on the proposed design plans submitted on September 11, 2015 and revised design plans, dated on February 4, 2016 the project proposal will require the following Planning permits:

- Major Conditional Use Permit for non-residential facilities with over 25,000 square feet of floor area in the CN-2 Zone;
- Regular Design Review for new construction;
- Minor Conditional Use Permit to conduct a Limited Agricultural Activity on the roof of the principal six-story building;
- Minor Variances for ground-floor residential facilities in the CN-2 zone and commercial loading berths where two berths are required within the property and no berths are proposed;
- CEQA Determination;
- Other City Permits include Tree Protection Permit for tree removal and construction within 10 feet of protected trees, other related onsite and offsite work permits and Encroachment permits.



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FIGURE 1

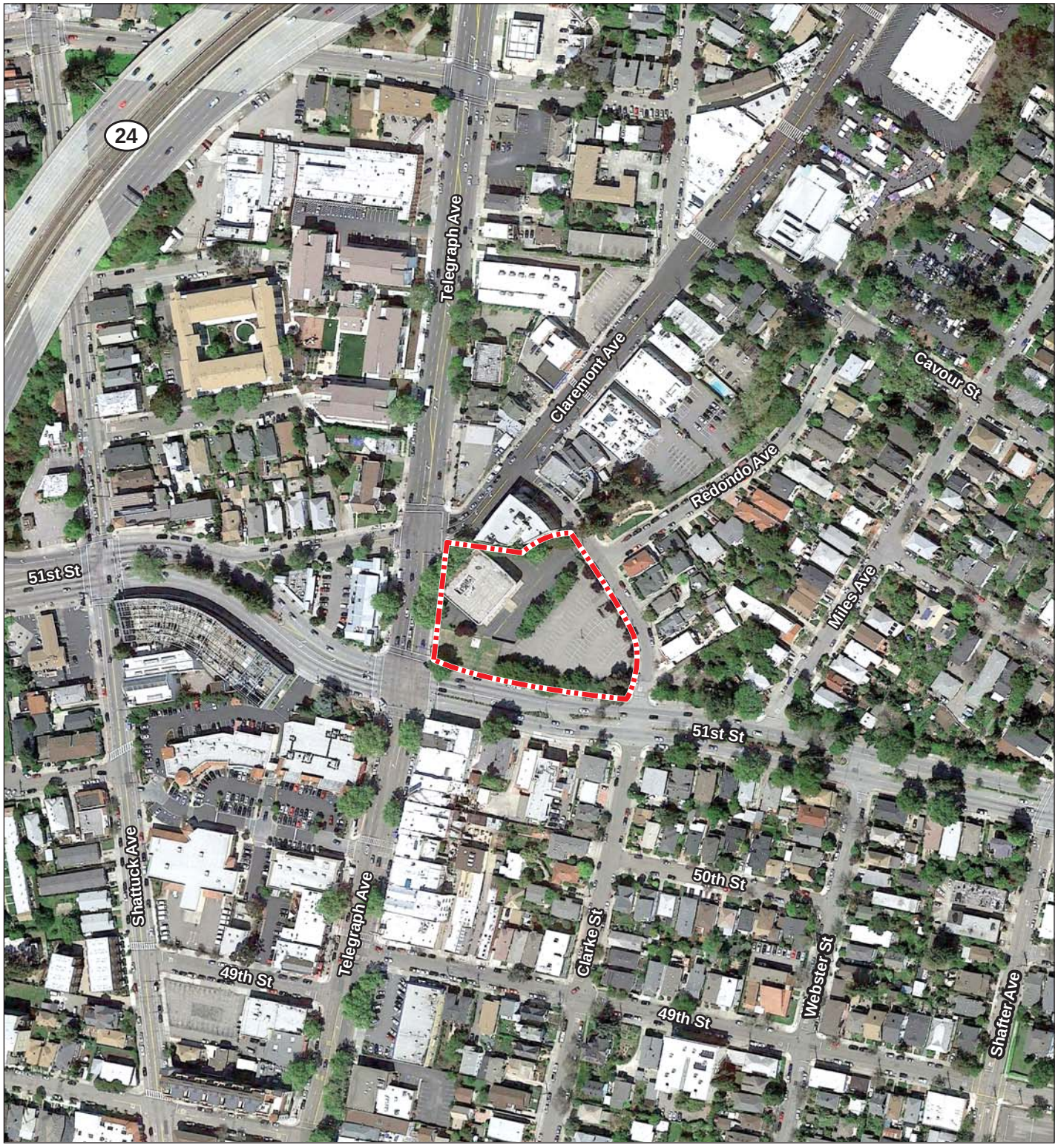
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5110 Telegraph Avenue Project
Project Location and Regional Vicinity Map

SOURCE: ESRI STREETMAP NORTH AMERICA (2012).

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FIGURE 2

Project Site

Note: This aerial photograph was taken in March 2015. As of February 2016, the building has been demolished and the site has been graded.

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5110 Telegraph Avenue Project
Aerial Photograph of Project Site

SOURCES: GOOGLE EARTH, APRIL 2014; LSA, 2016.

I:\NAU1501 5110 Telegraph\figures\Fig_2.ai (2/19/16)

Parking would be provided on two subterranean levels and would include 153 residential parking spaces and 144 commercial parking spaces. The number of proposed residential parking spaces is governed by Government Code 65915(p)(2).[1] The 204 long-term residential bicycle parking spaces would be provided on level two of the parking structure. One bicycle rack in each of the residential units (for a total of 204 bicycle racks) and 22 short term residential bicycle spaces within Level 1 of the building would also be provided. As shown in Table 1 below, the project would also include 64 long-term commercial bicycle parking spaces located within the parking structure and 22 short-term residential spaces within on Level 1.

Table 1: Proposed Bicycle Parking

	Long Term		Short Term	
Dedicated Use	**Number of Spaces**	**Location**	**Number of Spaces**	**Location**
Residential	204	Level P-2	22	Level 1
	204	In-Unit Rack	–	–
Commercial	64	Level P-1	22	Level 1
Total	**472**		**44**	

Source: 5110 Telegraph Plan Submission September 11, 2015.

The proposed commercial space would be located on the ground floor of the main building and would be divided into four retail spaces with a mezzanine area for storing utility equipment in the larger retail space. The larger retail space would likely house a grocery store. The proposal includes several street-level public access entry points along Telegraph Avenue, 51st Street, and Clarke Street. The proposed building ground-floor would also include a residential lobby, office space, a mix of one- and two-bedroom residential units, and common outdoor areas. The second, third, and fourth levels, along Clarke Street would include a mix of studios and one-, two-, and three-bedroom units. The fifth and sixth levels along Telegraph Avenue, 51st Street and Claremont Avenue also would include a mix of studios and one-, two-, and three-bedroom units. The roof above the six-story building would be comprised of a privately-operated urban farm facility with greenhouses, a farm staging area, a common roof deck, and planted farm raised-beds. The project would also include 8,710 square feet of open space on the second level intended to be shared by the project's residents. This shared deck includes landscaping, an outdoor kitchen, seating area, and fire feature.

Figure 3 provides a proposed site plan, and Figure 4 provides an architectural rendering of the Telegraph Avenue frontage. Figures 5, 6, 7 and 8 provide floor plans of the proposed building. Figures 9 and 10 provide elevations of the building from 51st Street and Telegraph Avenue, respectively.

The project sponsor proposes a public access easement along the north and west portions of the site. The easement would consist of a pedestrian pathway connecting Frog Park to Telegraph Avenue and 51st Street. Maintenance and restrictions of pathway use would be determined in a public access easement agreement provided by the applicant and for review and agreement by the City. Access to

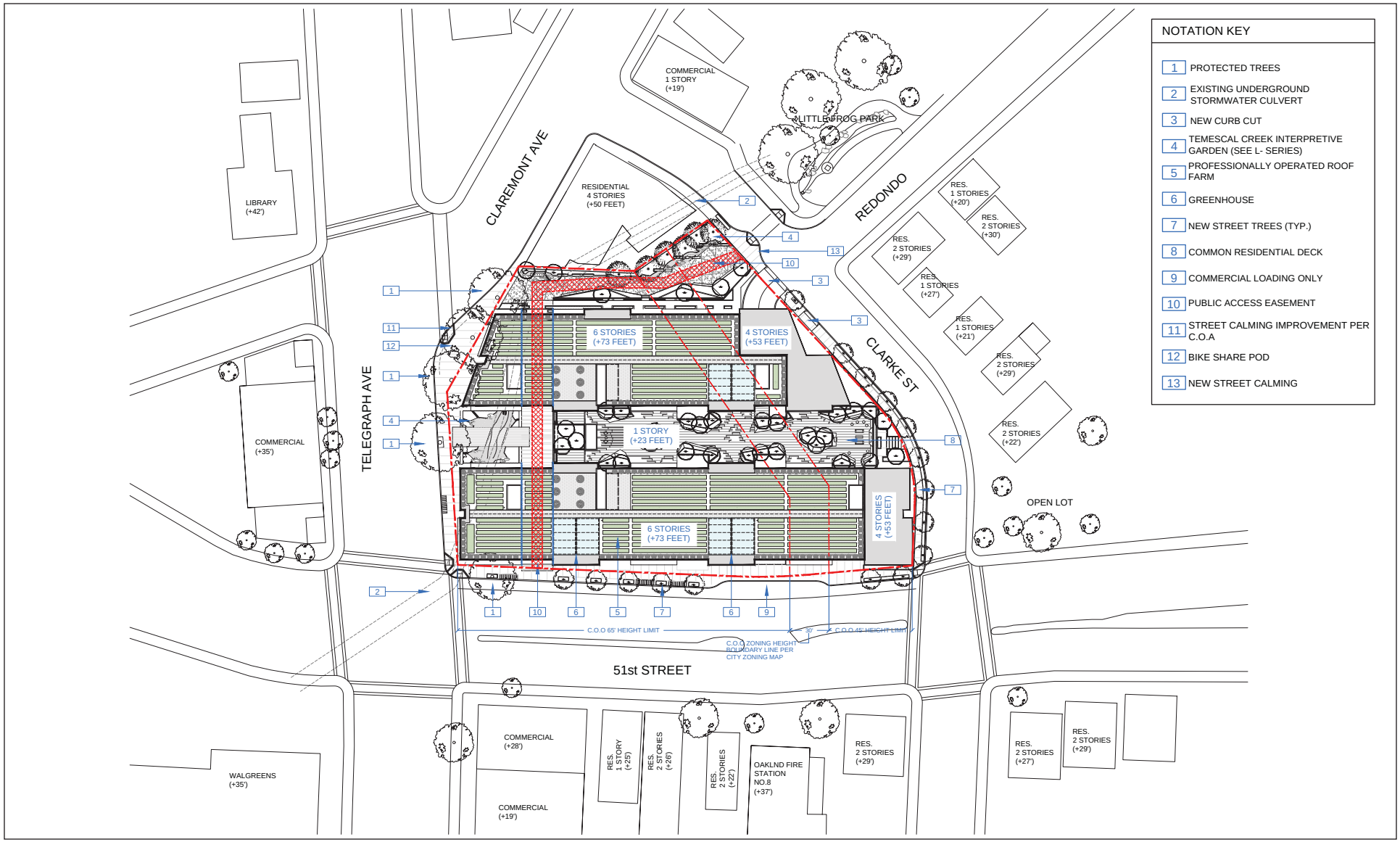
[1] The required parking for the project is 204 spaces for 204 residential units. However, the applicant seeks a 25% reduction in residential parking as part of their concessions for a density bonus. As required by Government Code 65915(p)(2), the City offers a density bonus to developers for the production of affordable housing units. The applicant proposed 11% very low income units which allows for a 35% density bonus.

the project site would be from 1) 51st Street on the southwest corner of the project site; 2) Telegraph Avenue in the main entrance courtyard; 3) Claremont Avenue in the northwest corner of the project site; and 4) Clarke Street directly across from Frog Park. Vehicular access to the underground parking garage would be provided by a one-lane entrance and two lane exit on Clarke Street. A separate driveway for the two residential loading berths would be located adjacent to the parking garage entrance/exit.

Proposed landscaping on the site would include *Olea Europ*a 'Swan Hill' (fruitless olive) and *Cercis occidentalis* (western redbud) trees along 51st Street and Clarke Avenue and along the site's northern border. Citrus trees would also be planted in limited locations within the interior courtyards and ornamental grasses and shrubs would be installed throughout the development site. Exterior lighting would include ceiling mounted fixtures along the pedestrian corridor between the retail spaces; and wall-mounted directional lighting would be placed at the residential lobby entrance and along the public pedestrian path.

Proposed project construction would include excavation and construction of the two-level subterranean parking structure, construction of the retail and residential building, and on-/off-site alterations/improvements and new landscaping. Excavation for the two-level subterranean parking structure would occur over approximately two months, utilizing backhoes, bulldozers, and excavators. Subterranean and podium construction would occur over approximately four months, and would not include pile driving or prolonged periods of noise or vibration. Construction of the retail and residential building would occur in two phases over a ten-month period, while site finishes and landscaping would occur over approximately two months. The total construction period is expected to be approximately 19 months, with project completion by approximately December 2017.

Traffic during construction of the retail and residential building would consist primarily of light-duty truck trips to and from the site, with additional truck trips for materials delivery. Site finishes and landscaping would be performed using small grading and earthwork equipment such as backhoes and whackers. A designated off-site parking area would be provided for construction worker vehicles, and the staging of construction equipment and materials would be limited to a designated area on-site. For certain stages of project construction (e.g., curb and gutter replacement and utility connections), use of the public right-of-way would be required. To minimize any adverse effect associated with this and all other construction related activities, the applicant will adhere to the conditions of all required permits, including the Conditional Use Permit, and prepare and provide to the City a Construction Logistics Plan.



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FIGURE 3

NOT TO SCALE

5110 Telegraph Avenue Project

Site Plan

SOURCE: NAUTILUS GROUP, FEBRUARY 4, 2016.

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FIGURE 4

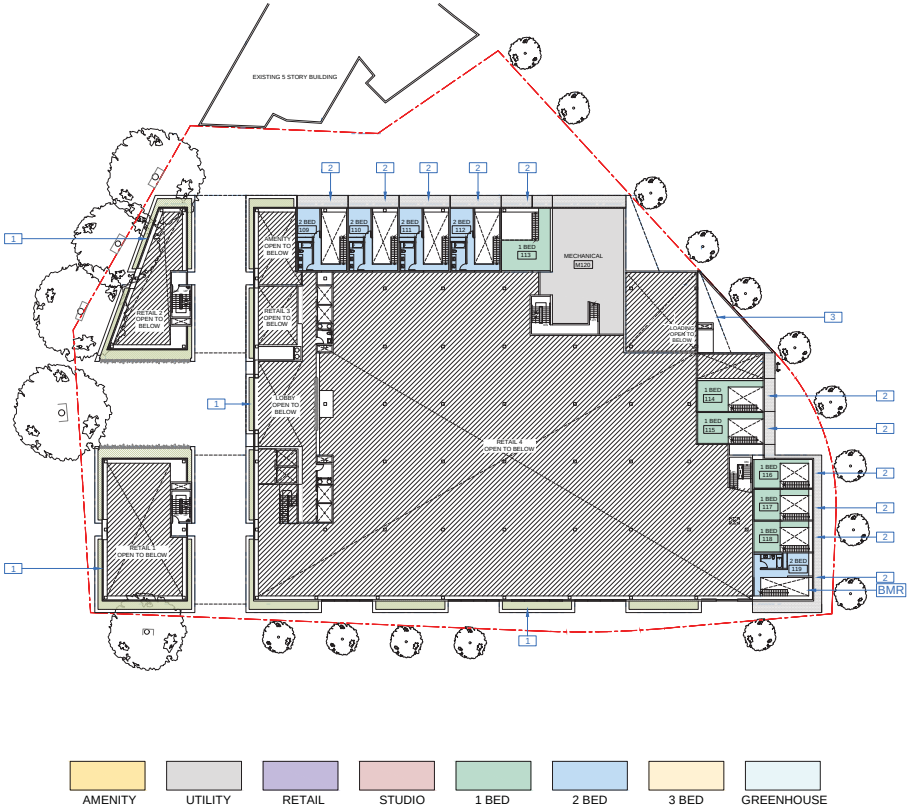
5110 Telegraph Avenue Project
Architectural Rendering

SOURCE: NAUTILUS GROUP, FEBRUARY 4, 2016.

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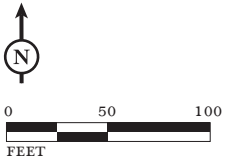


Level 1



Mezzanine

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NOTATION KEY - Level 1

1 PROTECTED TREES
2 NEW STREET TREES
3 EXISTING UNDERGROUND STORMWATER CULVERT
4 TEMESCAL CREEK INTERPRETIVE GARDEN & WATER FEATURE (SEE L- SERIES)
5 RETAIL AND RESIDENTIAL GARAGE ENTRY. STANDARD CURB CUT
6 LOADING ENTRY. STANDARD CURB CUT
7 BIKE SHARE POD
8 SHORT TERM BIKE PARKING
9 COMMERCIAL LOADING ONLY
10 OUTDOOR SEATING AREA
11 STREET CALMING IMPROVEMENT PER C.O.A
12 NEW STREET CALMING IMRPOVEMENT
BMR BELOW MARKET RATE UNIT (VERY LOW INCOME)

NOTATION KEY - Mezzanine

1 LIGHT SHELF WITH INTEGRAL PLANTER BED AND CLEARSTORY WINDOW
2 PRIVATE OPEN SPACE DECK
3 NON OCCUPIABLE ROOF
OPEN TO BELOW
BMR BELOW MARKET RATE UNIT (VERY LOW INCOME)

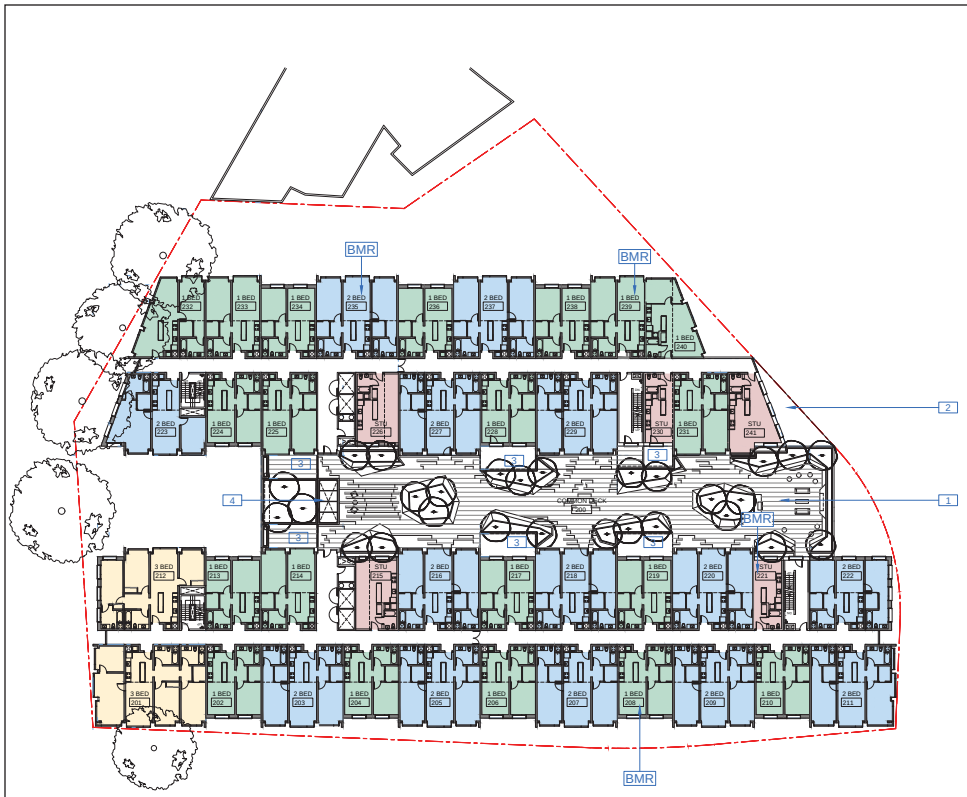
SOURCE: NAUTILUS GROUP, FEBRUARY 4, 2016.

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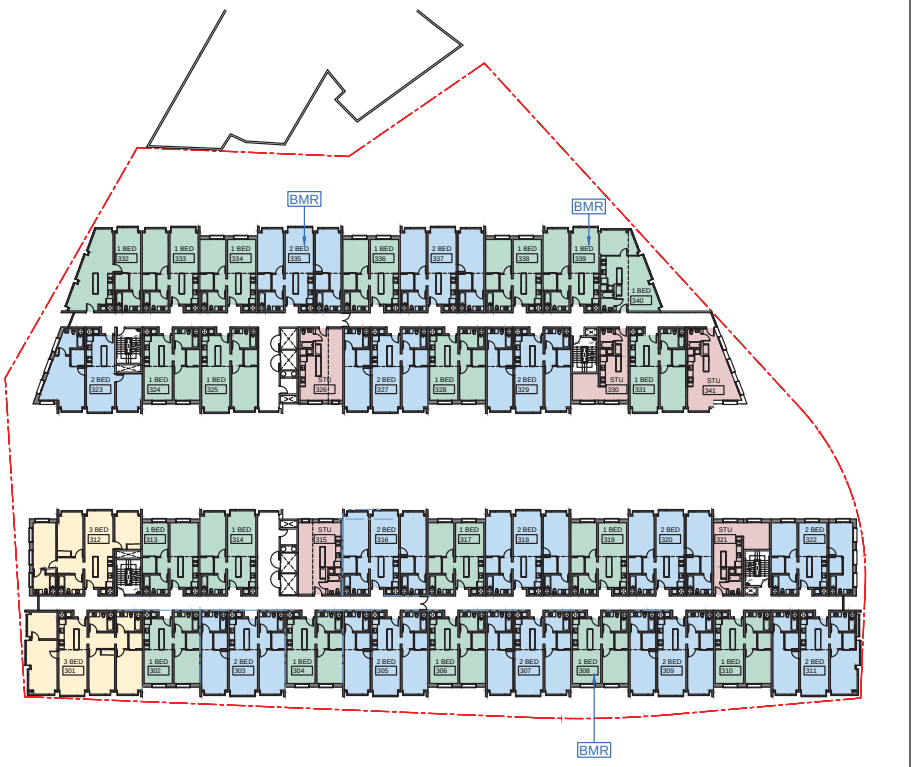
FIGURE 5

5110 Telegraph Avenue Project

Floor Plans: Level 1 and Mezzanine

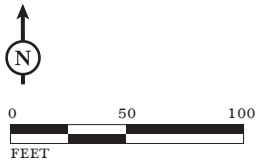


Level 2



Level 3

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NOTATION KEY - Level 2

1 RESIDENTIAL GROUP OPEN SPACE (SEE L-SERIES)

2 NON OCCUPIABLE ROOF

3 PRIVATE OPEN SPACE (SEE L-SERIES)

4 SKYLIGHT

BMR BELOW MARKET RATE UNIT (VERY LOW INCOME)

NOTATION KEY - Level 3

BMR BELOW MARKET RATE UNIT (VERY LOW INCOME)

FIGURE 6

5110 Telegraph Avenue Project

Floor Plans: Level 2 and Level 3

SOURCE: NAUTILUS GROUP, FEBRUARY 4, 2016.

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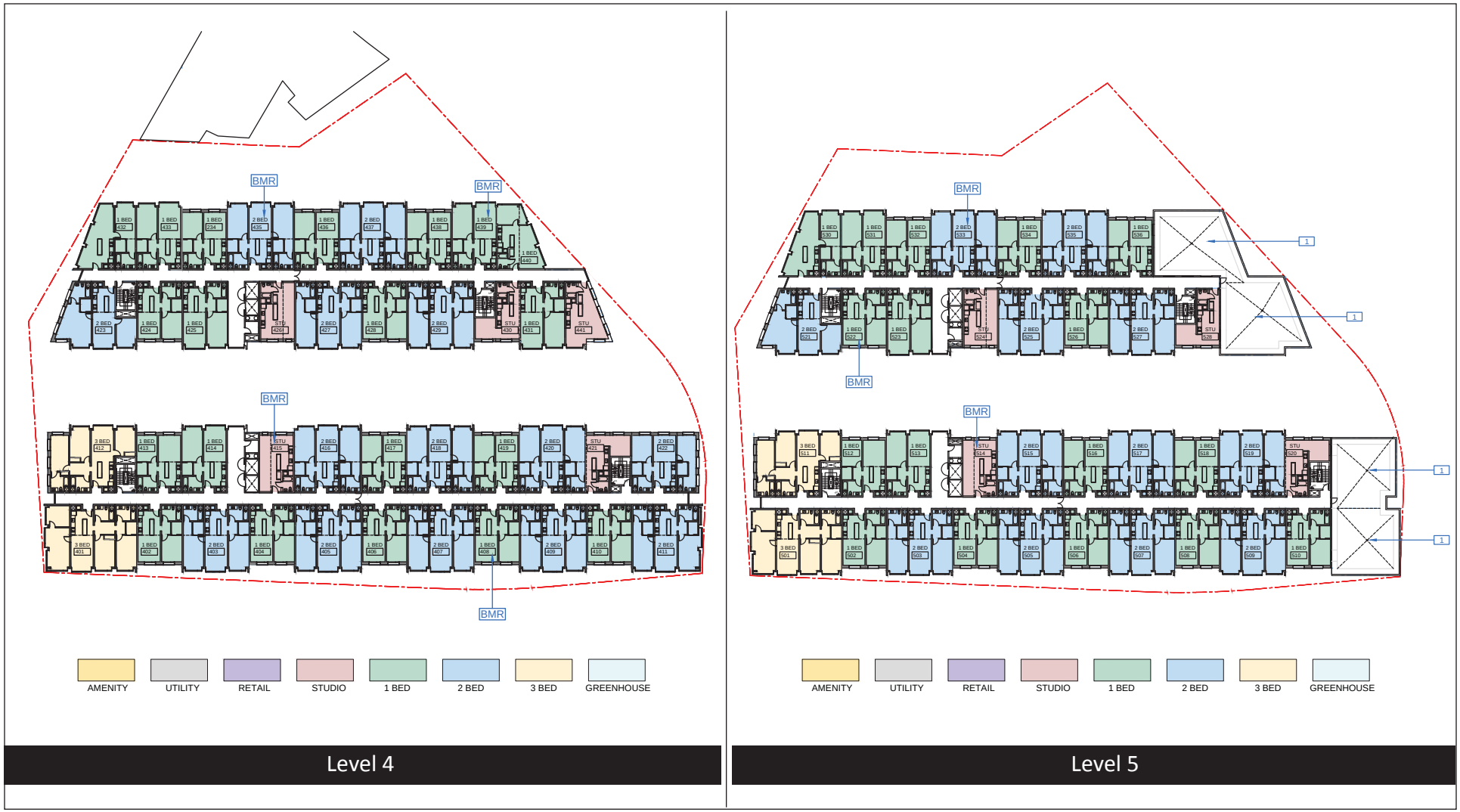


FIGURE 7

NOTATION KEY - Level 4

BMR BELOW MARKET RATE UNIT (VERY LOW INCOME)

NOTATION KEY - Level 5

1 NON OCCUPIABLE ROOF

BMR BELOW MARKET RATE UNIT (VERY LOW INCOME)

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5110 Telegraph Avenue Project

Floor Plans: Level 4 and Level 5

SOURCE: NAUTILUS GROUP, FEBRUARY 4, 2016.

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NOTATION KEY - Level 6

BMR BELOW MARKET RATE UNIT (VERY LOW INCOME)

NOTATION KEY - Roof

1 COMMON ROOF DECK

2 PLANTED FARM BEDS

3 ROOF PERIMETER HEDGEROW

4 GREENHOUSE

5 FARM STAGING AREA

0 50 100

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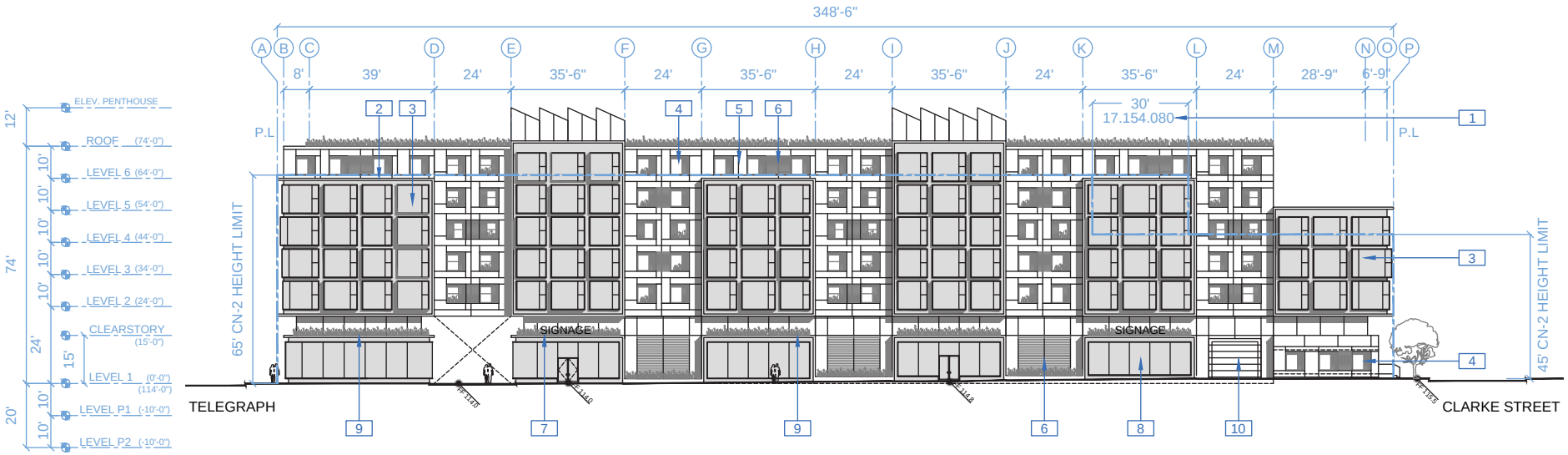
FIGURE 8

5110 Telegraph Avenue Project

Floor Plans: Level 6 and Roof

SOURCE: NAUTILUS GROUP, FEBRUARY 4, 2016.

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SOUTH ELEVATION: 51st STREET

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FIGURE 9

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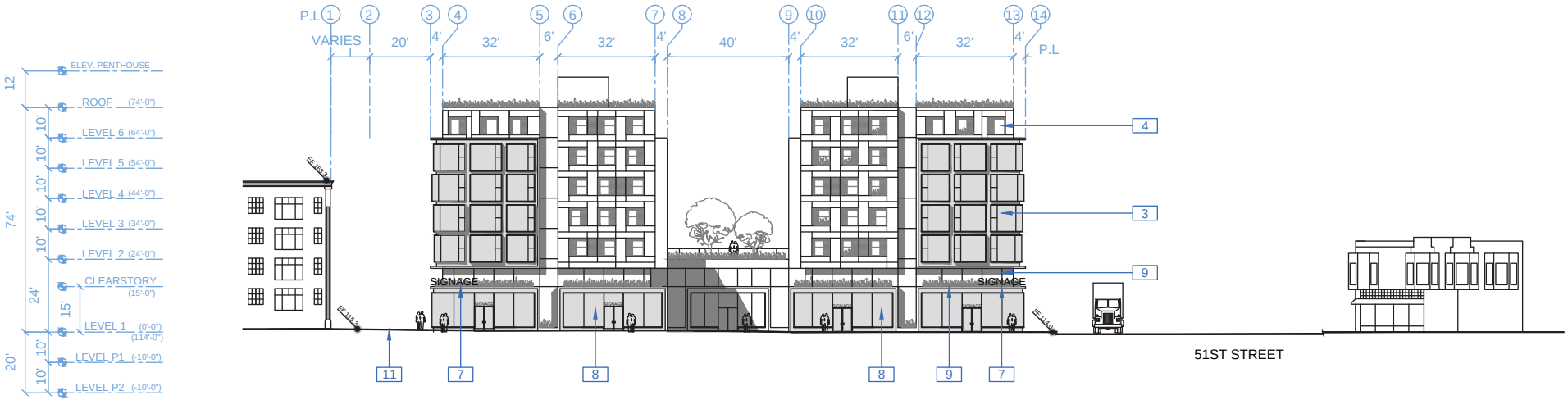
NOTATION KEY

1. PER 17.154.181 APPLICATION OF REG. TO LOTS DIVIDED BY ZONE BOUNDERIES
2. METAL PANEL CLADDING- DARK
3. METAL WINDOW BOX WITH OPERABLE WINDOW-DARK
4. PHENOLIC RESIN WINDOW BOX WITH OPERABLE WINDOW AND INTEGRAL PLANTER BOX
5. PHENOLIC RESIN RAINSCREEN PANEL-LIGHT
6. PHENOLIC RESIN LOUVER/SCREEN
7. PRIMARY SIGNAGE
8. STOREFRONT GLAZING WITH METAL PANEL FRAME-DARK
9. CLEARSTORY LIGHT SHELF WITH INTEGRAL PLANTER
10. COMMERCIAL LOADING ENTRY
11. TEMESCAL CREEK INTERPRETIVE GARDEN & WATER FEATURE (SEE L- SERIES)

5110 Telegraph Avenue Project
South Elevation: 51st Street

SOURCE: NAUTILUS GROUP, FEBRUARY 4, 2016.

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WEST ELEVATION: TELEGRAPH AVENUE

LSA

NOT TO SCALE

NOTATION KEY

1. PER 17.154.181 APPLICATION OF REG. TO LOTS DIVIDED BY ZONE BOUNDERIES
2. METAL PANEL CLADDING- DARK
3. METAL WINDOW BOX WITH OPERABLE WINDOW-DARK
4. PHENOLIC RESIN WINDOW BOX WITH OPERABLE WINDOW AND INTEGRAL PLANTER BOX
5. PHENOLIC RESIN RAINSCREEN PANEL-LIGHT
6. PHENOLIC RESIN LOUVER/SCREEN
7. PRIMARY SIGNAGE
8. STOREFRONT GLAZING WITH METAL PANEL FRAME-DARK
9. CLEARSTORY LIGHT SHELF WITH INTEGRAL PLANTER
10. COMMERCIAL LOADING ENTRY
11. TEMESCAL CREEK INTERPRETIVE GARDEN & WATER FEATURE (SEE L- SERIES)

FIGURE 10

5110 Telegraph Avenue Project
West Elevation: Telegraph Avenue

SOURCE: NAUTILUS GROUP, FEBRUARY 4, 2016..

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EXEMPTIONS

Article 19 of California Environmental Quality Act (CEQA) Guidelines includes, as required by Public Resources Code §21084, a list of classes of projects which have been determined not to have a significant effect on the environment and, as a result, are exempt from review under CEQA. This document has been prepared to serve as the basis for compliance with CEQA as it pertains to the proposed project, and to demonstrate that the project qualifies for a CEQA Exemption as an Infill Development Project, consistent with the provisions of CEQA Guidelines Sections 15300.2 and 15332 This document also demonstrates that the project qualifies for streamlined CEQA review per CEQA Guidelines Section 15183. Specifically, the information provided herein shows that:

a. The project qualifies for an exemption under CEQA Guidelines §15332 (i.e., Class 32) and, as a result, would not have a significant effect on the environment;

b. The analysis shows there are no exceptions to qualifying for the infill exemption, as identified in CEQA Guidelines §15300.2; and as a separate and independent basis; and

c. The project qualifies for streamlined CEQA review pursuant to CEQA Guidelines §15183.3 because there are no project-specific effects which are particular to the project or its site that were not already evaluated in the certified 2010 EIR for the 2007-2014 Housing Element, the 2014 Addendum to the 2010 EIR for the 2015-2023 Housing Element, and the certified 1998 Land Use and Transportation Element (LUTE) EIR.

1. Class 32 (In-Fill Development)

CEQA Guidelines §15332 is applicable to projects characterized as in-fill development meeting the following conditions:

a. The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations.

b. The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.

c. The project site has no value as habitat for endangered, rare or threatened species.

d. Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.

e. The site can be adequately served by all required utilities and public services.

The analysis below provides substantial evidence that the project properly qualifies for an exemption under CEQA Guidelines §15332 (i.e., Class 32) and, as a result, would not have a significant effect on the environment. Additionally, the analysis shows there are no exceptions to qualifying for the categorical exemption, as identified in CEQA Guidelines §15300.2.

City of Oakland - Standard Conditions of Approval
The analysis below also considers, where relevant, the application of the City of Oakland's Uniform Development Standards Adopted as Conditions of Approval ("Standard Conditions of Approval" or SCA). The Standard Conditions of Approval were initially and formally adopted by the City Council on November 3, 2008 (Ordinance No. 12899 C.M.S.), pursuant to Public Resources Code section 21083.3 and CEQA Guidelines section 15183 (and now section 15183.3), and incorporate develop-

ment policies and standards from various adopted plans, policies, and ordinances (such as the Oakland Planning and Municipal Codes, Oakland Creek Protection, Stormwater Water Management and Discharge Control Ordinance, Oakland Tree Protection Ordinance, Oakland Grading Regulations, National Pollutant Discharge Elimination System (NPDES) permit requirements, Housing Element-related mitigation measures, California Building Code, and Uniform Fire Code, among others), which have been found to substantially mitigate environmental effects. Where there are peculiar circumstances associated with a project or project site that will result in significant environmental impacts despite implementation of the Standard Conditions of Approval, the City will determine whether there are feasible mitigation measures to reduce the impact to less-than-significant levels in the course of appropriate CEQA review. No such peculiar circumstances have been identified. The City's Standard Conditions of Approval were most recently revised on July 22, 2015. Application of these Uniform Conditions of Approval are not considered mitigation measure under CEQA.

a. Criterion §15332(a): General Plan & Zoning Consistency

Finding: The project is consistent with the applicable General Plan designation and all applicable General Plan policies as well as with applicable zoning designation and regulations, as discussed below.

(1) General Plan. The project site has two applicable General Plan land use designations: Neighborhood Center Mixed Use Type and Mixed Housing Type Residential. The General Plan states that the intent of the Neighborhood Center Mixed Use classification is to "identify, create, maintain, and enhance mixed use neighborhood commercial centers. These centers are typically characterized by smaller scale pedestrian-oriented, continuous street frontage with a mix of retail, housing, office, active open space, eating and drinking places, personal and business services, and smaller scale educational cultural, or entertainment uses." Future development within this land use classification should be commercial or mixed uses that serve nearby neighborhoods, or urban residential with ground floor commercial. The General Plan states the intent of the Mixed Housing Type Residential classification is "to create, maintain, and enhance residential areas typically located near the City's major arterials and characterized by a mix of single family homes, townhouses, small multi-unit buildings, and neighborhood businesses where appropriate." The desired character of future development within this classification should be "primarily residential, with live-work types of development and small commercial enterprises."

The proposed project is a mixed-use residential and commercial development with continuous street frontage of commercial uses that are intended to serve the local neighborhood and surrounding areas and provide housing opportunities to the general public. The project is consistent with the site's General Plan classification.

(2) Zoning. The project site is zoned Neighborhood Commercial Zone-2 (CN-2). The intent of the CN-2 zone is to enhance the character of established neighborhood commercial centers that have a compact, vibrant pedestrian environment. Residential uses are allowed within the CN-2 Zoning District. The project proposes commercial and residential uses that are outright permitted and conditionally permitted. The project would promote a vibrant pedestrian environment by providing wider sidewalks, an entry plaza, and pedestrian-scaled commercial frontages, as well as a proposed public pedestrian pathway within the property that would connect Frog Park to Telegraph Avenue and 51st Street. The project is consistent with the CN-2 Zoning District.

b. Criterion §15332(b): Project Location, Size & Context

Finding: The proposed development occurs within City limits on a project site of no more than five acres, and is substantially surrounded by urban uses.

The project location is located in the City of Oakland on a site that measures approximately 1.7 acres in area, and is entirely surrounded by developed properties with urban land uses including residential, commercial, civic, and public and/or paved public streets (see Figure 2). Given these facts, the project meets the criteria of CEQA Guidelines §15332(b).

c. Criterion §15332(c): Endangered, Rare of Threatened Species

Finding: The project site has no value as habitat for endangered, rare, or threatened species.

As shown at Figure 2, the project site has been developed in the past and is currently vacant, but contains pavement and ruderal vegetation. Aside from street trees on the sidewalk and trees within the project site, there is no vegetation on the site. The project site also does not include habitat for endangered, rare, or threatened species. Given these facts, the project meets the criteria of CEQA Guidelines §15332(c).

d. Criterion §15332(d): Traffic, Noise, Air Quality or Water Quality

Finding: Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.

Relative to CEQA Guidelines §15332(d), the following pages of this analysis provide substantial evidence that the project, as compared to the City of Oakland CEQA thresholds of significance, would not result in a significant effect on traffic, noise, air quality and water quality. Given these facts, the project meets the criteria of CEQA Guidelines §15332(d).

(1) Traffic. The analysis and conclusions described under this environmental topic are derived from the 5110 Telegraph Avenue Transportation Impact Analysis (TIA), prepared by the project traffic consultant, Fehr and Peers and dated April 25, 2016 (see Appendix A).[2] The methodology used in the analysis is consistent with the City of Oakland Transportation Impact Study Guidelines.[3] The TIA includes an analysis of impacts related to safety for various transportation modes and impacts to traffic for four scenarios including: Existing; Existing Plus Project; 2035 No Project; and 2035 Plus Project. Based on the results of this analysis, as summarized below, the project would not result in any significant traffic or transportation-related impacts, and there is no applicable exception to the Class 32 exemption.

[2] Fehr and Peers, 2016. *Traffic Impact Analysis for 5110 Telegraph Project.*

[3] Oakland, City of, 2013. *Transportation Impact Study Guidelines.*

Standard Conditions of Approval. The following uniformly applied development standards related to transportation/traffic, imposed as standard conditions of approval, are germane to the topic of transportation/traffic and would be incorporated into the project to ensure that potential traffic-related impacts would be less than significant:

70. Transportation Improvements

Requirement: The project applicant shall implement the recommended on- and off-site transportation-related improvements contained within the Transportation Impact Study for the project (e.g., signal timing adjustments, restriping, signalization, traffic control devices, roadway reconfigurations, and pedestrian and bicyclist amenities). The project applicant is responsible for funding and installing the improvements, and shall obtain all necessary permits and approvals from the City and/or other applicable regulatory agencies such as, but not limited to, Caltrans (for improvements related to Caltrans facilities) and the California Public Utilities Commission (for improvements related to railroad crossings), prior to installing the improvements. To implement this measure for intersection modifications, the project applicant shall submit Plans, Specifications, and Estimates (PS&E) to the City for review and approval. All elements shall be designed to applicable City standards in effect at the time of construction and all new or upgraded signals shall include these enhancements as required by the City. All other facilities supporting vehicle travel and alternative modes through the intersection shall be brought up to both City standards and ADA standards (according to Federal and State Access Board guidelines) at the time of construction. Current City Standards call for, among other items, the elements listed below:

a. 2070L Type Controller with cabinet accessory
b. GPS communication (clock)
c. Accessible pedestrian crosswalks according to Federal and State Access Board guidelines with signals (audible and tactile)
d. Countdown pedestrian head module switch out
e. City Standard ADA wheelchair ramps
f. Video detection on existing (or new, if required)
g. Mast arm poles, full activation (where applicable)
h. Polara Push buttons (full activation)
i. Bicycle detection (full activation)
j. Pull boxes
k. Signal interconnect and communication with trenching (where applicable), or through existing conduit (where applicable), 600 feet maximum
l. Conduit replacement contingency
m. Fiber switch
n. PTZ camera (where applicable)
o. Transit Signal Priority (TSP) equipment consistent with other signals along corridor
p. Signal timing plans for the signals in the coordination group

When Required: Prior to building permit final or as otherwise specified

Initial Approval: Bureau of Building; Public Works Department, Transportation Services Division

Monitoring/Inspection: Bureau of Building

71. Transportation and Parking Demand Management

a. Transportation and Parking Demand Management (TDM) Plan Required

Requirement: The project applicant shall submit a Transportation and Parking Demand Management (TDM) Plan for review and approval by the City.

i. The goals of the TDM Plan shall be the following:

- Reduce vehicle traffic and parking demand generated by the project to the maximum extent practicable, consistent with the potential traffic and parking impacts of the project.
- Achieve the following project vehicle trip reductions (VTR):
  - Projects generating 50-99 net new a.m. or p.m. peak hour vehicle trips: 10 percent VTR
  - Projects generating 100 or more net new a.m. or p.m. peak hour vehicle trips: 20 percent VTR
- Increase pedestrian, bicycle, transit, and carpool/vanpool modes of travel. All four modes of travel shall be considered, as appropriate.
- Enhance the City's transportation system, consistent with City policies and programs.

ii. TDM strategies to consider include, but are not limited to, the following:

- Inclusion of additional long-term and short-term bicycle parking that meets the design standards set forth in chapter five of the Bicycle Master Plan and the Bicycle Parking Ordinance (chapter 17.117 of the Oakland Planning Code), and shower and locker facilities in commercial developments that exceed the requirement.
- Construction of and/or access to bikeways per the Bicycle Master Plan; construction of priority bikeways, on-site signage and bike lane striping.
- Installation of safety elements per the Pedestrian Master Plan (such as crosswalk striping, curb ramps, count down signals, bulb outs, etc.) to encourage convenient and safe crossing at arterials, in addition to safety elements required to address safety impacts of the project.
- Installation of amenities such as lighting, street trees, and trash receptacles per the Pedestrian Master Plan and any applicable streetscape plan.
- Construction and development of transit stops/shelters, pedestrian access, way finding signage, and lighting around transit stops per transit agency plans or negotiated improvements.

- Direct on-site sales of transit passes purchased and sold at a bulk group rate (through programs such as AC Transit Easy Pass or a similar program through another transit agency).
- Provision of a transit subsidy to employees or residents, determined by the project applicant and subject to review by the City, if employees or residents use transit or commute by other alternative modes.
- Provision of an ongoing contribution to transit service to the area between the project and nearest mass transit station prioritized as follows: 1) Contribution to AC Transit bus service; 2) Contribution to an existing area shuttle service; and 3) Establishment of new shuttle service. The amount of contribution (for any of the above scenarios) would be based upon the cost of establishing new shuttle service (Scenario 3).
- Guaranteed ride home program for employees, either through 511.org or through separate program.
- Pre-tax commuter benefits (commuter checks) for employees.
- Free designated parking spaces for on-site car-sharing program (such as City Car Share, Zip Car, etc.) and/or car-share membership for employees or tenants.
- On-site carpooling and/or vanpool program that includes preferential (discounted or free) parking for carpools and vanpools.
- Distribution of information concerning alternative transportation options.
- Parking spaces sold/leased separately for residential units. Charge employees for parking, or provide a cash incentive or transit pass alternative to a free parking space in commercial properties.
- Parking management strategies including attendant/valet parking and shared parking spaces.
- Requiring tenants to provide opportunities and the ability to work off-site.
- Allow employees or residents to adjust their work schedule in order to complete the basic work requirement of five eight-hour workdays by adjusting their schedule to reduce vehicle trips to the worksite (e.g., working four, ten-hour days; allowing employees to work from home two days per week).
- Provide or require tenants to provide employees with staggered work hours involving a shift in the set work hours of all employees at the workplace or flexible work hours involving individually determined work hours.

The TDM Plan shall indicate the estimated VTR for each strategy, based on published research or guidelines where feasible. For TDM Plans containing ongoing operational VTR strategies, the Plan shall include an ongoing monitoring and enforcement program to ensure the Plan is implemented on an ongoing basis during project operation. If an annual compliance report is required, as explained below, the TDM Plan shall also specify the topics to be addressed in the annual report.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: N/A

b. TDM Implementation – Physical Improvements

Requirement: For VTR strategies involving physical improvements, the project applicant shall obtain the necessary permits/approvals from the City and install the improvements prior to the completion of the project.

When Required: Prior to building permit final

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

c. TDM Implementation – Operational Strategies

Requirement: For projects that generate 100 or more net new AM or PM peak hour vehicle trips and contain ongoing operational VTR strategies, the project applicant shall submit an annual compliance report for the first five years following completion of the project (or completion of each phase for phased projects) for review and approval by the City. The annual report shall document the status and effectiveness of the TDM program, including the actual VTR achieved by the project during operation. If deemed necessary, the City may elect to have a peer review consultant, paid for by the project applicant, review the annual report. If timely reports are not submitted and/or the annual reports indicate that the project applicant has failed to implement the TDM Plan, the project will be considered in violation of the Conditions of Approval and the City may initiate enforcement action as provided for in these Conditions of Approval. The project shall not be considered in violation of this Condition if the TDM Plan is implemented but the VTR goal is not achieved.

When Required: Ongoing

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Planning

Project-Generated Traffic. As noted above, the project site is currently vacant and includes a 104-space surface parking lot used for staff parking by the Children's Hospital and Research Center. This parking lot would be eliminated as part of the proposed project. The amount of vehicular traffic the project would add to the local roadway network was estimated for typical weekday AM peak and PM peak hours, as shown in Table 2.[4] The estimates are based on rates and equations published by the Institute of Transportation Engineers (ITE) in Trip Generation Manual (9th Edition).

As shown in Table 2, the project would generate approximately 158 AM peak hour and 233 PM peak hour net new trips. The analysis presented in the TIA and in subsequent sections of this memorandum is based on previously proposed and entitled projects that have not been constructed: 1) Civiq located at 5110 Telegraph and b) Creekside located at 5132 Telegraph Avenue. These two entitled projects were estimated to generate 190 AM peak hour and 300 PM peak hour trips, respectively. Therefore,

[4] The TIA does not include Saturday traffic counts because the traffic generated by the proposed project in combination with background traffic during typical Saturday peak hours is not expected to be worse than weekday AM and PM peak hours."

the Existing Plus Project and 2035 Plus Project conditions analyses presented in subsequent sections of this memorandum are conservative and present worse conditions than expected, as the proposed project is smaller in size.

Table 2: 5110 Telegraph Avenue Trip Generation Summary

Land Use	Units[1]	ITE Code	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Residential	204 DU	220[a]	1,360	21	83	104	82	44	126
Restaurant	3.1 KSF	932[b]	394	19	15	34	19	12	31
Retail	2.7 KSF	820[c]	115	2	1	3	5	5	10
Supermarket	28.5 KSF	850[d]	3296	60	37	97	138	132	270
Subtotal			*5,165*	*102*	*136*	*238*	*244*	*193*	*437*
Non-Auto Reduction (-21.4%)[e]			-1,105	-22	-29	-51	-52	-42	-94
Pass-by (17%, 0%, 34%)[f]			-508	0	0	0	-42	-41	-83
Net New Project Trips			**3,552**	**80**	**107**	**187**	**150**	**110**	**260**
Existing Parking Lot[g]			-190	-29	0	-29	-1	-26	-27
Net New Trips			**3,362**	**51**	**107**	**158**	**149**	**84**	**233**

Notes:
DU = Dwelling Units; KSF = 1,000 square feet.

[a] ITE Trip Generation (9th Edition) land use category 220 (Apartment):
Daily: T = 6.06(X) + 123.56
AM Peak Hour: T = 0.51*(X) (20% in, 80% out)
PM Peak Hour: T = 0.62*(X) (65% in, 35% out)
Where T = trips generated and X = dwelling units

[b] ITE Trip Generation (9th Edition) land use category 932 (High-Turnover (Sit-Down) Restaurant):
Daily: Average Rate =127.15 trips per KSF
AM Peak Hour: T = 10.81*(X) (55% in, 45% out)
PM Peak Hour: T = 9.85*(X) (60% in, 40% out)

[c] ITE Trip Generation (9th Edition) land use category 820 (Shopping Center):
Daily: (T) = 42.70*(X)
AM Peak Hour: (T) = 0.96*(X) (62% in, 38% out)
PM Peak Hour: (T) = 3.71*(X) (52% in, 48% out)

[d] ITE Trip Generation (9th Edition) land use category 850 (Supermarket):
Daily: T = 66.85*(X) + 1391.56
AM Peak Hour: T = 3.40*(X) (62% in, 38% out)
PM Peak Hour: T = 9.48*(X) (51% in, 49% out)

[e] City of Oakland Transportation Impact Study Guidelines based on BATS 2000 data for developments in an urban environment between 0.5 and 1.0 miles of a BART station.

[f] Based on ITE Trip Generation Handbook (3rd Edition), the weekday PM peak hour average pass-by rates for land use categories 820, 850, and 932 are 34%, 36%, and 43%, respectively. A 34% pass-by rate is applied to the non-residential uses to present a more conservative analysis. Pass-by rates are not applied to the AM peak hour. Daily pass-by is estimated to be half of the PM peak hour. This reduction was applied to trips after the non-automobile reduction.

[g] Based on data collected in September 2013.

Source: Fehr & Peers, 2015.

Trip Generation for Non-Auto Travel Modes. Consistent with City of Oakland Transportation Impact Study Guidelines, the TIA also estimated project trip generation for non-auto travel modes. Trip generation by travel mode was estimated based on existing travel patterns, locations of complementary land uses and results of the Alameda County Transportation Commission's (ACTC) Travel Demand Model, as presented in Table 3.

Table 3: Trip Generation By Travel Mode

Mode	Mode Share Adjustment Factors [a]	Daily	AM Peak Hour	PM Peak Hour
Automobile	78.6%	3,552	187	343
Transit	11.8%	533	28	51
Bike	5.6%	253	13	24
Walk	20.1%	908	48	88
Total Trips		**5,246**	**276**	**506**

[a] Based on City of Oakland Transportation Impact Study Guidelines assuming project site is in an urban environment between 0.5 and 1.0 miles of a BART station.

Sources: Fehr & Peers, 2015.

Intersection Analysis. Table 4 summarizes the intersection operations results for the Existing No Project and Existing Plus Project conditions. Signalized intersection operations were evaluated using the 2000 Highway Capacity Manual (HCM), which uses intersection characteristics to estimate average delays and assigns a level of service (LOS) ranging from LOS A (no congestion and little delay) to LOS F (excessive congestion and delays). Under Existing and Existing Plus Project conditions all nine study intersections would continue to operate at an acceptable LOS, except for the northbound approach at the State Route 24 Ramps/52nd Street (Intersection #3), which would operate at LOS F during the PM peak hour under both Existing and Existing Plus Project conditions. The proposed project would not cause a significant impact at this intersection because it would not add more than 10 peak-hour trips to the critical northbound approach under 2035 Plus Project conditions. Overall, project impacts at the study intersections would be less than significant under both Existing and Existing Plus Project condition and or under 2035 Plus Project conditions.

Vehicular Access. Vehicular access to and from the project site would be provided through a full-access driveway on Clarke Street, opposite Redondo Avenue. The project would provide two levels of underground parking for residents and retail customers. An internal ramp would connect the two parking levels and a gate on top of the internal ramp would restrict access to the lower level to project residents only. The circulation aisles and parking spaces on both garage levels would meet the City Code dimension requirements (Oakland Municipal Code Sections 17.116.200 and 17.116.210). The project would provide two residential loading berths located adjacent to the parking garage ramp. No commercial loading would be permitted within the residential loading area and/or in the garage.

As noted above, the proposed project is expected to increase traffic volumes on Clarke Street from about 70 to 300 peak hour vehicles. It is unlikely that project generated traffic would use other residential streets, such as Redondo Avenue or Clarke Street south of 51st Street, because these routes are not as direct as the arterials in the area and would not provide shorter travel times for most destinations. It is expected that most of the project generated traffic, including project residents and retail customers would use 51st Street and Clarke Street to travel to and from the project site. The proposed project would eliminate the existing slip right-turn lane from northbound Telegraph Avenue to eastbound Claremont Avenue, a modification that is consistent with the City of Oakland's planned improvement at this location. The elimination of the slip right-turn lane would improve pedestrian safety because it would bring the current uncontrolled pedestrian crossing under signal control, reduce the number of pedestrian crossings, and reduce the speed for motorists making that right turn.

Table 4: Existing Plus Project Intersection Operations Summary

Intersection	Control [a]	Peak Hour	Existing Conditions		Existing Plus Project		Impact?
			Delay [b] (seconds)	LOS [c]	Delay [b] (seconds)	LOS [c]	
Telegraph Avenue/ Aileen Street/ SR 24 Westbound Off-Ramp [e]	Signal	AM	18.3	B	18.3	B	No
		PM	10.8	B	11.2	B	No
Telegraph Avenue/56th Street/SR 24 Eastbound On-Ramp [e]	Signal	AM	7.0	A	7.0	A	No
		PM	20.3	C	20.2	C	No
SR 24 Ramps/52nd Street	SSSC	AM	4.8 (13.6)	A (B)	4.7 (13.7)	A (B)	No
		PM	* (*)	F (F)	* (*)	F (F)	No
52nd Street/Shattuck Avenue	Signal	AM	29.2	C	30.0	C	No
		PM	36.0	D	37.4	D	No
Telegraph Avenue/52nd Street/Claremont Avenue [e]	Signal	AM	14.3	B	15.8	B	No
		PM	17.2	B	21.0	C	No
Clarke Street/Claremont Avenue	SSSC	AM	0.9 (10.7)	A (B)	2.4 (12.7)	A (B)	No
		PM	0.9 (11.9)	A (B)	3.3 (18.4)	A (C)	No
Telegraph Avenue/51st Street [e]	Signal	AM	30.6	C	31.1	C	No
		PM	45.2	D	46.4	D	No
Clarke Street/51st Street	SSSC	AM	0.7 (26.6)	A (D)	1.5 (26.9)	A (D)	No
		PM	1.1 (22.3)	A (C)	3.2 (29.7)	A (D)	No
Claremont Avenue/SR 24 Eastbound Off-Ramp/Clifton Street	Signal	AM	12.0	B	12.2	B	No
		PM	16.0	B	16.1	B	No
Clarke Street/Redondo Avenue	SSSC	AM	1.7	A	5.9	A	No
		PM	2.5	A	6.0	A	No

[a] Signal = intersection is controlled by a traffic signal; SSSC = intersection is controlled by a stop-sign on the side-street approach

[b] For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop-controlled intersections, delays for worst approach and average intersection delay are shown: intersection average (worst approach)

[c] Intersections operating at unacceptable levels are shown in bold.

[d] Denotes an intersection located in Downtown or that provides direct access to Downtown where LOS E (not LOS D) is the threshold.

* Delay cannot be estimated accurately because the Synchro software does not correctly account for the queues on eastbound 52nd Street at Shattuck Avenue blocking the off-ramp. Reported LOS is based on field observations.

Source: Fehr & Peers, 2015.

Pedestrian and Bicycle Access and Safety. The City of Oakland Pedestrian Master Plan[5] (PMP) designates both Telegraph Avenue and 51st Street as City Routes, and recommends 12-foot sidewalks with 8-foot through passage zones. Under the proposed project, the sidewalk adjacent to the project along Telegraph Avenue would be at least 13 feet wide, and the sidewalk along 51st Street would be between 9 and 18 feet wide. The PMP designates Clarke Street as a neighborhood route and recommends 9-foot sidewalks with 4-foot through passage zone. The proposed project would generally maintain the Clarke Street sidewalk adjacent to the project as a 9-foot sidewalk with a minimum 4-foot

[5] Oakland, City of, 2002. *Pedestrian Master Plan.*

through passage zone. Overall, the sidewalks along the project frontage on Telegraph Avenue, 51st Street, and Clarke Street would be consistent with the PMP recommendations.

Chapter 17.117 of the Oakland Municipal Code requires long-term and short-term bicycle parking for new buildings. The project proposes 268 long-term underground bicycle parking spaces for the project residents in an enclosed area and 44 short-term bicycle spaces in the form of bicycle racks on the sidewalks along the Telegraph Avenue and 51st Street project frontages. The project also proposes 204 long-term in-unit bicycle racks (one per unit). Long-term bicycle parking would be accessed via the project driveway to the garage on Clarke Street and or via the stairs or elevators from the ground level.

As previously described, the project proposes a commercial loading truck pullout on westbound 51st Street adjacent to the project. Accounting for the existing parking lane, the pullout would have an approximate width of 16.5 feet, which would accommodate the trucks expected to use the pullout. Thus, trucks parked at the loading pullout are not expected to interfere with bicycle travel on westbound 51st Street. The pullout area would also include curb cuts as necessary to ensure the safe transfer of materials between trucks and the building. Further, all commercial trucks will be required to have lift gates. Pallet jacks, fork lifts, or hand trucks would be used to transport materials from the on-street loading area across the sidewalk to the retail spaces. This would help avoid any conflicts between loading activities and pedestrian traffic. Loading times would also be restricted, as feasible, to further minimize potential conflicts with pedestrian traffic. No ramps, elevated platforms, or dock levelers are proposed.

The proposed long-term and short-term bicycle parking supply would exceed the Code requirements. Overall, the proposed project would not make major modifications to existing pedestrian and bicycle facilities in the project areas, and would be consistent with the City's plans and policies related to pedestrian and bicycle access and safety.

Transit Access. Public Transit service providers in the project vicinity include Bay Area Rapid Transit (BART) and AC Transit. The nearest BART station to the project site is the MacArthur BART Station, which is located about 0.7 miles to the south of Telegraph Avenue. The proposed project would not modify or relocate the existing bus stop or bus signage on westbound 51st Street. AC Transit is the primary bus service provider in the City of Oakland. Major AC Transit routes operating in the vicinity of the project site include Routes 12, 1, and 1R. Route 12 operates on 51st Street east of Telegraph Avenue and on Telegraph Avenue north of 51st Street, with stops in both directions on 51st Street just east of Telegraph Avenue. Routes 1 and 1R operate on Telegraph Avenue, with stops just north of Claremont Avenue and at 49th and 50th Streets. The proposed project would not modify or relocate access between the project site and bus stops in the vicinity of the project.

Loading. Per City Municipal Code Section 17.116.140, which establishes loading area requirements for residential and commercial uses, the project would be required to provide two residential loading berths within the project property for project residents, as well as two commercial loading berths within the property. As noted above, the project proposes two residential loading berths, located on the site and adjacent to the garage driveway on Clarke Street. These residential loading berths are intended to serve the residents of the project for move-in/move-out only. In addition, the project proposes one 66-foot long commercial loading area on 51st Street just west of Clarke Street. The proposed commercial loading area would be a parallel pullout zone that could accommodate either one large truck or two smaller trucks in tandem. This on-street commercial

loading area would require transport of cargo across the sidewalk to the commercial uses on site. An overhead coiling door for commercial deliveries is proposed adjacent to the on-street commercial loading area. Overall, the proposed project would not meet the City's commercial loading berths requirements and would require a variance. This is not considered a CEQA impact and the proposed loading spaces are expected to be adequate for typical building operations. In addition, truck traffic on Clarke Street would be minimized with implementation of the recommendations of the TIA (See TIA Recommendation 1 in Appendix A), which would be required.

(2) Noise. The analysis and conclusions described under this environmental topic are derived from the 5110 Telegraph Avenue Noise Impact Analysis, prepared by LSA Associates, Inc. and dated August 2015 ("Noise Study")[6] (see Appendix B).

Standard Conditions of Approval. The following Standard Conditions of Approval would be implemented as part of the project, as required by the City and to ensure that project related impacts are less than significant:

58. Construction Days/Hours

Requirement: The project applicant shall comply with the following restrictions concerning construction days and hours:

a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m.

b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday

c. No construction is allowed on Sunday or federal holidays.

Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.

Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/ emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed

[6] LSA Associates, 2015. *5110 Telegraph Avenue Noise Impact Analysis.*

construction activity and the draft public notice for City review and approval prior to distribution of the public notice.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

59. Construction Noise

Requirement: The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following:

a. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible.

b. Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.

c. Applicant shall use temporary power poles instead of generators where feasible.

d. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.

e. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

60. Extreme Construction Noise

a. Construction Noise Management Plan Required

Requirement: Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90 dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following:

i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;

ii. Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;

iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;

iv. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and

v. Monitor the effectiveness of noise attenuation measures by taking noise measurements.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

b. Public Notification Required

Requirement: The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.

When Required: During construction

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

61. Project-Specific Construction Noise Reduction Measures

Requirement: The project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site specific noise attenuation measures to further reduce construction noise impacts. The project applicant shall implement the approved Plan during construction

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

62. Construction Noise Complaints

Requirement: The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include:

a. Designation of an on-site construction complaint and enforcement manager for the project;

b. A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit;

c. Protocols for receiving, responding to, and tracking received complaints; and

d. Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

63. Exposure to Community Noise

Requirement: The project applicant shall submit a Noise Reduction Plan prepared by a qualified acoustical engineer for City review and approval that contains noise reduction measures (e.g., sound-rated window, wall, and door assemblies) to achieve an acceptable interior noise level in accordance with the land use compatibility guidelines of the Noise Element of the Oakland General Plan. The applicant shall implement the approved Plan during construction. To the maximum extent practicable, interior noise levels shall not exceed the following:

a. 45 dBA: Residential activities, civic activities, hotels

b. 50 dBA: Administrative offices; group assembly activities

c. 55 dBA: Commercial activities

d. 65 dBA: Industrial activities

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

64. Operational Noise

Requirement: Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of Chapter 17.120 of the Oakland Planning Code and Chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

Noise Impact Analysis. The Noise Study included both short-term and long-term noise measurements at the project site to quantify existing noise levels. The measurements included one long-term (24-hour) noise measurement (i.e., LT-1, LT-2) and short-term (15-minute) measurements at two locations. Measurement locations are shown in Figure 11, and the results of the noise measurements are shown in Tables 5 and 6. Table 5 shows the lowest, highest, and average sound levels occurring over the measurement time period. Table 6 includes the meteorological conditions

during the short-term measurements. The locations were chosen to understand: (a) traffic noise exposure at the project building facades closest to the major roadways; and (b) potential project-related noise exposure at existing nearby residences.

Table 5: Ambient Noise Monitoring Results, dBA, July 28-29, 2015

Location Number	Location Description	Start Time	L_{eq} [a]	L_{max} [b]	L_{min} [c]	Primary Noise Sources
ST-1	Project site boundary on 51st Street, across from 493 51st Street	11:23 a.m.	63.6	77.2	50.0	Traffic on 51st Street with Telegraph Avenue noise in the background.
ST-2	Project site boundary on Telegraph Avenue where Claremont Avenue intersects	11:42 a.m.	66.5	79.2	56.1	Traffic on Telegraph Avenue and the intersection of Claremont/ 52nd Street.
LT-1	Approximately 50 feet from the project site boundary on Telegraph Avenue and 60 feet north of the 51st Street project site boundary	12:30 p.m.	60.3	94.5	43.1	Telegraph Avenue and 51st Street traffic noise.

[a] L_{eq} represents the average of the sound energy occurring over the measurement time period.
[b] L_{max} is the highest sound level measured during the measurement time period.
[c] L_{min} is the lowest sound level measured during the measurement time period.

Source: LSA Associates, Inc., July 2015.

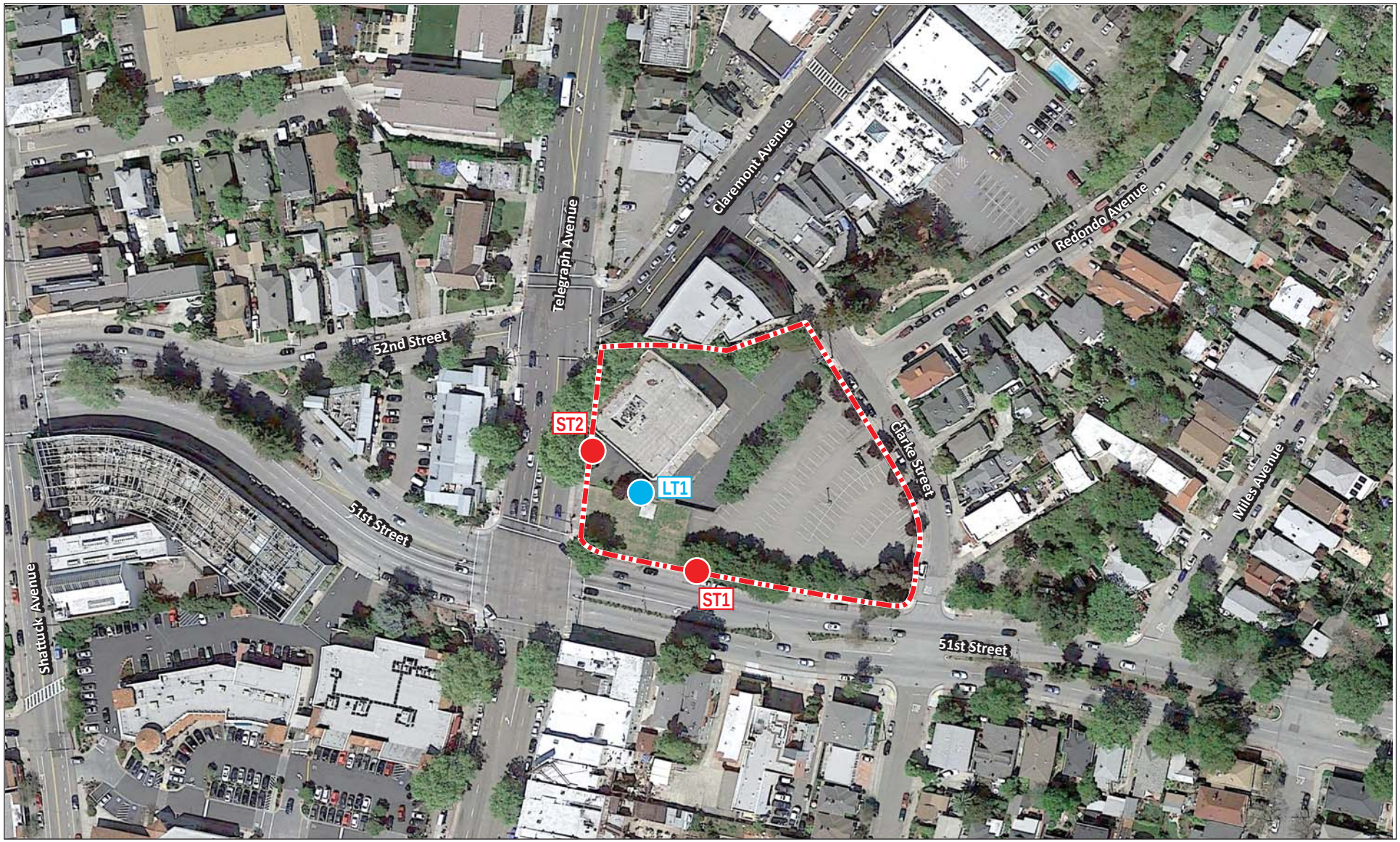
Table 6: Meteorological Conditions During Ambient Noise Monitoring

Location Number	Maximum Wind Speed (mph)	Average Wind Speed (mph)	Temperature (˚F)	Relative Humidity (percent)	Sky Conditions
ST-1	4.0	1.6	81.5	50	Sunny and clear
ST-2	5.1	2.6	77.6	58	Sunny and clear

Source: LSA Associates, Inc., July 2015.

As shown in Figure 11, noise measurements were taken at three locations within the project site. The primary source of existing noise audible from the project site was the traffic on Telegraph Avenue, Claremont Avenue, and 51st Street. Noise levels along these roadways were significantly lower along the eastern border of the project site, which abuts a residential neighborhood.

Existing sensitive land uses within the project area include single-family homes to the east along Clarke Street, approximately 50 feet from the project site, and multi-family residential units located approximately 100 feet to the south along 51st Street. The project site is adjacent to a four-story multi-family residential building, which is located approximately 15 feet to the north. Commercial buildings located west and southwest of the project site are not considered noise-sensitive uses.



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FIGURE 11

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ST# Short-Term Noise Monitoring Locations

LT# Long-Term Monitoring Location

Project Site

Note: This aerial photograph was taken in March 2015. As of February 2016, the building has been demolished and the site has been graded.

5110 Telegraph Avenue Project
Noise Monitoring Locations

SOURCES: GOOGLE EARTH, APRIL 2014; LSA, 2015.

I:\NAU1501 5110 Telegraph\figures\Fig_11.ai (2/19/16)

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Construction Noise. Construction of the project would occur over approximately 19 months. Construction activities would include excavation, grading, and building construction. These activities would result in short-term noise in the project vicinity.

Table 7 lists maximum noise levels recommended by the Federal Highway Administration for typical construction equipment estimated to occur, based on a distance of 50 feet between the equipment and a noise receptor. Typical maximum noise levels could be up to 91 dBA L_{max} at 50 feet during the noisiest construction phases.

Section 8.18.020 of the City's Municipal Code provides that all construction equipment powered by internal combustion engines shall be properly muffled and maintained, that unnecessary idling of internal combustion engines is prohibited, that all stationary noise-generating construction equipment are to be located as far as practical from existing residences, that quiet construction equipment are to be selected whenever possible, and that use of pile drivers and jack hammers shall be prohibited on Sundays and holidays, except for emergencies and as approved in advance by the Building Official.

Section 17.120.050 of the City's Planning Code limits construction activities to the hours between 7:00 a.m. to 7:00 p.m., Monday through Friday, and 9:00 a.m. to 8:00 p.m. on Saturdays and Sundays. Construction-related noise shall not exceed the applicable nighttime noise level standards on federal holidays. In addition, construction-related operations shall not exceed the maximum allowable receiving noise levels described for short-term construction (less than 10 days) and long-term construction (more than 10 days) listed in Table 8, Maximum Allowable Receiving Noise Level Standards, Residential, and Civic.

The site preparation phase, which would include excavation, and grading of the site, would generate the highest noise levels because earthmoving machinery is the noisiest construction equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Grading and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment involve one or two minutes of full-power operation followed by three or four minutes at lower power settings.

The sensitive receptors to the north, east, and south of the site may potentially be affected by the noise generated during project construction. Based on attenuation, the closest residences, which are located 15 feet, 50 feet, and 100 feet from the project site, may be subject to short-term construction noise reaching 101 dBA L_{max}, 91 dBA L_{max}, and 85 dBA L_{max}, respectively. The proposed buildings are set back approximately 15 feet from the western, eastern, and southern project site boundaries, and 50 feet from the northern project site boundary; therefore, during building construction sensitive receptors would be approximately 65 feet and 115 feet from the primary activity locations and experience noise levels of approximately 89 dBA L_{max} and 84 dBA L_{max}, respectively.

Table 7: Roadway Construction Noise Model Default Noise Emission Reference Levels and Usage Factors

Equipment Description	Impact Device?	Acoustical Usage Factor	Spec. 721.560 L_{max} at 50 feet (dBA, slow)	Actual Measured L_{max} at 50 feet (dBA, slow)	Number of Actual Data Samples (Count)
All other Equipment > 5 HP	No	50	85	N/A	0
Backhoe	No	40	80	78	372
Blasting	Yes	N/A	94	N/A	0
Boring Jack Power Unit	No	50	80	83	1
Compactor (ground)	No	20	80	83	57
Compressor (air)	No	40	80	78	18
Concrete Batch Plant	No	15	83	N/A	0
Concrete Mixer Truck	No	40	85	79	40
Concrete Pump Truck	No	20	82	81	30
Crane	No	16	85	81	405
Dozer	No	40	85	82	55
Drill Rig Truck	No	20	84	79	22
Dump Truck	No	40	84	76	31
Excavator	No	40	85	81	170
Flat Bed Truck	No	40	84	74	4
Front End Loader	No	40	80	79	96
Generator	No	50	82	81	19
Generator (< 25 kVA, VMS Signs)	No	50	70	73	74
Grader	No	40	85	N/A	0
Impact Derive	Yes	20	95	101	11
Jackhammer	Yes	20	85	89	133
Man Lift	No	20	85	75	23
Mounted Impact Hammer (hoe ram)	Yes	20	90	90	212
Paver	No	50	85	77	9
Pickup Truck	No	40	55	75	1
Pneumatic Tools	No	50	85	85	90
Pumps	No	50	77	81	17
Refrigerator Unit	No	100	82	73	3
Roller	No	20	85	80	16
Scraper	No	40	85	84	12
Tractor	No	40	84	N/A	0
Vacuum Excavator (Vac-Truck)	No	40	85	85	149
Ventilation Fan	No	100	85	79	13
Vibratory Pile Driver	No	20	95	101	44
Warning Horn	No	5	85	83	12
Welder/Torch	No	40	73	74	5

N/A = Not Applicable
dBA = A-weighted decibels

Source: *FHWA Highway Construction Noise Handbook*, August 2006.

Table 8: Maximum Allowable Receiving Noise Level Standards, Residential, and Civic

Cumulative Number of Minutes in Either the Daytime or Nighttime One Hour Time Period	Daytime 7:00 a.m. to 10:00 p.m.	Nighttime 10:00 p.m. to 7:00 a.m.
20	60	45
10	65	50
5	70	55
1	75	60
0	80	65

Source: City of Oakland Planning Code.

The City's SCA 58 would require normal construction activities to occur between 7:00 a.m. and 7:00 p.m. Monday through Friday, and pier drilling, pile driving, and/or extreme noise generating activities greater than 90 dBA are limited to between 8:00 a.m. and 4:00 p.m. Construction is permitted on Saturdays from 9:00 a.m. to 5:00 p.m, and no extreme noise generating activities (greater than 90 dBA) are permitted. Construction is prohibited on Sundays and federal holidays. SCA 59 would require noise reduction measures to reduce noise impacts due to construction. Since the project would be considered as generating extreme construction noise, the project applicant would be required to provide a Noise Reduction Plan under SCA 60. Additionally, a Construction Noise Management Plan would be required under SCA 61 that would include a set of site-specific noise attenuation measures to further reduce construction noise impacts a result of this noise analysis. The proposed project would construct more than 50 residential units and therefore is required under SCA 62 to submit to the City for review and approval a set of procedures for responding to and tracking construction noise complaints. These procedures are to be implemented during construction. With adherence to the City's Municipal Code and Planning Code requirements and implementation of these SCA's, the project would result in a less-than-significant impact related to construction noise.

Groundborne Vibration. Typical sources of groundborne vibration are construction activities (e.g., pavement breaking and operating heavy-duty earthmoving equipment) and occasional traffic on rough roads. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. When roadways are smooth, vibration from traffic (even heavy trucks) is rarely perceptible.

The streets surrounding the project site are paved and generally smooth; therefore, significant groundborne vibration along these roadways would be unlikely. In addition, the rubber tires and suspension systems of buses and other on-road vehicles make it unusual for such vehicles to cause groundborne noise or vibration problems. Therefore, it is assumed that no perceptible vehicular vibration impacts would occur and that no vibration impact analysis of on-road vehicles is necessary.

The sensitive receptors located closest to the project site include the four-story multi-family residential units located approximately 65 feet to the north. The four-story residential building abutting the project site to the north would not be susceptible to significant groundborne vibration levels. Based on typical vibration attenuation levels, the residences located 65 feet from the active construction areas could be exposed to groundborne vibration up to 0.07 PPV. This is below the maximum vibration level recommendations for residential structures of 1.0 PPV, and the vibration level which is distinctly perceptible by humans, 0.24 PPV. Therefore, construction-related groundborne vibration generated by the proposed project would be below human perception and

below thresholds that could cause structural damage to buildings. As such, the proposed project would not generate a significant impact related to vibration.

Operational Noise. The proposed project would include residential and commercial uses and would not be a source of substantial sources of noise. Primary sources of operational noise would include parking related noise and noise associated with delivery truck loading and unloading. Parking related activities, such as people conversing or doors slamming, would generate noise levels of approximately 60 dBA to 70 dBA L_{max} at 50 feet. However, given that the proposed project would include a subterranean parking structure, noise associated with parking activities would be confined and would not impact noise-sensitive receptors. In contrast, delivery truck loading and unloading activities located along and in front of the subject building on 51st Street would result in noise levels from 75 dBA to 85 dBA L_{max} at 50 feet, which could exceed the City's noise ordinance standards. Therefore, noise generated by delivery truck activity would generate the greatest level of project-related operational noise.

Noise-sensitive receptors are located approximately 50 feet from the proposed residential loading berths. Compliance with the City's Municipal Code (as required by SCA 64 above) would ensure that impacts related to operational noise are minimized by confining loading and unloading activities to daytime hours between 7:00 a.m. and 10:00 p.m. Maximum allowable receiving noise level standards at residential land uses for daytime hours between 7:00 a.m. and 10:00 p.m. are 60 dBA L_{max} for a cumulative number of 20 minutes in a one- hour period, 65 dBA L_{max} for 10 minutes in a one-hour period, 70 dBA L_{max} for 5 minutes in a one-hour period, and 75 dBA L_{max} for 1 minute in a one-hour period.

In compliance with SCA 64, the proposed two residential loading berths, located within the property and on Clarke Street, would be enclosed to minimize associated noise. Enclosure of the loading berths would reduce noise level by up to 25 dBA. Therefore, at a distance of 50 feet, loading and unloading noise levels would be 50 dBA to 60 dBA L_{max}, which would not exceed the City's maximum allowable receiving noise level standards (Table 8). A commercial loading zone would be provided on 51st Street, approximately 120 feet from existing sensitive receptors. Instantaneous noise levels could be up 77 dBA L_{max} at this distance. Loading and unloading noise would be intermittent and could exceed the noise ordinance specification if activities would occur for extended durations. However, implementation of SCA 64 would reduce this impact to a less-than-significant level. Therefore, loading and unloading activities associated with the project would meet the City's noise ordinance standards for operational noise and would not create a substantial noise increase at the nearby sensitive receptors.

The standards contained in the Municipal Code also pertain to the exposure of residences to noise generated from other sources. Compliance with Code requirements related to indoor noise standards would minimize the impacts of ambient (outside) noise on the living conditions of future project residents. More specifically, SCA 63 would require the project applicant to submit a Noise Reduction Plan that contains noise reduction measures to reduce interior noise levels to a level not to exceed 45 dBA CNEL in the residential units. The commercial spaces included as part of the proposed project, per the City's land use compatibility guidelines, would be required to have interior noise levels below 55 dBA CNEL.

(3) Air Quality. The following Standard Conditions of Approval would be implemented as part of the project:

Standard Conditions of Approval. The Air Quality Impact Analysis (AQIA) concluded that with implementation of the City's Standard Conditions of Approval during project construction, the project would not result in significant impacts related to air quality, greenhouse gas, or toxic air contaminants (health risk). The analysis also concluded that project operation would not exceed the BAAQMD threshold related to toxic air contaminants and therefore, that operational health risk reduction measures would not be required.

Since the air quality and health risk assessment demonstrates that emissions associated with project operation would be below applicable BAAQMD screening levels for air quality, greenhouse gas, and toxic air contaminants, related impacts are considered to be less than significant, and no further analysis is required. Nevertheless, consistent with the BAAQMD recommendations and City of Oakland Standard Conditions of Approval, the project would be required to comply with the following Standard Conditions of Approval related to air quality to ensure that project related air quality impacts would be less than significant:

19. Construction-Related Air Pollution Controls (Dust and Equipment Emissions)

    Requirement: The project applicant shall implement all of to the following applicable air pollution control measures during construction of the project:

    [BASIC CONTROLS (apply to ALL construction sites)]

    a. Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible.

    b. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).

    c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

    d. Pave all roadways, driveways, sidewalks, etc. within one month of site grading or as soon as feasible. In addition, building pads should be laid within one month of grading or as soon as feasible unless seeding or soil binders are used.

    e. Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).

    f. Limit vehicle speeds on unpaved roads to 15 miles per hour.

    g. Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points.

h. Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations").

i. All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

j. Portable equipment shall be powered by electricity if available. If electricity is not available, propane or natural gas shall be used if feasible. Diesel engines shall only be used if electricity is not available and it is not feasible to use propane or natural gas.

[ENHANCED CONTROLS: All "Basic" controls listed above plus the following controls if the project involves:

- 114 or more single-family dwelling units;
- 240 or more multi-family units;
- Nonresidential uses that exceed the applicable screening size listed in the Bay Area Air Quality Management District's CEQA Guidelines;
- Demolition permit;
- Simultaneous occurrence of more than two construction phases (e.g., grading and building construction occurring simultaneously);
- Extensive site preparation (i.e., the construction site is four acres or more in size); or
- Extensive soil transport (i.e., 10,000 or more cubic yards of soil import/export).]

k. All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

l. All excavation, grading, and demolition activities shall be suspended when average wind speeds exceed 20 mph.

m. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.

n. Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more).

o. Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress.

p. Install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of the construction site to minimize wind-blown dust. Wind breaks must have a maximum 50 percent air porosity.

q. Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.

r. Activities such as excavation, grading, and other ground-disturbing construction activities shall be phased to minimize the amount of disturbed surface area at any one time.

s. All trucks and equipment, including tires, shall be washed off prior to leaving the site.

t. Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.

u. All equipment to be used on the construction site and subject to the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") must meet emissions and performance requirements one year in advance of any fleet deadlines. Upon request by the City, the project applicant shall provide written documentation that fleet requirements have been met.

v. Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings).

w. All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM.

x. Off-road heavy diesel engines shall meet the California Air Resources Board's most recent certification standard.

y. Post a publicly-visible large on-site sign that includes the contact name and phone number for the project complaint manager responsible for responding to dust complaints and the telephone numbers of the City's Code Enforcement unit and the Bay Area Air Quality Management District. When contacted, the project complaint manager shall respond and take corrective action within 48 hours.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

20. Exposure to Air Pollution (Toxic Air Contaminants)

a. Health Risk Reduction Measures

Requirement: The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to exposure to toxic air contaminants. The project applicant shall choose one of the following methods:

i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk of exposure of project residents/occupants/users to air pollutants. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City.

- or -

ii. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:

- Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 [insert MERV-16 for projects located in the West Oakland Specific Plan area] or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.
- Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph). Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible.
- The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall be located as far away as feasible from a loading dock or where trucks concentrate to deliver goods.
- Sensitive receptors shall be located on the upper floors of buildings, if feasible.
- Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (Pinus nigra var. maritima), Cypress (X Cupressocyparis leylandii), Hybrid popular (Populus deltoids X trichocarpa), and Redwood (Sequoia sempervirens).
- Sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible.
- Existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible.
- Emissions from diesel trucks shall be reduced through implementing the following measures, if feasible:
- Installing electrical hook-ups for diesel trucks at loading docks.
- Requiring trucks to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards.
- Requiring truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels.
- Prohibiting trucks from idling for more than two minutes.
- Establishing truck routes to avoid sensitive receptors in the project. A truck route program, along with truck calming, parking, and delivery restrictions, shall be implemented.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning

Monitoring/Inspection: Bureau of Building

b. Maintenance of Health Risk Reduction Measures

Requirement: The project applicant shall maintain, repair, and/or replace installed health risk reduction measures, including but not limited to the HVAC system (if applicable), on an ongoing and as-needed basis. Prior to occupancy, the project applicant shall prepare and then distribute to the building manager/operator an operation and maintenance manual for the HVAC system and filter including the maintenance and replacement schedule for the filter.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

Air Quality Impact Analysis. An Air Quality Impact Analysis (AQIA), including a health risk assessment, (see Appendix C) was prepared for the project to determine whether the project would result in related impacts above acceptable threshold levels defined by the Bay Area Air Quality Management District's (BAAQMD) CEQA Air Quality Guidelines.[7,8] Both State and federal governments have established health-based Ambient Air Quality Standards for six criteria air pollutants:[9] carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter (PM). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Long-term exposure to elevated levels of criteria pollutants may result in adverse health effects. However, emission thresholds established by the BAAQMD are used to manage total regional emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual projects that would contribute to regional emissions and pollutant concentrations and could adversely affect or delay the projected attainment target year for certain criteria pollutants.

The BAAQMD has established a maximum threshold for land use projects that have the potential to expose sensitive receptors (including residential areas) or the general public to substantial levels of toxic air contaminants. The BAAQMD thresholds of significance for toxic air contaminants for single sources are: 1) probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 10 in one million; or 2) ground-level concentrations of non-carcinogenic toxic air contaminants would result in a Hazard Index greater than 1 for the MEI. The BAAQMD thresholds of significant under cumulative conditions (all sources) or construction emissions are: 1) a cancer risk level greater than 100 in a million; 2) a non-cancer risk (chronic or acute) hazard index greater than 10.0; or 3) annual average $PM_{2.5}$ of greater than 0.8 micrograms per cubic meter.

[7] Bay Area Air Quality Management District, 2012. *CEQA Air Quality Guidelines.*

[8] LSA Associates, Inc., 2015. *Air Quality Impact Analysis: 5110 Telegraph Avenue Project,* August.

[9] Criteria pollutants are defined as those pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

The project would have a significant impact related to air emissions if the project would:

- Result in average daily emissions of 54 pounds per day of ROG, NO_x, or PM2.5 or 82 pounds per day of PM10 during project construction; or
- Result in average daily emissions of 54 pounds per day of ROG, NO_X, or $PM_{2.5}$ or 82 pounds per day of PM_{10}; or result in maximum annual emissions of 10 tons per year of ROG, NO_X, or $PM_{2.5}$ or 15 tons per year of PM_{10} during project operation.

Project Construction. The AQIA found that during construction of the project, short-term degradation of air quality may occur due to the release of particulate matter emissions generated by excavation, grading, hauling, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, ROG, directly-emitted particulate matter ($PM_{2.5}$ and PM_{10}), and TACs such as diesel exhaust particulate matter. As noted above, project construction is expected to occur over approximately 19 months.

Because the project site is located in an urban area in close proximity to existing residential uses, nearby residents could be exposed to diesel emission exhaust and fugitive dust emissions during project construction. However, with implementation of standard construction measures, as required by the City's SCA #19, project construction emissions would be minimized and impacts to sensitive receptors related to dust and/or exhaust emissions would be a less than significant.

Table 9: Project Construction Emissions in Pounds Per Day

Project Construction	ROG	NO_x	Exhaust $PM_{2.5}$	Total $PM_{2.5}$	Exhaust PM_{10}	Total PM_{10}
Average Daily Emissions	22.1	21.6	3.7	7.5	3.9	13.2
BAAQMD Thresholds	54.0	54.0	54.0	NA	82.0	NA
Exceed Threshold?	No	No	No	--	No	--

NA = Not Applicable, the BAAQMD does not have threshold
Source: LSA Associates Inc., 2015

Project Operation. The project would also generate long-term air emissions associated with changes in the permanent use of the project site. These long-term emissions would primarily result from mobile source emissions resulting from vehicle trips associated with the proposed project. Area sources, such as natural gas heaters, landscape equipment, and use of consumer products such as pressurized air canisters, would also result in pollutant emissions. Because these project generated emissions would not exceed the BAAQMD's thresholds for ROG, NO_x, $PM_{2.5}$ and PM_{10}, the proposed project would not have a significant effect on regional air quality (See Appendix C).

Table 10: Project Operational Emissions

Emission Category	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO_x)	PM_{10}	$PM_{2.5}$
Emission in Pounds Per Day				
Area Source	10.3	0.2	0.1	0.1
Energy Source	0.1	0.6	0.0	0.0
Mobile Source	20.0	34.1	20.5	5.6
Total Emissions	**30.4**	**34.9**	**20.6**	**5.7**
BAAQMD Significance Threshold	**54.0**	**54.0**	**82.0**	**54.0**
Exceed?	**No**	**No**	**No**	**No**
Emissions in Tons Per Year				
Area Source	1.8	0.0	0.0	0.0
Energy Source	0.0	0.1	0.0	0.0
Mobile Source	2.5	4.6	2.8	0.8
Total Emissions	**4.3**	**4.7**	**2.8**	**0.8**
BAAQMD Significance Threshold	**10.0**	**10.0**	**15.0**	**10.0**
Exceed?	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc., 2015.

Although not required to be analyzed under CEQA based on the California Supreme Court's decision in CBIA v. Bay Area Air Quality Management District,[10] the AQIA also evaluated potential health risk levels from permitted emission sources in the project vicinity. Three sources of emissions were identified within 1,000 feet of the project site, including a generator, a gas station, and SR-24. As shown in Table 11, the results of the stationary and mobile source analysis indicated that the generator, located at 463 51st Street, would exceed the single source threshold for risk. However, with implementation of SCA #20, impacts related to health risk would be reduced to a less-than-significant level. More specifically, implementation of this SCA would reduce particulate matter indoors by 80 to 90 percent resulting in a health risk reduction from 13.14 in 1 million to 2.63 in 1 million, which would be below the BAAQMD's significance threshold. Data pertaining to the analysis of health risk is provided in Appendix C.

Table 11: Stationary and Mobile Sources in the Project Vicinity With SCA 20

Source (Name & Address)	Health Risk (in 1 million)	$PM_{2.5}$ (µg/m3)	Hazard Index
City of Oakland Environmental Sciences Division, 463 51st Street (generator)	2.63	0.005	0.008
ARCO Facility #06148, 5131 Shattuck Avenue	1.49	NA	0.083
State Route 24	1.69	0.084	0.007
BAAQMD Single Source Threshold	**10 in 1 million**	**0.3**	**1.0**
Exceeds Threshold?	**No**	**No**	**No**

Source: Bay Area Air Quality Management District, 2015

[10] California Building Industry Association vs. Bay Area Air Quality Management District. 2015.

As described in the AQIA, construction and operation of the proposed project would not result in the generation of criteria air pollutants that would not exceed City of Oakland or BAAQMD standards. Additionally, existing stationary source emissions would result in a maximum exposure of future project residents to a risk level that could exceed the criterion of significance for cancer health effects at the individual level. Implementation of the City of Oakland's SCA #20 would require the project to incorporate air filtration devices that would minimize health risk for new sensitive receptors.

(4) Water Quality. The following Standard Conditions of Approval would be incorporated into the project design and would ensure that project related water quality impacts would be less than significant:

44. Erosion and Sedimentation Control Measures for Construction

    Requirement: The project applicant shall implement Best Management Practices (BMPs) to reduce erosion, sedimentation, and water quality impacts during construction to the maximum extent practicable. At a minimum, the project applicant shall provide filter materials deemed acceptable to the City at nearby catch basins to prevent any debris and dirt from flowing into the City's storm drain system and creeks.

    When Required: During construction

    Initial Approval: N/A

    Monitoring/Inspection: Bureau of Building

48. Site Design Measures to Reduce Stormwater Runoff

    Requirement: Pursuant to Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES), the project applicant is encouraged to incorporate appropriate site design measures into the project to reduce the amount of stormwater runoff. These measures may include, but are not limited to, the following:

    a. Minimize impervious surfaces, especially directly connected impervious surfaces and surface parking areas;
    b. Utilize permeable paving in place of impervious paving where appropriate;
    c. Cluster structures;
    d. Direct roof runoff to vegetated areas;
    e. Preserve quality open space; and
    f. Establish vegetated buffer areas.

    When Required: Ongoing

    Initial Approval: N/A

    Monitoring/Inspection: N/A

49. Source Control Measures to Limit Stormwater Pollution

    Requirement: Pursuant to Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES), the project applicant is encouraged to incorporate appropriate source control measures to limit pollution in stormwater runoff. These measures may include, but are not limited to, the following:

a. Stencil storm drain inlets "No Dumping – Drains to Bay;"

b. Minimize the use of pesticides and fertilizers;

c. Cover outdoor material storage areas, loading docks, repair/maintenance bays and fueling areas;

d. Cover trash, food waste, and compactor enclosures; and

e. Plumb the following discharges to the sanitary sewer system, subject to City approval:

f. Discharges from indoor floor mats, equipment, hood filter, wash racks, and, covered outdoor wash racks for restaurants;

g. Dumpster drips from covered trash, food waste, and compactor enclosures;

h. Discharges from outdoor covered wash areas for vehicles, equipment, and accessories;

i. Swimming pool water, if discharge to on-site vegetated areas is not feasible; and

j. Fire sprinkler teat water, if discharge to on-site vegetated areas is not feasible.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: N/A

50. NPDES C.3 Stormwater Requirements for Regulated Projects

a. Post-Construction Stormwater Management Plan Required

Requirement: The project applicant shall comply with the requirements of Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES). The project applicant shall submit a Post-Construction Stormwater Management Plan to the City for review and approval with the project drawings submitted for site improvements, and shall implement the approved Plan during construction. The Post-Construction Stormwater Management Plan shall include and identify the following:

i. Location and size of new and replaced impervious surface;

ii. Directional surface flow of stormwater runoff;

iii. Location of proposed on-site storm drain lines;

iv. Site design measures to reduce the amount of impervious surface area;

v. Source control measures to limit stormwater pollution;

vi. Stormwater treatment measures to remove pollutants from stormwater runoff, including the method used to hydraulically size the treatment measures; and

vii. Hydromodification management measures, if required by Provision C.3, so that post project stormwater runoff flow and duration match pre-project runoff.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning; Bureau of Building

Monitoring/Inspection: Bureau of Building

b. Maintenance Agreement Required

Requirement: The project applicant shall enter into a maintenance agreement with the City, based on the Standard City of Oakland Stormwater Treatment Measures Maintenance Agreement, in accordance with Provision C.3, which provides, in part, for the following:

i. The project applicant accepting responsibility for the adequate installation/construction, operation, maintenance, inspection, and reporting of any on-site stormwater treatment measures being incorporated into the project until the responsibility is legally transferred to another entity; and

ii. Legal access to the on-site stormwater treatment measures for representatives of the City, the local vector control district, and staff of the Regional Water Quality Control Board, San Francisco Region, for the purpose of verifying the implementation, operation, and maintenance of the on-site stormwater treatment measures and to take corrective action if necessary. The maintenance agreement shall be recorded at the County Recorder's Office at the applicant's expense.

When Required: Prior to building permit final

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

51. NPDES C.3 Stormwater Requirements for Small Projects

Requirement: Pursuant to Provision C.3 of the Municipal Regional Stormwater Permit issued under the National Pollutant Discharge Elimination System (NPDES), the project applicant shall incorporate one or more of the following site design measures into the project:

a. Direct roof runoff into cisterns or rain barrels for reuse;

b. Direct roof runoff onto vegetated areas;

c. Direct runoff from sidewalks, walkways, and/or patios onto vegetated areas;

d. Direct runoff from driveways and/or uncovered parking lots onto vegetated areas;

e. Construct sidewalks, walkways, and/or patios with permeable surfaces; or

f. Construct bike lanes, driveways, and/or uncovered parking lots with permeable surfaces.

The project drawings submitted for construction-related permits shall include the proposed site design measure(s) and the approved measure(s) shall be installed during construction. The design and installation of the measure(s) shall comply with all applicable City requirements.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Planning; Bureau of Building

Monitoring/Inspection: Bureau of Building

All development projects within the City of Oakland are subject to mandatory water quality requirements imposed as a condition of construction (i.e., SCA #12, #13, and #14, above). These requirements implement regional water quality regulations imposed by the San Francisco Bay Regional Water Quality Control Board (RWQCB) pursuant to a National Pollutant Discharge Elimination System (NPDES) permit. Measures derived from these requirements include best management practices for both construction and post-construction periods that limit periods during which grading occurs and filtration of stormwater prior to entering public drainage systems. Other, similar requirements are also included. Implementation of the mandatory stormwater quality treatment methods listed above would ensure that any project-related water quality impacts would be avoided or minimized.

e. Criterion §15332(e): Utilities and Public Services

Finding: The site can be adequately served by all required utilities and public services.

The project is situated in an urban area already served by all necessary municipal utilities (i.e., stormwater, water, wastewater, solid waste) and public services (i.e., police, fire, schools). The following analysis reviews whether the project can, as required by CEQA Guidelines §15332(e) be "adequately served by all required utilities and public services."

(1) Stormwater. Under existing conditions, stormwater from the project site is conveyed to curb/gutters at abutting public streets for conveyance in the municipal stormwater system. This condition would be retained under the project.

Overall stormwater runoff volume from the project site would not substantially change since the site is comprised almost entirely of impervious services (e.g., paved parking lot, building). Therefore, no appreciable increase in contributions to the municipal stormwater system would result. Nonetheless, the City of Oakland's Standard Conditions of Approval previously listed in the Water Quality section would require the project sponsor to confirm the capacity of the City's surrounding stormwater system and state of repair.

(2) Water. The project site is served by existing water supplies, treatment facilities, and distribution systems operated and managed by the East Bay Municipal Utility District (EBMUD). EBMUD provides potable water to approximately 1.3 million people throughout portions of Alameda and Contra Costa counties including the City of Oakland. The project site is served by a 6-inch water main located on Clarke Street.

The project's increased water demand represents a very marginal increase in overall water demands within the EBMUD service area (less than 1/100th of a percent increase over the current adjusted demand of 216 million gallons per day). The project's estimated water demand is fully accounted for in EBMUD's water demand projections as published in the 2010 Urban Water Management Plan,[11] and would not exceed water supplies available from existing entitlements and resources.

[11] East Bay Municipal Utility District, 2011. *Urban Water Management Plan.*

The project sponsor would need to connect the proposed building to the existing water infrastructure. The existing main water pipeline system near the project site is expected to be adequate to deliver water to the project, although the water pipelines within the site may need to be extended or relocated to provide the requested service. As part of standard development practices, all modifications and improvements to the existing water supply infrastructure required to accommodate the project would be determined in consultation with EBMUD upon application for water service, with all associated costs to be borne by the project sponsor. Additionally, minimum fire flow requirements would be assessed at the time of project funding.

For the reasons stated above, there is sufficient water to serve the project.

(3) Wastewater. The project would incorporate the following Standard Condition of Approval into the project design:

79. Sanitary Sewer System

Requirement: The project applicant shall prepare and submit a Sanitary Sewer Impact Analysis to the City for review and approval in accordance with the City of Oakland Sanitary Sewer Design Guidelines. The Impact Analysis shall include an estimate of pre-project and post-project wastewater flow from the project site. In the event that the Impact Analysis indicates that the net increase in project wastewater flow exceeds City-projected increases in wastewater flow in the sanitary sewer system, the project applicant shall pay the Sanitary Sewer Impact Fee in accordance with the City's Master Fee Schedule for funding improvements to the sanitary sewer system.

When Required: Prior to approval of construction-related permit

Initial Approval: Public Works Department, Department of Engineering and Construction

Monitoring/Inspection: N/A

The project site is currently served by existing sewer infrastructure located beneath the surrounding roadways. Existing infrastructure consists of 8-inch pipelines located beneath Clarke Street.

The City of Oakland uses a numbered sub-basin system and assigns the discharges from each sub-basin a single discharge point from the City's collection system to the EBMUD interceptor system. The City allocates each sub-basin a certain amount of sewer flow that may be discharged to the EBMUD system, and flows within a sub-basin normally may not exceed that allocation. Should a sub-basin require more flow than its allocation, allocation may be redirected between adjacent sub-basins. In this manner, the City ensures the capacity of the EBMUD wastewater transport and treatment system is adequate to serve development as planned and as proposed.

Pursuant to the City of Oakland SCA # 79, the project sponsor would be required to confirm the capacity of the City's wastewater system, and would be responsible for any necessary wastewater infrastructure improvements necessary to accommodate the project. As such, portions of unused allocation would be re-allocated, through coordination agreements with EBMUD, to the relevant sub-basins to accommodate the project's projected demand.

Compliance with Oakland's Standard Conditions of approval would ensure that there is sufficient sewer capacity to serve the project.

(4) Solid Waste. The project would incorporate the following Standard Conditions of Approval into the project design, and as such solid waste impacts would be less than significant:

74. Construction and Demolition Waste Reduction and Recycling

Requirement: The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these requirements include all new construction, renovations/alterations/ modifications with construction values of $50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.

When Required: Prior to approval of construction-related permit

Initial Approval: Public Works Department, Environmental Services Division

Monitoring/Inspection: Public Works Department, Environmental Services Division

Solid waste and yard trimmings within the City of Oakland are collected by Waste Management of Alameda County. These materials are taken to the Davis Street Transfer Station in San Leandro. After undergoing processing, waste from the Transfer Station is delivered to the Altamont Landfill in eastern Alameda County. The landfill is projected to have sufficient capacity to operate until at least 2031, and potential to operate through 2071, depending on waste flows and waste reduction measures.

Waste Management provides curbside recycling within the City, including the project site. Curbside recycling includes collection of glass, aluminum and tin, motor oil, cardboard, magazine and newsprint, and plastic. Recyclable materials are also delivered to the Davis Street Transfer Center, where they are processed.

Uniformly imposed as a Standard Condition of Approval, the City's Waste Reduction and Recycling Standard, and Oakland Municipal Code Chapter 15.34 (which requires implementation of a recycling and waste reduction plan for construction and demolition activities) would reduce the amount of waste generated during the construction phases of the proposed project. For the reasons stated above, there is sufficient solid waste service for the project.

(5) Police Services. The project would increase development intensity on the project site as well as increase the onsite population (e.g., residents, visitors, employees, customers). This increase could result in an increase in reported crimes. Whereas the City of Oakland continues to deal with issues surrounding crime and crime prevention, and whereas the Oakland Police Department (OPD) continues to manage its resources as effectively as possible given budgetary constraints, it is not anticipated that the project would result in the need for any new physical facilities to maintain acceptable service ratios, response times or other OPD performance objectives. Therefore, police service is adequate to serve the project.

(6) Fire Protection Services. Oakland Fire Department's Station No. 8 is located at 463 51st Street, which is directly across the street from the project site, and Station No. 19 (located at 5766 Miles Avenue, near SR-24 and College Avenue), is approximately 1.5 miles from the project site. Both of these stations are capable of providing prompt fire protection service to the project site (less than seven minutes) in an emergency. Station No. 8, which is nearest to the site, is a truck company with a ladder equipped fire truck capable of fighting structural fires in multi-level buildings.

The future population at the project site may result in an increase in calls for fire and emergency service. However, the Fire Department would be able to provide adequate fire suppression and emergency medical response services to the project site with existing staff. The project would not require development of new or physically altered facilities. Therefore, fire protection service would be adequate to serve the project.

(7) Schools. The Oakland Unified School District ("District") provides public education services to the City of Oakland for grades kindergarten through high school (K-12). The proposed multi-family residential development would provide a maximum of 204 residential units to the City of Oakland's residential inventory, and future residents would be expected to include families with school-aged children. The District has prepared a technical analysis of how many school-aged children can be expected from new residential development in Oakland and an analysis of how much each new student represents in terms of the capital and annual operating cost of providing educational services. Student generation rates used by the District are shown in Table 12.

Based on the District's projected student generation rates for residential development, the project would be expected to result in a total school population of 56 students: 29 students in grades K-5, 12 students in grades 6-8, and 15 students in grades 9-12.

Table 12: Oakland Student Generation Rates

Grade Group	Students/Dwelling Unit
K-5	0.141
6-8	0.060
9-12	0.073
Total	0.274

Source: Oakland Unified School District, 2012.

The District's analysis of the financial impact of new residential and commercial development concludes that residential development creates a school facility cost of $6.72 per square foot and commercial development creates a cost ranging from $1.93 to $8.28 per square foot. The District's School Facility Fee report provides the basis for charging residential and commercial developers a fee $3.20 per square foot of residential development and $0.51 per square foot of commercial space. These fees are the most that can be charged pursuant to the provisions of Government Code Section 65995. As applied to the project, the District's fee program would require payment of $670,957 for the residential portion of the project (209,674 square feet) and $25,475 for the commercial portion of the project (49,950 square feet) or a total of $696,432. The payment of these fees is deemed to offset the financial impact of adding new student-age population to the District and, for the purposes of CEQA, would reduce the potential impact to a less-than-significant level.

EXCEPTIONS TO THE EXEMPTIONS

In addition to investigating the applicability of CEQA Guidelines §15332 (Class 32), this technical report assesses whether any of the exceptions to qualifying for the categorical exemption are present. The following analysis compares the criteria of CEQA Guidelines §15300.2 (Exceptions) to the

project and LSA determined that none of the exceptions are applicable to the project, and that a Categorical Exemption is the CEQA recommended finding.

Criterion 15300.2(a): Location

Finding: This exception does not apply to the project since it is not located in a particularly sensitive environment.

Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located: a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply in all instances, except where the project may have an impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, State, or local agencies. (Not Applicable)

The project does not qualify for an exemption under Classes 3, 4, 5, 6 or 11. The project is located within an urban developed area and is not located within a particularly sensitive environment. As described previously, the site consists of building, pavement, and ruderal vegetation. No habitat for special-status species is present on site, and no known designated cultural resources are present. In addition, the project would not result in any impacts on an environmental resource of hazardous or critical concern. Therefore, the exception under this criterion is not applicable.

Criterion 15300.2(b): Cumulative Impact

Finding: This exception is not applicable since the project would not have a considerable contribution to any cumulative effect related to the topics analyzed above.

The potential cumulative environmental effects associated with the project (and others in the area) are limited to transportation/traffic and air quality.

With regard to the topic of transportation/traffic, the TIA prepared for the project by Fehr & Peers and included as Appendix A analyzes the potential cumulative effects associated with the project. That analysis addresses cumulative scenarios and concludes a less-than-significant impact would result with project implementation. Therefore, relative to this environmental topic, the project would not result in a significant cumulative impact.

Concerning potential cumulative air quality effects, additional analysis (beyond that accomplished in the preceding pages) is not necessary. In developing thresholds of significance, BAAQMD considered the levels at which individual impacts would be cumulatively considerable. As described above, all project-specific air quality impacts are considered less than significant with incorporation of the City's Standard Conditions of Approval. Therefore, it can also be concluded the project's cumulative effect would also be less than significant.

Criterion 15300.2(c): Significant Effect

Finding: This exception is not applicable since the project site would not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.

There are no known unusual circumstances that are applicable to the project and which may result in a significant effect on the environment. The proposed project consists of a mixed-use development with commercial, residential, and urban agricultural uses. These uses would not result in a new activity to the area that could result in a significant effect on the environment. The proposed project is consistent with the uses in the surrounding area. In addition, the proposed project would not affect sensitive biological or cultural resources. Therefore, the exception under CEQA Guidelines Section 15300.2(c) does not apply to the project.

Criterion 15300.2(d): Scenic Highway

Finding: This exemption does not apply since the project would not result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a State Scenic Highway. This criterion does not apply to improvements required as mitigation by an adopted Negative Declaration or certified EIR. (Not Applicable)

The project site has no rock outcroppings or similar resources and is not visible from a State Scenic Highway. The nearest scenic highway, the Macarthur Highway, is located approximately one (1) mile south of the project site. In addition, a Tree Protection Permit (T1500029) has been approved to remove and protect trees within the property and in the City right-of-way by the Tree Services Division of Public Works. As described in the cultural resources analysis below, the project site does not include a historic resource within the meaning of CEQA.

Criterion 15300.2(e): Hazardous Waste Sites

This exemption does not apply because the project is not located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.

The City of Oakland threshold for determining significant environmental effects for properties on a list compiled pursuant to Section 65962.5 of the Government Code states, "Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 (i.e., the "Cortese List") and, as a result, would create a significant hazard to the public or the environment." The project site is not identified on any list compiled pursuant to Section 65962.5 of the Government Code or any other list compiled for purposes related to identifying the prior release of hazardous materials.

Therefore, given the above facts, the exception under CEQA Guidelines §15300.2(e) does not apply to the project.

Criterion 15300.2(f): Historic Resources

Finding: This exemption does not apply, as the project would not cause a substantial adverse change in the significance of a historical resource.

The project site is located near historic buildings including the Temescal Branch Library, located at 5205 Telegraph Avenue, and Cattaneo Block (Buon Gusto Bakery), located at 5006-5010 Telegraph Avenue, both of which are designated historic landmarks. The project would not result in adverse impacts on nearby historic structures. The proposed project would develop a mixed use residential and commercial building on the project site which is vacant, except for an existing parking lot that would be removed. The proposed project would not demolish, destroy, or alter any known historic resources; and although, the site is located near historic resources, project construction would not impair the significance of the individual historic structures. As described in the sun and shadow study prepared for the project (see Appendix D),[12] the project would cast shadows on the Temescal Branch Library building during the winter beginning at 9:00 a.m. and disappearing completely by 10:00 a.m., the time at which the facility opens. Because project-related shadows would not be cast on the building during the library's hours of operation, and would not result in any permanent physical impact on the building, the proposed project would not substantially impair the use of the building or result in negative effects on its character defining features. Therefore, the project's impact on the significance of a historic resource is less than significant within the meaning of CEQA, and the exception under CEQA Guildelines§15300.2(f) does not apply to the project.

Based on the foregoing consideration of potential exemptions it is concluded that none of the exceptions to the Class 32 Exemption apply to the project. Further, the substantial evidence provided in this document provides adequate support for the use of the Exemption Class 32 as an Infill Development project.

Criterion 15300.2: Other Potential Effects

Based on City of Oakland threshold criteria, the following additional analyses of other potential adverse effects were also considered.

Shadow

Finding: The exception under CEQA Guidelines §15300.2 does not apply because impacts related to project-generated shadows would be less than significant.

Under City of Oakland thresholds of significance, a project would have a significant shadow impact if it were to introduce buildings and/or landscaping that would cast substantial shadows on existing solar collectors; if it were to cast a shadow that substantially impairs the function of a building using passive solar energy; if it were to cast a shadow that substantially impairs the beneficial use of any public or quasi-public park, lawn, garden, or open space; or, if it were to cast a shadow on an historic resource such that the shadow would materially impair the resource's historic significance by

[12] Nautilus Group, 2016. *5110 Telegraph Shadow Study.*

materially altering those physical characteristics of the resource that convey its historical significance and that justify its designation as an historic resource.

A shadow study has been prepared for the project (see Appendix D).[13] The shadow study includes sun and shadow simulations for the following dates and times:

- Autumn Equinox (September 23) at 9:00 a.m.; 12:00 p.m. (noon); and 3:00 p.m. (Daylight Savings Time)
- Winter Solstice (December 21) at 9:00 a.m.; 12:00 p.m. (noon); and 3:00 p.m.
- Spring Equinox (March 20) at 9:00 a.m.; 12:00 p.m. (noon); and 3:00 p.m. (Daylight Savings Time)
- Summer Solstice (June 21) at 9:00 a.m.; 12:00 p.m. (noon); and 3:00 p.m (Daylight Savings Time)

While the study found that morning shadows would be cast during winter on the Oakland Temescal Branch Library, a historic building, these shadows would not materially impair any of the physical character-defining features of the building, nor would the essential functions of the library be impaired during operating hours. As described above and in the shadow study, project-generated shadows would be cast onto the library beginning at 9:00 a.m. in the winter. However, the library is not operational before 10:00 a.m., by which time project-generated shadows would have diminished. Further, partial morning shadows on the building would not substantially affect the building's function as a place for reading, writing, researching and gathering. Therefore, the project would result in a less-than-significant shadow impact on historic buildings.

The project would also cast shadows in the afternoon during the winter on Frog Park. Due to the presence of existing large trees in and adjacent to the park, Little Frog Park is shaded year-round during the afternoon hours. The proposed project would cast shadows on Little Frog Park beginning at 1:00 PM during the winter. However, because Little Frog Park already experiences shadow during these times due to the existing large trees, new shadows caused by the proposed project would not substantially impair the beneficial use of this area, or of any other public or quasi-public park, lawn, garden, or open spaces. Therefore, the project would result in a less-than-significant shadow impact on existing open spaces.

Based on review of detailed satellite imagery of the study area, no solar collectors exist in the vicinity of the proposed project. Therefore, the proposed project would not cast shadows on existing solar collectors and would result in no impact.

The proposed project would cast shadows on the south elevation of the existing four-story apartment building located at 5160 Claremont. However, due to the presence of six existing large trees along the south property line of this building, portions of the south elevation are shaded year-round. As part of the proposed project these trees are scheduled to be removed. New shadows caused by the proposed project would not substantially impact the adjacent building because the south elevation already experiences significant shadow and would not impair the beneficial use of the rooms on the south

[13] Nautilus Group, 2015. *5110 Telegraph Shadow Study.*

elevation of the existing apartment building. Further, this building is not a historic structure, nor does it include any solar collectors that would be affected by shadows generated by the proposed project.

For these reasons, the additional shadows cast by the project would not substantially impair the use or character of the library, park, adjacent buildings, or existing solar collectors, and the project would result in a less-than-significant shadow impact. For these reasons, the exception under CEQA Guidelines §15300.2 does not apply.

Tree Removal

Finding: Tree removal associated with project construction would result in a less-than-significant impact.

The following Standard Conditions of Approval would be incorporated into the project design, and any impacts to existing trees would therefore be avoided or minimized:

27. Tree Permit

a. Tree Permit Required

Requirement: Pursuant to the City's Tree Protection Ordinance (OMC chapter 12.36), the project applicant shall obtain a tree permit and abide by the conditions of that permit.

When Required: Prior to approval of construction-related permit

Initial Approval: Permit approval by Public Works Department, Tree Division; evidence of approval submitted to Bureau of Building

Monitoring/Inspection: Bureau of Building

b. Tree Protection During Construction

Requirement: Adequate protection shall be provided during the construction period for any trees which are to remain standing, including the following, plus any recommendations of an arborist:

i. Before the start of any clearing, excavation, construction, or other work on the site, every protected tree deemed to be potentially endangered by said site work shall be securely fenced off at a distance from the base of the tree to be determined by the project's consulting arborist. Such fences shall remain in place for duration of all such work. All trees to be removed shall be clearly marked. A scheme shall be established for the removal and disposal of logs, brush, earth and other debris which will avoid injury to any protected tree.

ii. Where proposed development or other site work is to encroach upon the protected perimeter of any protected tree, special measures shall be incorporated to allow the roots to breathe and obtain water and nutrients. Any excavation, cutting, filing, or compaction of the existing ground surface within the protected perimeter shall be minimized. No change in existing ground level shall occur within a distance to be determined by the project's consulting arborist from the base of any protected tree at any time. No burning or use of equipment with an open flame shall occur near or within the protected perimeter of any protected tree.

iii. No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees shall occur within the distance to be determined by the project's consulting arborist from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials shall be operated or stored within a distance from the base of any protected trees to be determined by the project's consulting arborist. Wires, ropes, or other devices shall not be attached to any protected tree, except as needed for support of the tree. No sign, other than a tag showing the botanical classification, shall be attached to any protected tree.

iv. Periodically during construction, the leaves of protected trees shall be thoroughly sprayed with water to prevent buildup of dust and other pollution that would inhibit leaf transpiration.

v. If any damage to a protected tree should occur during or as a result of work on the site, the project applicant shall immediately notify the Public Works Department and the project's consulting arborist shall make a recommendation to the City Tree Reviewer as to whether the damaged tree can be preserved. If, in the professional opinion of the Tree Reviewer, such tree cannot be preserved in a healthy state, the Tree Reviewer shall require replacement of any tree removed with another tree or trees on the same site deemed adequate by the Tree Reviewer to compensate for the loss of the tree that is removed.

vi. All debris created as a result of any tree removal work shall be removed by the project applicant from the property within two weeks of debris creation, and such debris shall be properly disposed of by the project applicant in accordance with all applicable laws, ordinances, and regulations.

When Required: During construction

Initial Approval: Public Works Department, Tree Division

Monitoring/Inspection: Bureau of Building

c. Tree Replacement Plantings

Requirement: Replacement plantings shall be required for tree removals for the purposes of erosion control, groundwater replenishment, visual screening, wildlife habitat, and preventing excessive loss of shade, in accordance with the following criteria:

i. No tree replacement shall be required for the removal of nonnative species, for the removal of trees which is required for the benefit of remaining trees, or where insufficient planting area exists for a mature tree of the species being considered.

ii. Replacement tree species shall consist of Sequoia sempervirens (Coast Redwood), Quercus agrifolia (Coast Live Oak), Arbutus menziesii (Madrone), Aesculus californica (California Buckeye), Umbellularia californica (California Bay Laurel), or other tree species acceptable to the Tree Division.

iii. Replacement trees shall be at least twenty-four (24) inch box size, unless a smaller size is recommended by the arborist, except that three fifteen (15) gallon size trees may be substituted for each twenty-four (24) inch box size tree where appropriate.

iv. Minimum planting areas must be available on site as follows:

- For Sequoia sempervirens, three hundred fifteen (315) square feet per tree;

- For other species listed, seven hundred (700) square feet per tree.

v. In the event that replacement trees are required but cannot be planted due to site constraints, an in lieu fee in accordance with the City's Master Fee Schedule may be substituted for required replacement plantings, with all such revenues applied toward tree planting in city parks, streets and medians.

vi. The project applicant shall install the plantings and maintain the plantings until established. The Tree Reviewer of the Tree Division of the Public Works Department may require a landscape plan showing the replacement plantings and the method of irrigation. Any replacement plantings which fail to become established within one year of planting shall be replanted at the project applicant's expense.

When Required: Prior to building permit final

Initial Approval: Public Works Department, Tree Division

Monitoring/Inspection: Bureau of Building

The project site includes five trees that are protected under Chapter 12.36 of the Oakland Municipal Code, including four trees along the Telegraph Avenue and Claremont Avenue intersection and one tree located on 51st Street at the corner of Telegraph Avenue. The five protected onsite trees could potentially be impacted during the project construction. Per SCA #27, a Tree Protection Permit has been filed by the applicant and will be reviewed by the Tree Services Division of Public Works per requirement of the SCA #27, and would be adhered to during project construction. Evidence of permit approval would be provided to the Bureau of building prior to construction.

PROJECTS CONSISTENT WITH A COMMUNITY PLAN, GENERAL PLAN OR ZONING

CEQA Guidelines §15183 provides for the streamlined review of projects which are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified. For such projects, additional environmental review is limited to an examination of project-specific effects which are peculiar to the project or its site. The project evaluated in this CEQA Analysis is consistent with the development density established by the General Plan's: (a) 1998 Land Use and Transportation Element ("LUTE"),[14] and (b) 2007-2014[15] and 2015-2023 Housing Elements.[16] An EIR was certified for each of these General Plan documents.

1. General Plan: LUTE EIR

The City of Oakland completed an update of the LUTE of the General Plan in March 1998. The LUTE includes the City's current Land Use and Transportation Diagram as well as strategies, policies, and priorities for Oakland's development and enhancement during a two-decade period. The EIR certified for the LUTE is used to simplify the task of preparing environmental documents on later

[14] Oakland, City of, 1998. *City of Oakland General Plan: Land Use and Transportation Element.* February.

[15] Oakland, City of, 2009. *City of Oakland- Housing Element 2007-2014.* June 3.

[16] Oakland, City of, 2014. *City of Oakland Housing Element 2015-2023.* July.

projects that occur as a result of LUTE implementation. Environmental effects identified in the LUTE's EIR as significant and unavoidable or as significant, but which can be reduced to less-than-significant levels through mitigation, are limited to the topics of: aesthetics/wind, cultural resources, hazards/hazardous materials, land use/planning, population/housing, and public services. The current project is consistent with the development intensity planned for the project site by the LUTE and there are no special circumstances of the project that would increase the severity of any of the previously identified significant effects in the LUTE EIR.

2. General Plan: Housing Element Update EIR and Addendum

Since 2000, the City has twice amended its General Plan to adopt updates to its Housing Element. It certified a 2010 EIR for the 2007-2014 Housing Element,[17] and a 2014 Addendum to the 2010 EIR for the 2015-2023 Housing Element.[18] The General Plan identifies the City's current and projected housing needs, and sets goals, policies, and programs to address those needs, as specified by the state's Regional Housing Needs Allocation (RHEA) process. Although the 5110 Telegraph Avenue project is not specified as a "Housing Opportunity Site" in the 2015-2023 Housing Element, the proposed project would contribute to the total number of housing units needed in the City of Oakland to meet its RHNA target. Applicable mitigation measures and SCAs identified in the 2014 Addendum to the 2010 EIR (for the 2015-2023 Housing Element) are considered in the analysis of the residential components of the proposed project in this document. The 2010 Housing Element Update EIR was designated a "Program EIR" under CEQA Guidelines Sections 15183 and 15183.3.

Additional certified/adopted environmental documents that pertain to the 2015-2023 Housing Element include the following:

a. Land Use and Transportation Element (LUTE) EIR (1998); b) Open Space Conservation and Recreation Element Mitigated Negative Declaration (1996);

b. The Initial Study prepared for the 2007-2014 Housing Element determined that it would result in less-than-significant impacts related to: aesthetics/shadows/winds, agricultural resources, biological resources, cultural resources, geology/soils, hazards/hazardous materials, hydrology/water quality, land use/planning, mineral resources, population/housing, public services, recreation, and utilities/service systems. As a result of the conclusions in the Initial Study, the accompanying EIR discussed impacts related to transportation, air, noise, and climate change.

c. Safety Element Negative Declaration (2004) and Addendum (2012);

d. Historic Preservation Element EIR (1998);

e. Noise Element Negative Declaration (2005);

f. Bicycle Master Plan EIR (2007);

g. Pedestrian Master Plan Mitigated Negative Declaration (2002); and

h. Estuary Policy Plan EIRs (1999, 2006) and Supplemental EIR (2013).

[17] Oakland, City of, 2010. *City of Oakland Housing Element Environmental Impact Report.* August.

[18] Oakland, City of, 2014. *City of Oakland 2015-2023 Housing Element Addendum to the Housing Element EIR.*

Collectively, these CEQA reviews, along with the 2015-2023 Housing Element Addendum, are known as the "Previous CEQA Documents."

Since the City's certification and/or adoption of the Previous CEQA Documents, there have been no substantial changes in the City's policies that relate to actions in the 2015-2023 Housing Element; and there is no new information, or a change of circumstances which would invalidate the Previous CEQA Documents. Moreover, the City has adopted new policies/regulations, including a Green Building Ordinance for private development (Ordinance No. 13040 C.M.S., adopted October 19, 2010) and revisions to the City's Standard Conditions of Approval (July 22, 2015), which further mitigate environmental impacts.

a. Environmental Effects Summary – 2010 Housing Element and 2014 Addendum. The 2010 Housing Element Update EIR (including its Initial Study Checklist) and 2014 Addendum for the 2015-2023 housing Element determined that housing developed pursuant to the Housing Element, which would include 5110 Telegraph Avenue, would result in the following impacts that would be reduced to a less-than-significant level with the implementation of mitigation measures and/or standard conditions of approval (previously described): aesthetics (visual character/quality and light/glare only); air quality (except as noted below); biological resources; cultural resources; geology and soils; greenhouse gas emissions; hazards and hazardous materials (except as noted below, and no impacts regarding airport/airstrip hazards and emergency routes); hydrology and water quality (except as noted below); noise; public services (police and fire only); and utilities and service systems (except as noted below).

Less-than-significant impacts were identified for the following resources in the Housing Element Update EIR and 2014 Addendum: hazards and hazardous materials (emergency plans and risk via transport/disposal); hydrology and water quality (flooding/flood flows, and inundation by seiche, tsunami or mudflow); land use (except no impact regarding community division or conservation plans); population and housing (except no impact regarding growth inducement); public services and recreation (except as noted above, and no impact regarding new recreation facilities); and utilities and service systems (landfill, solid waste, and energy capacity only, and no impact regarding energy standards). No impacts were identified for agricultural or forestry resources, and mineral resources.

Significant unavoidable impacts were identified for the following environmental resources in the 2010 Housing Element Update EIR and 2014 Addendum: air quality (toxic air contaminant exposure) and traffic delays. Due to the potential for significant unavoidable impacts, a Statement of Overriding Considerations was adopted as part of the City's approvals, and is incorporated by reference herein.

b. Qualified Infill Exemption. Public Resources Code Section 21094.5 and CEQA Guidelines Section 15183.3 (Streamlining for Infill Projects) allow streamlining for certain qualified infill projects by limiting the topics subject to review at the project level, if the effects of infill development have been addressed in a planning level decision, or by uniformly applicable development policies. Infill projects are eligible if they are located in an urban area on a site that either has been previously developed or that adjoins existing qualified urban uses on at least 75 percent of the site's perimeter; satisfy the performance standards provided in *CEQA Guidelines* Appendix N; and are consistent with the general use designation, density, building intensity, and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy. No additional environmental review is required if the infill project would not cause any new specific

effects or more significant effects, or if uniformly applicable development policies or standards would substantially mitigate such effects.

The analysis in the Program EIRs - (the 1998 LUTE EIR and, for the residential components of the 5110 Telegraph Avenue project only, the 2010 Housing Element Update EIR and its 2014 Addendum) are applicable to the 5110 Telegraph Avenue project and are the Previous CEQA Documents providing the basis for use of the Community Plan Exemption under CEQA Guidelines Section 15183.3. In addition, the Standard Conditions of Approval are uniformly applicable development policies that substantially mitigate any potentially significant environmental effect.

As documented in this CEQA analysis, the specific aspects of the current project, under the topics of transportation, air, noise, and shadow, have been evaluated and determined to not result in any significant effects. Concerning climate change, the 2015-2023 Housing Element Addendum documents that future residential development projects would result in less-than-significant impacts and would not be required to undergo project-specific analyses under CEQA because residential development under the Housing Element would not exceed the BAAQMD project- level threshold of 4.6 MT CO2e per service population.

APPENDIX A

5110 TELEGRAPH AVENUE
TRANSPORTATION IMPACT ANALYSIS

FEHR PEERS

MEMORANDUM

Date: April 25, 2016

To: Greta Brownlow, LSA

From: Sam Tabibnia

Subject: 5110 Telegraph Avenue –Transportation Impact Analysis

OK14-0033

This memorandum summarizes the transportation impact analysis conducted by Fehr & Peers for the proposed 5110 Telegraph Avenue Project. Based on the application of City of Oakland's CEQA Thresholds of Significance, the proposed 5110 Telegraph Avenue Project would not cause significant impacts to the transportation network. This memorandum also provides recommendations to improve access, circulation, and safety for all travel modes.

Our analysis assumptions and summary are detailed below.

INTRODUCTION

Figure 1 shows the location of the project within the local and regional street system. This analysis evaluates the transportation-related impacts of the project during the weekday morning (AM) and evening (PM) peak hours. The analysis complies with City of Oakland's *Transportation Impact Study Guidelines* (November 2013). The following four scenarios are included in the analysis:

- ***Existing*** – Represents existing conditions based on data obtained from recently published documents and data collected in fall 2014.
- ***Existing Plus Project*** – Existing conditions plus traffic generated by the proposed project
- ***2035 No Project*** – Future conditions with planned population and employment growth and planned transportation system changes for the year 2035, but without the proposed 5110 Telegraph Avenue project.

- ***2035 Plus Project***– 2035 conditions plus traffic generated by the proposed 5110 Telegraph Avenue project.

In addition, the impacts of the proposed project on safety for various travel modes were also evaluated.

INTERSECTION OPERATION ANALYSIS METHOD

Intersection operations are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic operations from the vehicle driver perspective and consists of the delay experienced by the driver at the intersection. It ranges from LOS A, with no congestion and little delay, to LOS F, with excessive congestion and delays. Different methods are used to assess signalized and unsignalized (stop-controlled) intersections.

Signalized Intersections

Signalized intersection operations are evaluated using methods provided in the 2000 Highway Capacity Manual (HCM). This method uses intersection characteristics to estimate average control delay and then assign an LOS. Control delay is defined as the delay associated with deceleration, stopping, moving up in the queue, and acceleration experienced by drivers at an intersection. **Table 1** provides descriptions of various LOS and the corresponding ranges of delays for signalized intersections.

Unsignalized Intersections

Unsignalized intersection (four-way stop-controlled, side-street stop-controlled, and roundabouts) LOS are also analyzed using the 2000 HCM. Delay is calculated for movements that are controlled by a stop sign or that must yield the right-of-way. This method defines operations by average control delay per vehicle (measured in seconds) for each stop-controlled movement. This incorporates delay associated with deceleration, acceleration stopping, and moving up in the queue. For side-street stop-controlled intersections, the movement or approach with the highest delay is reported. **Table 1** summarizes the LOS ranges for unsignalized intersections. They are lower than the delay ranges for signalized intersections because drivers will generally tolerate more delay at signals.

TABLE 1
INTERSECTION LEVEL OF SERVICE DEFINITIONS

Unsignalized Intersections			Signalized Intersections	
Description	**Average Total Vehicle Delay (Seconds)**	**Level of Service Grade**	**Average Control Vehicle Delay (Seconds)**	**Description**
No delay for stop-controlled approaches.	≤10.0	A	≤10.0	Free Flow or Insignificant Delays: Operations with very low delay, when signal progression is extremely favorable and most vehicles arrive during the green light phase. Most vehicles do not stop at all.
Operations with minor delay.	>10.0 and ≤15.0	B	>10.0 and ≤20.0	Stable Operation or Minimal Delays: Generally occurs with good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average delay. An occasional approach phase is fully utilized.
Operations with moderate delays.	>15.0 and ≤25.0	C	>20.0 and ≤35.0	Stable Operation or Acceptable Delays: Higher delays resulting from fair signal progression and/or longer cycle lengths. Drivers begin having to wait through more than one red light. Most drivers feel somewhat restricted.
Operations with increasingly unacceptable delays.	>25.0 and ≤35.0	D	>35.0 and ≤55.0	Approaching Unstable or Tolerable Delays: Influence of congestion becomes more noticeable. Longer delays result from unfavorable signal progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop. Drivers may have to wait through more than one red light. Queues may develop, but dissipate rapidly, without excessive delays.
Operations with high delays, and long queues.	>35.0 and ≤50.0	E	>55.0 and ≤80.0	Unstable Operation or Significant Delays: Considered to be the limit of acceptable delay. High delays indicate poor signal progression, long cycle lengths and high volume to capacity ratios. Individual cycle failures are frequent occurrences. Vehicles may wait through several signal cycles. Long queues form upstream from intersection.
Operations with extreme congestion, and with very high delays and long queues unacceptable to most drivers.	>50.0	F	>80.0	Forced Flow or Excessive Delays: Occurs with oversaturation when flows exceed the intersection capacity. Represents jammed conditions. Many cycle failures. Queues may block upstream intersections.

Source: Highway Capacity Manual, Transportation Research Board, 2000.

Analysis Tools

The Synchro Software was used to estimate delay and LOS for the study intersections. Synchro uses the equations provided in 2000 HCM to calculate control delay. These equations use intersection characteristics, such as vehicle and pedestrian volumes, lane geometry, and signal phasings, as inputs in estimating control delay.

THRESHOLDS OF SIGNIFICANCE

This analysis uses City of Oakland's CEQA Thresholds of Significance Guidelines to determine if the proposed project would cause significant impact. The project would have a significant impact on the environment if it were to:

Traffic Load and Capacity Thresholds

1. At a study, signalized intersection which is located **outside the Downtown**[1] **area and that does not provide direct access to Downtown**, the project would cause the motor vehicle level of service (LOS) to degrade to worse than LOS D (i.e., LOS E or LOS F) and cause the total intersection average vehicle delay to increase by four (4) or more seconds.

2. At a study, signalized intersection which is located **within the Downtown area or that provides direct access to Downtown**, the project would cause the motor vehicle LOS to degrade to worse than LOS E (i.e., LOS F) and cause the total intersection average vehicle delay to increase by four (4) or more seconds.

3. At a study, signalized intersection **outside the Downtown area and that does not provide direct access to Downtown** where the motor vehicle level of service is LOS E, the project would cause the total intersection average vehicle delay to increase by four (4) or more seconds.

4. At a study, signalized intersection **outside the Downtown area and that does not provide direct access to Downtown** where the motor vehicle level of service is LOS E, the project would cause an increase in the average delay for any of the critical movements of six (6) seconds or more.

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[1] The Downtown area is defined in the Land Use and Transportation Element of the General Plan (page 67) as the area generally bounded by the West Grand Avenue to the north, Lake Merritt and Channel Park to the east, the Oakland Estuary to the south, and I-980/Brush Street to the west. Intersections that provide direct access to downtown are generally defined as principal arterials within two (2) miles of Downtown and minor arterials within one (1) mile of Downtown, provided that the street connects directly to Downtown.

5. At a study, signalized intersection for all areas where the motor vehicle level of service is LOS F, the project would cause (a) the overall volume-to-capacity ("V/C") ratio to increase 0.03 or more or (b) the critical movement V/C ratio to increase 0.05 or more.

6. At a study, unsignalized intersection the project would add ten (10) or more vehicles to the critical movement, and after project completion, satisfy the *California Manual on Uniform Traffic Control Devices* (MUTCD) peak-hour volume traffic signal warrant.

7. For a roadway segment of the Congestion Management Program (CMP) Network, the project would cause (a) the LOS to degrade from LOS E or better to LOS F or (b) the V/C ratio to increase 0.03 or more for a roadway segment that would operate at LOS F without the project;[2]

8. Cause congestion of regional significance on a roadway segment on the Metropolitan Transportation System (MTS) evaluated per the requirements of the Land Use Analysis Program of the CMP;[3]

9. Result in substantially increased travel times for AC Transit buses;

Traffic Safety Thresholds

10. Directly or indirectly cause or expose roadway users (e.g., motorists, pedestrians, bus riders, bicyclists) to a permanent and substantial transportation hazard due to a new or existing physical design feature or incompatible uses;
11. Directly or indirectly result in a permanent substantial decrease in pedestrian safety;
12. Directly or indirectly result in a permanent substantial decrease in bicyclist safety;
13. Directly or indirectly result in a permanent substantial decrease in bus rider safety
14. Generate substantial multi-modal traffic traveling across at-grade railroad crossings that cause or expose roadway users (e.g., motorists, pedestrians, bus riders, bicyclists) to a permanent and substantial transportation hazard.

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[2] Refer to the ACTC Congestion Management Program for a description of the CMP Network. In Oakland, the CMP Network includes all state highways plus the following streets: portions of Martin Luther King Jr. Way, Webster/Posey Tubes, 23rd Avenue, 29th Avenue, and Hegenberger Road.

[3] Refer to ACTC's Congestion Management Program for a description of the MTS and the Land Use Analysis Program. The ACTC identified the roadway segments of the MTS that require evaluation in its letter commenting on the Notice of Preparation (NOP) issued by the City for the project. Note that the City is required to send NOPs and notices of proposed general plan amendments to ACTC under the Land Use Analysis Program regardless of how many project-related trips are expected to be generated.

Other Thresholds

15. Fundamentally conflict with adopted City policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities adopted for the purpose of avoiding or mitigating an environmental effect and actually result in a physical change in the environment;
16. Result in a substantial, though temporary, adverse effect on the circulation system during construction of the project; or
17. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

Cumulative Impacts

18. A project's contribution to cumulative impacts is considered "considerable" (i.e., significant) when the project exceeds at least one of the thresholds listed above in a future year scenario.

EXISTING SETTING

Study Area

The study evaluates traffic operations at the following nine intersections during weekday morning (AM) and afternoon (PM) peak hours[4] in the vicinity of the project site:

1. Telegraph Avenue/Aileen Street/SR 24 Westbound Off-Ramp [5]
2. Telegraph Avenue/56th Street/SR 24 Eastbound On-Ramp [4]
3. SR 24 Ramps/52nd Street
4. 52nd Street/Shattuck Avenue
5. Telegraph Avenue/52nd Street/ Claremont Avenue [4]
6. Clarke Street/Claremont Avenue
7. Telegraph Avenue/51st Street [4]
8. Clarke Street/51st Street
9. Claremont Avenue/SR 24 Eastbound Off-Ramp/Clifton Street
10. Clarke Street/ Redondo Avenue

Study intersections consist of signalized intersections where the proposed project would increase traffic volumes by 50 or more peak hour trips and unsignalized intersections where the proposed

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[4] The AM and PM peak hours represent the hours with the highest amount of traffic during the weekday morning (7:00 to 9:00 AM) and afternoon (4:00 to 6:00 PM) peak periods, respectively. These time periods were selected because the traffic generated by the proposed project in combination with background traffic at the study intersections during these hours is expected to represent typical worst traffic conditions after completion of the project. For example, the traffic generated by the proposed project in combination with background traffic during typical Saturday peak hours is not expected to be worse than weekday AM and PM peak hours.

[5] Denotes an intersection located in Downtown or that provides direct access to Downtown where LOS E (not LOS D) is the threshold.

project would increase traffic volume on a stop-controlled approach by 10 or more peak hour trips. This is consistent with the City of Oakland's *Transportation Impact Study Guidelines*.

Existing Traffic Conditions

Traffic data, consisting of automobile turning movement, as well as pedestrian and bicycle counts for all study intersections is based on the following:

- B*roadway Valdez District Specific Plan Draft EIR* (published in September 2013) for intersections 1 and 2.
- *Children's Hospital and Research Center Oakland Campus Master Plan Project Draft EIR* (August 2014) for intersections 3, 4, 5, and 7.
- New data collected in November 2014 for intersections 6 and 8 and in January 2016 for intersection 10.
- *Safeway Shopping Center – College and Claremont Avenues Draft EIR* (May 2011) for intersection 9.

Figure 2 presents existing intersection lane configurations, traffic control devices, and peak hour traffic volumes and **Figure 3** presents the existing pedestrian and bicycle volumes at the study intersections.

Based on the volumes and roadway configurations presented on Figures 2 and 3, Fehr & Peers calculated the AM and PM peak hour LOS at the study intersections. **Table 2** summarizes the existing intersection analysis results. **Appendix A** provides the detailed calculation sheets. All study intersections, except one, currently operate at LOS D or better during both weekday AM and PM peak hours. The stop-controlled northbound approach at the SR 24 Ramps/52nd Street intersection (#3) operates at LOS F during the PM peak hour.

PROJECT CHARACTERISTICS

The project proposes a mixed-use building consisting of 204 multi-family residential units, and about 34,250 square feet of commercial space. This analysis assumes that the commercial component of the project would consist of an approximately 28,450 square-foot supermarket, 2,700 square feet of general retail and about 3,100 square feet of restaurant.

The project is bordered by Telegraph Avenue to the west, 51st Street to the south and Clarke Street to the east. Currently, most of the site is either vacant or occupied by vacant buildings,

except a 104-space parking lot, with a driveway on Clarke Street, used for staff parking by Children's Hospital and Research Center Oakland (CHRCO)'s facilities on Claremont Avenue.

TABLE 2
EXISTING INTERSECTION OPERATIONS SUMMARY

Intersection	Control[1]	Peak Hour	Delay[2] (seconds)	LOS
1. Telegraph Avenue/Aileen Street/ SR 24 Westbound Off-Ramp*	Signal	AM	18.3	B
		PM	10.8	B
2. Telegraph Avenue/56th Street/ SR 24 Eastbound On-Ramp *	Signal	AM	7.0	A
		PM	20.3	C
3. SR 24 Ramps/52nd Street	SSSC	AM	4.8 (13.6)	A (B)
		PM	**** (**)**	**F (F)**
4. 52nd Street/Shattuck Avenue	Signal	AM	29.2	C
		PM	36.0	D
5. Telegraph Avenue/52nd Street/ Claremont Avenue*	Signal	AM	14.3	B
		PM	17.2	B
6. Clarke Street/Claremont Avenue	SSSC	AM	0.9 (10.7)	A (B)
		PM	0.9 (11.9)	A (B)
7. Telegraph Avenue/51st Street*	Signal	AM	30.6	C
		PM	45.2	D
8. Clarke Street/51st Street	SSSC	AM	0.7 (26.6)	A (D)
		PM	1.1 (22.3)	A (C)
9. Claremont Avenue/SR 24 Eastbound Off-Ramp/Clifton Street	Signal	AM	12.0	B
		PM	16.0	B
10. Clarke Street/Redondo Avenue	SSSC	AM	1.7	A
		PM	2.5	A

* Denotes an intersection located in Downtown or that provides direct access to Downtown where LOS E (not LOS D) is the threshold.

1. Signal = intersection is controlled by a traffic signal; SSSC = intersection is controlled by a stop-sign on the side-street approach
2. For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop-controlled intersections, delays for worst approach and average intersection delay are shown: intersection average (worst approach)

** Delay cannot be estimated accurately because the Synchro software does not correctly account for the queues on eastbound 52nd Street at Shattuck Avenue blocking the off-ramp. Reported LOS is based on field observations.

Source: Fehr & Peers, 2016.

Previously, the following developments were entitled on the project site:

- 5110 Telegraph Avenue (Civiq) Project – 67 multi-family residential units and 2,990 square feet of commercial space.

  5132 Telegraph Avenue (Creekside) Project - 102 multi-family residential units and 5,890 square feet of commercial space.

Project Access

Based on a site plan dated September 11, 2015, main automobile access to the proposed project would be through a full access driveway on Clarke Street opposite Redondo Avenue. The project would provide a two level underground garage with the upper level (B1) with 144 parking spaces serving the commercial components of the project and the lower level (B2) with 153 spaces reserved for project residents. An internal ramp would connect the two parking levels and a gate on top of the internal ramp would restrict access to the Level B2 to project residents only.

The project would also provide two loading docks within the building that would be reserved for the use of the residents for move-ins/move-outs. This residential loading area would be located just to the southeast of the garage driveway on Clarke Street. The proposed residential loading berths would have indirect access through an elevator to the garage levels and the rest of the building. The project proposes to accommodate commercial loading by providing a 66-foot parallel pullout on 51st Street, adjacent to the supermarket, to accommodate either one large truck or two small trucks in tandem.

The commercial components of the project would be along the Telegraph Avenue and 51st Street frontages. An internal path near the west of the site would separate the retail uses along Telegraph Avenue from the supermarket and would provide access to the main residential lobby and the supermarket. This path may accommodate outside seating for the commercial components of the project. The project would include nine ground-level residential units fronting Clarke Street with pedestrian access on Clarke Street. An east-west public path between the project building and the existing building to the north of the project would connect the sidewalks on Telegraph and Claremont Avenues to Clarke Street and Frog Park, which is located just east of Clarke Street.

Long-term bicycle parking for the project would be provided through secure bicycle cages at the southwest and southeast corners of both parking levels. Cyclists would access the long-term

bicycle parking through either riding through the project driveway on Clarke Street and through the garage or using the stairs or elevators from the ground level. The project would also provide short-term (i.e., bicycle racks) on the sidewalks along the project frontages on Telegraph Avenue and 51st street.

The project would also improve pedestrian safety and circulation by eliminating the existing slip right-turn lane from northbound Telegraph Avenue to eastbound Claremont Avenue.

Automobile Trip Generation

Trip generation refers to the process of estimating the amount of vehicular traffic a project would add to the local roadway network. **Table 3** summarizes the trip generation for the proposed project. The estimates are based on rates and equations published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual* (9th Edition) with the following adjustments:

- ***Non-Automobile Travel Modes*** - The ITE data is based on data collected at mostly single-use suburban sites where the automobile is often the only travel mode. However, the project site is in a mixed-use urban environment with robust transit available and where many trips are walk, bike, or transit trips. Since the proposed project is about 0.7 miles from the MacArthur BART Station, this analysis reduces the ITE based trip generation by about 21 percent to account for the non-automobile trips. This reduction is consistent with City of Oakland *Transportation Impact Study Guidelines* and is based on the Bay Area Travel Survey (BATS) 2000 which shows that the non-automobile mode share between one-half to one mile of a BART Station in Alameda County is about 21 percent. A 2011 research study shows reducing ITE based trip generation using BATS data results in a more accurate estimation of trip generation for mixed use developments than just using ITE based trip generation.[6]
- ***Pass-by Trips*** - Base estimates are reduced to account for pass-by trips, which are trips attracted to a site from adjacent roadways as an intermediate stop on the way to a final destination. Pass-by trips alter travel patterns in the immediate study area, but do not add new vehicle trips to the roadway network, and should therefore be excluded from trip generation estimates. According to ITE's *Trip Generation Handbook* (2nd Edition), the average weekday PM peak hour pass-by reduction is 34 percent for retail, 43 percent for restaurant,

[6] *Evaluation of the Operation and Accuracy of Five Available Smart Growth Trip Generation Methodologies.* Institute of Transportation Studies, UC Davis, 2011.

and 36 percent for supermarket.[7] To be conservative, this analysis accounts for the pass-by trips by reducing the restaurant, retail, and supermarket trip generation estimates by 34 percent for the PM peak hour. This corresponds to about 83 trips, which is reasonable considering that it corresponds to about two percent of the current PM peak hour traffic volumes on 51st Street, and Telegraph and Claremont Avenues.

TABLE 3
5110 TELEGRAPH AVENUE
TRIP GENERATION SUMMARY

Land Use	Units[1]	ITE Code	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Residential	204 DU	220[2]	1,360	21	83	104	82	44	126
Restaurant	3.1 KSF	932[3]	394	19	15	34	19	12	31
Retail	2.7 KSF	820[4]	115	2	1	3	5	5	10
Supermarket	28.5 KSF	850[5]	3296	60	37	97	138	132	270
Subtotal			*5,165*	*102*	*136*	*238*	*244*	*193*	*437*
Non-Auto Reduction (-21.4%)[6]			-1,105	-22	-29	-51	-52	-42	-94
Pass-by (17%, 0%, 34%)[7]			-508	0	0	0	-42	-41	-83
Net New Project Trips			**3,552**	**80**	**107**	**187**	**150**	**110**	**260**
Existing Parking Lot[8]			-190	-29	0	-29	-1	-26	-27
Net New Trips			**3,362**	**51**	**107**	**158**	**149**	**84**	**233**
Entitled Projects									
5110 Telegraph Avenue (Civiq) Project[9]			778	26	44	70	52	38	90
5132 Telegraph Avenue (Creekside) Project[10]			1,957	67	102	169	84	38	122
Subtotal			2,735	93	146	239	136	76	212
Net Difference			+627	-42	-39	-81	+13	+8	+21

1. DU = Dwelling Units, KSF = 1,000 square feet.
2. ITE Trip Generation (9th Edition) land use category 220 (Apartment):
   Daily: T = 6.06(X) + 123.56
   AM Peak Hour: T = 0.51*(X) (20% in, 80% out)
   PM Peak Hour: T = 0.62*(X) (65% in, 35% out)
   Where T = trips generated and X = dwelling units
3. ITE Trip Generation (9th Edition) land use category 932 (High-Turnover (Sit-Down) Restaurant):
   Daily: Average Rate =127.15 trips per KSF
   AM Peak Hour: T = 10.81*(X) (55% in, 45% out)
   PM Peak Hour: T = 9.85*(X) (60% in, 40% out)
4. ITE Trip Generation (9th Edition) land use category 820 (Shopping Center):
   Daily: (T) = 42.70*(X)
   AM Peak Hour: (T) = 0.96*(X) (62% in, 38% out)

[7] Since ITE does not provide pass-by reductions for AM peak hour, this analysis conservatively assumes no pass-by reductions for AM peak hour.

TABLE 3
5110 TELEGRAPH AVENUE
TRIP GENERATION SUMMARY

PM Peak Hour: (T) = 3.71*(X) (52% in, 48% out)

5. ITE Trip Generation (9th Edition) land use category 850 (Supermarket):
   Daily: T = 66.85*(X) + 1391.56
   AM Peak Hour: T = 3.40*(X) (62% in, 38% out)
   PM Peak Hour: T = 9.48*(X) (51% in, 49% out)
6. City of Oakland Transportation Impact Study Guidelines based on BATS 2000 data for developments in an urban environment between 0.5 and 1.0 miles of a BART station.
7. Based on ITE *Trip Generation Handbook (3rd Edition*), the weekday PM peak hour average pass-by rates for land use categories 820, 850, and 932 are 34%, 36%, and 43%, respectively. A 34% pass-by rate is applied to the non-residential uses to present a more conservative analysis. Pass-by rates are not applied to the AM peak hour. Daily pass-by is estimated to be half of the PM peak hour. This reduction was applied to trips after the non-automobile reduction.
8. Based on data collected in September 2013.
9. *5110 Telegraph Avenue Development Project Final TIA Report (December 2005),* Table 4 on page 19.
10. *Creekside Mixed-Use Development Project Draft EIR (August 2008),* Table IV-13 on page 74.

Source: Fehr & Peers, 2016.

- ***Existing Parking Lot Trips*** - The proposed project would eliminate the existing 104-space parking lot that is currently used by CHRCO staff. Based on data collected by Fehr & Peers in September 2013, the lot currently generates about 190 daily, and 29 AM and 27 PM peak hour trips. Since other CHRCO parking facilities in the vicinity are currently at or near capacity and designated for patient and visitor use only, it is expected that the existing trips to and from the existing parking lot would be diverted away from the project vicinity. Therefore, consistent with assumptions in the previously published *5110 Telegraph Avenue Development Project Final TIA Report* (December 2005), project trip generation in Table 3 is reduced to account for these existing trips.

As summarized in Table 3, the project would generate approximately 3,360 daily, 158 AM peak hour, and 233 PM peak hour net new trips. Table 3 also compares the project trip generation estimate with the trip generation estimate for the previously entitled developments. The currently proposed project would generate about 630 additional daily trips, 81 fewer AM peak hour trips, and 21 additional PM peak hour trips than the previously entitled developments combined.

Trip Generation for Non-Auto Travel Modes

Consistent with City of Oakland *Transportation Impact Study Guidelines,* **Table 4** presents the estimates of project trip generation for all travel modes.

TABLE 4
TRIP GENERATION BY TRAVEL MODE

Mode	Mode Share Adjustment Factors[1]	Daily	AM Peak Hour	PM Peak Hour
Automobile	78.6%	3,552	187	343
Transit	11.8%	533	28	51
Bike	5.6%	253	13	24
Walk	20.1%	908	48	88
Total Trips		**5,246**	**276**	**506**

1. Based on *City of Oakland Transportation Impact Study Guidelines* assuming project site is in an urban environment between 0.5 and 1.0 miles of a BART station.

Sources: Fehr & Peers, 2016.

Trip Distribution and Assignment

The trip distribution and assignment process is used to estimate how the trips generated by a project site would be distributed across the roadway network. Based on existing travel patterns, locations of complementary land uses and results of the Alameda County Transportation Commission's (ACTC) Travel Demand Model, we estimated the directions of approach to and departure from the project site. **Figure 4** shows the resulting trip distribution.

Trips generated by the proposed project were assigned to the roadway network according to the trip distribution shown on Figure 4. Motorists traveling to the site from the south on I-980/SR 24 can use either the 52nd Avenue or Claremont Avenue exit. Based on peak period travel times included in **Appendix B**, the Claremont Avenue exit has a shorter travel time during peak periods, although it is longer. Therefore, this analysis assigns the majority of trips traveling from the south on I-980/SR 24 to the project site to the Claremont Avenue exit.

Figure 5 shows the resulting trip assignment by roadway segment for the PM peak hour because the PM peak hour has the highest project trip generation. **Figure 6** shows the project trip assignment for the AM and PM peak hours at the study intersections. **Figure 7** shows the PM peak hour pass-by trips, as shown in Table 3, assigned to the study intersections.

EXISTING PLUS PROJECT INTERSECTION ANALYSIS

This section presents the extent of project impacts relative to existing conditions based on application of Thresholds of Significance #1 through #6 as listed on page 4 of this memorandum. **Figure 8** shows traffic volumes under Existing Plus Project conditions, which consists of Existing traffic volumes (shown on Figure 2) plus added traffic generated by the project (Figure 6) and project pass-by trips (Figure 7).

Table 5 summarizes the intersection operations results for the Existing No Project and Existing Plus Project conditions. All study intersections would continue to operate at an acceptable LOS under Existing Plus Project conditions, except the following.

- The stop-controlled northbound approach at the SR 24 Ramps/52nd Street intersection (#3) would operate at LOS F during the PM peak hour under both Existing and Existing Plus Project conditions. The proposed project would not cause a significant impact at this intersection because it would not add more than 10 peak-hour trips to the critical northbound approach (Significant Threshold #6) under Existing Plus Project conditions.
- The stop-controlled southbound approach at the Clarke Street/51st Street intersection (#8) would operate at LOS D during the PM peak hour under Existing Plus Project conditions. The proposed project would not cause a significant impact at this intersection because although it would add more than 10 peak-hour trips to the critical southbound approach, the intersection would not meet the peak-hour signal warrant (Significant Threshold #6) under Existing Plus Project conditions. **Appendix C** provides the peak-hour signal warrants.

The proposed project would not cause a significant impact at the study intersections under Existing Plus Project conditions.

TABLE 5
EXISTING PLUS PROJECT
INTERSECTION OPERATIONS SUMMARY

Intersection	Control[1]	Peak Hour	Existing Conditions		Existing Plus Project		Signif. Impact?
			Delay[2] (seconds)	LOS[3]	Delay[2] (seconds)	LOS[3]	
1. Telegraph Avenue/ Aileen Street/ SR 24 Westbound Off-Ramp*	Signal	AM	18.3	B	18.3	B	No
		PM	10.8	B	11.1	B	No
2. Telegraph Avenue/56th Street/SR 24 Eastbound On-Ramp *	Signal	AM	7.0	A	7.0	A	No
		PM	20.3	C	20.2	C	No
3. SR 24 Ramps/52nd Street	SSSC	AM	4.8 (13.6)	A (B)	4.7 (13.7)	A (B)	No
		PM	**** (**)**	**F (F)**	**** (**)**	**F (F)**	No
4. 52nd Street/Shattuck Avenue	Signal	AM	29.2	C	29.9	C	No
		PM	36.0	D	37.0	D	No
5. Telegraph Avenue/52nd Street/Claremont Avenue*	Signal	AM	14.3	B	15.6	B	No
		PM	17.2	B	20.2	C	No
6. Clarke Street/Claremont Avenue	SSSC	AM	0.9 (10.7)	A (B)	2.2 (12.3)	A (B)	No
		PM	0.9 (11.9)	A (B)	2.6 (16.2)	A (C)	No
7. Telegraph Avenue/51st Street*	Signal	AM	30.6	C	31.0	C	No
		PM	45.2	D	46.1	D	No
8. Clarke Street/51st Street	SSSC	AM	0.7 (26.6)	A (D)	1.5 (26.3)	A (D)	No
		PM	1.1 (22.3)	A (C)	2.9 (32.3)	A (D)	No
9. Claremont Avenue/SR 24 Eastbound Off-Ramp/ Clifton Street	Signal	AM	12.0	B	12.1	B	No
		PM	16.0	B	16.1	B	No
10. Clarke Street/Redondo Avenue	SSSC	AM	1.7	A	5.9	A	No
		PM	2.5	A	6.0	A	No

* Denotes an intersection located in Downtown or that provides direct access to Downtown where LOS E (not LOS D) is the threshold.

1. Signal = intersection is controlled by a traffic signal; SSSC = intersection is controlled by a stop-sign on the side-street approach
2. For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop-controlled intersections, delays for worst approach and average intersection delay are shown: intersection average (worst approach)
3. Intersections operating at unacceptable levels are shown in **bold**.

** Delay cannot be estimated accurately because the Synchro software does not correctly account for the queues on eastbound 52nd Street at Shattuck Avenue blocking the off-ramp. Reported LOS is based on field observations.

Source: Fehr & Peers, 2016.

CUMULATIVE (2035) INTERSECTION ANALYSIS

This section presents the extent of project impacts relative to forecasted cumulative year 2035 conditions based on direct application of Significance Threshold #18, which references Significance Thresholds #1 through #6.

Year 2035 No Project traffic forecasts for the study intersection analyzed in the Broadway Valdez District Specific Plan, and Children's Hospital Draft EIRs are from those published documents. These forecasts were based on the version of the ACTC Model released in June 2011, which uses land use data consistent with Association of Bay Area Government (ABAG) *Projection 2009*. Fehr & Peers developed 2035 No Project forecasts at the other intersections not analyzed in those documents using the same methodology in order to present consistent forecasts for the 2035 No Project conditions at all study intersections. **Figure 9** shows the 2035 No Project traffic volumes at the study intersections. **Figure 10** shows traffic volumes under 2035 Plus Project conditions, which consists of 2035 No Project traffic volumes (shown on Figure 9) plus added traffic generated by the project (Figure 6) and project pass-by trips (Figure 7).

This analysis assumes no changes to the roadway network at the study intersections or surrounding areas under 2035 No Project conditions because there are no fully funded and approved improvements planned at the study intersections.

This analysis assumes that signal timing parameters that do not require upgrades to the signal equipment, such as amount of green time assigned to each intersection approach, would be optimized at the signalized study intersections under 2035 conditions. This assumption reflects current City of Oakland practice that incorporates basic signal timing changes into routine maintenance of the traffic signal system. It is expected that retiming of signals in areas with the greatest need (e.g., major streets, areas with rapidly shifting traffic patterns) would be prioritized as part of the regular ongoing maintenance of signal equipment.

Table 6 summarizes intersection LOS calculations for 2035 No Project and 2035 Plus Project conditions. Most study intersections would operate at an acceptable LOS under 2035 conditions, except the following:

TABLE 6
CUMULATIVE (2035) CONDITIONS
INTERSECTION OPERATIONS SUMMARY

Intersection	Control[1]	Peak Hour	2035 No Project		2035 Plus Project		Signif. Impact?
			Delay[2] (seconds)	LOS[3]	Delay[2] (seconds)	LOS[3]	
1. Telegraph Avenue/ Aileen Street/ SR 24 Westbound Off-Ramp*	Signal	AM	25.3	C	25.8	C	No
		PM	17.1	B	17.3	B	No
2. Telegraph Avenue/56th Street/SR 24 Eastbound On-Ramp *	Signal	AM	8.9	A	9.0	A	No
		PM	48.1	D	47.5	D	No
3. SR 24 Ramps/52nd Street	SSSC	AM	6.5 (19)	A (C)	6.4 (19.2)	A (C)	No
		PM	**** (**)**	**F (F)**	**** (**)**	**F (F)**	No
4. 52nd Street/Shattuck Avenue	Signal	AM	**68.5**	**E**	**70.3**	**E**	No
		PM	**55.2**	**E**	**56.0**	**E**	No
5. Telegraph Avenue/52nd Street/Claremont Avenue*	Signal	AM	20.9	C	23.2	C	No
		PM	45.4	D	60.2	E	No
6. Clarke Street/Claremont Avenue	SSSC	AM	0.9 (11.2)	A (B)	2.0 (13.4)	A (B)	No
		PM	0.8 (14.4)	A (B)	2.7 (24.1)	A (C)	No
7. Telegraph Avenue/51st Street*	Signal	AM	39.7	D	40.6	D	No
		PM	**93.8 (v/c=1.05)**	**F**	**94.1 (v/c=1.07)**	**F**	No
8. Clarke Street/51st Street	SSSC	AM	1.8 (**61.6**)	A (**F**)	3.7 (**70.2**)	A (**F**)	No
		PM	2.9 (**70.0**)	A (**F**)	13.7 (**>100**)	B (**F**)	No
9. Claremont Avenue/SR 24 Eastbound Off-Ramp/ Clifton Street	Signal	AM	13.4	B	13.5	B	No
		PM	20.2	C	20.3	C	No
10. Clarke Street/Redondo Avenue	SSSC	AM	2.5	A	5.7	A	No
		PM	2.3	A	5.5	A	No

* Denotes an intersection located in Downtown or that provides direct access to Downtown where LOS E (not LOS D) is the threshold.
1. Signal = intersection is controlled by a traffic signal; SSSC = intersection is controlled by a stop-sign on the side-street approach
2. For signalized intersections, average intersection delay and LOS based on the 2000 HCM method is shown. For side-street stop-controlled intersections, delays for worst approach and average intersection delay are shown: intersection average (worst approach)
3. Intersections operating at unacceptable levels are shown in **bold**.

** Delay cannot be estimated accurately because the Synchro software does not correctly account for the queues on eastbound 52nd Street at Shattuck Avenue blocking the off-ramp. Reported LOS is based on field observations.

Source: Fehr & Peers, 2016.

- The stop-controlled northbound approach at the SR 24 Ramps/52nd Street intersection (#3) would operate at LOS F during the PM peak hour under both 2035 No Project and 2035 Plus Project conditions. The proposed project would not cause a significant impact at this intersection because it would not add more than 10 peak-hour trips to the critical northbound approach (Significant Threshold #6) under 2035 Plus Project conditions.
- The Shattuck Avenue/52nd Street intersection (#4) would operate at LOS E during both AM and PM peak hours under both 2035 No Project and 2035 Plus Project conditions. The proposed project would not cause a significant impact at this intersection because it would not increase total intersection average vehicle delay by four or more seconds (Significant Threshold #3) or increase the average delay for any of the critical movements by six or more seconds (Significant Threshold #4).
- The Telegraph Avenue/51st Street intersection (#7) would operate at LOS F during the PM peak hour under both 2035 No Project and 2035 Plus Project conditions. The proposed project would not cause a significant impact at this intersection because it would not increase the overall intersection V/C ratio by 0.03 or more nor increase the V/C ratio for any of the critical movements by 0.05 or more (Significant Threshold #5).
- The stop-controlled southbound approach at the Clarke Street/51st Street intersection (#8) would operate at LOS F during both AM and PM peak hours under both 2035 No Project and 2035 Plus Project conditions. The proposed project would not cause a significant impact at this intersection because although it would add more than 10 peak-hour trips to the critical southbound approach, the intersection would not meet the peak-hour signal warrant (Significant Threshold #6) under 2035 Plus Project conditions.

The proposed project would not cause a significant impact at the study intersections under 2035 Plus Project conditions.

SITE PLAN REVIEW

This section evaluates access, circulation, and safety for all travel modes, based on a site plan dated September 11, 2015. **Figure 11** shows the ground level site plan for the project.

The discussion of vehicle, pedestrian, and bicycle safety is based on application of Significance Thresholds #10 through #14. The proposed 5110 Telegraph Avenue Project would result in increased vehicular traffic and pedestrian and bicycle activity in and around the project area. However, as described below, the proposed project would result in a less than significant impact on vehicle, pedestrian, and bicycle safety, and no mitigation measures are required.

Automobile Access and Safety

All motorized access to and from the project site would be through a full access driveway on Clarke Street, opposite Redondo Avenue. The current site plan proposes a three-lane driveway, with one inbound lane and two outbound lanes. The proposed two outbound lanes may result in potential safety issues if two vehicles are simultaneously on each lane of the ramp.

The project would provide two levels of underground parking. The upper level (B1) would provide 144 parking spaces for the commercial components of the project and the lower level (B2) would provide 153 parking spaces for project residents. An internal ramp would connect the two parking levels and a gate on top of the internal ramp would restrict access to the lower level to project residents only.

Based on the project site plan, the project driveway and the adjacent residential loading docks, which would be reserved for resident move-in/move-outs only, and located in the building on Clarke Street would provide adequate sight distance between the motorists exiting the site and pedestrians on the adjacent sidewalk and the motorists driving on Clarke Street and Redondo Avenue. Adequate sight distance would also be provided through both garage levels, except for vehicles on the outbound up-ramp from Level B2 at Level B1 to the right. The circulation aisles and parking spaces on both garage levels would meet the City Code dimension requirements (Oakland Municipal Code Sections 17.116.200 and 17.116.210).

The proposed project is expected to increase traffic volumes on Clarke Street from about 70 to 300 peak hour vehicles. It is unlikely that project generated traffic would use other residential streets, such as Redondo Avenue or Clarke Street south of 51st Street, because they are not as direct as the arterials in the area and would not provide shorter travel times for most destinations.

It is expected that most of the project generated traffic, including some trucks (most trucks, especially larger ones, are expected to use the proposed pullout on 51st Street), would use 51st Street and Clarke Street to travel to and from the project site. The Clarke Street approach at 51st Street is currently 26 feet wide with on-street parking on both sides of the street, which makes through travel for vehicles simultaneously traveling in opposite directions difficult as the roadway may not provide adequate width for vehicles to pass. Although this is not considered a CEQA impact, implementation of Recommendation 1d and/or 1e would allow for more comfortable access to and from the project driveway and the adjacent residential loading docks reserved for move-ins/move-outs.

The proposed project would eliminate the existing slip right-turn lane from northbound Telegraph Avenue to eastbound Claremont Avenue. This modification is consistent with the City of Oakland's planned improvement at this location. The removal of the slip right-turn lane would not affect the intersection LOS because the northbound Telegraph Avenue approach currently does not provide an exclusive right-turn lane and the project would not modify the northbound Telegraph Avenue approach.

City of Oakland is also planning additional modifications to Claremont Avenue to improve bicycle and pedestrian access and safety. These improvements may include elimination of one automobile lane in each direction of Claremont Avenue to provide bicycle lanes.

Recommendation 1: While not required to address a CEQA impact, the following should be considered as part of the final proposed design for the project:

a. Eliminate one of the three lanes on the main driveway ramp on Clarke Street and provide one inbound lane and one outbound lane. Alternatively, maintain the two outbound lanes and provide appropriate signing and striping to indicate that the lanes are dedicated left-turn and right-turn lanes.
b. Modify project design to provide adequate sight distance for vehicles on the outbound up-ramp from Level B2 at Level B1 to the right (east). Alternatively, close the drive aisle just east of the ramps to eliminate the potential conflict, or install a mirror to enhance sight distance.
c. Prohibit parking (red painted curb) on Clarke Street between the project driveway and the proposed crosswalk crossing Clarke Street just west of Redondo Avenue.
d. Prohibit parking on the west side of Clarke Street between the curb-cut for the residential loading dock and 51st Street. The parking prohibition should be at all times (red painted curb and signage which would indicate that parking and stopping are prohibited at all times).
e. Prohibit trucks over 30 feet long from using Clarke Street through signs posted at the approaches to Clarke Street on 51st Street and Claremont Avenue, and direct all commercial trucks to use the commercial on-street pullout on 51st Street.
f. Coordinate with City of Oakland to ensure that the proposed closure of the slip right-turn lane from northbound Telegraph Avenue to eastbound Claremont

Avenue would be consistent with the City's long-term plans for Claremont Avenue

Pedestrian Access and Safety

The proposed project would provide two internal pedestrian paths. An internal path near the west side of the site would separate the retail uses along Telegraph Avenue from the supermarket and would provide primary access to the main residential lobby and the supermarket. This path may accommodate outside seating for the commercial components of the project. An east-west public path between the main project building and the existing building to the north of the project would connect the sidewalks on Telegraph and Claremont Avenues to Clarke Street and Frog Park, which is located just east of Clarke Street. In addition, the retail components of the project fronting Telegraph Avenue would have direct access to the sidewalk along Telegraph Avenue. The project would include nine ground-level residential units fronting Clarke Street with pedestrian access on Clarke Street.

The proposed project would improve pedestrian safety and circulation by eliminating the existing slip right-turn lane from northbound Telegraph Avenue to eastbound Claremont Avenue. The elimination of the slip right-turn lane would improve pedestrian safety because it would bring the current uncontrolled pedestrian crossing under signal control, reduce the number of pedestrian crossings, and reduce the speed for motorists making that right turn. Based on the project site plan, the project proposes to relocate the existing crosswalk across Claremont Avenue at the Telegraph Avenue/Claremont Avenue intersection so that the crosswalk would not be parallel to Telegraph Avenue.

The City of Oakland *Pedestrian Master Plan* (PMP) designates both Telegraph Avenue and 51st Street as City Routes, and recommends 12-foot sidewalks with eight-foot through passage zones. Considering the proposed building set-backs as shown on the project site plan dated September 11, 2015, the sidewalk adjacent to the project along Telegraph Avenue would be at least 13-foot wide, and the sidewalk along 51st Street would be between nine and 18 feet wide. The nine-foot sidewalk on 51st Street would be for about 66 feet adjacent to the proposed on-street truck loading pullout and would have at least an eight-foot through passage zone by not providing any trees or street amenities.

The PMP designates Clarke Street as a neighborhood route and recommends nine-foot sidewalks with four-foot through passage zone. The proposed project would generally maintain Clarke

Street sidewalk adjacent to the project as a nine-foot sidewalk with minimum four-foot through passage zone. Overall, the sidewalks along the project frontage on Telegraph Avenue, 51st Street, and Clarke Street would be consistent with the PMP recommendations.

The two signalized intersections adjacent to the site on Telegraph Avenue at 51st Street and Claremont Avenue provide marked crosswalks across all intersection approaches, except at the south approach of the Telegraph Avenue/Claremont Avenue intersection, where pedestrian crossings are prohibited. Both signalized intersections also provide pedestrian signal heads for the marked crosswalks, and directional curb ramps at the intersection corners except the southeast corner of Telegraph Avenue/51st Street intersection and northeast corner of the Telegraph Avenue/Claremont Avenue intersection. Installation of directional curb ramps at the southeast corner of Telegraph Avenue/51st Street intersection is considered infeasible due to existing infrastructure, such as signal poles, fire hydrants, and storm-water inlets. The marked crosswalks at these intersections provide a clear walking route except at the east approach of the Telegraph Avenue/51st Street intersection, where the median partially blocks the crosswalk.

As previously described, the Telegraph Avenue/Claremont Avenue intersection currently prohibits pedestrian crossings on the south approach of the intersection. Although the proposed project would activate the southeast corner of the intersection and increase pedestrian activity in the project vicinity, installing a marked crosswalk at this location is currently not recommended for the following reasons:

- The signal at this intersection currently provides split phasing for the east/west approaches (i.e., the east and west approaches of the intersection have their own exclusive green signal phase). Provision of a crosswalk at the south approach of the intersection under current signal control would require extending the green time for eastbound 52nd Street approach, because the approach currently has a short green phase due to the low automobile volume on the approach (about 33 peak hour vehicles). Thus, provision of a crosswalk would require longer signal cycle length, which would increase pedestrian wait times for all crosswalks at the intersection and also increase vehicle delay and queues along Telegraph Avenue.
- Alternatively, the current signal cycle length at the intersection can be maintained or reduced by converting the east/west approaches of the intersection to permitted operations (i.e., the east and west approaches of the intersection would have a simultaneous green signal phase and left-turning vehicles would yield to opposing

through vehicles and pedestrians in the crosswalk). However, this strategy would reduce pedestrian safety because pedestrians would cross the sidewalk simultaneously as automobiles turning left from westbound Claremont Avenue to southbound Telegraph Avenue.

- The north approach of Telegraph Avenue/51st Street intersection provides a signal-protected crossing of Telegraph Avenue about 200 feet to the south. The proposed project is oriented so that crossing Telegraph Avenue at 51st Street would be more convenient than Claremont Avenue for most project walk trips.
- Based on the current uses on the southwest corner of the Telegraph Avenue/Claremont Avenue intersection, low pedestrian demand is expected at this location.

Considering the limited benefit to pedestrians and the potential negative effects on pedestrian safety and automobile circulation, allowing pedestrian crossings on the south approach of the Telegraph Avenue/Claremont Avenue intersection is not recommended at this time.

Recommendation 2: While not required to address a CEQA impact, the following should be considered as part of the proposed final design for the project:

a. Modify the proposed crosswalk crossing Claremont Avenue at Telegraph Avenue to be parallel to Telegraph Avenue in order to provide the shortest path between the crosswalks on the east side of Telegraph Avenue. In addition, explore further extending the bulbout at the southeast corner of the intersection to reduce the pedestrian crossing distance, and provide directional curb ramps at the northeast corner of the intersection.
b. Ensure that sidewalk amenities or furniture such as trees, bicycle racks, and outside seating, would continue to maintain minimum eight-foot clearance for pedestrians on sidewalks adjacent to the project site along Telegraph Avenue and 51st Street.
c. Modify the existing median in the east crosswalk crossing 51st Street at Telegraph Avenue to eliminate the existing median that blocks the crosswalk.

The improvements within the public right-of-way shall be consistent with the City of Oakland's Standard Conditions of Approval (SCA) #70.

Bicyclist Parking, Access, and Safety

Chapter 17.117 of the Oakland Municipal Code requires long-term and short-term bicycle parking for new buildings. Long-term bicycle parking includes lockers or locked enclosures and short-term bicycle parking includes bicycle racks. **Table 7** presents the bicycle parking requirement for the project.

TABLE 7
BICYCLE PARKING REQUIREMENTS

Land Use	Size[1]	Long-Term		Short-Term	
		Spaces per Unit	Spaces	Spaces per Unit	Spaces
Apartments	204 DU	1:4 DU	51	1:20 DU	10
Restaurant/Supermarket	31.6 DU	1:12 KSF	3	1:2 KSF	16
Retail	2.7 KSF			Min.	2
Total Required Bicycle Spaces			54		28
Total Bicycle Parking Provided			268 [3]		44
Bicycle Parking Surplus (Deficit)			**+214**		**+16**

1. DU = dwelling unit; KSF = 1,000 square feet
2. Based on Oakland Municipal Code Sections 17.117.090 and 17.117.110
3. Does not include the in-unit racks that would be provided at the rate of one rack per residential unit.

Source: Fehr & Peers, 2016

The project proposes 268 long-term bicycle parking spaces in secure bicycle cages throughout both underground parking levels. The proposed long-term bicycle parking supply would exceed the Code requirements. In addition, each residential unit would provide one in-unit bicycle rack.

The long-term bicycle parking would be accessed by stairs or elevators from the ground level or biking to Clarke Street and using the driveway to ride through the garage. Using stairs or elevators to access the underground bicycle parking maybe inconvenient for bicyclists, and riding through the driveway and garage may result in potential conflicts between bicyclists and motorists.

The project proposes 44 short-term bicycle spaces in the form of bicycle racks on the sidewalks along the Telegraph Avenue and 51st Street project frontages. The proposed short-term parking supply would be 16 more spaces than required by City Code.

As previously described, the project proposes a commercial truck pullout on westbound 51st Street adjacent to the project. Accounting for the existing parking lane, the pullout would have an approximate width of 16.5 feet, which would accommodate the trucks expected to use the pullout. Thus, commercial trucks parked at the loading pullout are not expected to interfere with bicycle travel on westbound 51st Street.

Recommendation 3: While not required to address a CEQA impact, the following should be considered as part of the final proposed design for the project:

a. If feasible, relocate some or all of the long-term bicycle parking from the underground parking levels to a more convenient, accessible, and secure location on the ground level.
b. If long-term bicycle parking cannot be relocated, explore providing a separate bicycle entrance at the driveway on Clarke Street (maybe incorporated with Recommendation 1a).
c. Ensure that some short-term bicycle parking spaces can accommodate bicycles with trailers, without blocking the sidewalk, automobiles parked on-street, or the on-street commercial loading pullout on 51st Street.

Transit Access

Transit service providers in the project vicinity include Bay Area Rapid Transit (BART) and AC Transit.

BART provides regional rail service throughout the East Bay and across the Bay. The nearest BART station to the project site is the MacArthur BART Station, about 0.7 miles to the south. The proposed project would not modify access between the project site and the BART Station.

AC Transit is the primary bus service provider in the City of Oakland. AC Transit operates the following major routes in the vicinity of the project.

- Route 12 operates on 51st Street east of Telegraph Avenue and on Telegraph Avenue north of 51st Street with 20 to 30 minute headways on weekdays. Nearest stops to the project site are in both direction of 51st Street just east of Telegraph Avenue. The stop on westbound 51st Street, adjacent to the project site, currently provides a trash receptacle and the stop on eastbound 51st Street provides a bench.

- Routes 1 and 1R, among AC Transit's busiest routes with 15 minute headways on weekday, operate on Telegraph Avenue. Nearest stops to the site are just north of Claremont Avenue (Routes 1 and Route 12) and about 350 feet south of the project site at 49th and 50th Streets (Routes 1 and 1R). These bus stops in both directions of Telegraph Avenue provide a bench and the bus stop on southbound Telegraph Avenue at 50th Street provides a shelter.

The proposed project would not modify the existing bus stop on westbound 51st Street, nor access between the project site and bus stops in the vicinity of the project.

Recommendation 4: While not required to address a CEQA impact, the following should be considered as part of the final proposed design for the project:

- Coordinate with City of Oakland and AC Transit to enhance the existing bus stop adjacent to the project site on westbound 51st Street to provide a shelter and bench.

CONSISTENCY WITH ADOPTED POLICIES, PLANS OR PROGRAMS SUPPORTING ALTERNATIVE TRANSPORTATION

The discussion of consistency with adopted policies, plans or programs supporting alternative transportation is based on application of Significance Threshold #15. A discussion of applicable policies and plans is provided below.

The City of Oakland General Plan LUTE, as well as the City's Public Transit and Alternative Mode and Complete Streets Policies, states a strong preference for encouraging the use of non-automobile transportation modes, such as transit, bicycling, and walking. The proposed project would encourage the use of non-automobile transportation modes by providing residential and commercial uses in a dense walkable urban environment that is served by local and regional transit.

The proposed project is consistent with both the City's *Pedestrian Master Plan* (PMP) and *Bicycle Master Plan* (BMP) by not making major modifications to existing pedestrian or bicycle facilities in the surrounding areas and would not adversely affect installation of future facilities. The BMP identifies Telegraph and Claremont Avenues as proposed Class 2 bike lanes and 51st Street as proposed Class 3A arterial bike route.

Consistent with the City of Oakland's Standard Conditions of Approval (SCA) #71, the project would implement a Transportation Demand Management (TDM) Plan because the project would generate more than 50 peak hour trips.

The 5110 Telegraph Avenue Project would be consistent with and not conflict with adopted City policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. This is a less than significant impact, and no mitigation measures are required.

> **Recommendation 5:** Consistent with the City of Oakland's requirements, consider including the following strategies as part of the required TDM program for the proposed project:
>
> a. Unbundle the cost of parking from the cost of housing where residents pay separately for their parking spaces.
> b. Designate one or more dedicated on-site parking spaces for car-sharing.
> c. Provide long-term and short-term bicycle parking beyond the minimum required by City of Oakland Planning Code (Also see Recommendation 3).
> d. Cooperate with City of Oakland and/or other regional agencies to allow installation of a potential bike share station along the project frontage.
> e. Provide new residents and employees with information on the various transportation options available.
> f. Provide residents and employees with free or partially subsidized transit passes.

Loading Requirements

City Municipal Code Section 17.116.140 requires off-street loading facilities for residential and commercial uses. The requirement for residential facilities that have between 150,000 and 299,999 square feet of floor area is two off-street loading berths. For commercial buildings between 25,000 and 49,999 square feet of floor area, the Code requires two off-street loading berths. Based on City Code, the project is required to provide four off-street loading berths; two for project residents, and two for the supermarket.

The proposed site plan would provide the following:

- Two on-site residential loading docks inside the building and adjacent to the southeast of the garage driveway on Clarke Street which would have indirect access through an

elevator to the garage levels and the rest of the building. It is expected that residential loading trucks would use 51st Street to approach the loading docks from the south on Clarke Street and back into the residential loading dock; they would leave the site to the north.

- A 66-foot On-street loading parallel pullout space would be proposed on 51st Street just west of Clarke Street and adjacent to the supermarket component of the project. The proposed loading pullout would accommodate either one large commercial truck or two smaller trucks in tandem, and would require transport of material across the sidewalk between the trucks and the supermarket or other project components. Trucks would pull into and out of the parallel loading space on westbound 51st Street.

The project does not propose any dedicated loading spaces for the small commercial uses of the project. Considering the small size of the commercial spaces, these uses are expected to be mostly served by smaller trucks, which can be accommodated by using the proposed on-street loading pullout, other on-street parking adjacent to the project site, or within the project garage. In addition, the residential need for loading spaces within the building is expected to be sporadic after the initial move-in period immediately following the completion of the building construction.

The project would not satisfy the City's commercial loading requirement and the project sponsor proposes a variance for no commercial loading berths where two are required within the property. This is not considered a CEQA impact and the proposed loading spaces are expected to be adequate for typical building operations. In addition, implementation of Recommendations 1d, 1e, and 6 would minimize truck traffic on Clarke Street.

Recommendation 6: While not required to address a CEQA impact, the following should be considered as part of the final proposed design for the project:

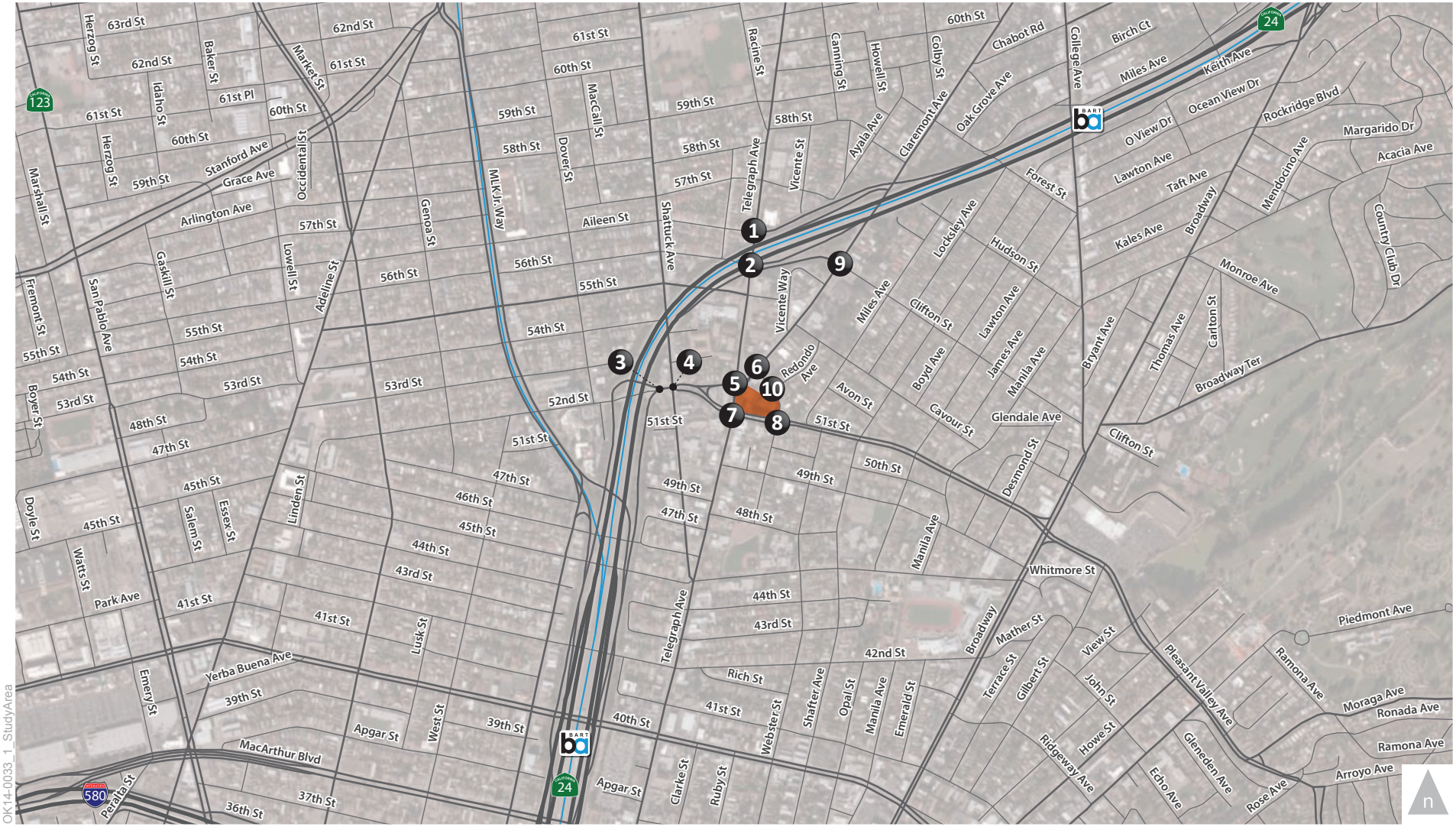
a. To the extent feasible, direct deliveries for all project components to the loading pullout space on 51st Street. The building residential loading docks for move-in/move-outs, located on Clarke Street, shall not be used by commercial trucks.
b. During the initial move-in period immediately following the completion of the building construction, designate temporarily the on-street parking on westbound 51st Street adjacent to the project or space within the project garage for residential moving trucks.

Please contact us with questions or comments.

Attachments:

Figure 1 Project Location and Study Intersections
Figure 2 Existing Peak Hour Traffic Volumes, Lane Configurations, and Traffic Controls
Figure 3 Existing Pedestrian and Bicycle Volumes
Figure 4 Project Trip Distribution
Figure 5 Project Trip Assignment – PM Peak Hour
Figure 6 Peak Hour Project Trip Assignment
Figure 7 Peak Hour Pass-by Trips
Figure 8 Existing Plus Project Peak Hour Traffic Volumes, Lane Configurations, and Traffic Controls
Figure 9 2035 No Project Peak Hour Traffic Volumes, Lane Configurations, and Traffic Controls
Figure 10 2035 Plus Project Peak Hour Traffic Volumes, Lane Configurations, and Traffic Controls
Figure 11 Project Site Plan (Ground Level)

Appendix A Intersection LOS Calculation Sheets
Appendix B Peak Period Travel Times
Appendix C Peak Hour Signal Warrants



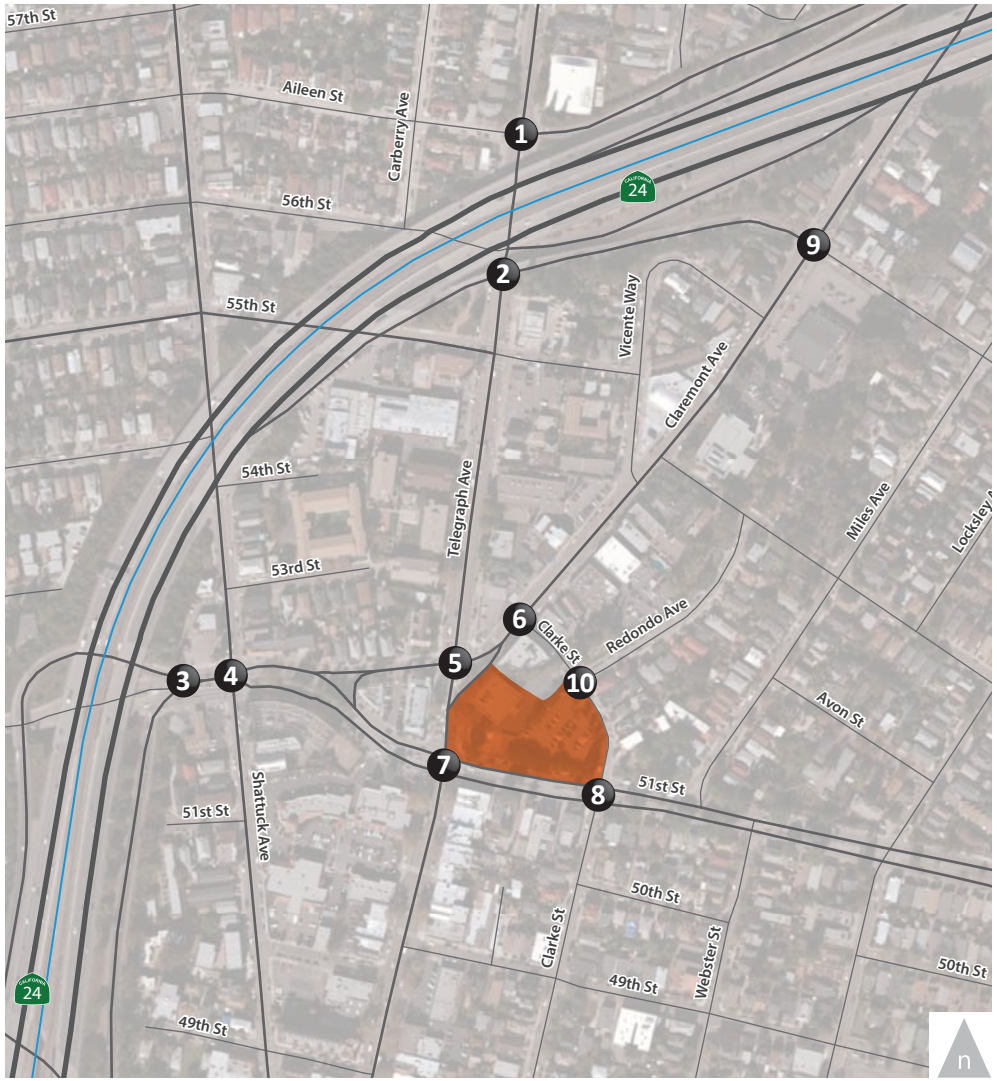
LEGEND

Study Intersection

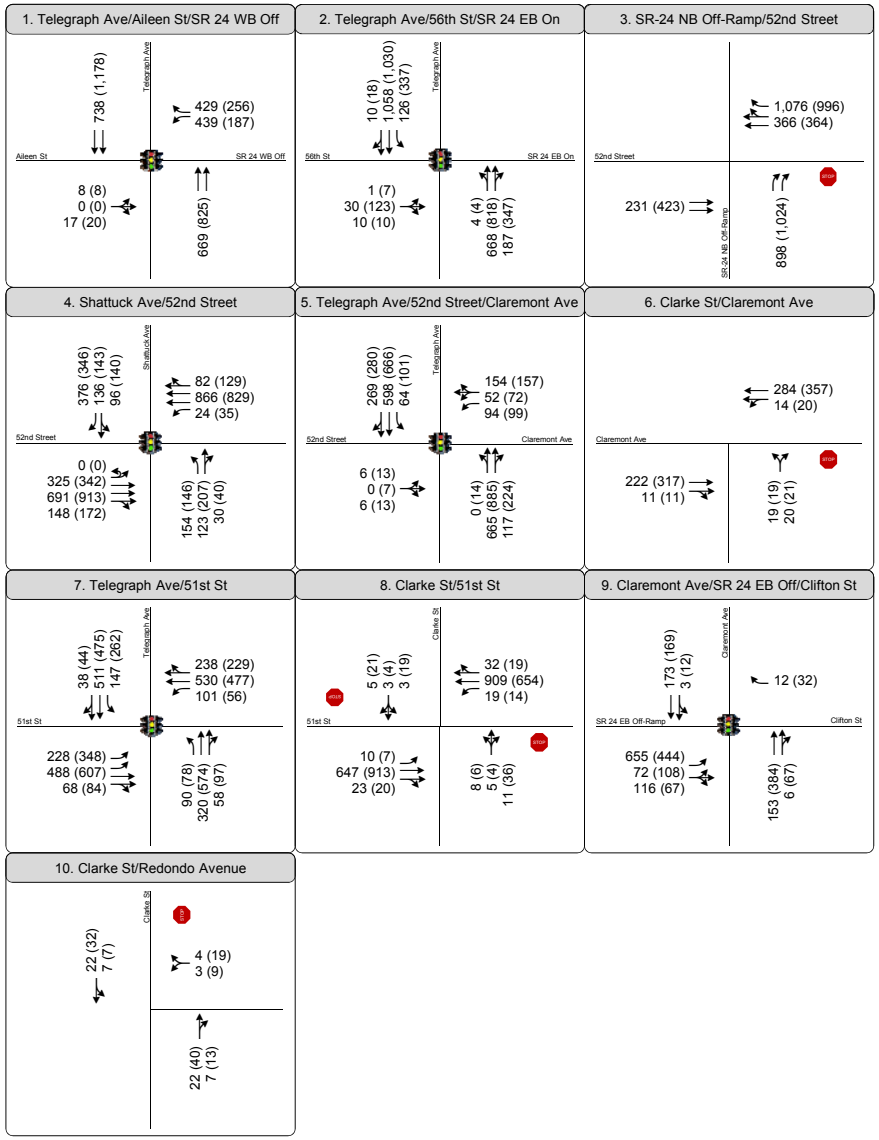
Project Site

Figure 1

Project Location and Study Intersections



OK14-0033_2_ExVol



LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

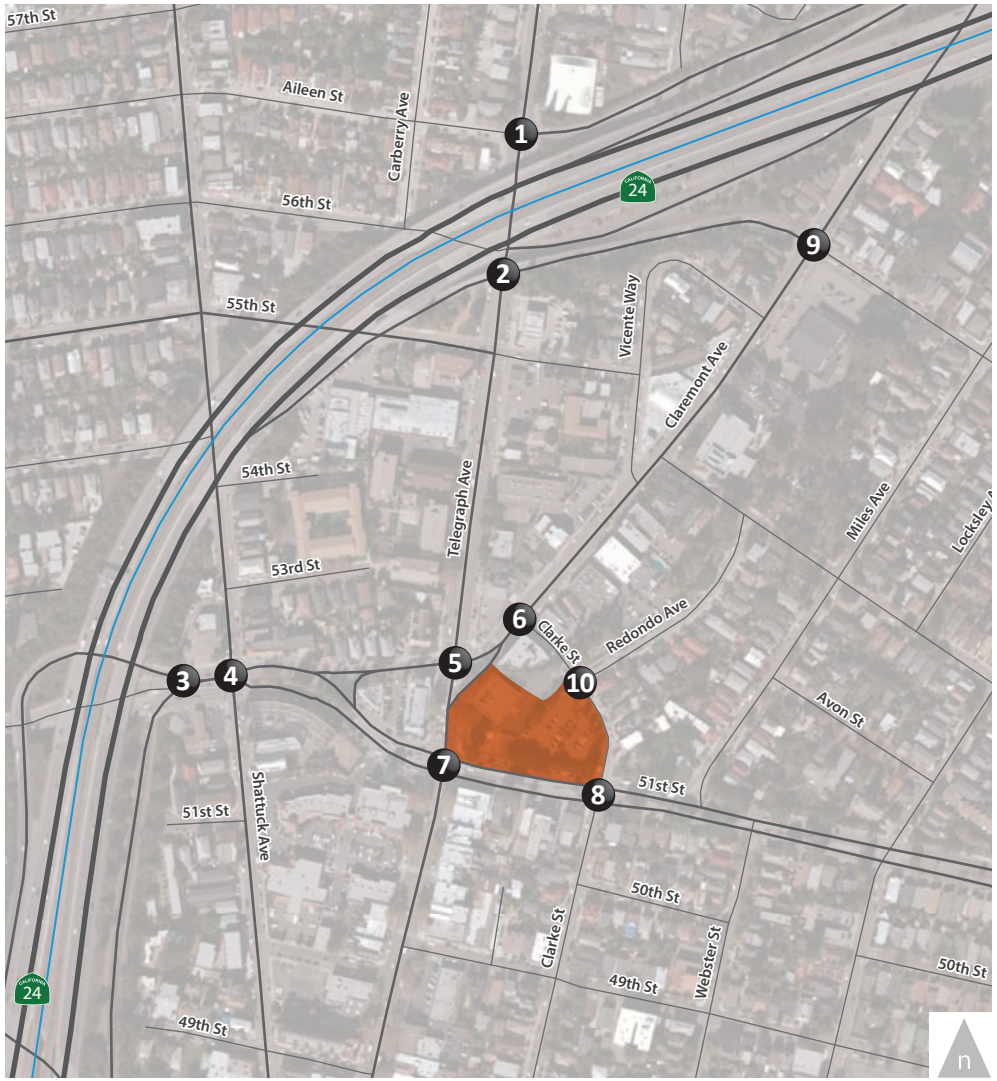
Stop Sign

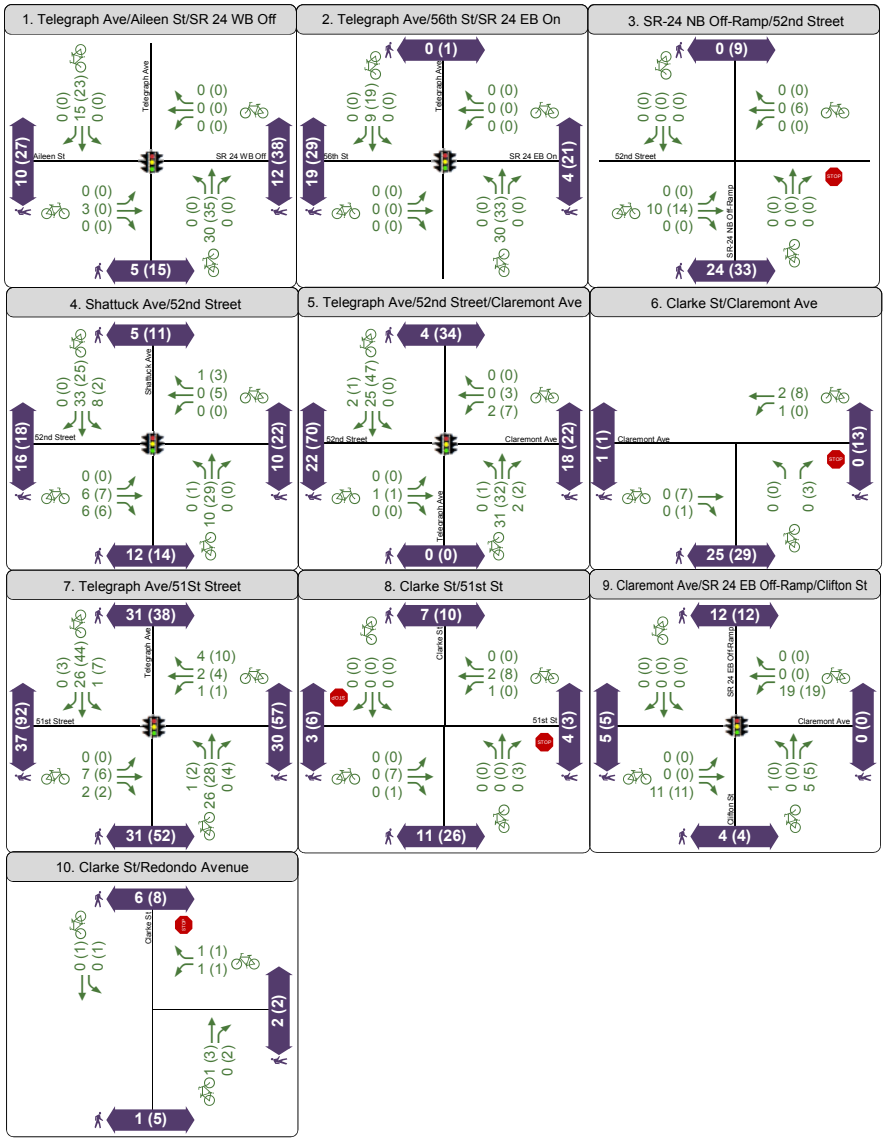
Study Intersection

Project Site

Figure 2

Existing Peak Hour Intersection Volumes, Lane Configurations and Traffic Control





OK14-0033_3_Vol-BikePed

LEGEND

AM (PM) Peak Hour Bicycle Volumes

x (y) AM (PM) Peak Hour Pedestrian Volumes

Signalized Intersection

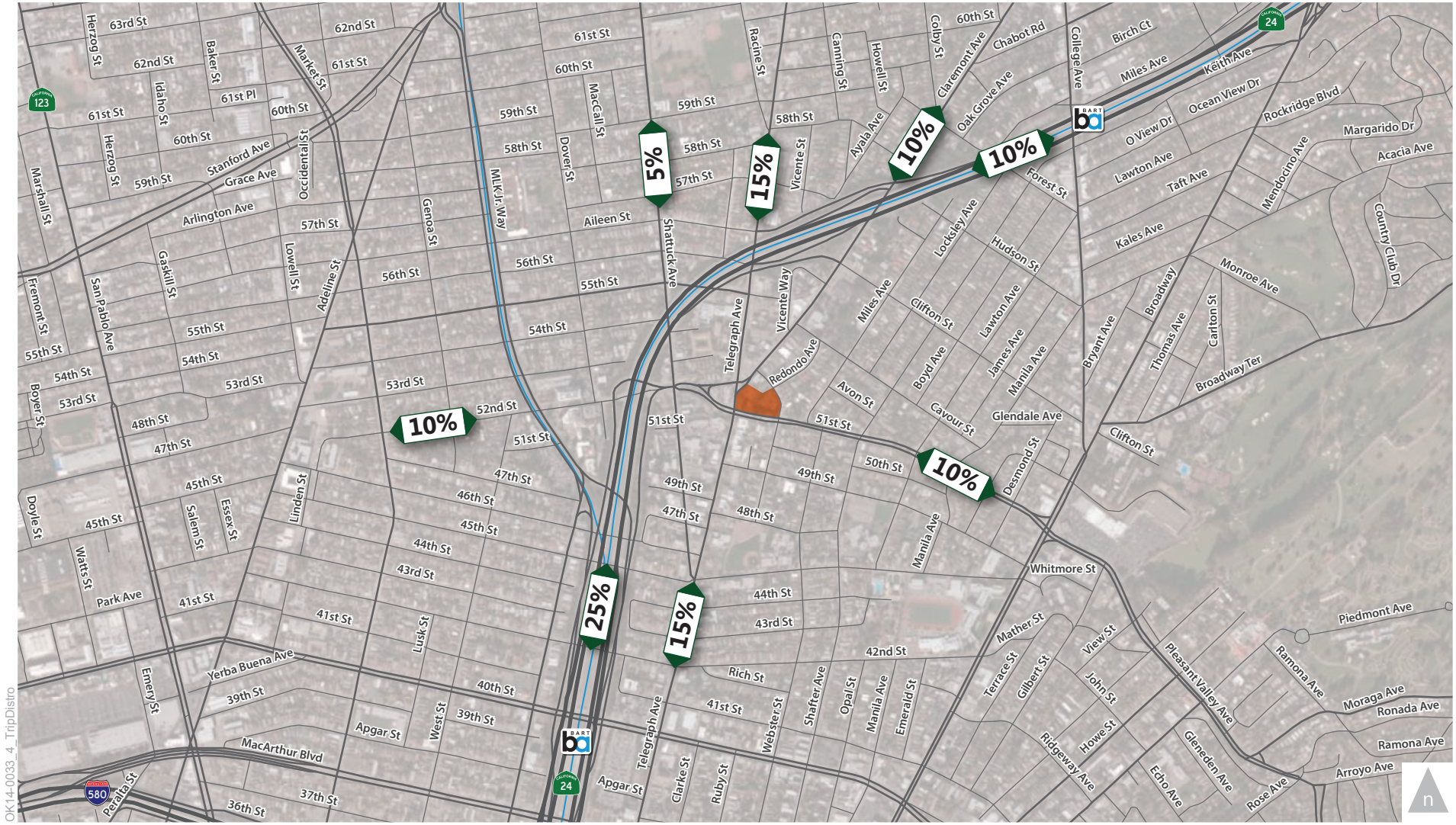
Stop Sign

Study Intersection

Project Site

Figure 3

Existing Pedestrian and Bicycle Volumes



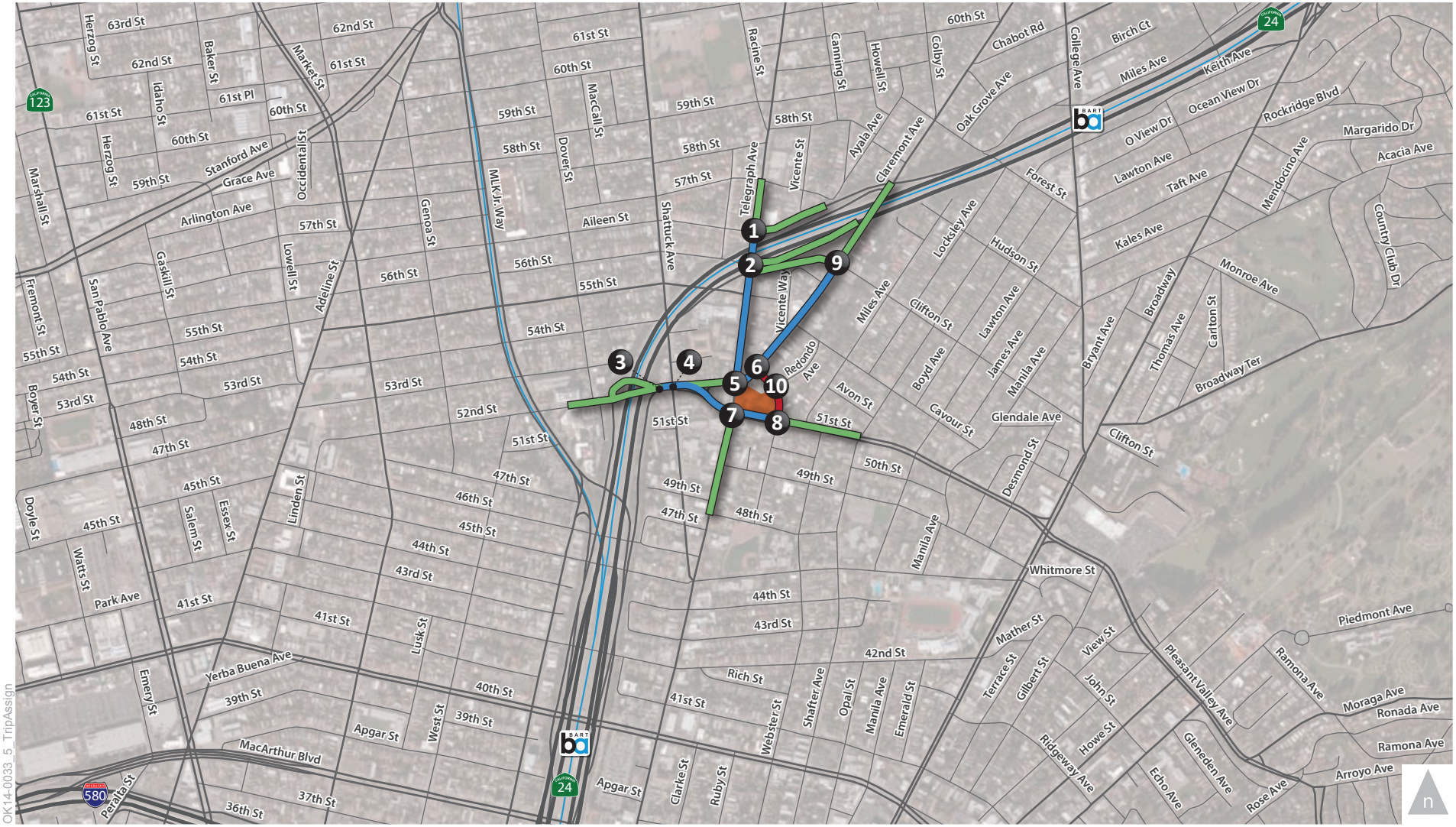
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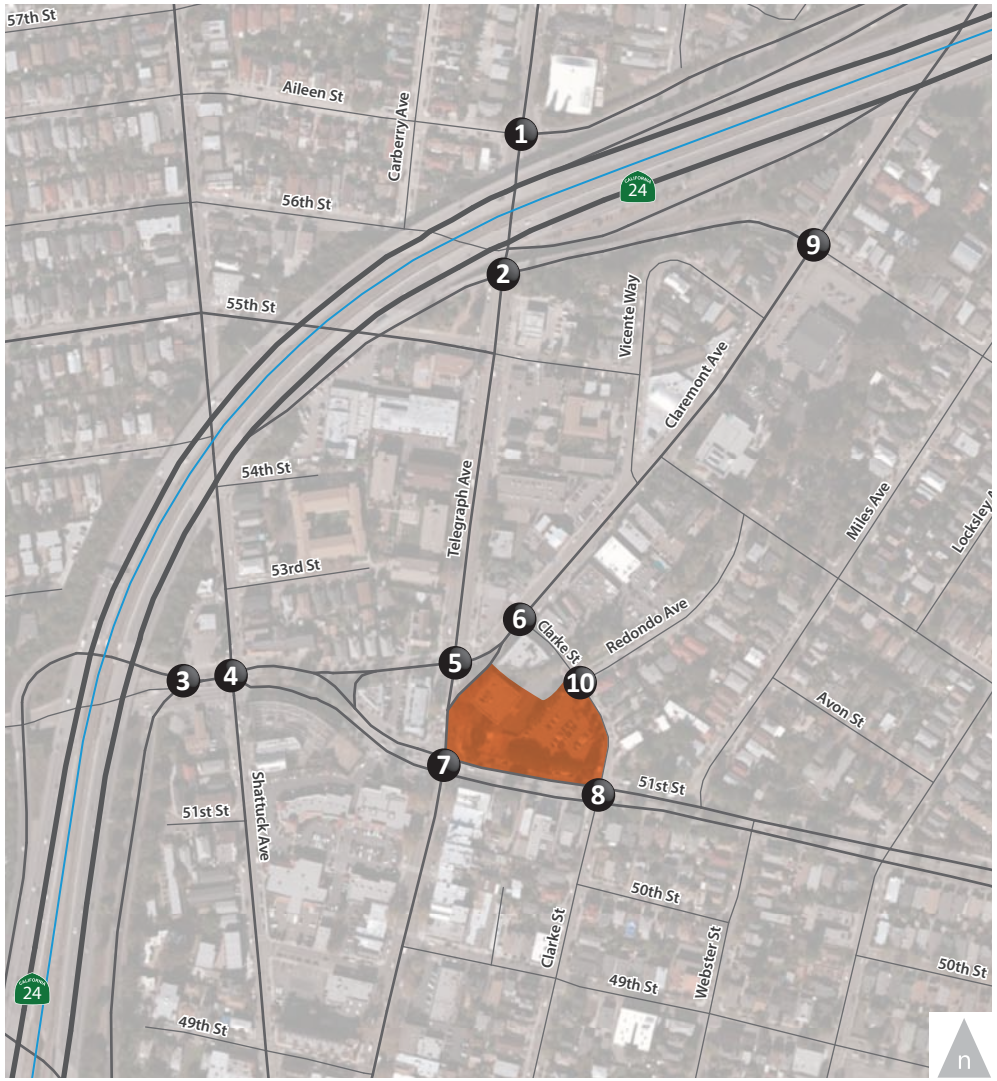
Project Site

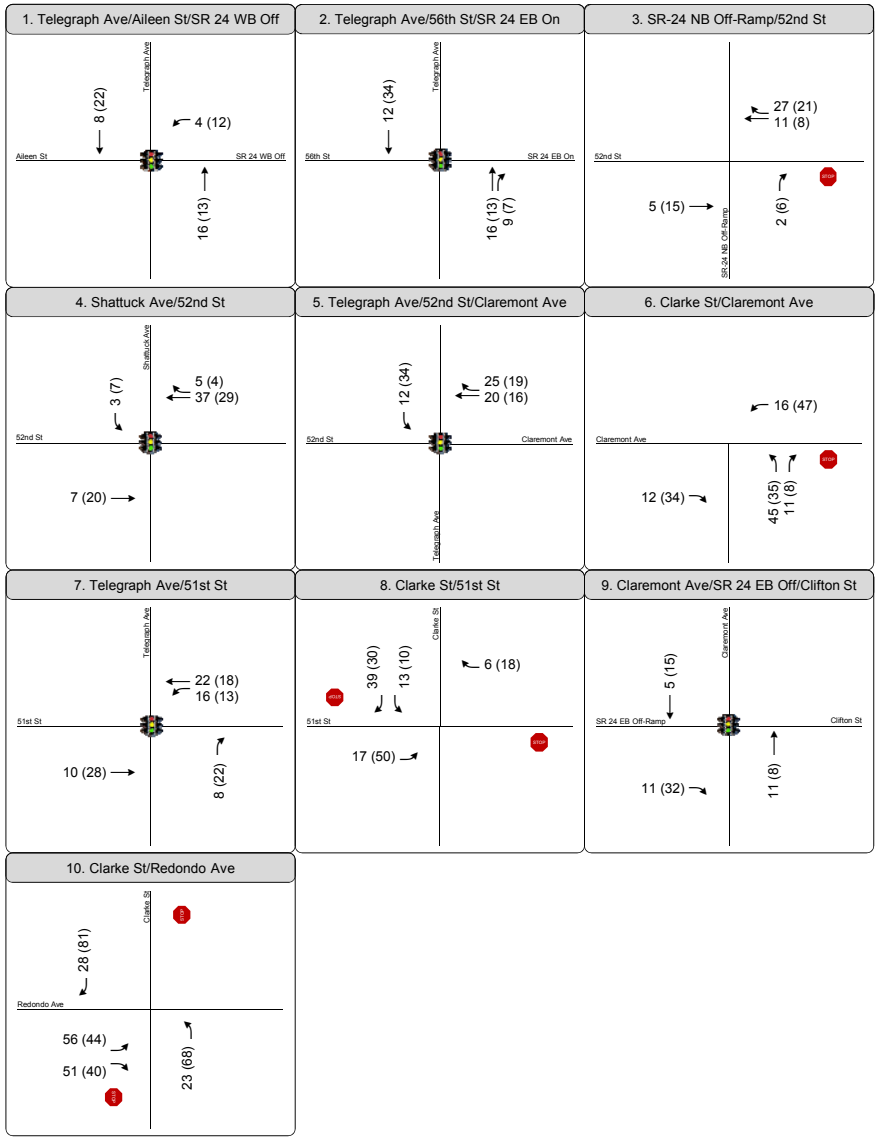
XX% Project Trip Distribution

Figure 4

Project Trip Distribution


1
2
3
4
5
6
7
8
9
10
Telegraph Ave
Claremont Ave
Vicente Way
Shattuck Ave
Dover St
Aileen St
Genoa St
MLK Jr. Way
Adeline St
Lowell St
Occidental St
Stanford Ave
Grace Ave
Arlington Ave
Marshall St
Fremont St
San Pablo Ave
Gaskill St
Herzog St
Idaho St
Baker St
Market St
Racine St
Canning St
Howell St
Colby St
Ayala Ave
Oak Grove Ave
Chabot Rd
College Ave
Birch Ct
Miles Ave
Keith Ave
Ocean View Dr
O View Dr
Lawton Ave
Taft Ave
Forest St
Rockridge Blvd
Margarido Dr
Acacia Ave
Mendocino Ave
Country Club Dr
Monroe Ave
Broadway
Broadway Ter
Carlton St
Thomas Ave
Bryant Ave
Kales Ave
Lockesley Ave
Hudson St
Miles Ave
Clifton St
Lawton Ave
James Ave
Manila Ave
Boyd Ave
Cavour St
Avon St
Redondo Ave
Glendale Ave
Desmond St
Clifton St
Whitmore St
Piedmont Ave
Ramona Ave
Moraga Ave
Ronada Ave
Ramona Ave
Arroyo Ave
Rose Ave
Gleneden Ave
Echo Ave
Ridgeway Ave
Howe St
John St
View St
Pleasant Valley Ave
Mather St
Terrace St
Gilbert St
Webster St
Shafter Ave
Opal St
Manila Ave
Emeraid St
Rich St
Yerba Buena Ave
Park Ave
Watts St
Doyle St
Boyer St
Salem St
Essex St
Linden St
Lusk St
Emery St
West St
Apgar St
MacArthur Blvd
Peralta St
Clarke St
Ruby St
Webster St
Shafter Ave
Opal St
Manila Ave
Emeraid St
Manila Ave
Desmond St
Avon St
Redondo Ave
Vicente Way
Vicente St
Ayala Ave
Howell St
Colby St
Racine St
Canning St
Dover St
MacCall St
Shattuck Ave
Genoa St
Lowell St
Adeline St
Occidental St
Market St
Baker St
Idaho St
Herzog St
Marshall St
Fremont St
San Pablo Ave
Gaskill St
Boyer St
Doyle St
Salem St
Essex St
Linden St
Watts St
Park Ave
Lusk St
Emery St
West St
Apgar St
MacArthur Blvd
Peralta St
Clarke St
Ruby St
Webster St
Shafter Ave
Opal St
Manila Ave
Emeraid St
Terrace St
Gilbert St
Mather St
View St
John St
Howe St
Ridgeway Ave
Pleasant Valley Ave
Piedmont Ave
Ramona Ave
Moraga Ave
Ronada Ave
Ramona Ave
Arroyo Ave
Rose Ave
Gleneden Ave
Echo Ave
Whitmore St
Manila Ave
Desmond St
Clifton St
Glendale Ave
Cavour





LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

Stop Sign

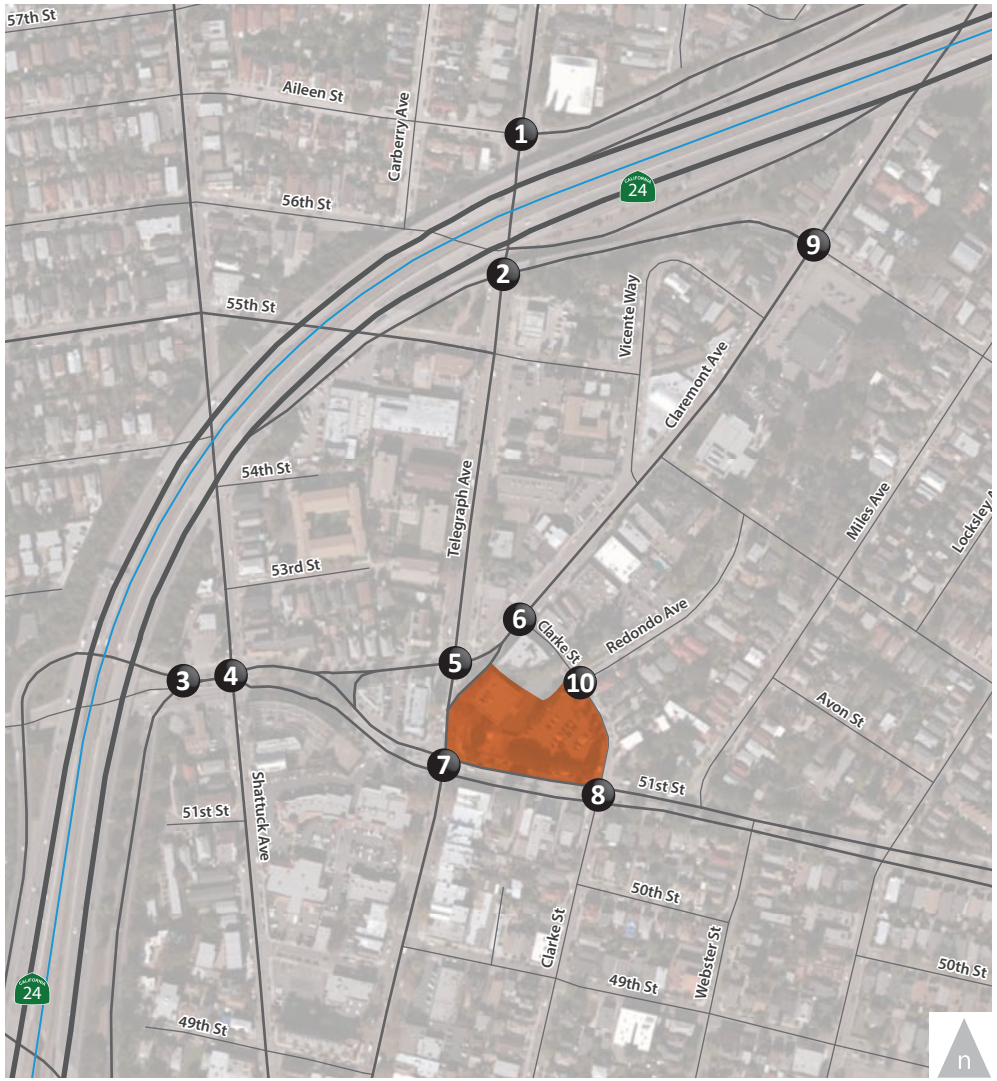
Study Intersection

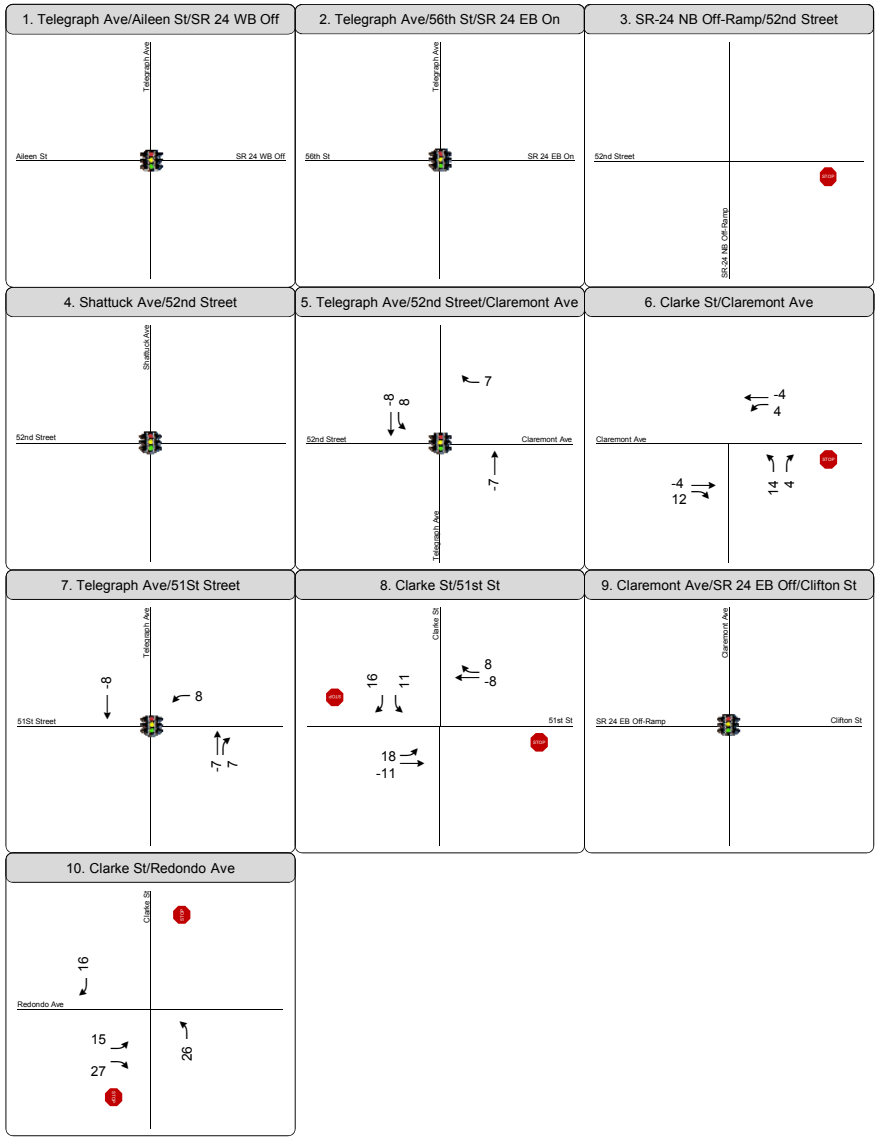
Project Site

OK14-0033_6_PTA

Figure 6

Peak Hour Project Trip Assignment





OK14-0033_7_PassbyTrips

LEGEND

XX (YY) PM Peak Hour Traffic Volumes

Signalized Intersection

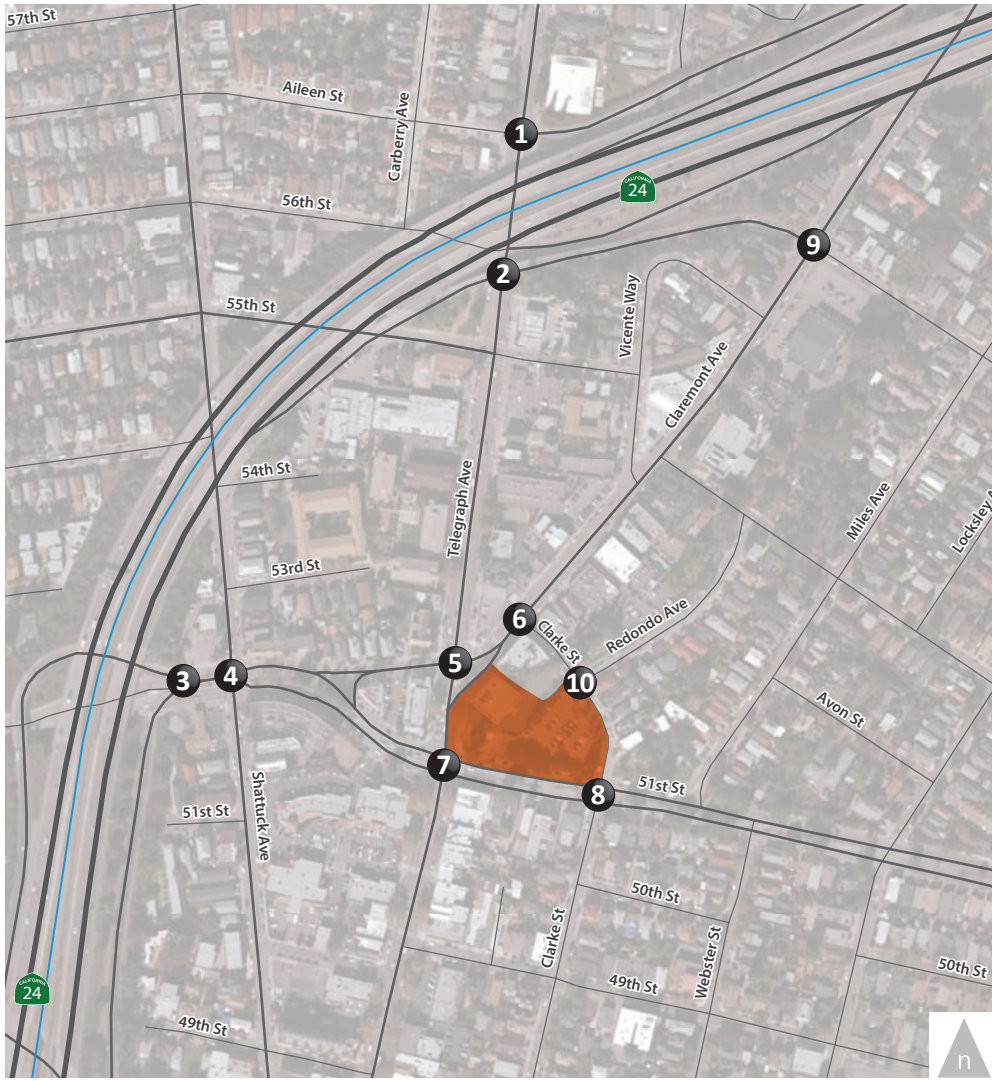
Stop Sign

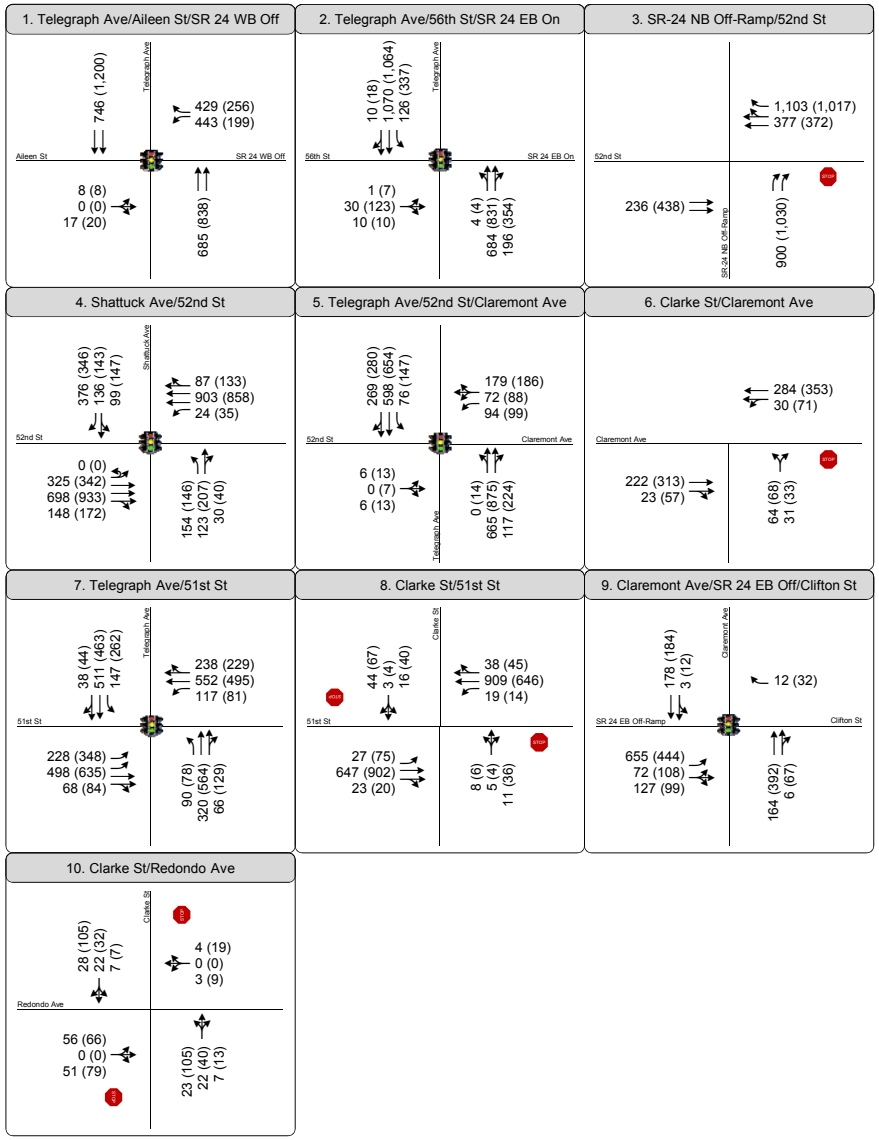
Study Intersection

Project Site

Figure 7

PM Peak Hour Pass-by Trips





OK14-0033_8_Ex+ProjVol

LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

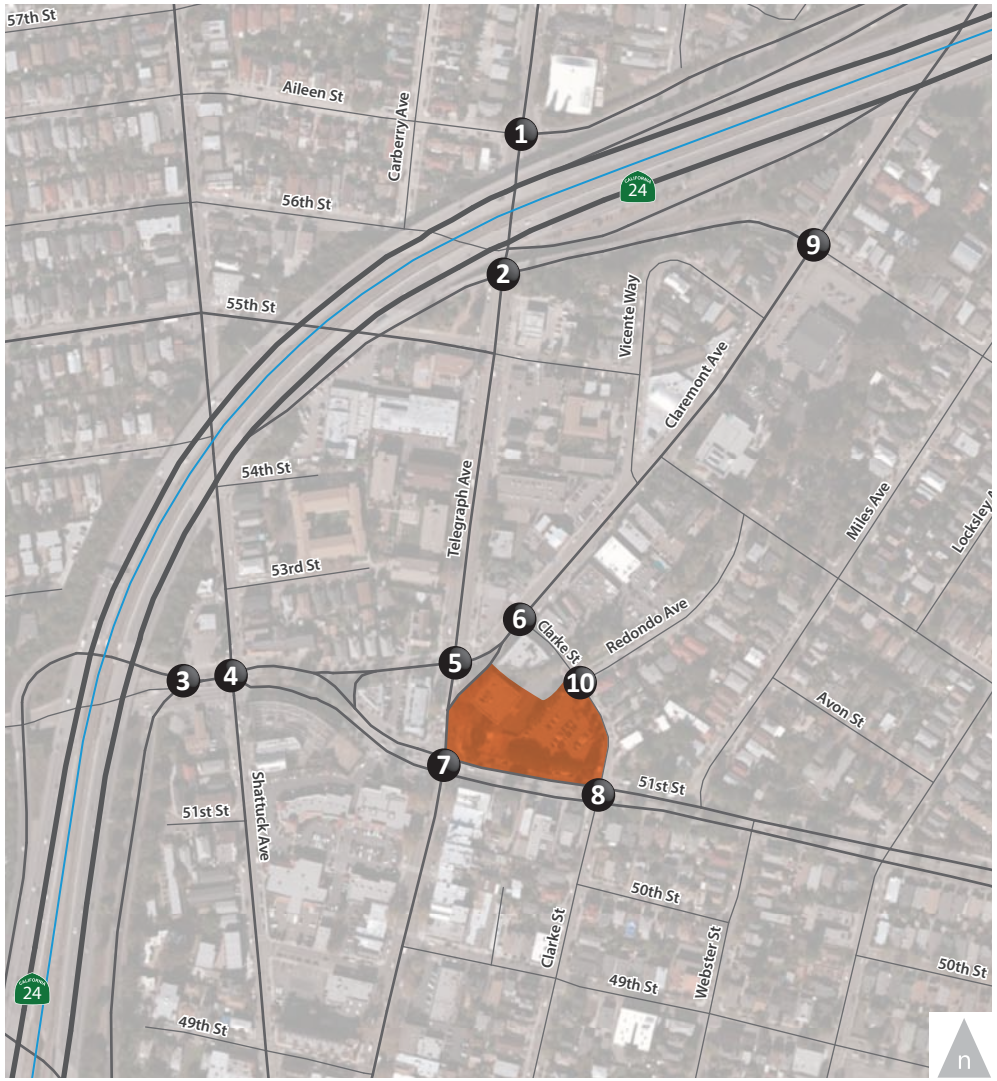
Stop Sign

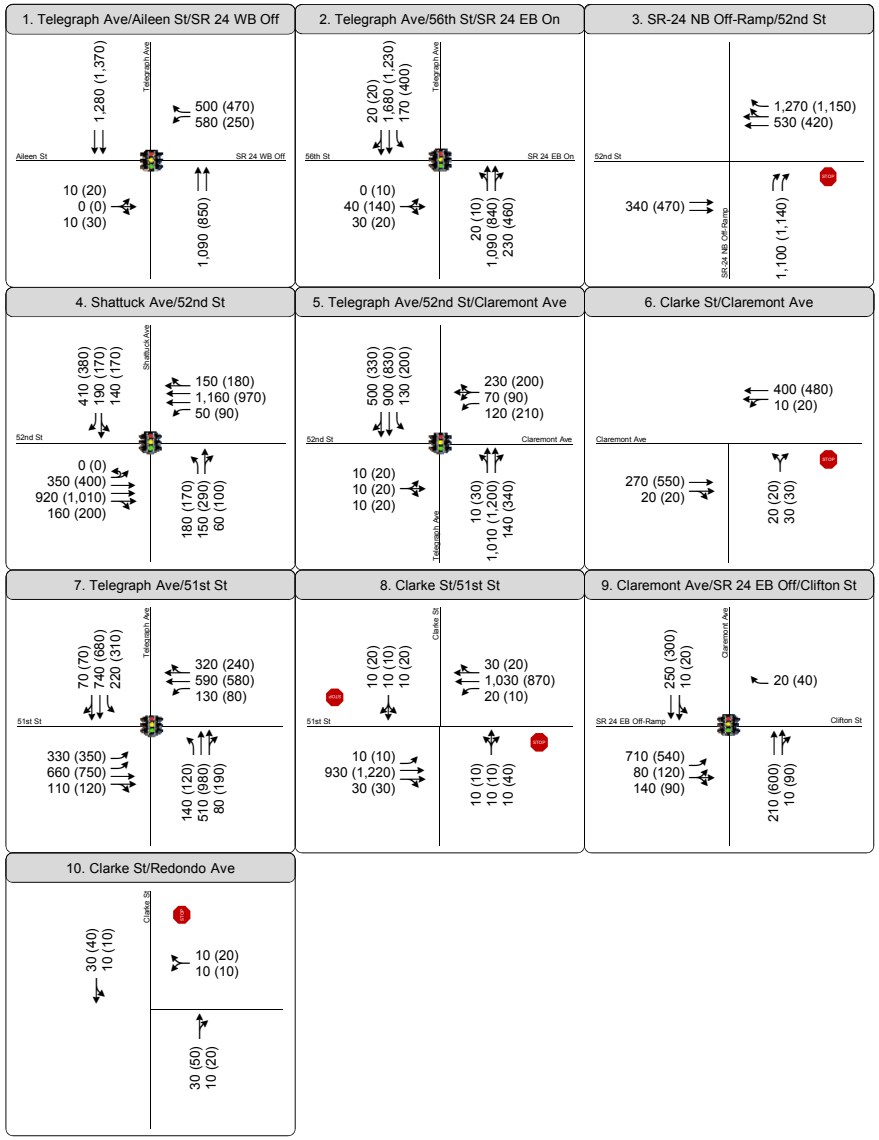
Study Intersection

Project Site

Figure 8

Existing Plus Project
Peak Hour Intersection Volumes, Lane Configurations and Traffic Control





OK14-0033_9_2035Vol

LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

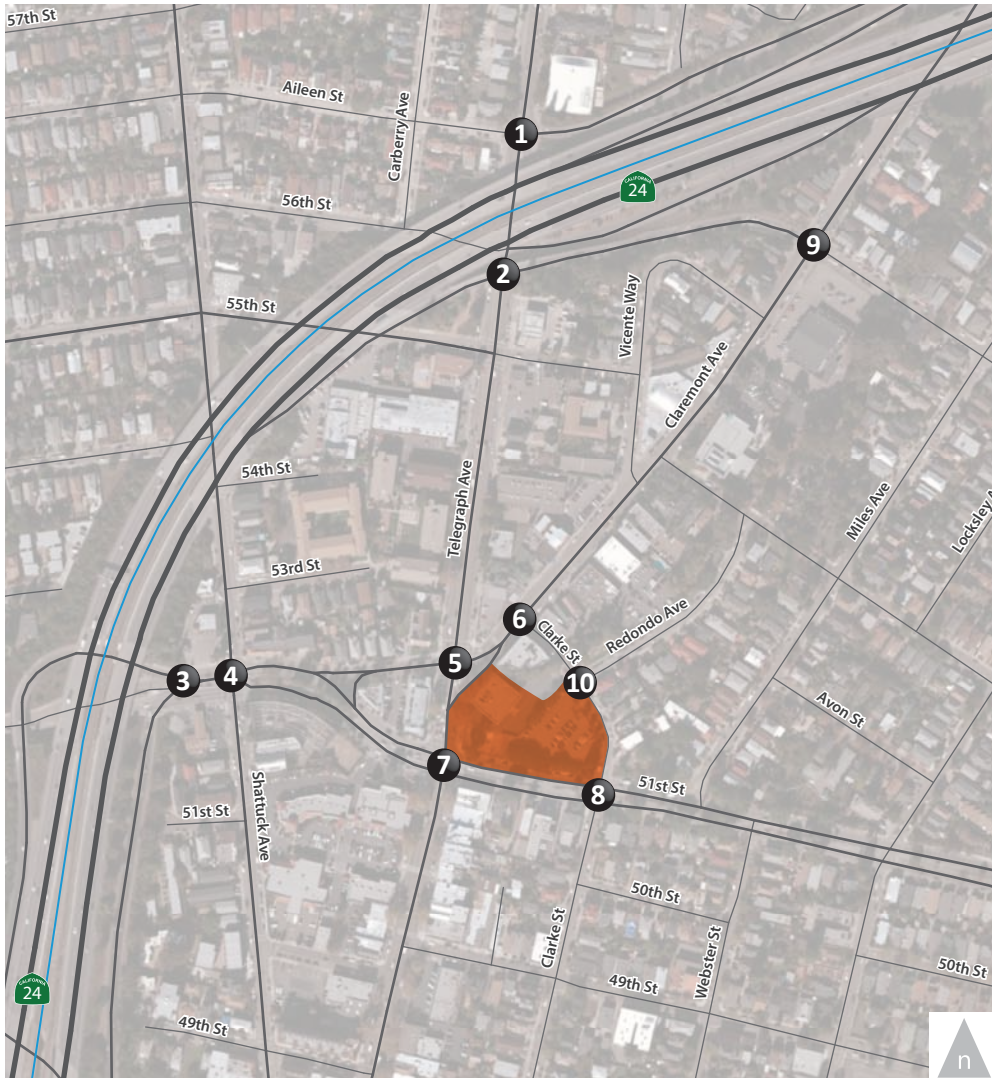
Stop Sign

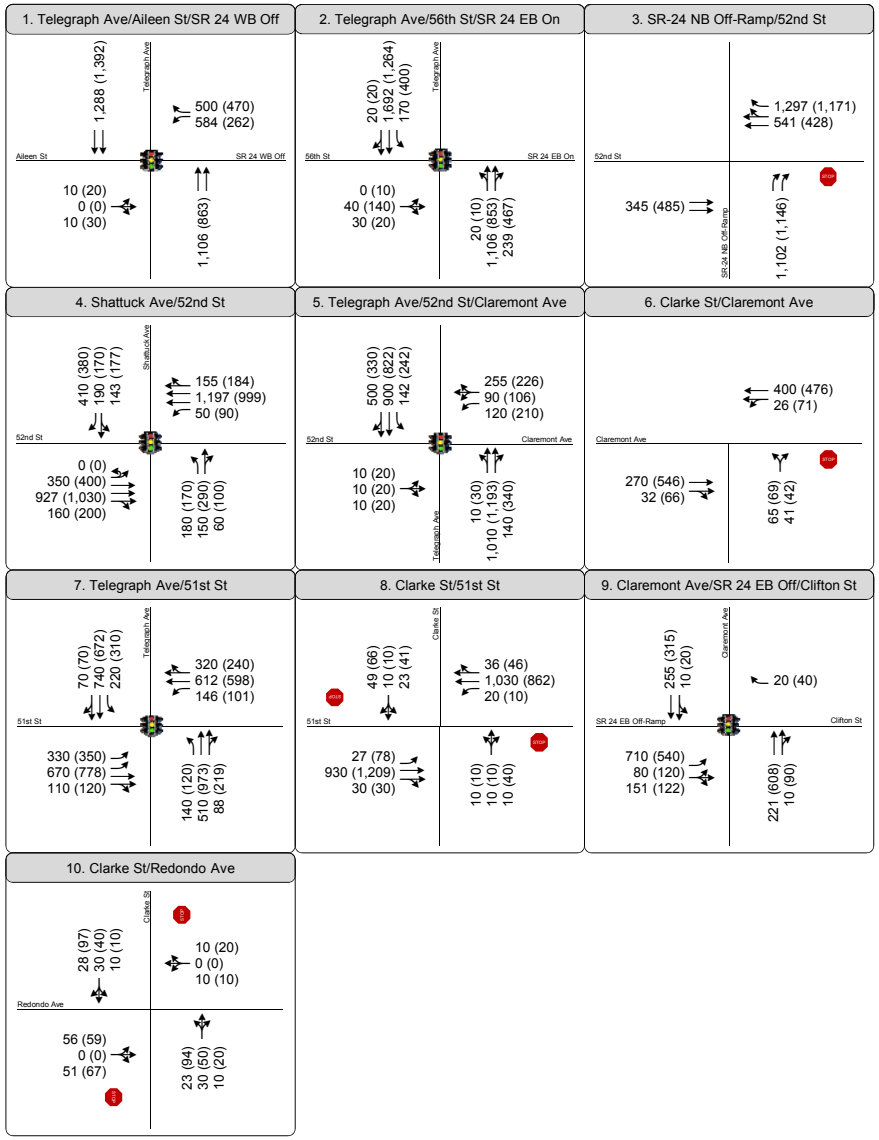
Study Intersection

Project Site

Figure 9

2035 No Project
Peak Hour Intersection Volumes, Lane Configurations and Traffic Control





OK14-0033_10_2035+ProjVol

LEGEND

XX (YY) AM (PM) Peak Hour Traffic Volumes

Signalized Intersection

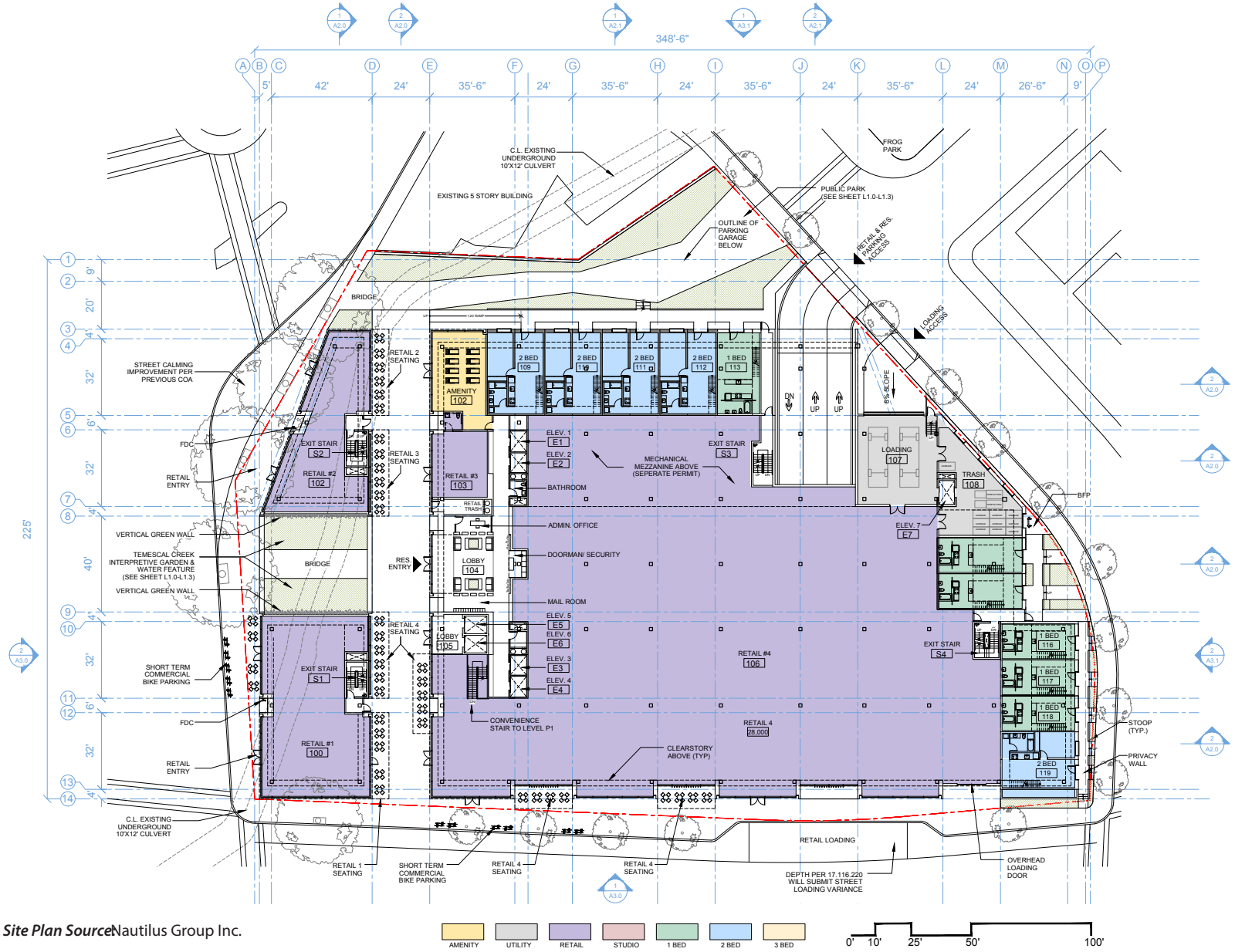
Stop Sign

Study Intersection

Project Site

Figure 10

2035 Plus Project
Peak Hour Intersection Volumes, Lane Configurations and Traffic Control



Site Plan Source: Nautilus Group Inc.

OK14-0033_11_SitePlan

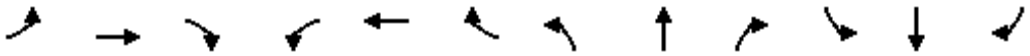
Figure 11

Project Site Plan (Ground Level)

Appendix A

LOS Calculations

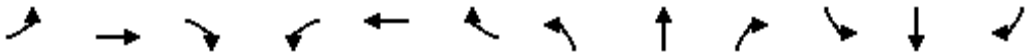
FEHR PEERS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	0	17	439	0	429	0	669	0	0	738	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0		5.0			5.0	
Lane Util. Factor		1.00		1.00		1.00		0.95			0.95	
Frpb, ped/bikes		0.99		1.00		0.98		1.00			1.00	
Flpb, ped/bikes		1.00		1.00		1.00		1.00			1.00	
Frt		0.91		1.00		0.85		1.00			1.00	
Flt Protected		0.98		0.95		1.00		1.00			1.00	
Satd. Flow (prot)		1646		1764		1559		3539			3539	
Flt Permitted		0.98		0.74		1.00		1.00			1.00	
Satd. Flow (perm)		1646		1376		1559		3539			3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	8	0	17	439	0	429	0	669	0	0	738	0
RTOR Reduction (vph)	0	15	0	0	0	101	0	0	0	0	0	0
Lane Group Flow (vph)	0	10	0	439	0	328	0	669	0	0	738	0
Confl. Peds. (#/hr)	3		3	3		3	4		12	12		4
Turn Type	Perm	NA		D.Pm		Perm		NA			NA	
Protected Phases		4						2			6	
Permitted Phases	4			4		4						
Actuated Green, G (s)		33.7		33.7		33.7		47.3			47.3	
Effective Green, g (s)		33.7		33.7		33.7		47.3			47.3	
Actuated g/C Ratio		0.37		0.37		0.37		0.53			0.53	
Clearance Time (s)		4.0		4.0		4.0		5.0			5.0	
Vehicle Extension (s)		3.0		3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)		616		515		583		1859			1859	
v/s Ratio Prot								0.19			c0.21	
v/s Ratio Perm		0.01		c0.32		0.21						
v/c Ratio		0.02		0.85		0.56		0.36			0.40	
Uniform Delay, d1		17.7		25.9		22.3		12.5			12.8	
Progression Factor		1.00		1.00		1.00		0.50			1.00	
Incremental Delay, d2		0.0		12.9		1.2		0.5			0.6	
Delay (s)		17.7		38.7		23.5		6.8			13.4	
Level of Service		B		D		C		A			B	
Approach Delay (s)		17.7			31.2			6.8			13.4	
Approach LOS		B			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		

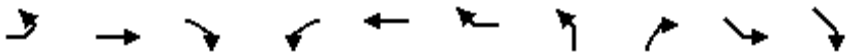
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	30	10	0	0	0	4	668	187	126	1058	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		1.00						0.95		1.00	0.95	
Frpb, ped/bikes		1.00						0.99		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.97						0.97		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		1793						3386		1770	3533	
Flt Permitted		1.00						0.95		0.95	1.00	
Satd. Flow (perm)		1793						3222		1770	3533	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1	30	10	0	0	0	4	668	187	126	1058	10
RTOR Reduction (vph)	0	9	0	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	0	32	0	0	0	0	0	842	0	126	1068	0
Confl. Peds. (#/hr)			1			1	3		10	10		3
Turn Type	Perm	NA					Perm	NA		Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4						2					
Actuated Green, G (s)		4.9						60.5		11.1	76.1	
Effective Green, g (s)		4.9						60.5		11.1	76.1	
Actuated g/C Ratio		0.05						0.67		0.12	0.85	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		97						2165		218	2987	
v/s Ratio Prot										c0.07	0.30	
v/s Ratio Perm		0.02						c0.26				
v/c Ratio		0.33						0.39		0.58	0.36	
Uniform Delay, d1		41.0						6.5		37.2	1.5	
Progression Factor		1.00						1.00		1.12	0.50	
Incremental Delay, d2		2.0						0.5		3.2	0.3	
Delay (s)		42.9						7.1		44.8	1.1	
Level of Service		D						A		D	A	
Approach Delay (s)		42.9			0.0			7.1			5.7	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER
Lane Configurations										
Volume (veh/h)	0	231	0	0	366	1076	0	898	0	0
Sign Control		Free			Free		Stop		Stop	
Grade		0%			0%		0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	231	0	0	366	1076	0	898	0	0
Pedestrians							24			
Lane Width (ft)							12.0			
Walking Speed (ft/s)							4.0			
Percent Blockage							2			
Right turn flare (veh)										
Median type		None			None					
Median storage veh)										
Upstream signal (ft)		767			192					
pX, platoon unblocked	0.83						0.83		0.83	0.83
vC, conflicting volume	1442			255			1697	140	1380	621
vC1, stage 1 conf vol										
vC2, stage 2 conf vol										
vCu, unblocked vol	1129			255			1435	140	1054	143
tC, single (s)	4.1			4.1			6.5	7.0	7.5	6.5
tC, 2 stage (s)										
tF (s)	2.2			2.2			4.0	3.3	3.5	4.0
p0 queue free %	100			100			100	0	0	100
cM capacity (veh/h)	512			1281			108	862	0	610

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	116	116	244	481	717	449	449
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	359	717	449	449
cSH	1700	1700	1700	1700	1700	862	862
Volume to Capacity	0.07	0.07	0.14	0.28	0.42	0.52	0.52
Queue Length 95th (ft)	0	0	0	0	0	77	77
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	13.6	13.6
Lane LOS						B	B
Approach Delay (s)	0.0		0.0			13.6	
Approach LOS						B	

Intersection Summary				
Average Delay	4.8			
Intersection Capacity Utilization	48.3%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	40	285	691	148	24	866	82	154	123	30	96	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.5		4.0	4.5		4.0	5.5			5.5
Lane Util. Factor		1.00	0.91		1.00	0.91		1.00	1.00			1.00
Frpb, ped/bikes		1.00	0.99		1.00	1.00		1.00	0.99			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00			1.00
Frt		1.00	0.97		1.00	0.99		1.00	0.97			1.00
Flt Protected		0.95	1.00		0.95	1.00		0.95	1.00			0.98
Satd. Flow (prot)		1787	4946		1805	5104		1752	1781			1734
Flt Permitted		0.95	1.00		0.95	1.00		0.44	1.00			0.80
Satd. Flow (perm)		1787	4946		1805	5104		809	1781			1410
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	285	691	148	24	866	82	154	123	30	96	136
RTOR Reduction (vph)	0	0	30	0	0	12	0	0	10	0	0	0
Lane Group Flow (vph)	0	325	809	0	24	936	0	154	143	0	0	232
Confl. Peds. (#/hr)				12			5			10	10	
Confl. Bikes (#/hr)				12			1			10		
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%	0%	3%	3%	3%	7%	7%
Turn Type	Prot	Prot	NA		Prot	NA		pm+pt	NA		Perm	NA
Protected Phases	7	7	4		3	8		5	2			6
Permitted Phases								2			6	
Actuated Green, G (s)		21.5	37.7		3.2	19.4		35.1	35.1			24.6
Effective Green, g (s)		21.5	37.7		3.2	19.4		35.1	35.1			24.6
Actuated g/C Ratio		0.24	0.42		0.04	0.22		0.39	0.39			0.27
Clearance Time (s)		4.0	4.5		4.0	4.5		4.0	5.5			5.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0		3.0	3.0			3.0
Lane Grp Cap (vph)		426	2071		64	1100		383	694			385
v/s Ratio Prot		c0.18	0.16		0.01	c0.18		c0.03	0.08			
v/s Ratio Perm								0.13				c0.16
v/c Ratio		0.76	0.39		0.38	0.85		0.40	0.21			0.60
Uniform Delay, d1		31.9	18.2		42.4	33.9		18.8	18.2			28.4
Progression Factor		1.00	1.00		1.23	0.83		1.00	1.00			1.00
Incremental Delay, d2		12.2	0.6		3.0	7.0		0.7	0.7			6.8
Delay (s)		44.1	18.7		55.0	35.1		19.5	18.9			35.3
Level of Service		D	B		E	D		B	B			D
Approach Delay (s)			25.8			35.6			19.2			30.3
Approach LOS			C			D			B			C

Intersection Summary			
HCM 2000 Control Delay	29.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	100.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Volume (vph)	376
Ideal Flow (vphpl)	1900
Total Lost time (s)	5.5
Lane Util. Factor	1.00
Frpb, ped/bikes	0.94
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1419
Flt Permitted	1.00
Satd. Flow (perm)	1419
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	376
RTOR Reduction (vph)	273
Lane Group Flow (vph)	103
Confl. Peds. (#/hr)	16
Confl. Bikes (#/hr)	41
Heavy Vehicles (%)	7%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	24.6
Effective Green, g (s)	24.6
Actuated g/C Ratio	0.27
Clearance Time (s)	5.5
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	387
v/s Ratio Prot	
v/s Ratio Perm	0.07
v/c Ratio	0.27
Uniform Delay, d1	25.6
Progression Factor	1.00
Incremental Delay, d2	1.7
Delay (s)	27.3
Level of Service	C
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	0	6	94	52	154	0	665	117	64	598	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	16	12	12	12	12
Total Lost time (s)		4.5		4.5	4.5			4.5		4.5	4.5	
Lane Util. Factor		1.00		0.95	0.95			0.95		1.00	0.95	
Frpb, ped/bikes		0.98		1.00	0.99			0.99		1.00	0.97	
Flpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Frt		0.93		1.00	0.89			0.98		1.00	0.95	
Flt Protected		0.98		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1576		1698	1569			3853		1770	3282	
Flt Permitted		0.98		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (perm)		1576		1698	1569			3853		1770	3282	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	6	0	6	94	52	154	0	665	117	64	598	269
RTOR Reduction (vph)	0	12	0	0	119	0	0	10	0	0	36	0
Lane Group Flow (vph)	0	0	0	85	96	0	0	772	0	64	831	0
Confl. Peds. (#/hr)	4					4	22		18			22
Confl. Bikes (#/hr)			1			2			33			27
Heavy Vehicles (%)	8%	8%	8%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Split	NA		Split	NA			NA		Prot	NA	
Protected Phases	4	4		8	8			2		1	6	
Permitted Phases							2					
Actuated Green, G (s)		1.1		15.4	15.4			48.2		7.3	60.0	
Effective Green, g (s)		1.1		15.4	15.4			48.2		7.3	60.0	
Actuated g/C Ratio		0.01		0.17	0.17			0.54		0.08	0.67	
Clearance Time (s)		4.5		4.5	4.5			4.5		4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		19		290	268			2063		143	2188	
v/s Ratio Prot		c0.00		0.05	c0.06			0.20		0.04	c0.25	
v/s Ratio Perm												
v/c Ratio		0.01		0.29	0.36			0.37		0.45	0.38	
Uniform Delay, d1		43.9		32.6	32.9			12.1		39.4	6.7	
Progression Factor		1.00		1.00	1.00			0.97		1.00	1.00	
Incremental Delay, d2		0.1		0.6	0.8			0.5		2.2	0.5	
Delay (s)		44.0		33.1	33.8			12.2		41.7	7.2	
Level of Service		D		C	C			B		D	A	
Approach Delay (s)		44.0			33.6			12.2			9.6	
Approach LOS		D			C			B			A	

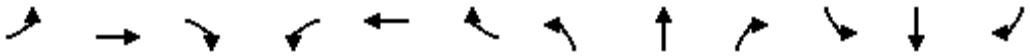
Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	222	11	14	284	19	20
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	222	11	14	284	19	20
Pedestrians	1				25	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	213			1066		
pX, platoon unblocked						
vC, conflicting volume			258		424	142
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			258		424	142
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		97	98
cM capacity (veh/h)			1284		543	865

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	148	85	109	189	39
Volume Left	0	0	14	0	19
Volume Right	0	11	0	0	20
cSH	1700	1700	1284	1700	671
Volume to Capacity	0.09	0.05	0.01	0.11	0.06
Queue Length 95th (ft)	0	0	1	0	5
Control Delay (s)	0.0	0.0	1.1	0.0	10.7
Lane LOS			A		B
Approach Delay (s)	0.0		0.4		10.7
Approach LOS					B

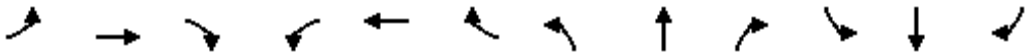
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	28.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	228	488	68	101	530	238	90	320	58	147	511	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	3.5		4.0	4.5		4.0	3.5	
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3400	3417		1787	3349		1719	3324		1752	3447	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3400	3417		1787	3349		1719	3324		1752	3447	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	228	488	68	101	530	238	90	320	58	147	511	38
RTOR Reduction (vph)	0	12	0	0	56	0	0	16	0	0	5	0
Lane Group Flow (vph)	228	544	0	101	712	0	90	362	0	147	544	0
Confl. Peds. (#/hr)			31			31			30			37
Confl. Bikes (#/hr)			9			7			27			27
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	5%	5%	5%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	11.2	29.0		8.6	26.9		8.4	24.9		11.0	28.5	
Effective Green, g (s)	11.2	29.0		8.6	26.9		8.4	24.9		11.0	28.5	
Actuated g/C Ratio	0.12	0.32		0.10	0.30		0.09	0.28		0.12	0.32	
Clearance Time (s)	4.0	4.0		4.0	3.5		4.0	4.5		4.0	3.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	423	1101		170	1000		160	919		214	1091	
v/s Ratio Prot	c0.07	c0.16		0.06	c0.21		0.05	0.11		c0.08	c0.16	
v/s Ratio Perm												
v/c Ratio	0.54	0.49		0.59	0.71		0.56	0.39		0.69	0.50	
Uniform Delay, d1	37.0	24.6		39.0	28.1		39.0	26.4		37.8	24.9	
Progression Factor	1.29	0.79		1.00	1.00		1.00	1.00		1.01	0.86	
Incremental Delay, d2	1.2	1.5		5.5	4.3		4.5	1.3		8.5	1.6	
Delay (s)	49.0	21.0		44.5	32.4		43.5	27.7		46.7	23.1	
Level of Service	D	C		D	C		D	C		D	C	
Approach Delay (s)		29.1			33.8			30.7			28.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

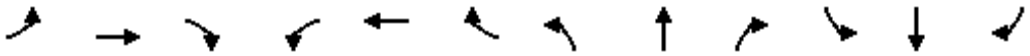
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	647	23	19	909	32	8	5	11	3	3	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	647	23	19	909	32	8	5	11	3	3	5
Pedestrians		3			4			11			7	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		418										
pX, platoon unblocked				0.89			0.89	0.89	0.89	0.89	0.89	
vC, conflicting volume	948			681			1192	1676	350	1331	1671	480
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	948			400			973	1515	29	1129	1510	480
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			95	95	99	98	97	99
cM capacity (veh/h)	722			1027			171	102	918	130	102	530

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	10	431	239	19	606	335	24	11
Volume Left	10	0	0	19	0	0	8	3
Volume Right	0	0	23	0	0	32	11	5
cSH	722	1700	1700	1027	1700	1700	223	178
Volume to Capacity	0.01	0.25	0.14	0.02	0.36	0.20	0.11	0.06
Queue Length 95th (ft)	1	0	0	1	0	0	9	5
Control Delay (s)	10.1	0.0	0.0	8.6	0.0	0.0	23.1	26.6
Lane LOS	B			A			C	D
Approach Delay (s)	0.1			0.2			23.1	26.6
Approach LOS							C	D

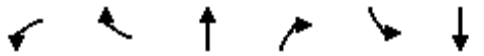
Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	37.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	655	72	116	0	0	12	0	153	6	3	173	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.96				0.86		0.99			1.00	
Flt Protected	0.95	0.97				1.00		1.00			1.00	
Satd. Flow (prot)	1681	1643				1611		3513			3536	
Flt Permitted	0.95	0.97				1.00		1.00			0.95	
Satd. Flow (perm)	1681	1643				1611		3513			3369	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	655	72	116	0	0	12	0	153	6	3	173	0
RTOR Reduction (vph)	0	18	0	0	0	4	0	4	0	0	0	0
Lane Group Flow (vph)	426	400	0	0	0	8	0	155	0	0	176	0
Confl. Peds. (#/hr)			5						4			12
Confl. Bikes (#/hr)			5						11			19
Turn Type	Perm	NA				Perm		NA		Perm	NA	
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	52.0	52.0				52.0		21.0			21.0	
Actuated g/C Ratio	0.65	0.65				0.65		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1092	1067				1047		922			884	
v/s Ratio Prot								0.04				
v/s Ratio Perm	c0.25	0.24				0.00					c0.05	
v/c Ratio	0.39	0.37				0.01		0.17			0.20	
Uniform Delay, d1	6.6	6.5				4.9		22.8			23.0	
Progression Factor	1.00	1.00				1.00		1.00			1.00	
Incremental Delay, d2	1.1	1.0				0.0		0.4			0.5	
Delay (s)	7.6	7.5				4.9		23.2			23.5	
Level of Service	A	A				A		C			C	
Approach Delay (s)		7.5			4.9			23.2			23.5	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		

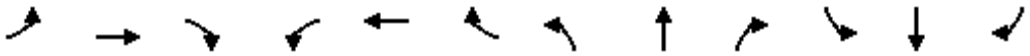
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	3	4	22	7	7	22
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	3	4	22	7	7	22
Pedestrians	7		1			6
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	1		0			1
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	70	38			36	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	70	38			36	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	925	1022			1566	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	7	29	29
Volume Left	3	0	7
Volume Right	4	7	0
cSH	978	1700	1566
Volume to Capacity	0.01	0.02	0.00
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.7	0.0	1.8
Lane LOS	A		A
Approach Delay (s)	8.7	0.0	1.8
Approach LOS	A		

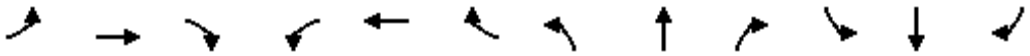
Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	19.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	0	20	187	0	256	0	825	0	0	1178	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0		5.0			5.0	
Lane Util. Factor		1.00		1.00		1.00		0.95			0.95	
Frpb, ped/bikes		0.99		1.00		0.98		1.00			1.00	
Flpb, ped/bikes		1.00		0.99		1.00		1.00			1.00	
Frt		0.90		1.00		0.85		1.00			1.00	
Flt Protected		0.99		0.95		1.00		1.00			1.00	
Satd. Flow (prot)		1635		1759		1555		3539			3539	
Flt Permitted		0.99		0.74		1.00		1.00			1.00	
Satd. Flow (perm)		1635		1369		1555		3539			3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	8	0	20	187	0	256	0	825	0	0	1178	0
RTOR Reduction (vph)	0	18	0	0	0	161	0	0	0	0	0	0
Lane Group Flow (vph)	0	10	0	187	0	95	0	825	0	0	1178	0
Confl. Peds. (#/hr)	5		5	5		5	10		12	12		10
Turn Type	Perm	NA		D.Pm		Perm		NA			NA	
Protected Phases		4						2			6	
Permitted Phases	4			4		4						
Actuated Green, G (s)		18.7		18.7		18.7		72.3			72.3	
Effective Green, g (s)		18.7		18.7		18.7		72.3			72.3	
Actuated g/C Ratio		0.19		0.19		0.19		0.72			0.72	
Clearance Time (s)		4.0		4.0		4.0		5.0			5.0	
Vehicle Extension (s)		2.0		2.0		2.0		2.0			2.0	
Lane Grp Cap (vph)		305		256		290		2558			2558	
v/s Ratio Prot								0.23			c0.33	
v/s Ratio Perm		0.01		c0.14		0.06						
v/c Ratio		0.03		0.73		0.33		0.32			0.46	
Uniform Delay, d1		33.3		38.3		35.2		5.0			5.8	
Progression Factor		1.00		1.00		1.00		0.05			1.00	
Incremental Delay, d2		0.0		8.9		0.2		0.2			0.6	
Delay (s)		33.3		47.2		35.4		0.5			6.4	
Level of Service		C		D		D		A			A	
Approach Delay (s)		33.3			40.4			0.5			6.4	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

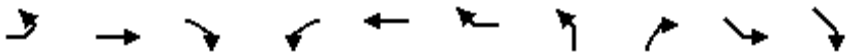
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	123	10	0	0	0	4	818	347	337	1030	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		1.00						0.95		1.00	0.95	
Frpb, ped/bikes		1.00						0.99		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.99						0.96		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		1840						3348		1770	3525	
Flt Permitted		1.00						0.95		0.95	1.00	
Satd. Flow (perm)		1840						3188		1770	3525	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	7	123	10	0	0	0	4	818	347	337	1030	18
RTOR Reduction (vph)	0	4	0	0	0	0	0	37	0	0	1	0
Lane Group Flow (vph)	0	136	0	0	0	0	0	1132	0	337	1047	0
Confl. Peds. (#/hr)							3		4			19
Turn Type	Split	NA					Perm	NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases							2					
Actuated Green, G (s)		11.8						53.2		21.5	79.2	
Effective Green, g (s)		11.8						53.2		21.5	79.2	
Actuated g/C Ratio		0.12						0.53		0.22	0.79	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		2.0						2.0		2.0	2.0	
Lane Grp Cap (vph)		217						1696		380	2791	
v/s Ratio Prot		c0.07								c0.19	0.30	
v/s Ratio Perm								c0.36				
v/c Ratio		0.63						0.67		0.89	0.38	
Uniform Delay, d1		42.0						17.0		38.1	3.1	
Progression Factor		1.00						1.00		1.33	0.68	
Incremental Delay, d2		4.1						2.1		19.1	0.3	
Delay (s)		46.1						19.1		69.6	2.4	
Level of Service		D						B		E	A	
Approach Delay (s)		46.1			0.0			19.1			18.8	
Approach LOS		D			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER
Lane Configurations										
Volume (veh/h)	0	423	0	0	364	996	0	1024	0	0
Sign Control		Free			Free		Stop		Stop	
Grade		0%			0%		0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	423	0	0	364	996	0	1024	0	0
Pedestrians							33		9	
Lane Width (ft)							12.0		0.0	
Walking Speed (ft/s)							4.0		4.0	
Percent Blockage							3		0	
Right turn flare (veh)										
Median type		None			None					
Median storage veh)										
Upstream signal (ft)		767			192					
pX, platoon unblocked	0.84						0.84		0.84	0.84
vC, conflicting volume	1369			456			1825	244	1608	829
vC1, stage 1 conf vol										
vC2, stage 2 conf vol										
vCu, unblocked vol	1051			456			1596	244	1337	405
tC, single (s)	4.1			4.1			6.5	7.0	7.5	6.5
tC, 2 stage (s)										
tF (s)	2.2			2.2			4.0	3.3	3.5	4.0
p0 queue free %	100			100			100	0	0	100
cM capacity (veh/h)	551			1071			86	732	0	434

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	212	212	243	453	664	512	512
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	332	664	512	512
cSH	1700	1700	1700	1700	1700	732	732
Volume to Capacity	0.12	0.12	0.14	0.27	0.39	0.70	0.70
Queue Length 95th (ft)	0	0	0	0	0	144	144
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	20.5	20.5
Lane LOS						C	C
Approach Delay (s)	0.0		0.0			20.5	
Approach LOS						C	

Intersection Summary			
Average Delay	7.5		
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	40	302	913	172	35	829	129	146	207	40	140	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.5		4.0	4.5		4.0	5.5			5.5
Lane Util. Factor		1.00	0.91		1.00	0.91		1.00	1.00			1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.99		1.00	0.99			1.00
Flpb, ped/bikes		1.00	1.00		1.00	1.00		1.00	1.00			0.99
Frt		1.00	0.98		1.00	0.98		1.00	0.98			1.00
Flt Protected		0.95	1.00		0.95	1.00		0.95	1.00			0.98
Satd. Flow (prot)		1787	4955		1805	5037		1747	1783			1716
Flt Permitted		0.95	1.00		0.95	1.00		0.30	1.00			0.72
Satd. Flow (perm)		1787	4955		1805	5037		554	1783			1268
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	40	302	913	172	35	829	129	146	207	40	140	143
RTOR Reduction (vph)	0	0	23	0	0	19	0	0	6	0	0	0
Lane Group Flow (vph)	0	342	1062	0	35	939	0	146	241	0	0	283
Confl. Peds. (#/hr)		11		14	14		11	18		22	22	
Confl. Bikes (#/hr)				13			8			30		
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%	0%	3%	3%	3%	7%	7%
Turn Type	Prot	Prot	NA		Prot	NA		pm+pt	NA		Perm	NA
Protected Phases	7	7	4		3	8		5	2			6
Permitted Phases								2			6	
Actuated Green, G (s)		33.5	57.2		3.9	27.6		34.9	34.9			25.4
Effective Green, g (s)		33.5	57.2		3.9	27.6		34.9	34.9			25.4
Actuated g/C Ratio		0.30	0.52		0.04	0.25		0.32	0.32			0.23
Clearance Time (s)		4.0	4.5		4.0	4.5		4.0	5.5			5.5
Vehicle Extension (s)		3.0	3.0		3.0	3.0		3.0	3.0			3.0
Lane Grp Cap (vph)		544	2576		63	1263		235	565			292
v/s Ratio Prot		c0.19	0.21		0.02	c0.19		c0.03	0.14			
v/s Ratio Perm								0.17				c0.22
v/c Ratio		0.63	0.41		0.56	0.74		0.62	0.43			0.97
Uniform Delay, d1		32.9	16.1		52.2	37.9		31.3	29.6			41.9
Progression Factor		1.00	1.00		1.00	1.00		1.00	1.00			1.00
Incremental Delay, d2		5.4	0.5		10.2	4.0		5.0	2.3			45.4
Delay (s)		38.3	16.6		62.4	41.9		36.4	32.0			87.3
Level of Service		D	B		E	D		D	C			F
Approach Delay (s)			21.8			42.7			33.6			59.2
Approach LOS			C			D			C			E

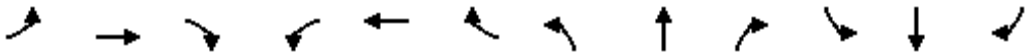
Intersection Summary			
HCM 2000 Control Delay	36.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	99.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBR
Lane Configurations	
Volume (vph)	346
Ideal Flow (vphpl)	1900
Total Lost time (s)	5.5
Lane Util. Factor	1.00
Frpb, ped/bikes	0.94
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1421
Flt Permitted	1.00
Satd. Flow (perm)	1421
Peak-hour factor, PHF	1.00
Adj. Flow (vph)	346
RTOR Reduction (vph)	266
Lane Group Flow (vph)	80
Confl. Peds. (#/hr)	18
Confl. Bikes (#/hr)	27
Heavy Vehicles (%)	7%
Turn Type	Perm
Protected Phases	
Permitted Phases	6
Actuated Green, G (s)	25.4
Effective Green, g (s)	25.4
Actuated g/C Ratio	0.23
Clearance Time (s)	5.5
Vehicle Extension (s)	3.0
Lane Grp Cap (vph)	328
v/s Ratio Prot	
v/s Ratio Perm	0.06
v/c Ratio	0.24
Uniform Delay, d1	34.5
Progression Factor	1.00
Incremental Delay, d2	1.8
Delay (s)	36.2
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	7	13	99	72	157	14	885	224	101	666	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	16	12	12	12	12
Total Lost time (s)		4.5		4.5	4.5			4.5		4.5	4.5	
Lane Util. Factor		1.00		0.95	0.95			0.95		1.00	0.95	
Frpb, ped/bikes		0.99		1.00	0.95			0.99		1.00	0.93	
Flpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Frt		0.95		1.00	0.90			0.97		1.00	0.96	
Flt Protected		0.98		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1623		1698	1532			3801		1770	3149	
Flt Permitted		0.98		0.95	1.00			0.94		0.95	1.00	
Satd. Flow (perm)		1623		1698	1532			3570		1770	3149	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	13	7	13	99	72	157	14	885	224	101	666	280
RTOR Reduction (vph)	0	12	0	0	74	0	0	17	0	0	36	0
Lane Group Flow (vph)	0	21	0	89	165	0	0	1106	0	101	910	0
Confl. Peds. (#/hr)	34					34	70		22	22		70
Confl. Bikes (#/hr)			1			10			35			48
Heavy Vehicles (%)	8%	8%	8%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Split	NA		Split	NA		Perm	NA		Prot	NA	
Protected Phases	4	4		8	8			2		1	6	
Permitted Phases							2					
Actuated Green, G (s)		4.6		16.9	16.9			51.2		9.3	65.0	
Effective Green, g (s)		4.6		16.9	16.9			51.2		9.3	65.0	
Actuated g/C Ratio		0.05		0.17	0.17			0.51		0.09	0.65	
Clearance Time (s)		4.5		4.5	4.5			4.5		4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		74		286	258			1827		164	2046	
v/s Ratio Prot		c0.01		0.05	c0.11					c0.06	0.29	
v/s Ratio Perm								c0.31				
v/c Ratio		0.28		0.31	0.64			0.61		0.62	0.44	
Uniform Delay, d1		46.1		36.4	38.7			17.3		43.6	8.6	
Progression Factor		1.86		1.00	1.00			0.61		1.00	1.00	
Incremental Delay, d2		1.2		0.6	5.1			1.1		6.7	0.7	
Delay (s)		87.0		37.1	43.9			11.6		50.3	9.3	
Level of Service		F		D	D			B		D	A	
Approach Delay (s)		87.0			42.0			11.6			13.3	
Approach LOS		F			D			B			B	

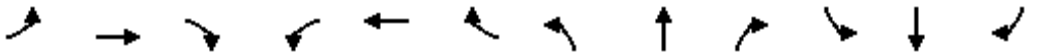
Intersection Summary			
HCM 2000 Control Delay	17.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	317	11	20	357	19	21
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	317	11	20	357	19	21
Pedestrians	1			13	29	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			1	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	224			1035		
pX, platoon unblocked						
vC, conflicting volume			357		571	206
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			357		571	206
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		96	97
cM capacity (veh/h)			1176		435	776

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	211	117	139	238	40
Volume Left	0	0	20	0	19
Volume Right	0	11	0	0	21
cSH	1700	1700	1176	1700	565
Volume to Capacity	0.12	0.07	0.02	0.14	0.07
Queue Length 95th (ft)	0	0	1	0	6
Control Delay (s)	0.0	0.0	1.3	0.0	11.9
Lane LOS			A		B
Approach Delay (s)	0.0		0.5		11.9
Approach LOS					B

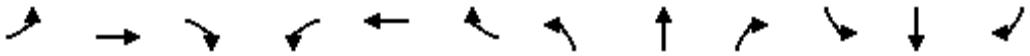
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	348	607	84	56	477	229	78	574	97	262	475	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	3.5		4.0	4.5		4.0	3.5	
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.97		1.00	0.98		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3400	3403		1787	3314		1719	3311		1752	3401	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3400	3403		1787	3314		1719	3311		1752	3401	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	348	607	84	56	477	229	78	574	97	262	475	44
RTOR Reduction (vph)	0	10	0	0	57	0	0	13	0	0	6	0
Lane Group Flow (vph)	348	681	0	56	649	0	78	658	0	262	513	0
Confl. Peds. (#/hr)	38		52	52		38	92		57	57		92
Confl. Bikes (#/hr)			8			15			34			54
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	5%	5%	5%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.9	30.3		7.4	23.3		5.8	32.8		13.0	41.0	
Effective Green, g (s)	14.9	30.3		7.4	23.3		5.8	32.8		13.0	41.0	
Actuated g/C Ratio	0.15	0.30		0.07	0.23		0.06	0.33		0.13	0.41	
Clearance Time (s)	4.0	4.0		4.0	3.5		4.0	4.5		4.0	3.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	506	1031		132	772		99	1086		227	1394	
v/s Ratio Prot	c0.10	0.20		0.03	c0.20		0.05	c0.20		c0.15	0.15	
v/s Ratio Perm												
v/c Ratio	0.69	0.66		0.42	0.84		0.79	0.61		1.15	0.37	
Uniform Delay, d1	40.3	30.4		44.3	36.6		46.5	28.2		43.5	20.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.18	0.73	
Incremental Delay, d2	3.9	3.3		2.2	10.7		32.8	2.5		105.5	0.7	
Delay (s)	44.2	33.7		46.5	47.3		79.3	30.7		157.0	15.6	
Level of Service	D	C		D	D		E	C		F	B	
Approach Delay (s)		37.2			47.2			35.7			63.0	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	45.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		

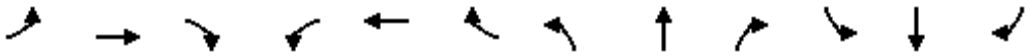
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	913	20	14	654	19	6	4	36	19	4	21
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	7	913	20	14	654	19	6	4	36	19	4	21
Pedestrians		6			3			26			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			2			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		414										
pX, platoon unblocked				0.84			0.84	0.84	0.84	0.84	0.84	
vC, conflicting volume	683			959			1347	1674	496	1213	1674	352
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	683			578			1038	1426	28	879	1427	352
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			96	96	96	90	96	97
cM capacity (veh/h)	905			823			138	108	859	181	108	638

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	7	609	324	14	436	237	46	44
Volume Left	7	0	0	14	0	0	6	19
Volume Right	0	0	20	0	0	19	36	21
cSH	905	1700	1700	823	1700	1700	375	252
Volume to Capacity	0.01	0.36	0.19	0.02	0.26	0.14	0.12	0.17
Queue Length 95th (ft)	1	0	0	1	0	0	10	16
Control Delay (s)	9.0	0.0	0.0	9.4	0.0	0.0	15.9	22.3
Lane LOS	A			A			C	C
Approach Delay (s)	0.1			0.2			15.9	22.3
Approach LOS							C	C

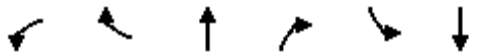
Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	40.4%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	444	108	67	0	0	32	0	384	67	12	169	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00				1.00		0.99			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.97				0.86		0.98			1.00	
Flt Protected	0.95	0.98				1.00		1.00			1.00	
Satd. Flow (prot)	1681	1670				1611		3438			3528	
Flt Permitted	0.95	0.98				1.00		1.00			0.92	
Satd. Flow (perm)	1681	1670				1611		3438			3256	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	444	108	67	0	0	32	0	384	67	12	169	0
RTOR Reduction (vph)	0	13	0	0	0	11	0	18	0	0	0	0
Lane Group Flow (vph)	311	295	0	0	0	21	0	433	0	0	181	0
Confl. Peds. (#/hr)			5						4			12
Confl. Bikes (#/hr)			5						11			19
Turn Type	Perm	NA				Perm		NA		Perm	NA	
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	52.0	52.0				52.0		21.0			21.0	
Actuated g/C Ratio	0.65	0.65				0.65		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1092	1085				1047		902			854	
v/s Ratio Prot								c0.13				
v/s Ratio Perm	c0.18	0.18				0.01					0.06	
v/c Ratio	0.28	0.27				0.02		0.48			0.21	
Uniform Delay, d1	6.0	6.0				5.0		24.9			23.0	
Progression Factor	1.00	1.00				1.00		1.00			1.00	
Incremental Delay, d2	0.7	0.6				0.0		1.8			0.6	
Delay (s)	6.7	6.6				5.0		26.7			23.6	
Level of Service	A	A				A		C			C	
Approach Delay (s)		6.6			5.0			26.7			23.6	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		

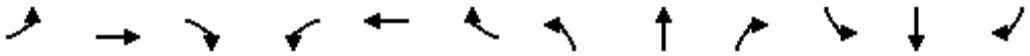
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	9	19	40	13	7	32
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	9	19	40	13	7	32
Pedestrians	6		2			8
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	1		0			1
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	100	60			59	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	100	60			59	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	98			100	
cM capacity (veh/h)	888	993			1537	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	28	53	39
Volume Left	9	0	7
Volume Right	19	13	0
cSH	957	1700	1537
Volume to Capacity	0.03	0.03	0.00
Queue Length 95th (ft)	2	0	0
Control Delay (s)	8.9	0.0	1.3
Lane LOS	A		A
Approach Delay (s)	8.9	0.0	1.3
Approach LOS	A		

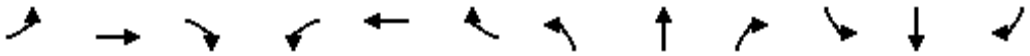
Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	20.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	0	17	443	0	429	0	685	0	0	746	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0		5.0			5.0	
Lane Util. Factor		1.00		1.00		1.00		0.95			0.95	
Frpb, ped/bikes		0.99		1.00		0.98		1.00			1.00	
Flpb, ped/bikes		1.00		1.00		1.00		1.00			1.00	
Frt		0.91		1.00		0.85		1.00			1.00	
Flt Protected		0.98		0.95		1.00		1.00			1.00	
Satd. Flow (prot)		1646		1764		1559		3539			3539	
Flt Permitted		0.98		0.74		1.00		1.00			1.00	
Satd. Flow (perm)		1646		1376		1559		3539			3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	8	0	17	443	0	429	0	685	0	0	746	0
RTOR Reduction (vph)	0	15	0	0	0	96	0	0	0	0	0	0
Lane Group Flow (vph)	0	10	0	443	0	333	0	685	0	0	746	0
Confl. Peds. (#/hr)	3		3	3		3	4		12	12		4
Turn Type	Perm	NA		D.Pm		Perm		NA			NA	
Protected Phases		4						2			6	
Permitted Phases	4			4		4						
Actuated Green, G (s)		34.0		34.0		34.0		47.0			47.0	
Effective Green, g (s)		34.0		34.0		34.0		47.0			47.0	
Actuated g/C Ratio		0.38		0.38		0.38		0.52			0.52	
Clearance Time (s)		4.0		4.0		4.0		5.0			5.0	
Vehicle Extension (s)		3.0		3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)		621		519		588		1848			1848	
v/s Ratio Prot								0.19			c0.21	
v/s Ratio Perm		0.01		c0.32		0.21						
v/c Ratio		0.02		0.85		0.57		0.37			0.40	
Uniform Delay, d1		17.5		25.7		22.2		12.7			13.0	
Progression Factor		1.00		1.00		1.00		0.51			1.00	
Incremental Delay, d2		0.0		12.9		1.3		0.5			0.7	
Delay (s)		17.5		38.6		23.4		7.0			13.7	
Level of Service		B		D		C		A			B	
Approach Delay (s)		17.5			31.1			7.0			13.7	
Approach LOS		B			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

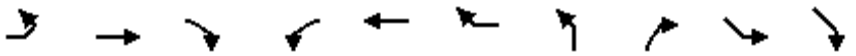
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	30	10	0	0	0	4	684	196	126	1070	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		1.00						0.95		1.00	0.95	
Frpb, ped/bikes		1.00						0.99		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.97						0.97		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		1793						3383		1770	3533	
Flt Permitted		1.00						0.95		0.95	1.00	
Satd. Flow (perm)		1793						3220		1770	3533	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1	30	10	0	0	0	4	684	196	126	1070	10
RTOR Reduction (vph)	0	9	0	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	0	32	0	0	0	0	0	867	0	126	1080	0
Confl. Peds. (#/hr)			1			1	3		10	10		3
Turn Type	Perm	NA					Perm	NA		Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4						2					
Actuated Green, G (s)		4.9						60.5		11.1	76.1	
Effective Green, g (s)		4.9						60.5		11.1	76.1	
Actuated g/C Ratio		0.05						0.67		0.12	0.85	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		97						2164		218	2987	
v/s Ratio Prot										c0.07	0.31	
v/s Ratio Perm		0.02						c0.27				
v/c Ratio		0.33						0.40		0.58	0.36	
Uniform Delay, d1		41.0						6.6		37.2	1.5	
Progression Factor		1.00						1.00		1.11	0.50	
Incremental Delay, d2		2.0						0.6		3.2	0.3	
Delay (s)		42.9						7.2		44.6	1.1	
Level of Service		D						A		D	A	
Approach Delay (s)		42.9			0.0			7.2			5.6	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		

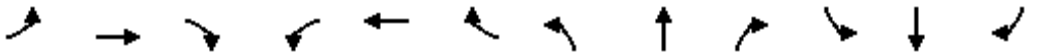
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER
Lane Configurations										
Volume (veh/h)	0	236	0	0	377	1103	0	900	0	0
Sign Control		Free			Free		Stop		Stop	
Grade		0%			0%		0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	236	0	0	377	1103	0	900	0	0
Pedestrians							24			
Lane Width (ft)							12.0			
Walking Speed (ft/s)							4.0			
Percent Blockage							2			
Right turn flare (veh)										
Median type		None			None					
Median storage veh)										
Upstream signal (ft)		767			192					
pX, platoon unblocked	0.82						0.82		0.82	0.82
vC, conflicting volume	1480			260			1740	142	1395	637
vC1, stage 1 conf vol										
vC2, stage 2 conf vol										
vCu, unblocked vol	1153			260			1469	142	1049	128
tC, single (s)	4.1			4.1			6.5	7.0	7.5	6.5
tC, 2 stage (s)										
tF (s)	2.2			2.2			4.0	3.3	3.5	4.0
p0 queue free %	100			100			100	0	0	100
cM capacity (veh/h)	495			1275			102	859	0	614

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	118	118	251	493	735	450	450
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	368	735	450	450
cSH	1700	1700	1700	1700	1700	859	859
Volume to Capacity	0.07	0.07	0.15	0.29	0.43	0.52	0.52
Queue Length 95th (ft)	0	0	0	0	0	78	78
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	13.7	13.7
Lane LOS						B	B
Approach Delay (s)	0.0		0.0			13.7	
Approach LOS						B	

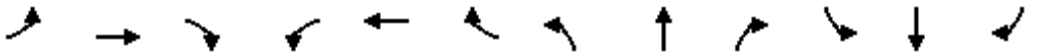
Intersection Summary				
Average Delay	4.7			
Intersection Capacity Utilization	48.9%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	325	698	148	24	903	87	154	123	30	99	136	376
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	5.5			5.5	5.5
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99			1.00	0.94
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.97		1.00	0.99		1.00	0.97			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)	1787	4947		1805	5103		1752	1781			1733	1419
Flt Permitted	0.95	1.00		0.95	1.00		0.43	1.00			0.79	1.00
Satd. Flow (perm)	1787	4947		1805	5103		801	1781			1404	1419
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	325	698	148	24	903	87	154	123	30	99	136	376
RTOR Reduction (vph)	0	30	0	0	13	0	0	10	0	0	0	273
Lane Group Flow (vph)	325	816	0	24	977	0	154	143	0	0	235	103
Confl. Peds. (#/hr)			12			5			10	10		16
Confl. Bikes (#/hr)			12			1			10			41
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	3%	3%	3%	7%	7%	7%
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	21.5	37.7		3.2	19.4		35.1	35.1			24.6	24.6
Effective Green, g (s)	21.5	37.7		3.2	19.4		35.1	35.1			24.6	24.6
Actuated g/C Ratio	0.24	0.42		0.04	0.22		0.39	0.39			0.27	0.27
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	5.5			5.5	5.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	426	2072		64	1099		381	694			383	387
v/s Ratio Prot	c0.18	0.17		0.01	c0.19		c0.03	0.08				
v/s Ratio Perm							0.13				c0.17	0.07
v/c Ratio	0.76	0.39		0.38	0.89		0.40	0.21			0.61	0.27
Uniform Delay, d1	31.9	18.2		42.4	34.3		18.8	18.2			28.6	25.6
Progression Factor	1.00	1.00		1.23	0.81		1.00	1.00			1.00	1.00
Incremental Delay, d2	12.2	0.6		3.0	9.2		0.7	0.7			7.2	1.7
Delay (s)	44.1	18.8		55.0	37.0		19.5	18.9			35.7	27.3
Level of Service	D	B		E	D		B	B			D	C
Approach Delay (s)		25.8			37.4			19.2			30.5	
Approach LOS		C			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	101.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	6	0	6	94	72	179	0	665	117	76	598	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	16	12	12	12	12
Total Lost time (s)		4.5		4.5	4.5			4.5		4.5	4.5	
Lane Util. Factor		1.00		0.95	0.95			0.95		1.00	0.95	
Frpb, ped/bikes		0.98		1.00	0.99			0.99		1.00	0.97	
Flpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Frt		0.93		1.00	0.90			0.98		1.00	0.95	
Flt Protected		0.98		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1576		1698	1578			3853		1770	3282	
Flt Permitted		0.98		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (perm)		1576		1698	1578			3853		1770	3282	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	6	0	6	94	72	179	0	665	117	76	598	269
RTOR Reduction (vph)	0	12	0	0	103	0	0	10	0	0	37	0
Lane Group Flow (vph)	0	0	0	85	158	0	0	772	0	76	830	0
Confl. Peds. (#/hr)	4					4	22		18			22
Confl. Bikes (#/hr)			1			2			33			27
Heavy Vehicles (%)	8%	8%	8%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Split	NA		Split	NA			NA		Prot	NA	
Protected Phases	4	4		8	8			2		1	6	
Permitted Phases							2					
Actuated Green, G (s)		1.1		16.2	16.2			47.1		7.6	59.2	
Effective Green, g (s)		1.1		16.2	16.2			47.1		7.6	59.2	
Actuated g/C Ratio		0.01		0.18	0.18			0.52		0.08	0.66	
Clearance Time (s)		4.5		4.5	4.5			4.5		4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		19		305	284			2016		149	2158	
v/s Ratio Prot		c0.00		0.05	c0.10			0.20		c0.04	c0.25	
v/s Ratio Perm												
v/c Ratio		0.01		0.28	0.55			0.38		0.51	0.38	
Uniform Delay, d1		43.9		31.9	33.6			12.8		39.4	7.1	
Progression Factor		1.00		1.00	1.00			0.96		1.00	1.00	
Incremental Delay, d2		0.1		0.5	2.3			0.5		2.9	0.5	
Delay (s)		44.0		32.4	36.0			12.8		42.3	7.6	
Level of Service		D		C	D			B		D	A	
Approach Delay (s)		44.0			35.1			12.8			10.4	
Approach LOS		D			D			B			B	

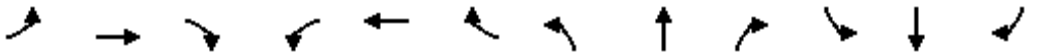
Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	222	23	30	284	64	31
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	222	23	30	284	64	31
Pedestrians	1				25	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	213			950		
pX, platoon unblocked						
vC, conflicting volume			270		462	148
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			270		462	148
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		87	96
cM capacity (veh/h)			1271		508	858

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	148	97	125	189	95
Volume Left	0	0	30	0	64
Volume Right	0	23	0	0	31
cSH	1700	1700	1271	1700	586
Volume to Capacity	0.09	0.06	0.02	0.11	0.16
Queue Length 95th (ft)	0	0	2	0	14
Control Delay (s)	0.0	0.0	2.1	0.0	12.3
Lane LOS			A		B
Approach Delay (s)	0.0		0.8		12.3
Approach LOS					B

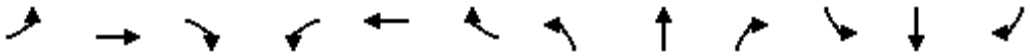
Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	228	498	68	117	552	238	90	320	66	147	511	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	3.5		4.0	4.5		4.0	3.5	
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.95		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3400	3418		1787	3355		1719	3311		1752	3447	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3400	3418		1787	3355		1719	3311		1752	3447	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	228	498	68	117	552	238	90	320	66	147	511	38
RTOR Reduction (vph)	0	12	0	0	52	0	0	19	0	0	5	0
Lane Group Flow (vph)	228	554	0	117	738	0	90	367	0	147	544	0
Confl. Peds. (#/hr)			31			31			30			37
Confl. Bikes (#/hr)			9			7			27			27
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	5%	5%	5%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	11.2	29.0		8.9	27.2		8.4	24.6		11.0	28.2	
Effective Green, g (s)	11.2	29.0		8.9	27.2		8.4	24.6		11.0	28.2	
Actuated g/C Ratio	0.12	0.32		0.10	0.30		0.09	0.27		0.12	0.31	
Clearance Time (s)	4.0	4.0		4.0	3.5		4.0	4.5		4.0	3.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	423	1101		176	1013		160	905		214	1080	
v/s Ratio Prot	0.07	0.16		c0.07	c0.22		0.05	0.11		c0.08	c0.16	
v/s Ratio Perm												
v/c Ratio	0.54	0.50		0.66	0.73		0.56	0.41		0.69	0.50	
Uniform Delay, d1	37.0	24.7		39.1	28.1		39.0	26.7		37.8	25.2	
Progression Factor	1.29	0.79		1.00	1.00		1.00	1.00		1.03	0.85	
Incremental Delay, d2	1.2	1.5		9.1	4.6		4.5	1.4		8.4	1.6	
Delay (s)	48.9	21.1		48.2	32.7		43.5	28.1		47.5	23.1	
Level of Service	D	C		D	C		D	C		D	C	
Approach Delay (s)		29.1			34.7			31.0			28.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

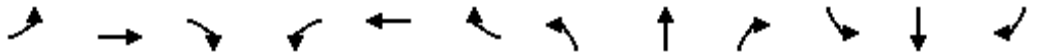
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	27	647	23	19	909	38	8	5	11	16	3	44
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	27	647	23	19	909	38	8	5	11	16	3	44
Pedestrians		3			4			11			7	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		418										
pX, platoon unblocked				0.89			0.89	0.89	0.89	0.89	0.89	
vC, conflicting volume	954			681			1264	1716	350	1368	1708	484
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	954			400			1054	1560	29	1170	1551	484
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			98			94	95	99	86	97	92
cM capacity (veh/h)	718			1027			136	93	919	118	94	527

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	27	431	239	19	606	341	24	63
Volume Left	27	0	0	19	0	0	8	16
Volume Right	0	0	23	0	0	38	11	44
cSH	718	1700	1700	1027	1700	1700	193	252
Volume to Capacity	0.04	0.25	0.14	0.02	0.36	0.20	0.12	0.25
Queue Length 95th (ft)	3	0	0	1	0	0	10	24
Control Delay (s)	10.2	0.0	0.0	8.6	0.0	0.0	26.3	24.0
Lane LOS	B			A			D	C
Approach Delay (s)	0.4			0.2			26.3	24.0
Approach LOS							D	C

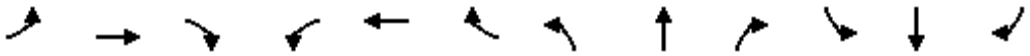
Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	38.6%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	655	72	127	0	0	12	0	164	6	3	178	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.95				0.86		0.99			1.00	
Flt Protected	0.95	0.97				1.00		1.00			1.00	
Satd. Flow (prot)	1681	1638				1611		3515			3536	
Flt Permitted	0.95	0.97				1.00		1.00			0.95	
Satd. Flow (perm)	1681	1638				1611		3515			3369	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	655	72	127	0	0	12	0	164	6	3	178	0
RTOR Reduction (vph)	0	19	0	0	0	4	0	3	0	0	0	0
Lane Group Flow (vph)	432	403	0	0	0	8	0	167	0	0	181	0
Confl. Peds. (#/hr)			5						4			12
Confl. Bikes (#/hr)			5						11			19
Turn Type	Perm	NA				Perm		NA		Perm	NA	
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	52.0	52.0				52.0		21.0			21.0	
Actuated g/C Ratio	0.65	0.65				0.65		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1092	1064				1047		922			884	
v/s Ratio Prot								0.05				
v/s Ratio Perm	c0.26	0.25				0.00					c0.05	
v/c Ratio	0.40	0.38				0.01		0.18			0.20	
Uniform Delay, d1	6.6	6.5				4.9		22.8			23.0	
Progression Factor	1.00	1.00				1.00		1.00			1.00	
Incremental Delay, d2	1.1	1.0				0.0		0.4			0.5	
Delay (s)	7.7	7.5				4.9		23.3			23.5	
Level of Service	A	A				A		C			C	
Approach Delay (s)		7.6			4.9			23.3			23.5	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		

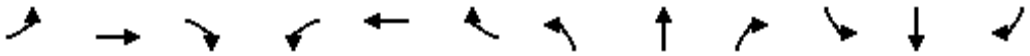
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	56	0	51	3	0	4	23	22	7	7	22	28
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	56	0	51	3	0	4	23	22	7	7	22	28
Pedestrians					7			1			6	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					1			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	132	132	37	180	142	38	50			36		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	132	132	37	180	142	38	50			36		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	100	95	100	100	100	99			100		
cM capacity (veh/h)	817	740	1034	724	730	1022	1557			1566		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	107	7	52	57
Volume Left	56	3	23	7
Volume Right	51	4	7	28
cSH	908	869	1557	1566
Volume to Capacity	0.12	0.01	0.01	0.00
Queue Length 95th (ft)	10	1	1	0
Control Delay (s)	9.5	9.2	3.3	0.9
Lane LOS	A	A	A	A
Approach Delay (s)	9.5	9.2	3.3	0.9
Approach LOS	A	A		

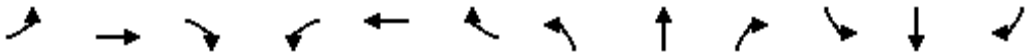
Intersection Summary				
Average Delay	5.9			
Intersection Capacity Utilization	24.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	0	20	199	0	256	0	838	0	0	1200	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0		5.0			5.0	
Lane Util. Factor		1.00		1.00		1.00		0.95			0.95	
Frpb, ped/bikes		0.99		1.00		0.98		1.00			1.00	
Flpb, ped/bikes		1.00		0.99		1.00		1.00			1.00	
Frt		0.90		1.00		0.85		1.00			1.00	
Flt Protected		0.99		0.95		1.00		1.00			1.00	
Satd. Flow (prot)		1635		1759		1555		3539			3539	
Flt Permitted		0.99		0.74		1.00		1.00			1.00	
Satd. Flow (perm)		1635		1369		1555		3539			3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	8	0	20	199	0	256	0	838	0	0	1200	0
RTOR Reduction (vph)	0	18	0	0	0	155	0	0	0	0	0	0
Lane Group Flow (vph)	0	10	0	199	0	101	0	838	0	0	1200	0
Confl. Peds. (#/hr)	5		5	5		5	10		12	12		10
Turn Type	Perm	NA		D.Pm		Perm		NA			NA	
Protected Phases		4						2			6	
Permitted Phases	4			4		4						
Actuated Green, G (s)		19.3		19.3		19.3		71.7			71.7	
Effective Green, g (s)		19.3		19.3		19.3		71.7			71.7	
Actuated g/C Ratio		0.19		0.19		0.19		0.72			0.72	
Clearance Time (s)		4.0		4.0		4.0		5.0			5.0	
Vehicle Extension (s)		2.0		2.0		2.0		2.0			2.0	
Lane Grp Cap (vph)		315		264		300		2537			2537	
v/s Ratio Prot								0.24			c0.34	
v/s Ratio Perm		0.01		c0.15		0.06						
v/c Ratio		0.03		0.75		0.34		0.33			0.47	
Uniform Delay, d1		32.8		38.1		34.8		5.2			6.1	
Progression Factor		1.00		1.00		1.00		0.05			1.00	
Incremental Delay, d2		0.0		10.3		0.2		0.3			0.6	
Delay (s)		32.8		48.4		35.1		0.5			6.7	
Level of Service		C		D		D		A			A	
Approach Delay (s)		32.8			40.9			0.5			6.7	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

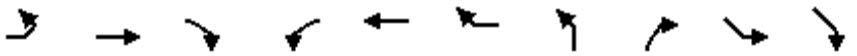
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	123	10	0	0	0	4	831	354	337	1064	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		1.00						0.95		1.00	0.95	
Frpb, ped/bikes		1.00						0.99		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.99						0.96		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		1840						3347		1770	3526	
Flt Permitted		1.00						0.95		0.95	1.00	
Satd. Flow (perm)		1840						3188		1770	3526	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	7	123	10	0	0	0	4	831	354	337	1064	18
RTOR Reduction (vph)	0	4	0	0	0	0	0	37	0	0	1	0
Lane Group Flow (vph)	0	136	0	0	0	0	0	1152	0	337	1081	0
Confl. Peds. (#/hr)							3		4			19
Turn Type	Split	NA					Perm	NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases							2					
Actuated Green, G (s)		11.8						53.2		21.5	79.2	
Effective Green, g (s)		11.8						53.2		21.5	79.2	
Actuated g/C Ratio		0.12						0.53		0.22	0.79	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		2.0						2.0		2.0	2.0	
Lane Grp Cap (vph)		217						1696		380	2792	
v/s Ratio Prot		c0.07								c0.19	0.31	
v/s Ratio Perm								c0.36				
v/c Ratio		0.63						0.68		0.89	0.39	
Uniform Delay, d1		42.0						17.1		38.1	3.1	
Progression Factor		1.00						1.00		1.32	0.67	
Incremental Delay, d2		4.1						2.2		18.9	0.4	
Delay (s)		46.1						19.4		69.4	2.4	
Level of Service		D						B		E	A	
Approach Delay (s)		46.1			0.0			19.4			18.3	
Approach LOS		D			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		

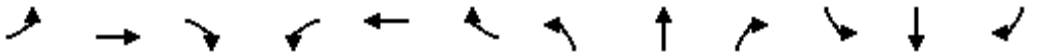
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER
Lane Configurations										
Volume (veh/h)	0	438	0	0	372	1017	0	1030	0	0
Sign Control		Free			Free		Stop		Stop	
Grade		0%			0%		0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	438	0	0	372	1017	0	1030	0	0
Pedestrians							33		9	
Lane Width (ft)							12.0		0.0	
Walking Speed (ft/s)							4.0		4.0	
Percent Blockage							3		0	
Right turn flare (veh)										
Median type		None			None					
Median storage veh)										
Upstream signal (ft)		767			192					
pX, platoon unblocked	0.83						0.83		0.83	0.83
vC, conflicting volume	1398			471			1869	252	1630	852
vC1, stage 1 conf vol										
vC2, stage 2 conf vol										
vCu, unblocked vol	1068			471			1636	252	1347	409
tC, single (s)	4.1			4.1			6.5	7.0	7.5	6.5
tC, 2 stage (s)										
tF (s)	2.2			2.2			4.0	3.3	3.5	4.0
p0 queue free %	100			100			100	0	0	100
cM capacity (veh/h)	538			1057			81	724	0	428

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	219	219	248	463	678	515	515
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	339	678	515	515
cSH	1700	1700	1700	1700	1700	724	724
Volume to Capacity	0.13	0.13	0.15	0.27	0.40	0.71	0.71
Queue Length 95th (ft)	0	0	0	0	0	150	150
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	21.2	21.2
Lane LOS						C	C
Approach Delay (s)	0.0		0.0			21.2	
Approach LOS						C	

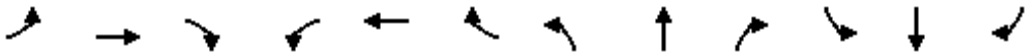
Intersection Summary				
Average Delay	7.7			
Intersection Capacity Utilization	55.6%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	342	933	172	35	858	133	146	207	40	147	143	346
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	5.5			5.5	5.5
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99			1.00	0.94
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			0.99	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)	1787	4959		1805	5037		1748	1783			1715	1421
Flt Permitted	0.95	1.00		0.95	1.00		0.29	1.00			0.72	1.00
Satd. Flow (perm)	1787	4959		1805	5037		534	1783			1259	1421
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	342	933	172	35	858	133	146	207	40	147	143	346
RTOR Reduction (vph)	0	23	0	0	19	0	0	6	0	0	0	266
Lane Group Flow (vph)	342	1082	0	35	972	0	146	241	0	0	290	80
Confl. Peds. (#/hr)	11		14	14		11	18		22	22		18
Confl. Bikes (#/hr)			13			8			30			27
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	3%	3%	3%	7%	7%	7%
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	33.5	57.2		3.9	27.6		34.9	34.9			25.4	25.4
Effective Green, g (s)	33.5	57.2		3.9	27.6		34.9	34.9			25.4	25.4
Actuated g/C Ratio	0.30	0.52		0.04	0.25		0.32	0.32			0.23	0.23
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	5.5			5.5	5.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	544	2578		63	1263		230	565			290	328
v/s Ratio Prot	c0.19	0.22		0.02	c0.19		c0.03	0.14				
v/s Ratio Perm							0.17				c0.23	0.06
v/c Ratio	0.63	0.42		0.56	0.77		0.63	0.43			1.00	0.24
Uniform Delay, d1	32.9	16.2		52.2	38.3		31.5	29.6			42.3	34.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	5.4	0.5		10.2	4.6		5.6	2.3			52.8	1.8
Delay (s)	38.3	16.7		62.4	42.8		37.1	32.0			95.1	36.2
Level of Service	D	B		E	D		D	C			F	D
Approach Delay (s)		21.8			43.5			33.9			63.1	
Approach LOS		C			D			C			E	

Intersection Summary			
HCM 2000 Control Delay	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	13	7	13	99	88	186	14	875	224	147	654	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	16	12	12	12	12
Total Lost time (s)		4.5		4.5	4.5			4.5		4.5	4.5	
Lane Util. Factor		1.00		0.95	0.95			0.95		1.00	0.95	
Frpb, ped/bikes		0.99		1.00	0.95			0.99		1.00	0.93	
Flpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Frt		0.95		1.00	0.90			0.97		1.00	0.96	
Flt Protected		0.98		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1623		1698	1534			3798		1770	3144	
Flt Permitted		0.98		0.95	1.00			0.94		0.95	1.00	
Satd. Flow (perm)		1623		1698	1534			3567		1770	3144	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	13	7	13	99	88	186	14	875	224	147	654	280
RTOR Reduction (vph)	0	12	0	0	72	0	0	19	0	0	39	0
Lane Group Flow (vph)	0	21	0	89	212	0	0	1094	0	147	895	0
Confl. Peds. (#/hr)	34					34	70		22	22		70
Confl. Bikes (#/hr)			1			10			35			48
Heavy Vehicles (%)	8%	8%	8%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Split	NA		Split	NA		Perm	NA		Prot	NA	
Protected Phases	4	4		8	8			2		1	6	
Permitted Phases							2					
Actuated Green, G (s)		4.6		18.1	18.1			47.2		12.1	63.8	
Effective Green, g (s)		4.6		18.1	18.1			47.2		12.1	63.8	
Actuated g/C Ratio		0.05		0.18	0.18			0.47		0.12	0.64	
Clearance Time (s)		4.5		4.5	4.5			4.5		4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		74		307	277			1683		214	2005	
v/s Ratio Prot		c0.01		0.05	c0.14					c0.08	0.28	
v/s Ratio Perm								c0.31				
v/c Ratio		0.28		0.29	0.77			0.65		0.69	0.45	
Uniform Delay, d1		46.1		35.4	38.9			20.1		42.1	9.2	
Progression Factor		1.88		1.00	1.00			0.61		1.00	1.00	
Incremental Delay, d2		1.1		0.5	11.9			1.4		8.8	0.7	
Delay (s)		88.0		35.9	50.8			13.7		51.0	9.9	
Level of Service		F		D	D			B		D	A	
Approach Delay (s)		88.0			47.3			13.7			15.5	
Approach LOS		F			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	313	57	71	353	68	33
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	313	57	71	353	68	33
Pedestrians	1			13	29	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			1	2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	224			1016		
pX, platoon unblocked						
vC, conflicting volume			399		690	227
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			399		690	227
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		80	96
cM capacity (veh/h)			1135		348	752

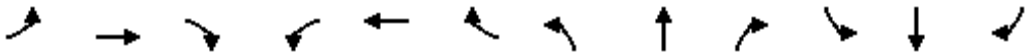
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	209	161	189	235	101
Volume Left	0	0	71	0	68
Volume Right	0	57	0	0	33
cSH	1700	1700	1135	1700	423
Volume to Capacity	0.12	0.09	0.06	0.14	0.24
Queue Length 95th (ft)	0	0	5	0	23
Control Delay (s)	0.0	0.0	3.5	0.0	16.2
Lane LOS			A		C
Approach Delay (s)	0.0		1.6		16.2
Approach LOS					C

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	348	635	84	81	495	229	78	564	129	262	463	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	3.5		4.0	4.5		4.0	3.5	
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.95		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3400	3407		1787	3320		1719	3275		1752	3399	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3400	3407		1787	3320		1719	3275		1752	3399	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	348	635	84	81	495	229	78	564	129	262	463	44
RTOR Reduction (vph)	0	10	0	0	54	0	0	19	0	0	7	0
Lane Group Flow (vph)	348	709	0	81	670	0	78	674	0	262	500	0
Confl. Peds. (#/hr)	38		52	52		38	92		57	57		92
Confl. Bikes (#/hr)			8			15			34			54
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	5%	5%	5%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.9	29.4		8.3	23.3		5.8	32.8		13.0	41.0	
Effective Green, g (s)	14.9	29.4		8.3	23.3		5.8	32.8		13.0	41.0	
Actuated g/C Ratio	0.15	0.29		0.08	0.23		0.06	0.33		0.13	0.41	
Clearance Time (s)	4.0	4.0		4.0	3.5		4.0	4.5		4.0	3.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	506	1001		148	773		99	1074		227	1393	
v/s Ratio Prot	c0.10	0.21		0.05	c0.20		0.05	c0.21		c0.15	0.15	
v/s Ratio Perm												
v/c Ratio	0.69	0.71		0.55	0.87		0.79	0.63		1.15	0.36	
Uniform Delay, d1	40.3	31.5		44.0	36.9		46.5	28.4		43.5	20.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.17	0.72	
Incremental Delay, d2	3.9	4.2		4.1	12.6		32.8	2.8		105.5	0.7	
Delay (s)	44.2	35.7		48.1	49.4		79.3	31.2		156.6	15.4	
Level of Service	D	D		D	D		E	C		F	B	
Approach Delay (s)		38.5			49.3			36.1			63.5	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	46.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

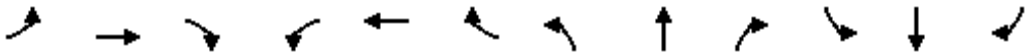
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	75	902	20	14	646	45	6	4	36	40	4	67
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	75	902	20	14	646	45	6	4	36	40	4	67
Pedestrians		6			3			26			10	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			2			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		414										
pX, platoon unblocked				0.84			0.84	0.84	0.84	0.84	0.84	
vC, conflicting volume	701			948			1514	1817	490	1348	1804	362
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	701			553			1228	1589	7	1031	1574	362
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	92			98			93	95	96	69	95	89
cM capacity (veh/h)	891			837			86	79	881	131	81	630

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	75	601	321	14	431	260	46	111
Volume Left	75	0	0	14	0	0	6	40
Volume Right	0	0	20	0	0	45	36	67
cSH	891	1700	1700	837	1700	1700	285	240
Volume to Capacity	0.08	0.35	0.19	0.02	0.25	0.15	0.16	0.46
Queue Length 95th (ft)	7	0	0	1	0	0	14	57
Control Delay (s)	9.4	0.0	0.0	9.4	0.0	0.0	20.1	32.3
Lane LOS	A			A			C	D
Approach Delay (s)	0.7			0.2			20.1	32.3
Approach LOS							C	D

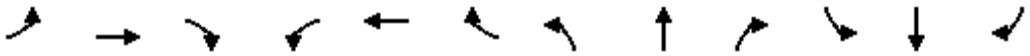
Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	52.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	444	108	99	0	0	32	0	392	67	12	184	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00				1.00		0.99			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.95				0.86		0.98			1.00	
Flt Protected	0.95	0.98				1.00		1.00			1.00	
Satd. Flow (prot)	1681	1650				1611		3440			3528	
Flt Permitted	0.95	0.98				1.00		1.00			0.92	
Satd. Flow (perm)	1681	1650				1611		3440			3263	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	444	108	99	0	0	32	0	392	67	12	184	0
RTOR Reduction (vph)	0	20	0	0	0	11	0	17	0	0	0	0
Lane Group Flow (vph)	329	302	0	0	0	21	0	442	0	0	196	0
Confl. Peds. (#/hr)			5						4			12
Confl. Bikes (#/hr)			5						11			19
Turn Type	Perm	NA				Perm		NA		Perm	NA	
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	52.0	52.0				52.0		21.0			21.0	
Actuated g/C Ratio	0.65	0.65				0.65		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1092	1072				1047		903			856	
v/s Ratio Prot								c0.13				
v/s Ratio Perm	c0.20	0.18				0.01					0.06	
v/c Ratio	0.30	0.28				0.02		0.49			0.23	
Uniform Delay, d1	6.1	6.0				5.0		25.0			23.1	
Progression Factor	1.00	1.00				1.00		1.00			1.00	
Incremental Delay, d2	0.7	0.7				0.0		1.9			0.6	
Delay (s)	6.8	6.7				5.0		26.9			23.8	
Level of Service	A	A				A		C			C	
Approach Delay (s)		6.7			5.0			26.9			23.8	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		

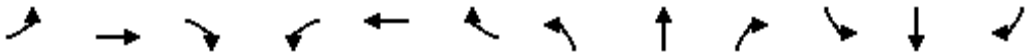
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	66	0	79	9	0	19	105	40	13	7	32	105
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	66	0	79	9	0	19	105	40	13	7	32	105
Pedestrians					6			2			8	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					1			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	382	368	86	442	414	60	137			59		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	382	368	86	442	414	60	137			59		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	87	100	92	98	100	98	93			100		
cM capacity (veh/h)	526	516	970	450	486	993	1447			1537		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	145	28	158	144
Volume Left	66	9	105	7
Volume Right	79	19	13	105
cSH	701	715	1447	1537
Volume to Capacity	0.21	0.04	0.07	0.00
Queue Length 95th (ft)	19	3	6	0
Control Delay (s)	11.5	10.2	5.3	0.4
Lane LOS	B	B	A	A
Approach Delay (s)	11.5	10.2	5.3	0.4
Approach LOS	B	B		

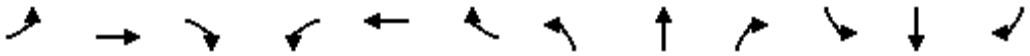
Intersection Summary				
Average Delay	6.0			
Intersection Capacity Utilization	41.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	0	10	580	0	500	0	1090	0	0	1280	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0		5.0			5.0	
Lane Util. Factor		1.00		1.00		1.00		0.95			0.95	
Frpb, ped/bikes		0.99		1.00		0.98		1.00			1.00	
Flpb, ped/bikes		1.00		1.00		1.00		1.00			1.00	
Frt		0.93		1.00		0.85		1.00			1.00	
Flt Protected		0.98		0.95		1.00		1.00			1.00	
Satd. Flow (prot)		1679		1764		1559		3539			3539	
Flt Permitted		0.98		0.74		1.00		1.00			1.00	
Satd. Flow (perm)		1679		1382		1559		3539			3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	10	580	0	500	0	1090	0	0	1280	0
RTOR Reduction (vph)	0	12	0	0	0	28	0	0	0	0	0	0
Lane Group Flow (vph)	0	8	0	580	0	472	0	1090	0	0	1280	0
Confl. Peds. (#/hr)	3		3	3		3	4		12	12		4
Turn Type	Perm	NA		D.Pm		Perm		NA			NA	
Protected Phases		4						2			6	
Permitted Phases	4			4		4						
Actuated Green, G (s)		38.0		38.0		38.0		43.0			43.0	
Effective Green, g (s)		38.0		38.0		38.0		43.0			43.0	
Actuated g/C Ratio		0.42		0.42		0.42		0.48			0.48	
Clearance Time (s)		4.0		4.0		4.0		5.0			5.0	
Vehicle Extension (s)		3.0		3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)		708		583		658		1690			1690	
v/s Ratio Prot								0.31			c0.36	
v/s Ratio Perm		0.01		c0.42		0.30						
v/c Ratio		0.01		0.99		0.72		0.64			0.76	
Uniform Delay, d1		15.1		25.9		21.6		17.7			19.2	
Progression Factor		1.00		1.00		1.00		0.45			1.00	
Incremental Delay, d2		0.0		35.7		3.7		1.4			3.2	
Delay (s)		15.1		61.6		25.3		9.5			22.5	
Level of Service		B		E		C		A			C	
Approach Delay (s)		15.1			44.8			9.5			22.5	
Approach LOS		B			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	25.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		

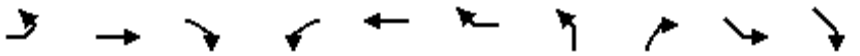
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	40	30	0	0	0	20	1090	230	170	1680	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		1.00						0.95		1.00	0.95	
Frpb, ped/bikes		0.99						0.99		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.94						0.97		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		1745						3416		1770	3532	
Flt Permitted		1.00						0.90		0.95	1.00	
Satd. Flow (perm)		1745						3090		1770	3532	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	40	30	0	0	0	20	1090	230	170	1680	20
RTOR Reduction (vph)	0	28	0	0	0	0	0	13	0	0	1	0
Lane Group Flow (vph)	0	42	0	0	0	0	0	1327	0	170	1699	0
Confl. Peds. (#/hr)			1			1	3		10	10		3
Turn Type		NA					Perm	NA		Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4						2					
Actuated Green, G (s)		6.7						57.6		12.2	74.3	
Effective Green, g (s)		6.7						57.6		12.2	74.3	
Actuated g/C Ratio		0.07						0.64		0.14	0.83	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		129						1977		239	2915	
v/s Ratio Prot		c0.02								c0.10	0.48	
v/s Ratio Perm								c0.43				
v/c Ratio		0.33						0.67		0.71	0.58	
Uniform Delay, d1		39.5						10.2		37.2	2.6	
Progression Factor		1.00						1.00		1.09	0.32	
Incremental Delay, d2		1.5						1.8		5.3	0.5	
Delay (s)		41.0						12.1		46.0	1.3	
Level of Service		D						B		D	A	
Approach Delay (s)		41.0			0.0			12.1			5.4	
Approach LOS		D			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		

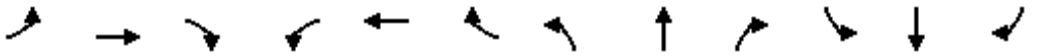
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER
Lane Configurations										
Volume (veh/h)	0	340	0	0	530	1270	0	1100	0	0
Sign Control		Free			Free		Stop		Stop	
Grade		0%			0%		0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	340	0	0	530	1270	0	1100	0	0
Pedestrians							24			
Lane Width (ft)							12.0			
Walking Speed (ft/s)							4.0			
Percent Blockage							2			
Right turn flare (veh)										
Median type		None			None					
Median storage veh)										
Upstream signal (ft)		767			192					
pX, platoon unblocked	0.80						0.80		0.80	0.80
vC, conflicting volume	1800			364			2164	194	1800	894
vC1, stage 1 conf vol										
vC2, stage 2 conf vol										
vCu, unblocked vol	1494			364			1951	194	1494	357
tC, single (s)	4.1			4.1			6.5	7.0	7.5	6.5
tC, 2 stage (s)										
tF (s)	2.2			2.2			4.0	3.3	3.5	4.0
p0 queue free %	100			100			100	0	0	100
cM capacity (veh/h)	355			1167			50	795	0	443

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	170	170	353	600	847	550	550
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	423	847	550	550
cSH	1700	1700	1700	1700	1700	795	795
Volume to Capacity	0.10	0.10	0.21	0.35	0.50	0.69	0.69
Queue Length 95th (ft)	0	0	0	0	0	142	142
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	19.0	19.0
Lane LOS						C	C
Approach Delay (s)	0.0		0.0			19.0	
Approach LOS						C	

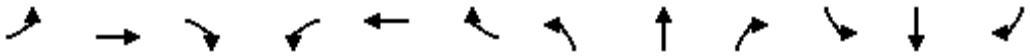
Intersection Summary				
Average Delay	6.5			
Intersection Capacity Utilization	56.7%	ICU Level of Service		B
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	350	920	160	50	1160	150	180	150	60	140	190	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	5.5			5.5	5.5
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99			1.00	0.94
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.96			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)	1787	4975		1805	5078		1752	1752			1733	1420
Flt Permitted	0.95	1.00		0.95	1.00		0.31	1.00			0.77	1.00
Satd. Flow (perm)	1787	4975		1805	5078		578	1752			1358	1420
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	350	920	160	50	1160	150	180	150	60	140	190	410
RTOR Reduction (vph)	0	23	0	0	17	0	0	16	0	0	0	294
Lane Group Flow (vph)	350	1057	0	50	1293	0	180	194	0	0	330	116
Confl. Peds. (#/hr)			12			5			10	10		16
Confl. Bikes (#/hr)			12			1			10			41
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	3%	3%	3%	7%	7%	7%
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	21.5	34.6		5.5	18.6		35.9	35.9			25.4	25.4
Effective Green, g (s)	21.5	34.6		5.5	18.6		35.9	35.9			25.4	25.4
Actuated g/C Ratio	0.24	0.38		0.06	0.21		0.40	0.40			0.28	0.28
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	5.5			5.5	5.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	426	1912		110	1049		315	698			383	400
v/s Ratio Prot	c0.20	0.21		0.03	c0.25		c0.04	0.11				
v/s Ratio Perm							0.19				c0.24	0.08
v/c Ratio	0.82	0.55		0.45	1.23		0.57	0.28			0.86	0.29
Uniform Delay, d1	32.4	21.7		40.8	35.7		19.3	18.3			30.6	25.2
Progression Factor	1.00	1.00		1.08	0.90		1.00	1.00			1.00	1.00
Incremental Delay, d2	16.2	1.2		2.5	111.7		2.5	1.0			21.7	1.8
Delay (s)	48.6	22.8		46.4	143.7		21.8	19.3			52.3	27.1
Level of Service	D	C		D	F		C	B			D	C
Approach Delay (s)		29.1			140.1			20.4			38.3	
Approach LOS		C			F			C			D	

Intersection Summary					
HCM 2000 Control Delay	68.5	HCM 2000 Level of Service		E	
HCM 2000 Volume to Capacity ratio	0.92				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)		18.0	
Intersection Capacity Utilization	110.9%	ICU Level of Service		H	
Analysis Period (min)	15				

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	10	120	70	230	10	1010	140	130	900	500
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	16	12	12	12	12
Total Lost time (s)		4.5		4.5	4.5			4.5		4.5	4.5	
Lane Util. Factor		1.00		0.95	0.95			0.95		1.00	0.95	
Frpb, ped/bikes		0.99		1.00	0.99			0.99		1.00	0.97	
Flpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Frt		0.95		1.00	0.89			0.98		1.00	0.95	
Flt Protected		0.98		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1643		1698	1564			3873		1770	3243	
Flt Permitted		0.98		0.95	1.00			0.94		0.95	1.00	
Satd. Flow (perm)		1643		1698	1564			3635		1770	3243	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	10	10	120	70	230	10	1010	140	130	900	500
RTOR Reduction (vph)	0	10	0	0	129	0	0	9	0	0	61	0
Lane Group Flow (vph)	0	21	0	108	183	0	0	1151	0	130	1339	0
Confl. Peds. (#/hr)	4					4	22		18			22
Confl. Bikes (#/hr)			1			2			33			27
Heavy Vehicles (%)	8%	8%	8%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Split	NA		Split	NA		Perm	NA		Prot	NA	
Protected Phases	4	4		8	8			2		1	6	
Permitted Phases							2					
Actuated Green, G (s)		4.5		17.1	17.1			40.6		9.8	54.9	
Effective Green, g (s)		4.5		17.1	17.1			40.6		9.8	54.9	
Actuated g/C Ratio		0.05		0.19	0.19			0.45		0.11	0.61	
Clearance Time (s)		4.5		4.5	4.5			4.5		4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		82		322	297			1639		192	1978	
v/s Ratio Prot		c0.01		0.06	c0.12					0.07	c0.41	
v/s Ratio Perm								0.32				
v/c Ratio		0.25		0.34	0.62			0.70		0.68	0.68	
Uniform Delay, d1		41.1		31.5	33.4			19.8		38.6	11.7	
Progression Factor		1.19		1.00	1.00			0.94		1.00	1.00	
Incremental Delay, d2		1.5		0.6	3.8			1.7		9.1	1.9	
Delay (s)		50.4		32.2	37.2			20.5		47.7	13.5	
Level of Service		D		C	D			C		D	B	
Approach Delay (s)		50.4			35.9			20.5			16.4	
Approach LOS		D			D			C			B	

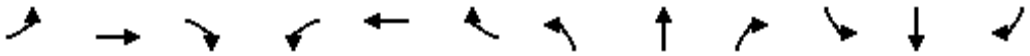
Intersection Summary			
HCM 2000 Control Delay	20.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	270	20	10	400	20	30
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	270	20	10	400	20	30
Pedestrians	1				25	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	213			1045		
pX, platoon unblocked						
vC, conflicting volume			315		526	170
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			315		526	170
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		96	96
cM capacity (veh/h)			1223		470	830

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	180	110	143	267	50
Volume Left	0	0	10	0	20
Volume Right	0	20	0	0	30
cSH	1700	1700	1223	1700	635
Volume to Capacity	0.11	0.06	0.01	0.16	0.08
Queue Length 95th (ft)	0	0	1	0	6
Control Delay (s)	0.0	0.0	0.6	0.0	11.2
Lane LOS			A		B
Approach Delay (s)	0.0		0.2		11.2
Approach LOS					B

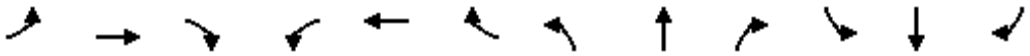
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	28.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	330	660	110	130	590	320	140	510	80	220	740	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	3.5		4.0	4.5		4.0	3.5	
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3400	3402		1787	3319		1719	3336		1752	3432	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3400	3402		1787	3319		1719	3336		1752	3432	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	330	660	110	130	590	320	140	510	80	220	740	70
RTOR Reduction (vph)	0	15	0	0	80	0	0	13	0	0	8	0
Lane Group Flow (vph)	330	755	0	130	830	0	140	577	0	220	802	0
Confl. Peds. (#/hr)			31			31			30			37
Confl. Bikes (#/hr)			9			7			27			27
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	5%	5%	5%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.9	27.3		10.6	25.5		10.9	23.6		12.0	25.7	
Effective Green, g (s)	12.9	27.3		10.6	25.5		10.9	23.6		12.0	25.7	
Actuated g/C Ratio	0.14	0.30		0.12	0.28		0.12	0.26		0.13	0.29	
Clearance Time (s)	4.0	4.0		4.0	3.5		4.0	4.5		4.0	3.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	487	1031		210	940		208	874		233	980	
v/s Ratio Prot	c0.10	0.22		0.07	c0.25		0.08	0.17		c0.13	c0.23	
v/s Ratio Perm												
v/c Ratio	0.68	0.73		0.62	0.88		0.67	0.66		0.94	0.82	
Uniform Delay, d1	36.6	28.1		37.8	30.8		37.8	29.6		38.7	30.0	
Progression Factor	1.17	1.01		1.00	1.00		1.00	1.00		1.24	0.83	
Incremental Delay, d2	3.4	4.3		5.3	11.8		8.3	3.9		37.5	6.1	
Delay (s)	46.1	32.6		43.1	42.6		46.1	33.5		85.5	31.1	
Level of Service	D	C		D	D		D	C		F	C	
Approach Delay (s)		36.6			42.7			35.9			42.7	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	39.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		

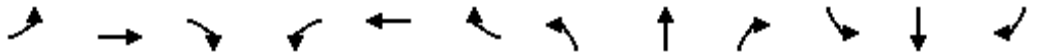
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	930	30	20	1030	30	10	10	10	10	10	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	930	30	20	1030	30	10	10	10	10	10	10
Pedestrians		3			4			11			7	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		418										
pX, platoon unblocked				0.82			0.82	0.82	0.82	0.82	0.82	
vC, conflicting volume	1067			971			1549	2083	495	1596	2083	540
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1067			521			1227	1879	0	1284	1879	540
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			98			89	82	99	88	82	98
cM capacity (veh/h)	651			850			89	55	879	82	55	485

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	10	620	340	20	687	373	30	30
Volume Left	10	0	0	20	0	0	10	10
Volume Right	0	0	30	0	0	30	10	10
cSH	651	1700	1700	850	1700	1700	98	92
Volume to Capacity	0.02	0.36	0.20	0.02	0.40	0.22	0.31	0.32
Queue Length 95th (ft)	1	0	0	2	0	0	29	31
Control Delay (s)	10.6	0.0	0.0	9.3	0.0	0.0	56.9	61.6
Lane LOS	B			A			F	F
Approach Delay (s)	0.1			0.2			56.9	61.6
Approach LOS							F	F

Intersection Summary				
Average Delay	1.8			
Intersection Capacity Utilization	40.7%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	710	80	140	0	0	20	0	210	10	10	250	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	0.99				1.00		1.00			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.95				0.86		0.99			1.00	
Flt Protected	0.95	0.97				1.00		1.00			1.00	
Satd. Flow (prot)	1681	1638				1611		3507			3532	
Flt Permitted	0.95	0.97				1.00		1.00			0.94	
Satd. Flow (perm)	1681	1638				1611		3507			3336	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	710	80	140	0	0	20	0	210	10	10	250	0
RTOR Reduction (vph)	0	20	0	0	0	7	0	4	0	0	0	0
Lane Group Flow (vph)	469	441	0	0	0	13	0	216	0	0	260	0
Confl. Peds. (#/hr)			6						5			14
Confl. Bikes (#/hr)			6						13			23
Turn Type	Perm	NA				Perm		NA		Perm	NA	
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	52.0	52.0				52.0		21.0			21.0	
Actuated g/C Ratio	0.65	0.65				0.65		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1092	1064				1047		920			875	
v/s Ratio Prot								0.06				
v/s Ratio Perm	c0.28	0.27				0.01					c0.08	
v/c Ratio	0.43	0.41				0.01		0.23			0.30	
Uniform Delay, d1	6.8	6.7				4.9		23.2			23.6	
Progression Factor	1.00	1.00				1.00		1.00			1.00	
Incremental Delay, d2	1.2	1.2				0.0		0.6			0.9	
Delay (s)	8.0	7.9				5.0		23.8			24.5	
Level of Service	A	A				A		C			C	
Approach Delay (s)		8.0			5.0			23.8			24.5	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		

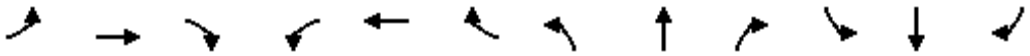
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	10	10	30	10	10	30
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	10	30	10	10	30
Pedestrians	7		1			6
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	1		0			1
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	93	48			47	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	93	48			47	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	99			99	
cM capacity (veh/h)	895	1010			1551	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	20	40	40
Volume Left	10	0	10
Volume Right	10	10	0
cSH	949	1700	1551
Volume to Capacity	0.02	0.02	0.01
Queue Length 95th (ft)	2	0	0
Control Delay (s)	8.9	0.0	1.9
Lane LOS	A		A
Approach Delay (s)	8.9	0.0	1.9
Approach LOS	A		

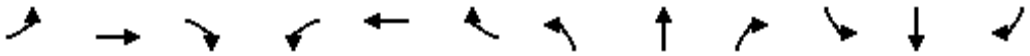
Intersection Summary			
Average Delay	2.5		
Intersection Capacity Utilization	20.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	0	30	250	0	470	0	850	0	0	1370	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0		5.0			5.0	
Lane Util. Factor		1.00		1.00		1.00		0.95			0.95	
Frpb, ped/bikes		0.99		1.00		0.98		1.00			1.00	
Flpb, ped/bikes		1.00		1.00		1.00		1.00			1.00	
Frt		0.92		1.00		0.85		1.00			1.00	
Flt Protected		0.98		0.95		1.00		1.00			1.00	
Satd. Flow (prot)		1661		1764		1559		3539			3539	
Flt Permitted		0.98		0.72		1.00		1.00			1.00	
Satd. Flow (perm)		1661		1345		1559		3539			3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	0	30	250	0	470	0	850	0	0	1370	0
RTOR Reduction (vph)	0	16	0	0	0	65	0	0	0	0	0	0
Lane Group Flow (vph)	0	34	0	250	0	405	0	850	0	0	1370	0
Confl. Peds. (#/hr)	3		3	3		3	4		12	12		4
Turn Type	Perm	NA		D.Pm		Perm		NA			NA	
Protected Phases		4						2			6	
Permitted Phases	4			4		4						
Actuated Green, G (s)		29.3		29.3		29.3		51.7			51.7	
Effective Green, g (s)		29.3		29.3		29.3		51.7			51.7	
Actuated g/C Ratio		0.33		0.33		0.33		0.57			0.57	
Clearance Time (s)		4.0		4.0		4.0		5.0			5.0	
Vehicle Extension (s)		3.0		3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)		540		437		507		2032			2032	
v/s Ratio Prot								0.24			c0.39	
v/s Ratio Perm		0.02		0.19		c0.26						
v/c Ratio		0.06		0.57		0.80		0.42			0.67	
Uniform Delay, d1		20.9		25.2		27.7		10.7			13.3	
Progression Factor		1.00		1.00		1.00		0.58			1.00	
Incremental Delay, d2		0.0		1.8		8.6		0.4			1.8	
Delay (s)		20.9		27.0		36.3		6.6			15.1	
Level of Service		C		C		D		A			B	
Approach Delay (s)		20.9			33.0			6.6			15.1	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

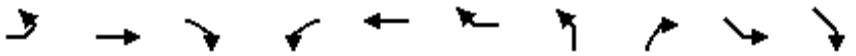
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	140	20	0	0	0	10	840	460	400	1230	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		1.00						0.95		1.00	0.95	
Frpb, ped/bikes		1.00						0.98		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.98						0.95		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		1825						3293		1770	3529	
Flt Permitted		1.00						0.94		0.95	1.00	
Satd. Flow (perm)		1825						3107		1770	3529	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	140	20	0	0	0	10	840	460	400	1230	20
RTOR Reduction (vph)	0	6	0	0	0	0	0	65	0	0	1	0
Lane Group Flow (vph)	0	164	0	0	0	0	0	1245	0	400	1249	0
Confl. Peds. (#/hr)			1			1	3		10	10		3
Turn Type	Perm	NA					Perm	NA		Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4						2					
Actuated Green, G (s)		13.3						49.7		13.5	67.7	
Effective Green, g (s)		13.3						49.7		13.5	67.7	
Actuated g/C Ratio		0.15						0.55		0.15	0.75	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		269						1715		265	2654	
v/s Ratio Prot										c0.23	0.35	
v/s Ratio Perm		0.09						c0.40				
v/c Ratio		0.61						0.73		1.51	0.47	
Uniform Delay, d1		35.9						15.1		38.2	4.3	
Progression Factor		1.00						1.00		1.31	0.41	
Incremental Delay, d2		3.9						2.7		243.9	0.5	
Delay (s)		39.8						17.8		294.0	2.2	
Level of Service		D						B		F	A	
Approach Delay (s)		39.8			0.0			17.8			73.0	
Approach LOS		D			A			B			E	

Intersection Summary			
HCM 2000 Control Delay	48.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	100.4%	ICU Level of Service	G
Analysis Period (min)	15		

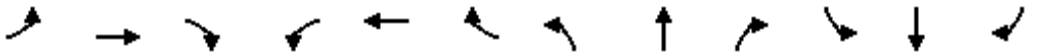
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER
Lane Configurations										
Volume (veh/h)	0	470	0	0	420	1150	0	1140	0	0
Sign Control		Free			Free		Stop		Stop	
Grade		0%			0%		0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	470	0	0	420	1150	0	1140	0	0
Pedestrians							24			
Lane Width (ft)							12.0			
Walking Speed (ft/s)							4.0			
Percent Blockage							2			
Right turn flare (veh)										
Median type		None			None					
Median storage veh)										
Upstream signal (ft)		767			192					
pX, platoon unblocked	0.81						0.81		0.81	0.81
vC, conflicting volume	1570			494			2064	259	1795	914
vC1, stage 1 conf vol										
vC2, stage 2 conf vol										
vCu, unblocked vol	1240			494			1848	259	1517	433
tC, single (s)	4.1			4.1			6.5	7.0	7.5	6.5
tC, 2 stage (s)										
tF (s)	2.2			2.2			4.0	3.3	3.5	4.0
p0 queue free %	100			100			100	0	0	100
cM capacity (veh/h)	453			1045			59	722	0	410

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	235	235	280	523	767	570	570
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	383	767	570	570
cSH	1700	1700	1700	1700	1700	722	722
Volume to Capacity	0.14	0.14	0.16	0.31	0.45	0.79	0.79
Queue Length 95th (ft)	0	0	0	0	0	198	198
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	26.0	26.0
Lane LOS						D	D
Approach Delay (s)	0.0		0.0			26.0	
Approach LOS						D	

Intersection Summary				
Average Delay	9.3			
Intersection Capacity Utilization	59.7%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	400	1010	200	90	970	180	170	290	100	170	170	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	5.5			5.5	5.5
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99			1.00	0.94
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.96			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)	1787	4956		1805	5038		1752	1761			1727	1422
Flt Permitted	0.95	1.00		0.95	1.00		0.31	1.00			0.65	1.00
Satd. Flow (perm)	1787	4956		1805	5038		572	1761			1157	1422
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	400	1010	200	90	970	180	170	290	100	170	170	380
RTOR Reduction (vph)	0	30	0	0	30	0	0	14	0	0	0	269
Lane Group Flow (vph)	400	1180	0	90	1120	0	170	376	0	0	340	111
Confl. Peds. (#/hr)			12			5			10	10		16
Confl. Bikes (#/hr)			12			1			10			41
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	3%	3%	3%	7%	7%	7%
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	21.5	30.9		8.4	17.8		36.7	36.7			26.2	26.2
Effective Green, g (s)	21.5	30.9		8.4	17.8		36.7	36.7			26.2	26.2
Actuated g/C Ratio	0.24	0.34		0.09	0.20		0.41	0.41			0.29	0.29
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	5.5			5.5	5.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	426	1701		168	996		318	718			336	413
v/s Ratio Prot	c0.22	0.24		0.05	c0.22		0.04	c0.21				
v/s Ratio Perm							0.18				c0.29	0.08
v/c Ratio	0.94	0.69		0.54	1.12		0.53	0.52			1.01	0.27
Uniform Delay, d1	33.6	25.5		38.9	36.1		18.7	20.1			31.9	24.5
Progression Factor	1.00	1.00		1.14	0.86		1.00	1.00			1.00	1.00
Incremental Delay, d2	30.7	2.4		2.7	67.5		1.7	2.7			52.1	1.6
Delay (s)	64.3	27.8		47.0	98.6		20.4	22.8			84.0	26.1
Level of Service	E	C		D	F		C	C			F	C
Approach Delay (s)		36.9			94.8			22.1			53.5	
Approach LOS		D			F			C			D	

Intersection Summary			
HCM 2000 Control Delay	55.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	108.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	20	20	210	90	200	30	1200	340	200	830	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	16	12	12	12	12
Total Lost time (s)		4.5		4.5	4.5			4.5		4.5	4.5	
Lane Util. Factor		1.00		0.95	0.95			0.95		1.00	0.95	
Frpb, ped/bikes		0.99		1.00	0.99			0.99		1.00	0.97	
Flpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Frt		0.95		1.00	0.90			0.97		1.00	0.96	
Flt Protected		0.98		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1644		1698	1589			3792		1770	3301	
Flt Permitted		0.98		0.95	1.00			0.91		0.95	1.00	
Satd. Flow (perm)		1644		1698	1589			3441		1770	3301	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	20	20	210	90	200	30	1200	340	200	830	330
RTOR Reduction (vph)	0	19	0	0	81	0	0	24	0	0	37	0
Lane Group Flow (vph)	0	41	0	189	230	0	0	1546	0	200	1123	0
Confl. Peds. (#/hr)	4					4	22		18			22
Confl. Bikes (#/hr)			1			2			33			27
Heavy Vehicles (%)	8%	8%	8%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Split	NA		Split	NA		Perm	NA		Prot	NA	
Protected Phases	4	4		8	8			2		1	6	
Permitted Phases							2					
Actuated Green, G (s)		6.2		18.7	18.7			36.6		10.5	51.6	
Effective Green, g (s)		6.2		18.7	18.7			36.6		10.5	51.6	
Actuated g/C Ratio		0.07		0.21	0.21			0.41		0.12	0.57	
Clearance Time (s)		4.5		4.5	4.5			4.5		4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		113		352	330			1399		206	1892	
v/s Ratio Prot		c0.03		0.11	c0.14					c0.11	0.34	
v/s Ratio Perm								c0.45				
v/c Ratio		0.37		0.54	0.70			1.11		0.97	0.59	
Uniform Delay, d1		40.0		31.8	33.0			26.7		39.6	12.4	
Progression Factor		1.10		1.00	1.00			0.63		1.00	1.00	
Incremental Delay, d2		2.0		1.6	6.3			48.6		54.1	1.4	
Delay (s)		46.1		33.4	39.3			65.3		93.7	13.8	
Level of Service		D		C	D			E		F	B	
Approach Delay (s)		46.1			37.1			65.3			25.5	
Approach LOS		D			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	45.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	111.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	550	20	20	480	20	30
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	550	20	20	480	20	30
Pedestrians	1				25	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	213			1033		
pX, platoon unblocked						
vC, conflicting volume			595		866	310
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			595		866	310
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		93	96
cM capacity (veh/h)			964		282	674

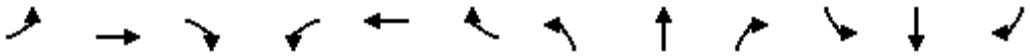
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	367	203	180	320	50
Volume Left	0	0	20	0	20
Volume Right	0	20	0	0	30
cSH	1700	1700	964	1700	433
Volume to Capacity	0.22	0.12	0.02	0.19	0.12
Queue Length 95th (ft)	0	0	2	0	10
Control Delay (s)	0.0	0.0	1.2	0.0	14.4
Lane LOS			A		B
Approach Delay (s)	0.0		0.4		14.4
Approach LOS					B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	37.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	350	750	120	80	580	240	120	980	190	310	680	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	3.5		4.0	4.5		4.0	3.5	
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3400	3406		1787	3361		1719	3316		1752	3426	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3400	3406		1787	3361		1719	3316		1752	3426	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	350	750	120	80	580	240	120	980	190	310	680	70
RTOR Reduction (vph)	0	13	0	0	50	0	0	18	0	0	9	0
Lane Group Flow (vph)	350	857	0	80	770	0	120	1152	0	310	741	0
Confl. Peds. (#/hr)			31			31			30			37
Confl. Bikes (#/hr)			9			7			27			27
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	5%	5%	5%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	13.1	30.8		8.0	26.2		10.4	22.7		12.0	25.3	
Effective Green, g (s)	13.1	30.8		8.0	26.2		10.4	22.7		12.0	25.3	
Actuated g/C Ratio	0.15	0.34		0.09	0.29		0.12	0.25		0.13	0.28	
Clearance Time (s)	4.0	4.0		4.0	3.5		4.0	4.5		4.0	3.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	494	1165		158	978		198	836		233	963	
v/s Ratio Prot	c0.10	c0.25		0.04	0.23		0.07	c0.35		c0.18	0.22	
v/s Ratio Perm												
v/c Ratio	0.71	0.74		0.51	0.79		0.61	1.38		1.33	0.77	
Uniform Delay, d1	36.6	26.0		39.1	29.3		37.9	33.6		39.0	29.7	
Progression Factor	1.08	1.19		1.00	1.00		1.00	1.00		1.19	0.78	
Incremental Delay, d2	4.1	3.7		2.5	6.4		5.2	177.6		171.5	5.0	
Delay (s)	43.5	34.7		41.7	35.7		43.0	211.3		217.8	28.3	
Level of Service	D	C		D	D		D	F		F	C	
Approach Delay (s)		37.2			36.3			195.6			83.7	
Approach LOS		D			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	93.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	99.0%	ICU Level of Service	F
Analysis Period (min)	15		

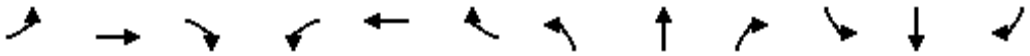
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	10	1220	30	10	870	20	10	10	40	20	10	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	1220	30	10	870	20	10	10	40	20	10	20
Pedestrians		3			4			11			7	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		418										
pX, platoon unblocked				0.79			0.79	0.79	0.79	0.79	0.79	
vC, conflicting volume	897			1261			1749	2183	640	1586	2188	455
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	897			811			1425	1971	29	1220	1978	455
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			83	79	95	76	79	96
cM capacity (veh/h)	754			644			59	47	818	83	47	550

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	10	813	437	10	580	310	60	50
Volume Left	10	0	0	10	0	0	10	20
Volume Right	0	0	30	0	0	20	40	20
cSH	754	1700	1700	644	1700	1700	140	102
Volume to Capacity	0.01	0.48	0.26	0.02	0.34	0.18	0.43	0.49
Queue Length 95th (ft)	1	0	0	1	0	0	47	54
Control Delay (s)	9.8	0.0	0.0	10.7	0.0	0.0	48.7	70.0
Lane LOS	A			B			E	F
Approach Delay (s)	0.1			0.1			48.7	70.0
Approach LOS							E	F

Intersection Summary				
Average Delay	2.9			
Intersection Capacity Utilization	48.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	540	120	90	0	0	40	0	600	90	20	300	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	1.00				1.00		0.99			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.96				0.86		0.98			1.00	
Flt Protected	0.95	0.98				1.00		1.00			1.00	
Satd. Flow (prot)	1681	1662				1611		3448			3528	
Flt Permitted	0.95	0.98				1.00		1.00			0.86	
Satd. Flow (perm)	1681	1662				1611		3448			3026	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	540	120	90	0	0	40	0	600	90	20	300	0
RTOR Reduction (vph)	0	14	0	0	0	14	0	15	0	0	0	0
Lane Group Flow (vph)	378	358	0	0	0	26	0	675	0	0	320	0
Confl. Peds. (#/hr)			6						5			14
Confl. Bikes (#/hr)			6						13			23
Turn Type	Perm	NA				Perm		NA		Perm	NA	
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	52.0	52.0				52.0		21.0			21.0	
Actuated g/C Ratio	0.65	0.65				0.65		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1092	1080				1047		905			794	
v/s Ratio Prot								c0.20				
v/s Ratio Perm	c0.22	0.22				0.02					0.11	
v/c Ratio	0.35	0.33				0.02		0.75			0.40	
Uniform Delay, d1	6.3	6.2				5.0		27.1			24.3	
Progression Factor	1.00	1.00				1.00		1.00			1.00	
Incremental Delay, d2	0.9	0.8				0.0		5.6			1.5	
Delay (s)	7.2	7.1				5.0		32.6			25.9	
Level of Service	A	A				A		C			C	
Approach Delay (s)		7.1			5.0			32.6			25.9	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	116.2%	ICU Level of Service	H
Analysis Period (min)	15		

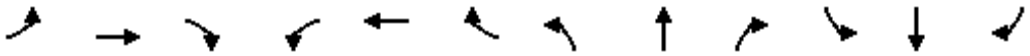
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	10	20	50	20	10	40
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	10	20	50	20	10	40
Pedestrians	6		2			8
Lane Width (ft)	12.0		12.0			12.0
Walking Speed (ft/s)	4.0		4.0			4.0
Percent Blockage	1		0			1
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	128	74			76	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	128	74			76	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	98			99	
cM capacity (veh/h)	855	976			1515	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	30	70	50
Volume Left	10	0	10
Volume Right	20	20	0
cSH	932	1700	1515
Volume to Capacity	0.03	0.04	0.01
Queue Length 95th (ft)	2	0	0
Control Delay (s)	9.0	0.0	1.5
Lane LOS	A		A
Approach Delay (s)	9.0	0.0	1.5
Approach LOS	A		

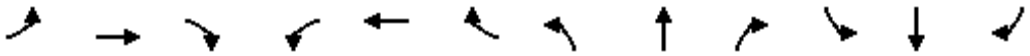
Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	21.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	0	10	584	0	500	0	1106	0	0	1288	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0		5.0			5.0	
Lane Util. Factor		1.00		1.00		1.00		0.95			0.95	
Frpb, ped/bikes		0.99		1.00		0.98		1.00			1.00	
Flpb, ped/bikes		1.00		1.00		1.00		1.00			1.00	
Frt		0.93		1.00		0.85		1.00			1.00	
Flt Protected		0.98		0.95		1.00		1.00			1.00	
Satd. Flow (prot)		1679		1764		1559		3539			3539	
Flt Permitted		0.98		0.74		1.00		1.00			1.00	
Satd. Flow (perm)		1679		1382		1559		3539			3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	0	10	584	0	500	0	1106	0	0	1288	0
RTOR Reduction (vph)	0	12	0	0	0	26	0	0	0	0	0	0
Lane Group Flow (vph)	0	8	0	584	0	474	0	1106	0	0	1288	0
Confl. Peds. (#/hr)	3		3	3		3	4		12	12		4
Turn Type	Perm	NA		D.Pm		Perm		NA			NA	
Protected Phases		4						2			6	
Permitted Phases	4			4		4						
Actuated Green, G (s)		38.0		38.0		38.0		43.0			43.0	
Effective Green, g (s)		38.0		38.0		38.0		43.0			43.0	
Actuated g/C Ratio		0.42		0.42		0.42		0.48			0.48	
Clearance Time (s)		4.0		4.0		4.0		5.0			5.0	
Vehicle Extension (s)		3.0		3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)		708		583		658		1690			1690	
v/s Ratio Prot								0.31			c0.36	
v/s Ratio Perm		0.01		c0.42		0.30						
v/c Ratio		0.01		1.00		0.72		0.65			0.76	
Uniform Delay, d1		15.1		26.0		21.6		17.9			19.3	
Progression Factor		1.00		1.00		1.00		0.46			1.00	
Incremental Delay, d2		0.0		37.7		3.9		1.5			3.3	
Delay (s)		15.1		63.7		25.5		9.7			22.6	
Level of Service		B		E		C		A			C	
Approach Delay (s)		15.1			46.1			9.7			22.6	
Approach LOS		B			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

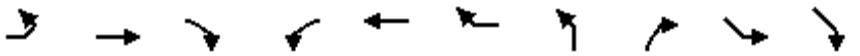
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	40	30	0	0	0	20	1106	239	170	1692	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		1.00						0.95		1.00	0.95	
Frpb, ped/bikes		0.99						0.99		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.94						0.97		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		1745						3414		1770	3532	
Flt Permitted		1.00						0.90		0.95	1.00	
Satd. Flow (perm)		1745						3088		1770	3532	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	0	40	30	0	0	0	20	1106	239	170	1692	20
RTOR Reduction (vph)	0	28	0	0	0	0	0	13	0	0	1	0
Lane Group Flow (vph)	0	42	0	0	0	0	0	1352	0	170	1711	0
Confl. Peds. (#/hr)			1			1	3		10	10		3
Turn Type		NA					Perm	NA		Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4						2					
Actuated Green, G (s)		6.7						57.6		12.2	74.3	
Effective Green, g (s)		6.7						57.6		12.2	74.3	
Actuated g/C Ratio		0.07						0.64		0.14	0.83	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		129						1976		239	2915	
v/s Ratio Prot		c0.02								c0.10	0.48	
v/s Ratio Perm								c0.44				
v/c Ratio		0.33						0.68		0.71	0.59	
Uniform Delay, d1		39.5						10.4		37.2	2.7	
Progression Factor		1.00						1.00		1.10	0.32	
Incremental Delay, d2		1.5						1.9		5.2	0.5	
Delay (s)		41.0						12.3		46.0	1.3	
Level of Service		D						B		D	A	
Approach Delay (s)		41.0			0.0			12.3			5.3	
Approach LOS		D			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	102.1%	ICU Level of Service	G
Analysis Period (min)	15		

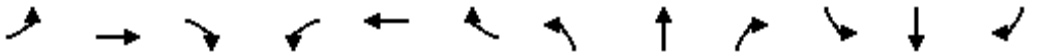
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER
Lane Configurations										
Volume (veh/h)	0	345	0	0	541	1297	0	1102	0	0
Sign Control		Free			Free		Stop		Stop	
Grade		0%			0%		0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	345	0	0	541	1297	0	1102	0	0
Pedestrians							24			
Lane Width (ft)							12.0			
Walking Speed (ft/s)							4.0			
Percent Blockage							2			
Right turn flare (veh)										
Median type		None			None					
Median storage veh)										
Upstream signal (ft)		767			192					
pX, platoon unblocked	0.79						0.79		0.79	0.79
vC, conflicting volume	1838			369			2207	196	1816	910
vC1, stage 1 conf vol										
vC2, stage 2 conf vol										
vCu, unblocked vol	1531			369			1998	196	1503	358
tC, single (s)	4.1			4.1			6.5	7.0	7.5	6.5
tC, 2 stage (s)										
tF (s)	2.2			2.2			4.0	3.3	3.5	4.0
p0 queue free %	100			100			100	0	0	100
cM capacity (veh/h)	341			1162			46	792	0	439

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	172	172	361	613	865	551	551
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	432	865	551	551
cSH	1700	1700	1700	1700	1700	792	792
Volume to Capacity	0.10	0.10	0.21	0.36	0.51	0.70	0.70
Queue Length 95th (ft)	0	0	0	0	0	144	144
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	19.2	19.2
Lane LOS						C	C
Approach Delay (s)	0.0		0.0			19.2	
Approach LOS						C	

Intersection Summary				
Average Delay	6.4			
Intersection Capacity Utilization	56.9%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	350	927	160	50	1197	155	180	150	60	143	190	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	5.5			5.5	5.5
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99			1.00	0.94
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.96			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)	1787	4976		1805	5078		1752	1752			1733	1420
Flt Permitted	0.95	1.00		0.95	1.00		0.31	1.00			0.76	1.00
Satd. Flow (perm)	1787	4976		1805	5078		570	1752			1354	1420
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	350	927	160	50	1197	155	180	150	60	143	190	410
RTOR Reduction (vph)	0	23	0	0	18	0	0	16	0	0	0	294
Lane Group Flow (vph)	350	1064	0	50	1334	0	180	194	0	0	333	116
Confl. Peds. (#/hr)			12			5			10	10		16
Confl. Bikes (#/hr)			12			1			10			41
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	3%	3%	3%	7%	7%	7%
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	21.0	34.6		5.5	19.1		35.9	35.9			25.4	25.4
Effective Green, g (s)	21.0	34.6		5.5	19.1		35.9	35.9			25.4	25.4
Actuated g/C Ratio	0.23	0.38		0.06	0.21		0.40	0.40			0.28	0.28
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	5.5			5.5	5.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	416	1912		110	1077		312	698			382	400
v/s Ratio Prot	c0.20	0.21		0.03	c0.26		c0.04	0.11				
v/s Ratio Perm							0.19				c0.25	0.08
v/c Ratio	0.84	0.56		0.45	1.24		0.58	0.28			0.87	0.29
Uniform Delay, d1	32.9	21.7		40.8	35.5		19.3	18.3			30.7	25.2
Progression Factor	1.00	1.00		1.08	0.89		1.00	1.00			1.00	1.00
Incremental Delay, d2	18.3	1.2		2.5	114.2		2.6	1.0			22.9	1.8
Delay (s)	51.2	22.9		46.5	145.9		21.9	19.3			53.7	27.1
Level of Service	D	C		D	F		C	B			D	C
Approach Delay (s)		29.8			142.4			20.5			39.0	
Approach LOS		C			F			C			D	

Intersection Summary			
HCM 2000 Control Delay	70.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	111.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	10	10	120	90	255	10	1010	140	142	900	500
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	16	12	12	12	12
Total Lost time (s)		4.5		4.5	4.5			4.5		4.5	4.5	
Lane Util. Factor		1.00		0.95	0.95			0.95		1.00	0.95	
Frpb, ped/bikes		0.99		1.00	0.99			0.99		1.00	0.97	
Flpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Frt		0.95		1.00	0.89			0.98		1.00	0.95	
Flt Protected		0.98		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1643		1698	1571			3873		1770	3242	
Flt Permitted		0.98		0.95	1.00			0.94		0.95	1.00	
Satd. Flow (perm)		1643		1698	1571			3633		1770	3242	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	10	10	120	90	255	10	1010	140	142	900	500
RTOR Reduction (vph)	0	10	0	0	112	0	0	10	0	0	65	0
Lane Group Flow (vph)	0	21	0	108	245	0	0	1150	0	142	1335	0
Confl. Peds. (#/hr)	4					4	22		18			22
Confl. Bikes (#/hr)			1			2			33			27
Heavy Vehicles (%)	8%	8%	8%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Split	NA		Split	NA		Perm	NA		Prot	NA	
Protected Phases	4	4		8	8			2		1	6	
Permitted Phases							2					
Actuated Green, G (s)		4.5		19.0	19.0			38.5		10.0	53.0	
Effective Green, g (s)		4.5		19.0	19.0			38.5		10.0	53.0	
Actuated g/C Ratio		0.05		0.21	0.21			0.43		0.11	0.59	
Clearance Time (s)		4.5		4.5	4.5			4.5		4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		82		358	331			1554		196	1909	
v/s Ratio Prot		c0.01		0.06	c0.16					0.08	c0.41	
v/s Ratio Perm								0.32				
v/c Ratio		0.25		0.30	0.74			0.74		0.72	0.70	
Uniform Delay, d1		41.1		29.9	33.2			21.6		38.7	12.9	
Progression Factor		1.19		1.00	1.00			0.94		1.00	1.00	
Incremental Delay, d2		1.5		0.5	8.6			2.2		12.5	2.2	
Delay (s)		50.7		30.4	41.8			22.4		51.1	15.1	
Level of Service		D		C	D			C		D	B	
Approach Delay (s)		50.7			39.1			22.4			18.4	
Approach LOS		D			D			C			B	

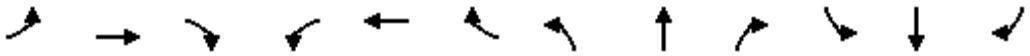
Intersection Summary			
HCM 2000 Control Delay	23.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	102.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	270	32	26	400	65	41
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	270	32	26	400	65	41
Pedestrians	1				25	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	213			1066		
pX, platoon unblocked						
vC, conflicting volume			327		564	176
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			327		564	176
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		85	95
cM capacity (veh/h)			1211		439	822

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	180	122	159	267	106
Volume Left	0	0	26	0	65
Volume Right	0	32	0	0	41
cSH	1700	1700	1211	1700	535
Volume to Capacity	0.11	0.07	0.02	0.16	0.20
Queue Length 95th (ft)	0	0	2	0	18
Control Delay (s)	0.0	0.0	1.5	0.0	13.4
Lane LOS			A		B
Approach Delay (s)	0.0		0.5		13.4
Approach LOS					B

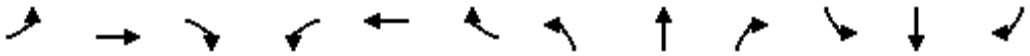
Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	39.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	330	670	110	146	612	320	140	510	88	220	740	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	3.5		4.0	4.5		4.0	3.5	
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.95		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3400	3403		1787	3325		1719	3328		1752	3432	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3400	3403		1787	3325		1719	3328		1752	3432	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	330	670	110	146	612	320	140	510	88	220	740	70
RTOR Reduction (vph)	0	15	0	0	74	0	0	16	0	0	8	0
Lane Group Flow (vph)	330	765	0	146	858	0	140	582	0	220	802	0
Confl. Peds. (#/hr)			31			31			30			37
Confl. Bikes (#/hr)			9			7			27			27
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	5%	5%	5%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.9	27.1		10.9	25.6		10.9	23.5		12.0	25.6	
Effective Green, g (s)	12.9	27.1		10.9	25.6		10.9	23.5		12.0	25.6	
Actuated g/C Ratio	0.14	0.30		0.12	0.28		0.12	0.26		0.13	0.28	
Clearance Time (s)	4.0	4.0		4.0	3.5		4.0	4.5		4.0	3.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	487	1024		216	945		208	868		233	976	
v/s Ratio Prot	c0.10	0.22		0.08	c0.26		0.08	0.18		c0.13	c0.23	
v/s Ratio Perm												
v/c Ratio	0.68	0.75		0.68	0.91		0.67	0.67		0.94	0.82	
Uniform Delay, d1	36.6	28.4		37.9	31.1		37.8	29.8		38.7	30.1	
Progression Factor	1.16	1.01		1.00	1.00		1.00	1.00		1.24	0.85	
Incremental Delay, d2	3.4	4.6		8.1	14.0		8.3	4.1		36.9	6.1	
Delay (s)	46.0	33.1		46.0	45.0		46.1	33.9		84.8	31.6	
Level of Service	D	C		D	D		D	C		F	C	
Approach Delay (s)		37.0			45.2			36.2			43.0	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	40.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		

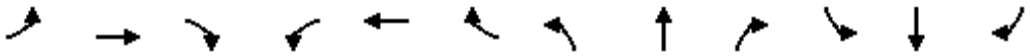
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	27	930	30	20	1030	36	10	10	10	23	10	49
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	27	930	30	20	1030	36	10	10	10	23	10	49
Pedestrians		3			4			11			7	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		418										
pX, platoon unblocked				0.82			0.82	0.82	0.82	0.82	0.82	
vC, conflicting volume	1073			971			1622	2123	495	1633	2120	543
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1073			514			1311	1925	0	1325	1922	543
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			98			85	80	99	69	80	90
cM capacity (veh/h)	648			853			68	50	877	73	50	482

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	27	620	340	20	687	379	30	82
Volume Left	27	0	0	20	0	0	10	23
Volume Right	0	0	30	0	0	36	10	49
cSH	648	1700	1700	853	1700	1700	84	134
Volume to Capacity	0.04	0.36	0.20	0.02	0.40	0.22	0.36	0.61
Queue Length 95th (ft)	3	0	0	2	0	0	35	80
Control Delay (s)	10.8	0.0	0.0	9.3	0.0	0.0	70.2	67.6
Lane LOS	B			A			F	F
Approach Delay (s)	0.3			0.2			70.2	67.6
Approach LOS							F	F

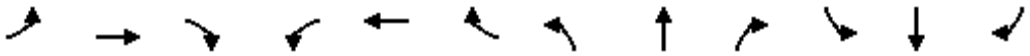
Intersection Summary				
Average Delay	3.7			
Intersection Capacity Utilization	43.2%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	710	80	151	0	0	20	0	221	10	10	255	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	0.99				1.00		1.00			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.95				0.86		0.99			1.00	
Flt Protected	0.95	0.98				1.00		1.00			1.00	
Satd. Flow (prot)	1681	1633				1611		3509			3533	
Flt Permitted	0.95	0.98				1.00		1.00			0.94	
Satd. Flow (perm)	1681	1633				1611		3509			3336	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	710	80	151	0	0	20	0	221	10	10	255	0
RTOR Reduction (vph)	0	22	0	0	0	7	0	4	0	0	0	0
Lane Group Flow (vph)	476	443	0	0	0	13	0	227	0	0	265	0
Confl. Peds. (#/hr)			6						5			14
Confl. Bikes (#/hr)			6						13			23
Turn Type	Perm	NA				Perm		NA		Perm	NA	
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	52.0	52.0				52.0		21.0			21.0	
Actuated g/C Ratio	0.65	0.65				0.65		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1092	1061				1047		921			875	
v/s Ratio Prot								0.06				
v/s Ratio Perm	c0.28	0.27				0.01					c0.08	
v/c Ratio	0.44	0.42				0.01		0.25			0.30	
Uniform Delay, d1	6.8	6.7				4.9		23.3			23.6	
Progression Factor	1.00	1.00				1.00		1.00			1.00	
Incremental Delay, d2	1.3	1.2				0.0		0.6			0.9	
Delay (s)	8.1	7.9				5.0		23.9			24.5	
Level of Service	A	A				A		C			C	
Approach Delay (s)		8.0			5.0			23.9			24.5	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	114.2%	ICU Level of Service	H
Analysis Period (min)	15		

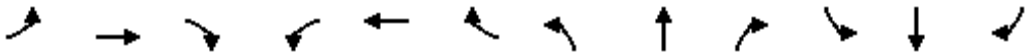
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	56	0	51	10	0	10	23	30	10	10	30	28
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	56	0	51	10	0	10	23	30	10	10	30	28
Pedestrians					7			1			6	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					1			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	161	157	45	204	166	48	58			47		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	161	157	45	204	166	48	58			47		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	93	100	95	99	100	99	99			99		
cM capacity (veh/h)	776	715	1024	697	707	1010	1546			1551		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	107	20	63	68
Volume Left	56	10	23	10
Volume Right	51	10	10	28
cSH	877	825	1546	1551
Volume to Capacity	0.12	0.02	0.01	0.01
Queue Length 95th (ft)	10	2	1	0
Control Delay (s)	9.7	9.5	2.8	1.1
Lane LOS	A	A	A	A
Approach Delay (s)	9.7	9.5	2.8	1.1
Approach LOS	A	A		

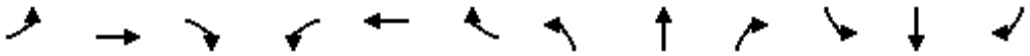
Intersection Summary				
Average Delay	5.7			
Intersection Capacity Utilization	23.1%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	0	30	262	0	470	0	863	0	0	1392	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0		5.0			5.0	
Lane Util. Factor		1.00		1.00		1.00		0.95			0.95	
Frpb, ped/bikes		0.99		1.00		0.98		1.00			1.00	
Flpb, ped/bikes		1.00		1.00		1.00		1.00			1.00	
Frt		0.92		1.00		0.85		1.00			1.00	
Flt Protected		0.98		0.95		1.00		1.00			1.00	
Satd. Flow (prot)		1661		1764		1559		3539			3539	
Flt Permitted		0.98		0.72		1.00		1.00			1.00	
Satd. Flow (perm)		1661		1345		1559		3539			3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	0	30	262	0	470	0	863	0	0	1392	0
RTOR Reduction (vph)	0	16	0	0	0	62	0	0	0	0	0	0
Lane Group Flow (vph)	0	34	0	262	0	408	0	863	0	0	1392	0
Confl. Peds. (#/hr)	3		3	3		3	4		12	12		4
Turn Type	Perm	NA		D.Pm		Perm		NA			NA	
Protected Phases		4						2			6	
Permitted Phases	4			4		4						
Actuated Green, G (s)		29.7		29.7		29.7		51.3			51.3	
Effective Green, g (s)		29.7		29.7		29.7		51.3			51.3	
Actuated g/C Ratio		0.33		0.33		0.33		0.57			0.57	
Clearance Time (s)		4.0		4.0		4.0		5.0			5.0	
Vehicle Extension (s)		3.0		3.0		3.0		3.0			3.0	
Lane Grp Cap (vph)		548		443		514		2017			2017	
v/s Ratio Prot								0.24			c0.39	
v/s Ratio Perm		0.02		0.19		c0.26						
v/c Ratio		0.06		0.59		0.79		0.43			0.69	
Uniform Delay, d1		20.6		25.1		27.4		11.0			13.7	
Progression Factor		1.00		1.00		1.00		0.57			1.00	
Incremental Delay, d2		0.0		2.1		8.2		0.4			2.0	
Delay (s)		20.7		27.2		35.6		6.7			15.7	
Level of Service		C		C		D		A			B	
Approach Delay (s)		20.7			32.6			6.7			15.7	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

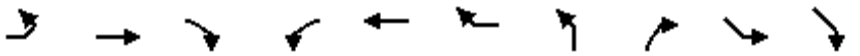
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	10	140	20	0	0	0	10	853	467	400	1264	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		1.00						0.95		1.00	0.95	
Frpb, ped/bikes		1.00						0.98		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		1.00	1.00	
Frt		0.98						0.95		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		1825						3293		1770	3529	
Flt Permitted		1.00						0.94		0.95	1.00	
Satd. Flow (perm)		1825						3106		1770	3529	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	10	140	20	0	0	0	10	853	467	400	1264	20
RTOR Reduction (vph)	0	6	0	0	0	0	0	65	0	0	1	0
Lane Group Flow (vph)	0	164	0	0	0	0	0	1265	0	400	1283	0
Confl. Peds. (#/hr)			1			1	3		10	10		3
Turn Type	Perm	NA					Perm	NA		Prot	NA	
Protected Phases		4						2		1	6	
Permitted Phases	4						2					
Actuated Green, G (s)		13.3						49.7		13.5	67.7	
Effective Green, g (s)		13.3						49.7		13.5	67.7	
Actuated g/C Ratio		0.15						0.55		0.15	0.75	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		269						1715		265	2654	
v/s Ratio Prot										c0.23	0.36	
v/s Ratio Perm		0.09						c0.41				
v/c Ratio		0.61						0.74		1.51	0.48	
Uniform Delay, d1		35.9						15.2		38.2	4.3	
Progression Factor		1.00						1.00		1.30	0.42	
Incremental Delay, d2		3.9						2.9		243.7	0.5	
Delay (s)		39.8						18.1		293.3	2.3	
Level of Service		D						B		F	A	
Approach Delay (s)		39.8			0.0			18.1			71.4	
Approach LOS		D			A			B			E	

Intersection Summary			
HCM 2000 Control Delay	47.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	101.9%	ICU Level of Service	G
Analysis Period (min)	15		

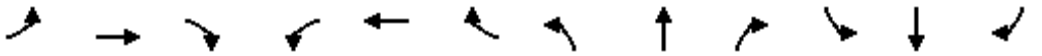
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	SEL	SER
Lane Configurations										
Volume (veh/h)	0	485	0	0	428	1171	0	1146	0	0
Sign Control		Free			Free		Stop		Stop	
Grade		0%			0%		0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	485	0	0	428	1171	0	1146	0	0
Pedestrians							24			
Lane Width (ft)							12.0			
Walking Speed (ft/s)							4.0			
Percent Blockage							2			
Right turn flare (veh)										
Median type		None			None					
Median storage veh)										
Upstream signal (ft)		767			192					
pX, platoon unblocked	0.81						0.81		0.81	0.81
vC, conflicting volume	1599			509			2108	266	1816	937
vC1, stage 1 conf vol										
vC2, stage 2 conf vol										
vCu, unblocked vol	1264			509			1895	266	1533	444
tC, single (s)	4.1			4.1			6.5	7.0	7.5	6.5
tC, 2 stage (s)										
tF (s)	2.2			2.2			4.0	3.3	3.5	4.0
p0 queue free %	100			100			100	0	0	100
cM capacity (veh/h)	440			1031			55	714	0	401

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	NB 2
Volume Total	242	242	285	533	781	573	573
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	390	781	573	573
cSH	1700	1700	1700	1700	1700	714	714
Volume to Capacity	0.14	0.14	0.17	0.31	0.46	0.80	0.80
Queue Length 95th (ft)	0	0	0	0	0	207	207
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	27.2	27.2
Lane LOS						D	D
Approach Delay (s)	0.0		0.0			27.2	
Approach LOS						D	

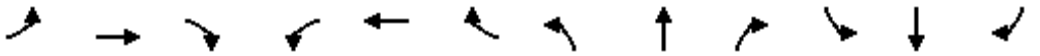
Intersection Summary				
Average Delay	9.7			
Intersection Capacity Utilization	60.2%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	400	1030	200	90	999	184	170	290	100	177	170	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.5		4.0	4.5		4.0	5.5			5.5	5.5
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00			1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99			1.00	0.94
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.96			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)	1787	4959		1805	5039		1752	1761			1726	1422
Flt Permitted	0.95	1.00		0.95	1.00		0.31	1.00			0.65	1.00
Satd. Flow (perm)	1787	4959		1805	5039		567	1761			1149	1422
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	400	1030	200	90	999	184	170	290	100	177	170	380
RTOR Reduction (vph)	0	30	0	0	29	0	0	14	0	0	0	267
Lane Group Flow (vph)	400	1200	0	90	1154	0	170	376	0	0	347	113
Confl. Peds. (#/hr)			12			5			10	10		16
Confl. Bikes (#/hr)			12			1			10			41
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	3%	3%	3%	7%	7%	7%
Turn Type	Prot	NA		Prot	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	7	4		3	8		5	2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	21.0	30.9		8.4	18.3		36.7	36.7			26.7	26.7
Effective Green, g (s)	21.0	30.9		8.4	18.3		36.7	36.7			26.7	26.7
Actuated g/C Ratio	0.23	0.34		0.09	0.20		0.41	0.41			0.30	0.30
Clearance Time (s)	4.0	4.5		4.0	4.5		4.0	5.5			5.5	5.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	416	1702		168	1024		310	718			340	421
v/s Ratio Prot	c0.22	0.24		0.05	c0.23		0.04	c0.21				
v/s Ratio Perm							0.19				c0.30	0.08
v/c Ratio	0.96	0.71		0.54	1.13		0.55	0.52			1.02	0.27
Uniform Delay, d1	34.1	25.6		38.9	35.9		18.7	20.1			31.6	24.2
Progression Factor	1.00	1.00		1.15	0.84		1.00	1.00			1.00	1.00
Incremental Delay, d2	35.5	2.5		2.7	67.9		2.0	2.7			54.2	1.6
Delay (s)	69.6	28.1		47.5	98.1		20.7	22.8			85.8	25.7
Level of Service	E	C		D	F		C	C			F	C
Approach Delay (s)		38.3			94.5			22.2			54.4	
Approach LOS		D			F			C			D	

Intersection Summary			
HCM 2000 Control Delay	56.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	109.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	20	20	210	106	226	30	1193	340	242	822	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	16	12	12	12	12
Total Lost time (s)		4.5		4.5	4.5			4.5		4.5	4.5	
Lane Util. Factor		1.00		0.95	0.95			0.95		1.00	0.95	
Frpb, ped/bikes		0.99		1.00	0.99			0.99		1.00	0.97	
Flpb, ped/bikes		1.00		1.00	1.00			1.00		1.00	1.00	
Frt		0.95		1.00	0.90			0.97		1.00	0.96	
Flt Protected		0.98		0.95	1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1644		1698	1591			3791		1770	3299	
Flt Permitted		0.98		0.95	1.00			0.91		0.95	1.00	
Satd. Flow (perm)		1644		1698	1591			3439		1770	3299	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	20	20	20	210	106	226	30	1193	340	242	822	330
RTOR Reduction (vph)	0	19	0	0	78	0	0	24	0	0	40	0
Lane Group Flow (vph)	0	41	0	189	275	0	0	1539	0	242	1112	0
Confl. Peds. (#/hr)	4					4	22		18			22
Confl. Bikes (#/hr)			1			2			33			27
Heavy Vehicles (%)	8%	8%	8%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Turn Type	Split	NA		Split	NA		Perm	NA		Prot	NA	
Protected Phases	4	4		8	8			2		1	6	
Permitted Phases							2					
Actuated Green, G (s)		6.2		20.3	20.3			35.0		10.5	50.0	
Effective Green, g (s)		6.2		20.3	20.3			35.0		10.5	50.0	
Actuated g/C Ratio		0.07		0.23	0.23			0.39		0.12	0.56	
Clearance Time (s)		4.5		4.5	4.5			4.5		4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		113		382	358			1337		206	1832	
v/s Ratio Prot		c0.03		0.11	c0.17					c0.14	0.34	
v/s Ratio Perm								c0.45				
v/c Ratio		0.37		0.49	0.77			1.15		1.17	0.61	
Uniform Delay, d1		40.0		30.4	32.6			27.5		39.8	13.4	
Progression Factor		1.11		1.00	1.00			0.65		1.00	1.00	
Incremental Delay, d2		2.0		1.0	9.5			68.8		117.8	1.5	
Delay (s)		46.4		31.4	42.1			86.6		157.6	14.9	
Level of Service		D		C	D			F		F	B	
Approach Delay (s)		46.4			38.4			86.6			39.7	
Approach LOS		D			D			F			D	

Intersection Summary			
HCM 2000 Control Delay	60.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	112.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	546	66	71	476	69	42
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	546	66	71	476	69	42
Pedestrians	1				25	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				2	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	213			1049		
pX, platoon unblocked					1.00	
vC, conflicting volume			637		985	331
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			637		983	331
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		69	94
cM capacity (veh/h)			930		224	654

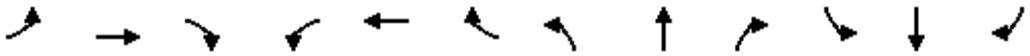
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	364	248	230	317	111
Volume Left	0	0	71	0	69
Volume Right	0	66	0	0	42
cSH	1700	1700	930	1700	298
Volume to Capacity	0.21	0.15	0.08	0.19	0.37
Queue Length 95th (ft)	0	0	6	0	42
Control Delay (s)	0.0	0.0	3.4	0.0	24.1
Lane LOS			A		C
Approach Delay (s)	0.0		1.4		24.1
Approach LOS					C

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	350	778	120	101	598	240	120	973	219	310	672	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	3.5		4.0	4.5		4.0	3.5	
Lane Util. Factor	0.97	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.98		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3400	3409		1787	3366		1719	3300		1752	3425	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3400	3409		1787	3366		1719	3300		1752	3425	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	350	778	120	101	598	240	120	973	219	310	672	70
RTOR Reduction (vph)	0	13	0	0	47	0	0	22	0	0	8	0
Lane Group Flow (vph)	350	885	0	101	791	0	120	1170	0	310	734	0
Confl. Peds. (#/hr)			31			31			30			37
Confl. Bikes (#/hr)			9			7			27			27
Heavy Vehicles (%)	3%	3%	3%	1%	1%	1%	5%	5%	5%	3%	3%	3%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.5	30.1		8.2	26.3		9.9	23.2		12.0	26.3	
Effective Green, g (s)	12.5	30.1		8.2	26.3		9.9	23.2		12.0	26.3	
Actuated g/C Ratio	0.14	0.33		0.09	0.29		0.11	0.26		0.13	0.29	
Clearance Time (s)	4.0	4.0		4.0	3.5		4.0	4.5		4.0	3.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	472	1140		162	983		189	850		233	1000	
v/s Ratio Prot	c0.10	c0.26		0.06	0.23		0.07	c0.35		c0.18	0.21	
v/s Ratio Perm												
v/c Ratio	0.74	0.78		0.62	0.80		0.63	1.38		1.33	0.73	
Uniform Delay, d1	37.2	26.9		39.4	29.5		38.3	33.4		39.0	28.7	
Progression Factor	1.07	1.21		1.00	1.00		1.00	1.00		1.20	0.79	
Incremental Delay, d2	5.5	4.7		7.3	7.0		6.8	177.1		171.3	4.0	
Delay (s)	45.2	37.2		46.7	36.4		45.1	210.5		218.0	26.7	
Level of Service	D	D		D	D		D	F		F	C	
Approach Delay (s)		39.4			37.5			195.4			83.1	
Approach LOS		D			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	94.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	100.3%	ICU Level of Service	G
Analysis Period (min)	15		

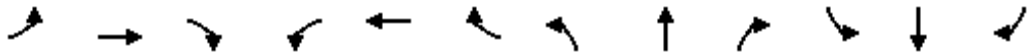
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	78	1209	30	10	862	46	10	10	40	41	10	66
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	78	1209	30	10	862	46	10	10	40	41	10	66
Pedestrians		3			4			11			7	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		418										
pX, platoon unblocked				0.79			0.79	0.79	0.79	0.79	0.79	
vC, conflicting volume	915			1250			1916	2326	634	1722	2318	464
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	915			779			1624	2144	0	1377	2134	464
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	89			98			69	70	95	24	70	88
cM capacity (veh/h)	743			656			33	33	846	54	34	543

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	78	806	433	10	575	333	60	117
Volume Left	78	0	0	10	0	0	10	41
Volume Right	0	0	30	0	0	46	40	66
cSH	743	1700	1700	656	1700	1700	92	100
Volume to Capacity	0.11	0.47	0.25	0.02	0.34	0.20	0.65	1.18
Queue Length 95th (ft)	9	0	0	1	0	0	79	195
Control Delay (s)	10.4	0.0	0.0	10.6	0.0	0.0	99.0	224.4
Lane LOS	B			B			F	F
Approach Delay (s)	0.6			0.1			99.0	224.4
Approach LOS							F	F

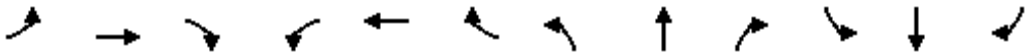
Intersection Summary				
Average Delay	13.7			
Intersection Capacity Utilization	60.8%	ICU Level of Service	B	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	540	120	122	0	0	40	0	608	90	20	315	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Util. Factor	0.95	0.95				1.00		0.95			0.95	
Frpb, ped/bikes	1.00	0.99				1.00		0.99			1.00	
Flpb, ped/bikes	1.00	1.00				1.00		1.00			1.00	
Frt	1.00	0.95				0.86		0.98			1.00	
Flt Protected	0.95	0.98				1.00		1.00			1.00	
Satd. Flow (prot)	1681	1646				1611		3450			3529	
Flt Permitted	0.95	0.98				1.00		1.00			0.85	
Satd. Flow (perm)	1681	1646				1611		3450			3016	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	540	120	122	0	0	40	0	608	90	20	315	0
RTOR Reduction (vph)	0	21	0	0	0	14	0	15	0	0	0	0
Lane Group Flow (vph)	394	367	0	0	0	26	0	683	0	0	335	0
Confl. Peds. (#/hr)			6						5			14
Confl. Bikes (#/hr)			6						13			23
Turn Type	Perm	NA				Perm		NA		Perm	NA	
Protected Phases		4						2			2	
Permitted Phases	4					8				2		
Actuated Green, G (s)	52.0	52.0				52.0		21.0			21.0	
Effective Green, g (s)	52.0	52.0				52.0		21.0			21.0	
Actuated g/C Ratio	0.65	0.65				0.65		0.26			0.26	
Clearance Time (s)	3.0	3.0				3.0		4.0			4.0	
Lane Grp Cap (vph)	1092	1069				1047		905			791	
v/s Ratio Prot								c0.20				
v/s Ratio Perm	c0.23	0.22				0.02					0.11	
v/c Ratio	0.36	0.34				0.02		0.75			0.42	
Uniform Delay, d1	6.4	6.3				5.0		27.1			24.5	
Progression Factor	1.00	1.00				1.00		1.00			1.00	
Incremental Delay, d2	0.9	0.9				0.0		5.8			1.7	
Delay (s)	7.3	7.2				5.0		33.0			26.1	
Level of Service	A	A				A		C			C	
Approach Delay (s)		7.3			5.0			33.0			26.1	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	7.0
Intersection Capacity Utilization	116.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	59	0	67	10	0	20	94	50	20	10	40	97
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	59	0	67	10	0	20	94	50	20	10	40	97
Pedestrians					6			2			8	
Lane Width (ft)					12.0			12.0			12.0	
Walking Speed (ft/s)					4.0			4.0			4.0	
Percent Blockage					1			0			1	
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	384	372	90	432	411	74	137			76		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	384	372	90	432	411	74	137			76		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	89	100	93	98	100	98	94			99		
cM capacity (veh/h)	526	516	966	465	490	976	1447			1515		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	126	30	164	147
Volume Left	59	10	94	10
Volume Right	67	20	20	97
cSH	694	715	1447	1515
Volume to Capacity	0.18	0.04	0.06	0.01
Queue Length 95th (ft)	16	3	5	0
Control Delay (s)	11.3	10.3	4.6	0.6
Lane LOS	B	B	A	A
Approach Delay (s)	11.3	10.3	4.6	0.6
Approach LOS	B	B		

Intersection Summary				
Average Delay	5.5			
Intersection Capacity Utilization	39.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix B

Peak Period

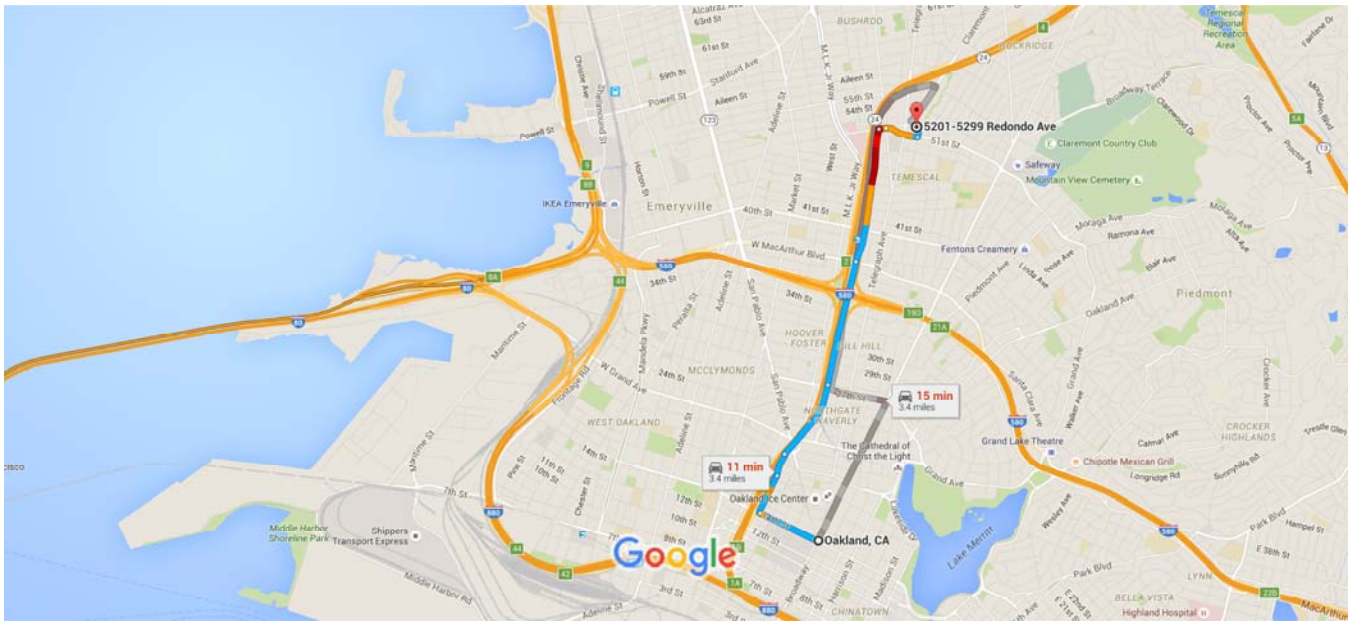
Travel Times

FEHR PEERS

Google Maps

Oakland, CA to 5201-5299 Redondo Ave, Oakland, CA 94618

Drive 2.9 miles, 13 min



Map data ©2016 Google 2000 ft

Oakland, CA

Take 14th St, I-980 E, CA-24 E and Exit 2 to Clarke St

7 min (2.9 mi)

1. Head southwest on Broadway toward 14th St

20 ft

2. Turn right onto 14th St

0.4 mi

3. Turn right onto Castro St

0.2 mi

4. Use the left lane to turn slightly left onto the CA-24 ramp to Walnut Creek/San Francisco/Hayward

0.1 mi

5. Use the left lane to merge onto I-980 E

0.5 mi

6. Use the middle lane to continue on CA-24 E

0.7 mi

7. Use the right 2 lanes to take exit 2 toward 51st Street

0.8 mi

8. Use any lane to turn right onto 52nd St

213 ft

9. Continue onto 51st St

0.2 mi

Follow Clarke St to Redondo Ave

24 s (338 ft)

10. Turn left onto Clarke St

328 ft

11. Turn right onto Redondo Ave

10 ft

5201-5299 Redondo Ave

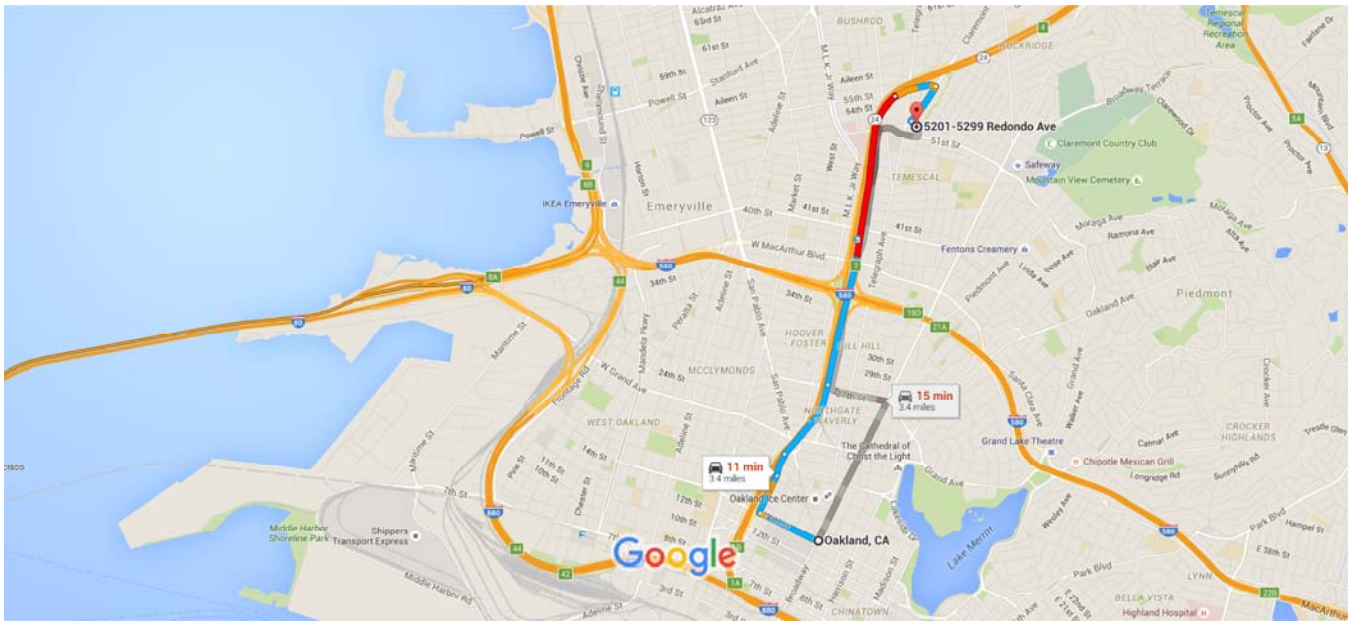
Oakland, CA 94618

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Google Maps

Oakland, CA to 5201-5299 Redondo Ave, Oakland, CA 94618

Drive 3.4 miles, 11 min



Map data ©2016 Google 2000 ft

Oakland, CA

Get on I-980 E from 14th St and Castro St

3 min (0.7 mi)

1. Head southwest on Broadway toward 14th St

20 ft

2. Turn right onto 14th St

0.4 mi

3. Turn right onto Castro St

0.2 mi

4. Use the left lane to turn slightly left onto the CA-24 ramp to Walnut Creek/San Francisco/Hayward

0.1 mi

Take CA-24 E to Claremont Ave. Take the Claremont Avenue exit from CA-24 E

3 min (2.4 mi)

5. Use the left lane to merge onto I-980 E

0.5 mi

6. Keep left to continue on CA-24 E

1.7 mi

7. Take the Claremont Avenue exit

0.2 mi

Continue on Claremont Ave. Drive to Redondo Ave

1 min (0.3 mi)

8. Turn right onto Claremont Ave

0.2 mi

9. Turn left onto Clarke St

226 ft

10. Turn left onto Redondo Ave

10 ft

5201-5299 Redondo Ave

Oakland, CA 94618

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Appendix C

Peak Hour

Signal Warrants

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FEHR PEERS

Sheet No 1 of 1

Project
Scenario Existing Plus Project
Peak Hour PM

Major Street Claremont Av
Minor Street Clarke St

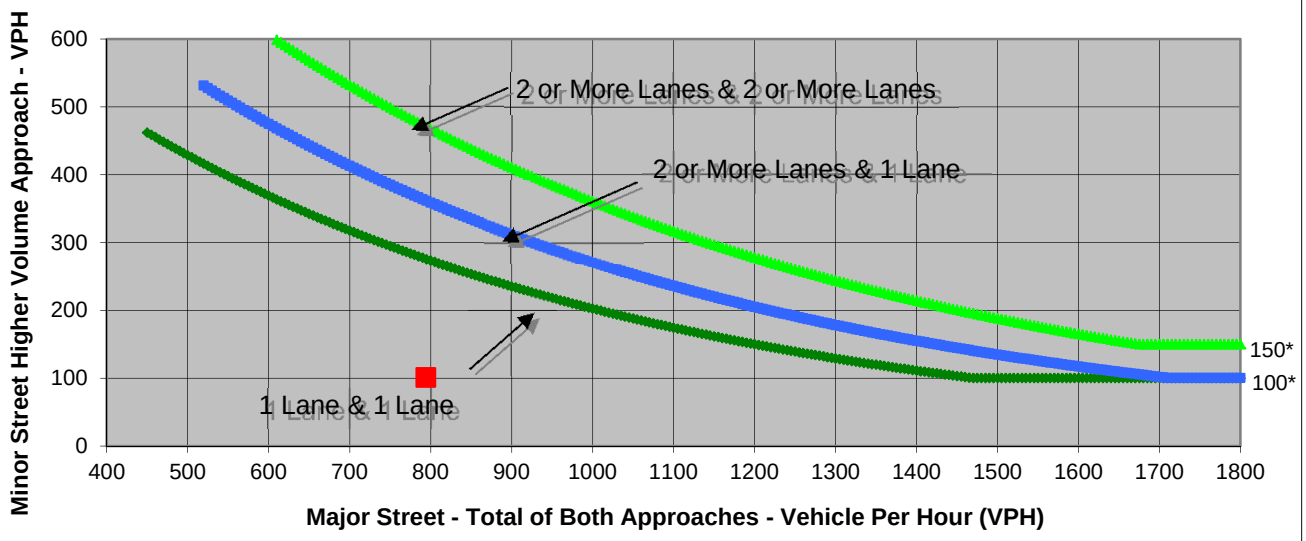
Turn Movement Volumes

	NB	SB	EB	WB
Left	68	0	0	71
Through	0	0	313	353
Right	33	0	57	0
Total	101	0	370	424

Major Street Direction

	North/South
X	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Claremont Av	Clarke St	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**794**	**101**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 1

Project
Major Street 51st St
Minor Street Clarke St
Scenario Existing Plus Project
Peak Hour PM

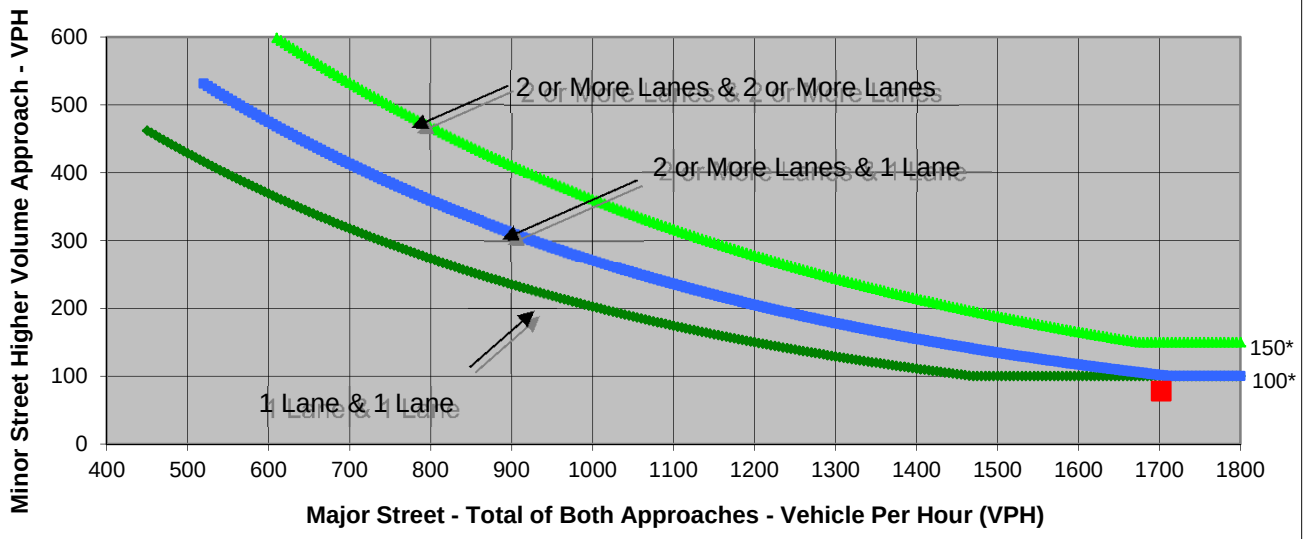
Turn Movement Volumes

	NB	SB	EB	WB
Left	6	40	75	14
Through	4	4	902	646
Right	36	34	20	45
Total	46	78	997	705

Major Street Direction

	North/South
X	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	51st St	Clarke St	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,702**	**78**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 1

Project
Major Street Claremont Av
Minor Street Clarke St
Scenario 2035+P
Peak Hour PM

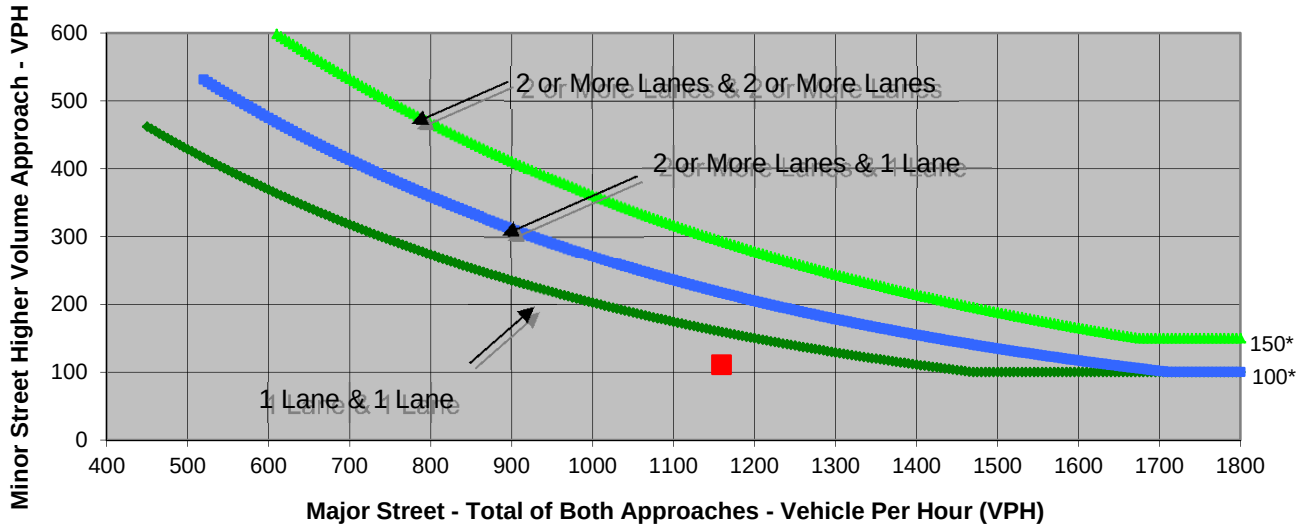
Turn Movement Volumes

	NB	SB	EB	WB
Left	69	0	0	71
Through	0	0	546	476
Right	42	0	66	0
Total	111	0	612	547

Major Street Direction

	North/South
X	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	Claremont Av	Clarke St	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**1,159**	**111**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Sheet No 1 of 1

Project
Scenario 2035 Plus Project
Peak Hour PM

Major Street 51st St
Minor Street Clarke St

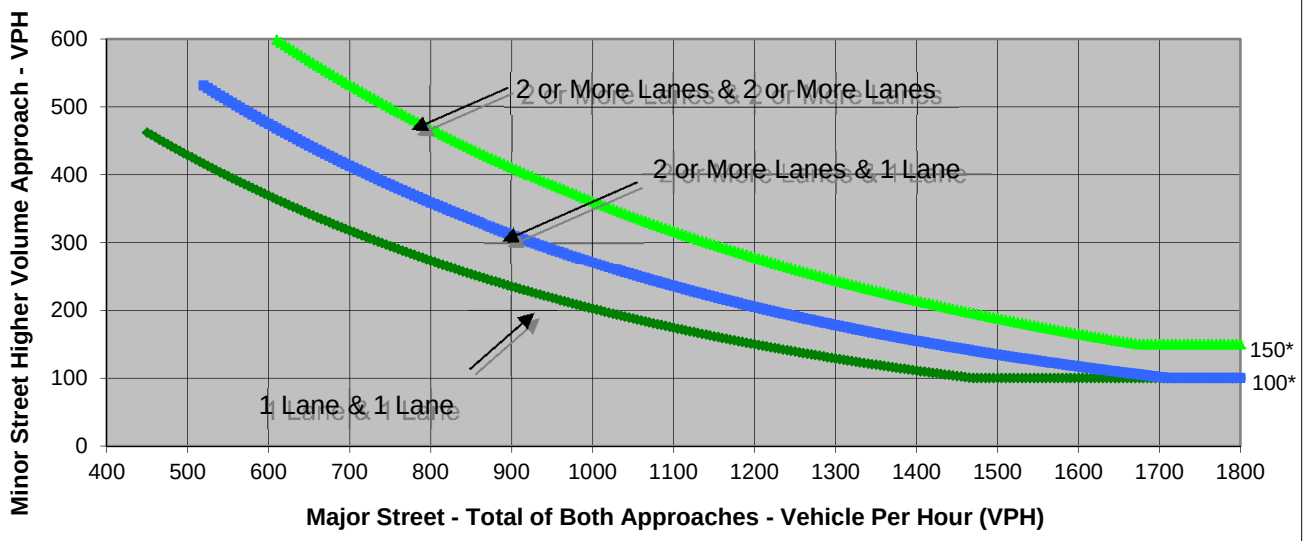
Turn Movement Volumes

	NB	SB	EB	WB
Left	10	41	78	10
Through	10	10	1,209	862
Right	40	33	30	46
Total	60	84	1,317	918

Major Street Direction

	North/South
X	East/West

Figure 4C-3. Warrant 3, Peak Hour



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2012

	Major Street	Minor Street	Warrant Met
	51st St	Clarke St	
Number of Approach Lanes	**2**	**1**	**NO**
Traffic Volume (VPH) *	**2,235**	**84**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

APPENDIX B

5110 TELEGRAPH AVENUE
NOISE IMPACT ANALYSIS

NOISE IMPACT ANALYSIS

5110 TELEGRAPH AVENUE PROJECT

CITY OF OAKLAND, CALIFORNIA

LSA

January 2016

NOISE IMPACT ANALYSIS

5110 TELEGRAPH AVENUE PROJECT

CITY OF OAKLAND, CALIFORNIA

Submitted to:

City of Oakland
Planning & Building Department
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

Prepared by:

LSA Associates, Inc.
5084 N. Fruit Avenue, Suite 103
Fresno, California 93711
(559) 490-1210

LSA

January 2016

TABLE OF CONTENTS

A. INTRODUCTION 3

B. PROJECT DESCRIPTION 3

C. BACKGROUND 7
1. CHARACTERISTICS OF SOUND 7
2. MEASUREMENT OF SOUND 7
3. PHYSIOLOGICAL EFFECTS OF NOISE 8
4. REGULATORY FRAMEWORK 10

D. SETTING 15
1. EXISTING SENSITIVE LAND USES IN THE PROJECT AREA 15
2. OVERVIEW OF THE EXISTING NOISE ENVIRONMENT 15
3. AMBIENT NOISE LEVELS 16

E. PROJECT IMPACTS 19
1. CONSTRUCTION NOISE 19
2. LAND USE COMPATIBILITY 21
3. OPERATIONAL NOISE 22
4. GROUNDBORNE VIBRATION 23
5. CUMULATIVE IMPACTS 24

FIGURES

Figure 1: Project Location and Regional Vicinity Map 5
Figure 2: Site Plan 6
Figure 3: Noise Monitoring Locations 17

TABLES

Table 1: Definitions of Acoustical Terms 9
Table 2: Common Sound Levels and Their Noise Sources 10
Table 3: City of Oakland Noise-Land Use Compatibility Matrix 11
Table 4: Maximum Allowable Receiving Noise Level Standards, Residential, and Civic 12
Table 5: Ambient Noise Monitoring Results, dBA, July 28-29, 2015 16
Table 6: Meteorological Conditions During Ambient Noise Monitoring 16
Table 7: RCNM Default Noise Emission Reference Levels and Usage Factors 20

APPENDICES

Appendix A: Noise Monitoring Data

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NOISE IMPACT ANALYSIS

A. INTRODUCTION

LSA Associates, Inc. (LSA) has completed a noise impact analysis for the proposed 5110 Telegraph Avenue Project (project) located at 5110 Telegraph Avenue in the City of Oakland. The project location and a detailed vicinity map are shown in Figure 1.

This noise impact analysis examines potential impacts from noise sources in the project vicinity, including local roadways though noise monitoring and analysis. Noise monitoring was conducted using the Larson Davis SoundTrack LxT sound level meter to assess the ambient noise environment on the project site. Construction and operational noise levels were analyzed and the calculations are included in Appendix A.

In summary, based on the results of the analysis, LSA concluded that with mitigation measures, the noise levels associated with exposure to future residents of the project site would not exceed the significance criterion for noise levels provided by the City of Oakland.

B. PROJECT DESCRIPTION

The project site is located in North Oakland within the Temescal neighborhood, which is centered on Telegraph Avenue and generally bound by 40th Street to the south, Martin Luther King Junior Boulevard to the west, Broadway Boulevard to the east, and 55th Street to the north. The approximately 1.7-acre site is comprised of ten parcels and is bordered by Telegraph Avenue to the west, 51st Street to the south, Clarke Street to the east, and multi-family uses to the north.

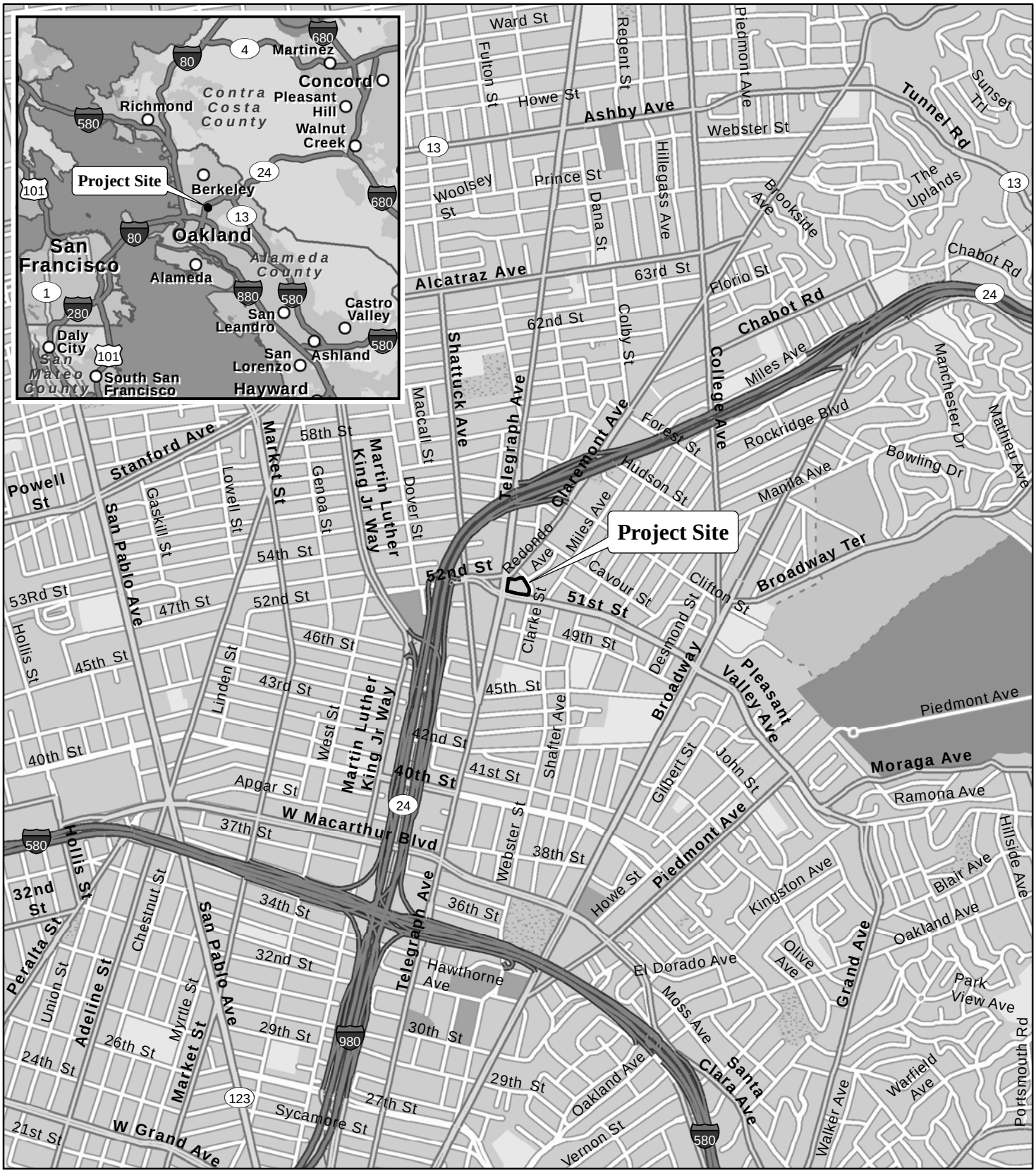
The project site is surrounded by a variety of uses including residential, commercial, institutional, and park uses. A four-story multi-family residential development directly borders the site to the north. Little Frog Park and a one- to two-story single-family residential development are located to the east of the site along Clarke Street. A Fire Station, multi-family residential, and commercial uses are located south of the project site along 51st Street. A two-story commercial development is located directly west of the site. Further south, Telegraph Avenue includes a variety of commercial and retail uses. The project site is also located within close proximity (approximately 0.5 mile) to the MacArthur Bay Area Rapid Transit (BART) Station. Figure 1 depicts the site's regional and local context. Figure 2 depicts an aerial view of the project site and its vicinity.

The proposed project would develop a four and six-story, mixed-use building with residential and commercial uses, located on the corner of 51st Street and Telegraph Avenue and along Clarke Street and Claremont Avenue. The applicant proposes to construct a new mixed-use building including approximately 34,000 square feet of commercial space, 297 parking spaces, and 204 housing units. Parking would be provided in two subterranean levels and would include 153 residential parking spaces and 144 commercial parking spaces. The commercial space would be located on the ground floor and would be divided into four retail spaces, including a space for a grocery store. The ground floor would also include a residential lobby, 16 studio loft units, as well as common commercial outdoor areas and a public pathway. The second, third, and fourth levels along Clarke Street would

include 4 studios, 17 one-bedroom units, 16 two-bedroom units, and 2 three-bedroom units. The fifth and sixth levels each would include 4 studios, 17 one-bedroom units, 12 two-bedroom units, and 2 three-bedroom units. The second-level would include private decks along the Clarke Street frontage, and an upper courtyard between the north and south building wings. The roof would include a commercial urban farm with greenhouses and storage of farming tools and preparation areas. Figure 3 provides a proposed site plan and Figure 4 provides an architectural rendering of the Telegraph Avenue frontage. Figures 5, 6, 7 and 8 provide floor plans of the proposed building. Figure 9 provides an elevation of building from Telegraph Avenue.

Pedestrian access would be provided via a pedestrian pathway that would connect the project site to Little Frog Park. Four points of public access would be provided: 1) at 51st Street on the southwest corner of the project site; 2) at Telegraph Avenue in the main entrance courtyard; 3) at Claremont Avenue in the northwest corner of the project site; and 4) at Clarke Street directly across from Little Frog Park. Vehicular access to the parking garage would be provided by a three-lane garage entrance on Clarke Street. Two residential loading docks/berths would be located adjacent to the parking garage entrance. The project sponsor also proposes two tandem commercial loading spaces along 51st Street and in front of the grocery/supermarket.

Project construction could include excavation and construction of the subterranean parking structure, construction of the above-grade retail and residential structure, and site finishes and landscaping. Excavation for the subterranean parking structure would occur over approximately two months, utilizing backhoes, bulldozers, and excavators. Subterranean and podium construction would occur over approximately four months and would not include pile driving or prolonged periods of noise or vibration. Construction of the rest of the retail and residential building would occur in two phases over a ten-month period, while site finishes and landscaping would occur over approximately two months. Traffic during construction of the retail and residential portions of the project would consist primarily of light-duty truck trips to and from the site, with additional truck trips for materials delivery. Site finishes and landscaping would be performed using small grading and earthwork equipment such as backhoes and whackers. The total construction period is expected to be approximately 19 months, with project completion by December 2017.



LSA

FIGURE 1

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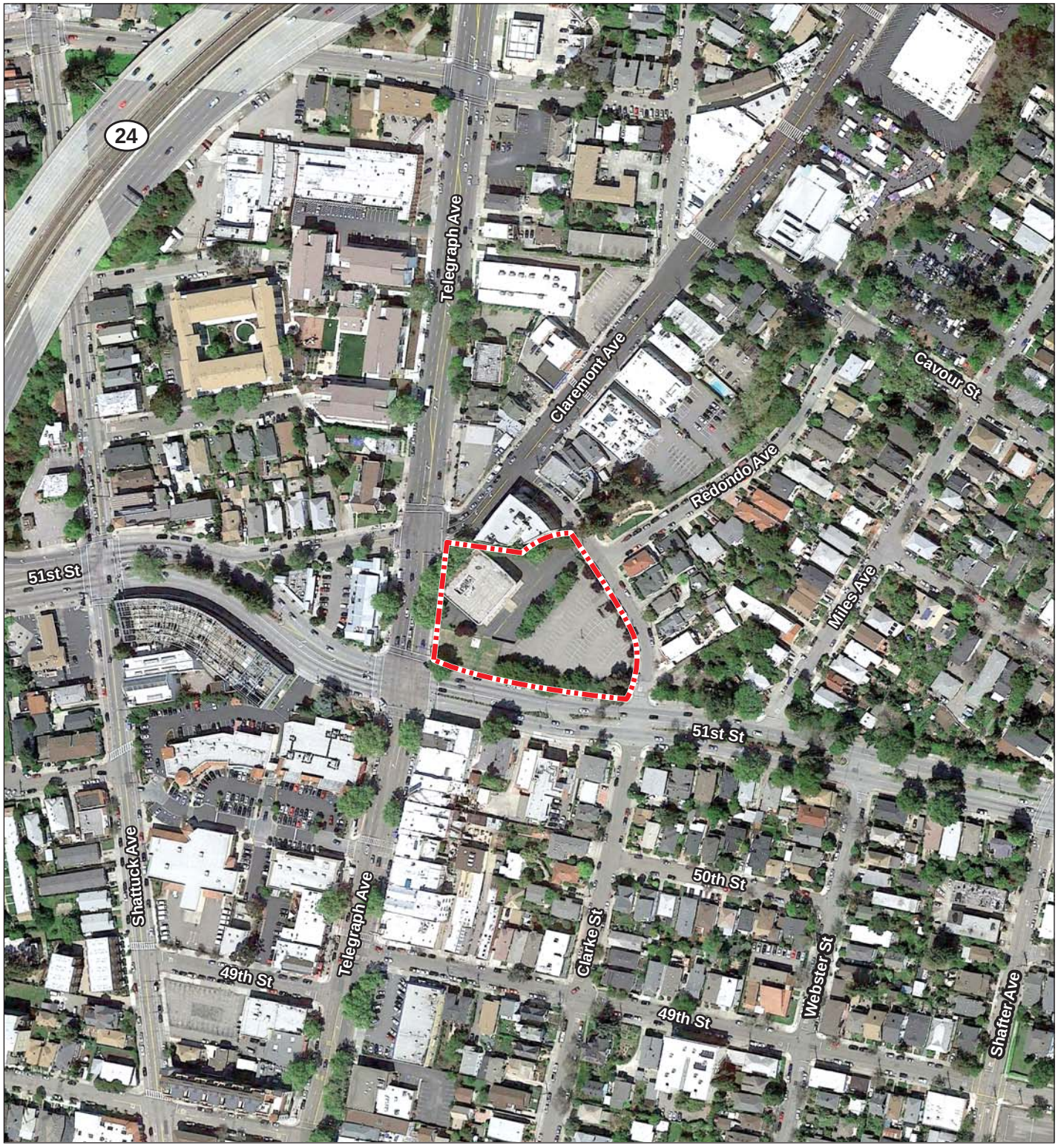
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SOURCE: ESRI STREETMAP NORTH AMERICA (2012).

5110 Telegraph Avenue Project

Project Location and Regional Vicinity Map

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LSA

FIGURE 2

Project Site

Note: This aerial photograph was taken in March 2015. As of February 2016, the building has been demolished and the site has been graded.

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5110 Telegraph Avenue Project
Aerial Photograph of Project Site

SOURCES: GOOGLE EARTH, APRIL 2014; LSA ASSOCIATES, INC., 2016.

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C. BACKGROUND

This section provides background information on the evaluation of noise impacts associated with the proposed project and includes a determination of the short-term construction noise impacts on off-site noise-sensitive land uses; a determination of the long-term project-related noise impacts on off-site noise-sensitive uses; and a determination of the long-term traffic and aircraft noise impacts on the proposed on-site uses. The analysis also evaluates measures necessary to reduce short-term and long-term noise impacts.

This noise impact analysis utilizes the City's noise standards, including the City's General Plan and SCAs noise section, as thresholds for evaluating potential noise impacts.

1. Characteristics of Sound

Noise is usually defined as unwanted sound and consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. To the human ear, sound has two significant characteristics: pitch and loudness. Pitch is generally an annoyance, while loudness can affect our ability to hear. Pitch is the number of complete vibrations, or cycles per second, of a wave resulting in the tone's range from high to low. Loudness is the strength of a sound that describes a noisy or quiet environment and is measured by the amplitude of the sound wave. Loudness is determined by the intensity of the sound waves, combined with the reception characteristics of the human ear. Sound intensity refers to how hard the sound wave strikes an object, which in turn produces the sound's effect. This characteristic of sound can be measured precisely with instruments. The project analysis defines the noise environment of the project area in terms of sound intensity and the project's effect on adjacent sensitive land uses.

2. Measurement of Sound

Sound intensity is measured through the A-weighted scale to correct for the relative frequency response of the human ear. That is, an A-weighted noise level de-emphasizes low and very high frequencies of sound similar to the human ear's de-emphasis of these frequencies. Unlike linear units (e.g., inches or pounds), decibels are measured on a logarithmic scale representing points on a sharply rising curve.

For example, 10 decibels (dB) are 10 times more intense than 1 dB; 20 dB are 100 times more intense than 1 dB; and 30 dB are 1,000 times more intense than 1 dB. Thirty decibels (30 dB) represent 1,000 times as much acoustic energy as 1 dB. The decibel scale increases as the square of the change, representing the sound pressure energy. A sound as soft as human breathing is about 10 times greater than 0 dB. The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. A 10 dB increase in sound level is perceived by the human ear as only a doubling of the loudness of the sound. Ambient sounds generally range from 30 A-weighted decibels (dBA) (very quiet) to 100 dBA (very loud).

Sound levels are generated from a source, and their decibel level decreases as the distance from that source increases. Sound dissipates exponentially with distance from the noise source. For a single point source, sound levels decrease approximately 6 dBA for each doubling of distance from the source. This drop-off rate is appropriate for noise generated by stationary equipment. If noise is produced by a line source (e.g., highway traffic or railroad operations), the sound decreases 3 dBA for

each doubling of distance in a hard-site environment, and the sound decreases 4.5 dBA for each doubling of distance in a relatively flat environment with absorptive vegetation.

There are many ways to rate noise for various time periods, an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for communities in the State of California are the L_{eq} and Community Noise Equivalent Level (CNEL) or the day-night average level (L_{dn}) based on dBA. CNEL is the time varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as evening hours) and a 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale, but without the adjustment for events occurring during the evening hours. CNEL and L_{dn} are within 1 dBA of each other and are normally interchangeable. The City uses both the CNEL and L_{dn} noise scale for long-term noise impact assessment.

Other noise rating scales are important when assessing the annoyance factor include the maximum noise level (L_{max}), which is the highest exponential time averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis for short-term noise impacts are specified in terms of maximum levels denoted by L_{max}, which reflects peak operating conditions and addresses the annoying aspects of intermittent noise. It is often used together with another noise scale, or noise standards in terms of percentile noise levels, in noise ordinances for enforcement purposes. For example, the L_{10} noise level represents the noise level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level. Half of the time the noise level exceeds this level, and half of the time it is less than this level. The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the background noise level during a monitoring period. For a relatively constant noise source, the L_{eq} and L_{50} are approximately the same.

Noise impacts can be described in three categories. The first category includes audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3.0 dB or greater since this level has been found to be the lowest audible change perceptible to humans in outdoor environments. The second category, potentially audible, refers to a change in the noise level between 1.0 and 3.0 dB, which is only noticeable in laboratory environments. The last category includes changes in noise levels of less than 1.0 dB, which are inaudible to the human ear. Only audible changes in existing ambient or background noise levels are considered potentially significant.

3. Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure (typically more than 8 hours, as defined by the Occupational Safety and Health Administration [OSHA]) to noise levels higher than 85 dBA. Exposure to high noise levels affects our entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions (thereby, affecting blood pressure and functions of the heart and the nervous system). In comparison, extended periods of noise exposure above 90 dBA would result in permanent cell damage. When the noise level reaches 120 dB, a tickling sensation occurs in the human ear, even with short-term exposure. This level of noise is called the threshold of feeling. As the sound reaches 140 dB, the tickling sensation is replaced by the feeling of pain in the ear. This is called the threshold of pain. A sound level of 160 to 165 dB will result in dizziness or loss

of equilibrium. The ambient or background noise problem is widespread and generally more concentrated in urban areas than in outlying less developed areas.

Table 1 lists "Definitions of Acoustical Terms," and Table 2 displays "Common Sound Levels and Their Noise Sources."

Table 1: Definitions of Acoustical Terms

Term	Definitions
Decibel, dB	A unit of level that denotes the ratio between two quantities proportional to power; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
Frequency, Hz	Of a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., number of cycles per second).
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted, unless reported otherwise.
L_{01}, L_{10}, L_{50}, L_{90}	The fast A-weighted noise levels equaled or exceeded by a fluctuating sound level for 1 percent, 10percent, 50 percent, and 90 percent of a stated time period.
Equivalent Continuous Noise Level, L_{eq}	The level of a steady sound that, in a stated time period and at a stated location, has the same A-weighted sound energy as the time varying sound.
Community Noise Equivalent Level, CNEL	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 5 dB to sound levels occurring in the evening from 7:00 p.m. to 10:00 p.m. and after the addition of 10 dB to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
Day/Night Noise Level, L_{dn}	The 24-hour A-weighted average sound level from midnight to midnight, obtained after the addition of 10 dB to sound levels occurring in the night between 10:00 p.m. and 7:00 a.m.
L_{max}, L_{min}	The maximum and minimum A-weighted sound levels measured on a sound level meter, during a designated time interval, using fast time averaging.
Ambient Noise Level	The all-encompassing noise associated with a given environment at a specified time, usually a composite of sound from many sources at many directions, near and far; no particular sound is dominant.
Intrusive	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content, as well as the prevailing ambient noise level.

Source: Harris, Cyril M., *Handbook of Acoustical Measurements and Noise Control*, 1991.

Table 2: Common Sound Levels and Their Noise Sources

Noise Source	A-Weighted Sound Level in Decibels	Noise Environment	Subjective Evaluation
Near Jet Engine	140	Deafening	128 times as loud
Civil Defense Siren	130	Threshold of Pain	64 times as loud
Hard Rock Band	120	Threshold of Feeling	32 times as loud
Accelerating Motorcycle a few feet away	110	Very Loud	16 times as loud
Pile Driver; Noisy Urban Street/ Heavy City Traffic	100	Very Loud	8 times as loud
Ambulance Siren; Food Blender	95	Very Loud	
Garbage Disposal	90	Very Loud	4 times as loud
Freight Cars; Living Room Music	85	Loud	
Pneumatic Drill; Vacuum Cleaner	80	Loud	2 times as loud
Busy Restaurant	75	Moderately Loud	
Near Freeway Auto Traffic	70	Moderately Loud	Reference Level
Average Office	60	Quiet	½ as loud
Suburban Street	55	Quiet	
Light Traffic; Soft Radio Music in Apartment	50	Quiet	¼ as loud
Large Transformer	45	Quiet	
Average Residence Without Stereo Playing	40	Faint	⅛ as loud
Soft Whisper	30	Faint	
Rustling Leaves	20	Very Faint	
Human Breathing	10	Very Faint	Threshold of Hearing
	0	Very Faint	

Source: Compiled by LSA Associates, Inc., 2015.

4. Regulatory Framework

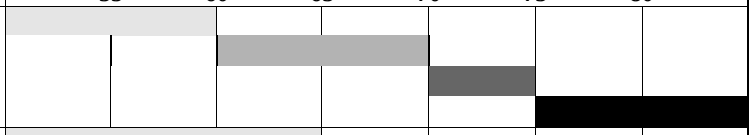
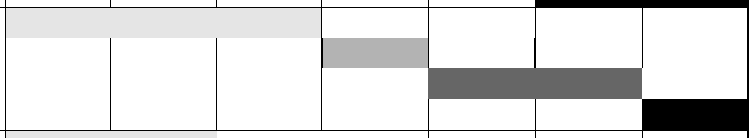
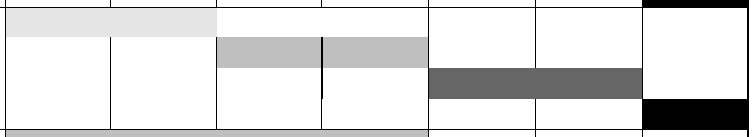
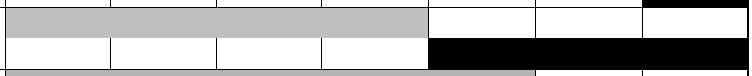
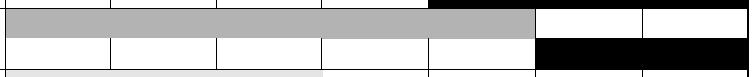
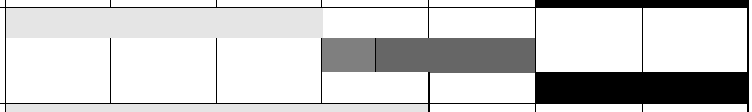
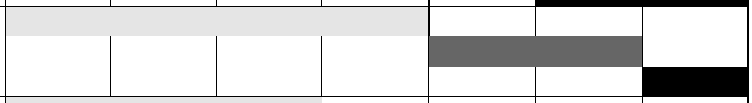
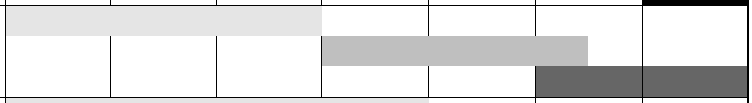
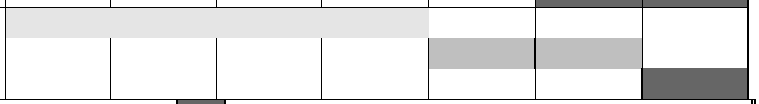
The City of Oakland has established standards for land use projects that have the potential to expose sensitive receptors (including residential areas) or the general public to noise levels in excess of the City's General Plan, the SCAs, and the City's Municipal Code, as discussed below.

a. City of Oakland's General Plan. The Noise Element of the City's General Plan was established to protect the quality of life and physical and mental well-being of the City's residents by mitigating noise incompatibilities among land uses.[1] As shown in Table 3, according to the City's land use compatibility matrix for residential uses, noise levels up to 60 dBA L_{dn} (or CNEL) are considered *normally acceptable*. Noise levels between 60 dBA and 70 dBA CNEL are *conditionally acceptable*, noise levels between 70 dBA and 75 dBA CNEL are *normally unacceptable*, and noise levels above 75 dBA CNEL are *clearly unacceptable* for residential land uses. Office buildings and commercial uses are normally acceptable up 65 dBA CNEL. Conditionally acceptable noise levels require detailed noise analysis and additional noise reduction requirements for new development.[2]

[1] Oakland, City of, 2005. *City of Oakland General Plan: Noise Element.* June.

[2] Ibid.

Table 3: City of Oakland Noise-Land Use Compatibility Matrix

Land Use Category	Community Noise Exposure in Decibels (CNEL) or Day/Night Average Noise Level in Decibels (L_{dn}) 55 60 65 70 75 80
Residential	
Transient Lodging (Motels, Hotels)	
Schools, Libraries, Churches, Hospitals, Nursing Homes	
Auditoriums, Concert Halls, Amphitheaters	
Sports Arena, Outdoor Spectator Sports	
Playgrounds, Neighborhood Parks	
Golf Courses, Riding Stables, Water Recreation, Cemeteries	
Office Buildings, Business Commercial and Professional Centers	
Industrial, Manufacturing, Utilities, Agriculture	

NORMALLY ACCEPTABLE Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.	NORMALLY UNACCEPTABLE New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
CONDITIONALLY ACCEPTABLE New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise reduction features included in the design. Conventional construction, but with windows closed and fresh air supply systems or air conditioning will normally suffice.	CLEARLY UNACCEPTABLE New construction or development should generally not be undertaken.

Source: Oakland, City of, 2005. *Oakland General Plan*. June.

b. City of Oakland Municipal Code. Section 8.18.020 of the City's Municipal Code provides that all construction equipment powered by internal combustion engines shall be properly muffled and maintained, that unnecessary idling of internal combustion engines is prohibited, that all stationary noise-generating construction equipment are to be located as far as practical from existing residences, that quiet construction equipment are to be selected whenever possible, and that use of

pile drivers and jack hammers shall be prohibited on Sundays and holidays, except for emergencies and as approved in advance by the Building Official.[3]

Section 17.120.050 of the City's Planning Code limits construction activities to the hours between 7:00 a.m. to 7:00 p.m., Monday through Friday, and 9:00 a.m. to 8:00 p.m. on Saturdays and Sundays.[4] Construction-related noise shall not exceed the applicable nighttime noise level standards on federal holidays. In addition, construction-related operations shall not exceed the maximum allowable receiving noise levels described for short-term construction (less than 10 days) and long-term construction (more than 10 days) in Table 4 below.

Table 4: Maximum Allowable Receiving Noise Level Standards, Residential, and Civic

Cumulative Number of Minutes in Either the Daytime or Nighttime One Hour Time Period	Daytime 7:00 a.m. to 10:00 p.m.	Nighttime 10:00 p.m. to 7:00 a.m.
20	60	45
10	65	50
5	70	55
1	75	60
0	80	65

Source: City of Oakland Planning Code.

c. City of Oakland Standard Conditions of Approval. The City of Oakland has developed SCAs to achieve consistency between projects of the same type. Variations in conditions of approval should only occur if two projects have different characteristics such as different sizes, locations, environmental settings, or other considerations.[5]

The proposed project would include the construction of more than 50 residential dwelling units, would be located in a conditionally acceptable noise area, and would result in *extreme construction noise* defined as any project that would generate noise levels above 90 dBA. Therefore, the proposed project would be required to meet conditions 58 through 60 and 62 through 64 of the City's SCAs, as listed below for reference. These conditions include noise reduction measures relevant to this noise analysis.

SCA 58 Construction Days/Hours

Requirement: The project applicant shall comply with the following restrictions concerning construction days and hours:

a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m.
b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only

[3] Oakland, City of, 2008. Oakland Municipal Code 8.18.020.

[4] Oakland, City of, 2008. Oakland Planning Code 17.120.

[5] Oakland, City of, 2015. Standard Conditions of Approval. July 22.

within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday.

c. No construction is allowed on Sunday or federal holidays.

Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.

Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.

When Required: During construction
Initial Approval: N/A
Monitoring/Inspection: Bureau of Building

SCA 59 Construction Noise

Requirement: The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following:

a. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible.
b. Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.
c. Applicant shall use temporary power poles instead of generators where feasible.
d. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.
e. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.

When Required: During construction
Initial Approval: N/A
Monitoring/Inspection: Bureau of Building

SCA 60 Extreme Construction Noise

a. ***Construction Noise Management Plan Required***

Requirement: Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set

of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following:

i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;
ii. Implement "quiet" pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;
iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;
iv. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and
v. Monitor the effectiveness of noise attenuation measures by taking noise measurements.

When Required: Prior to approval of construction-related permit
Initial Approval: Bureau of Building
Monitoring/Inspection: Bureau of Building

b. ***Public Notification Required***

Requirement: The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.

When Required: During construction
Initial Approval: Bureau of Building
Monitoring/Inspection: Bureau of Building

SCA 62 Construction Noise Complaints

Requirement: The project applicant shall submit to the City for review and approval a set of procedures for responding to and tracking complaints received pertaining to construction noise, and shall implement the procedures during construction. At a minimum, the procedures shall include:

a. Designation of an on-site construction complaint and enforcement manager for the project;
b. A large on-site sign near the public right-of-way containing permitted construction days/hours, complaint procedures, and phone numbers for the project complaint manager and City Code Enforcement unit;
c. Protocols for receiving, responding to, and tracking received complaints; and
d. Maintenance of a complaint log that records received complaints and how complaints were addressed, which shall be submitted to the City for review upon the City's request.

When Required: Prior to approval of construction-related permit
Initial Approval: Bureau of Building
Monitoring/Inspection: Bureau of Building

SCA 63 Exposure to Community Noise

Requirement: The project applicant shall submit a Noise Reduction Plan prepared by a qualified acoustical engineer for City review and approval that contains noise reduction measures (e.g., sound-rated window, wall, and door assemblies) to achieve an acceptable interior noise level in accordance with the land use compatibility guidelines of the Noise Element of the Oakland General Plan. The applicant shall implement the approved Plan during construction. To the maximum extent practicable, interior noise levels shall not exceed the following:

a. 45 dBA: Residential activities, civic activities, hotels
b. 50 dBA: Administrative offices; group assembly activities
c. 55 dBA: Commercial activities
d. 65 dBA: Industrial activities

When Required: Prior to approval of construction-related permit
Initial Approval: Bureau of Planning
Monitoring/Inspection: Bureau of Building

SCA 64 Operational Noise

Requirement: Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of chapter 17.120 of the Oakland Planning Code and chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City.

When Required: Ongoing
Initial Approval: N/A
Monitoring/Inspection: Bureau of Building

D. SETTING

1. Existing Sensitive Land Uses in the Project Area

Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to noise. Existing sensitive land uses within the project area include single-family homes to the east, along Clarke Street, approximately 50 feet from the project site and multifamily residential units located approximately 100 feet to the south along 51st Street. The project site is adjacent to a multifamily residential building to the north, approximately 15 feet away. Office and commercial buildings located west and south of the project site are not considered noise-sensitive uses. The sensitive land uses to the north, east, and south may potentially be affected by the noise generated during project construction or future operational noise generated by the project.

2. Overview of the Existing Noise Environment

The primary existing noise sources in the project area are the nearby roads; traffic on Telegraph Avenue and 51st Street is the dominant source contributing to the ambient noise levels in the project vicinity. Noise from motor vehicles is generated by engine vibrations, the interaction between the tires and the road, and the exhaust systems.

Airport related noise levels are primarily associated with aircraft engine noise made while aircraft are taking off, landing, or running their engines while still on the ground. The Oakland International Airport is located approximately 12 miles southwest of the proposed project and the project site is not within the 65 dBA CNEL contour. Noise from this airport does not affect the noise environment of the project site. The project is not within the 60 dBA L_{dn} contour for BART or railroad noise.[6]

[6] Oakland, City of, 2000. *Oakland General Plan, Noise Element.*

3. Ambient Noise Levels

To assess existing noise levels, LSA conducted two short-term and one long-term noise measurements on the project site between July 28, 2015, and July 29, 2015. The short-term 15-minute noise measurements were recorded at different locations on-site between 11:15 a.m. and 12:00 p.m. on July 28, 2015. The long-term noise measurement recorded a 24-hour measurement from July 28, 2015, to July 29, 2015. The short-term measurements were taken on the southern and eastern property site boundaries along 51st Street and Telegraph Avenue, respectively. Noise monitoring locations are shown in Figure 3. Noise measurement data collected during monitoring is summarized in Table 5. The meteorological conditions at the time of the noise monitoring are shown in Table 6. The short-term noise measurements indicate that ambient noise in the project site vicinity ranges from approximately 50.0 dBA to 79.2 dBA L_{eq}. The long-term noise measurement was 63 dBA CNEL.

The primary noise sources observed on Clarke Street was the traffic on Telegraph Avenue, Claremont Avenue, and 51st Street; traffic noise levels were significantly lower here than the western project site boundary due to distance attenuation.

Table 5: Ambient Noise Monitoring Results, dBA, July 28-29, 2015

Location Number	Location Description	Start Time	L_{eq} [a]	L_{max} [b]	L_{min} [c]	Primary Noise Sources
ST-1	Project site boundary on 51st Street, across from 493 51st Street	11:23 a.m.	63.6	77.2	50.0	Traffic on 51st Street with Telegraph Avenue noise in the background.
ST-2	Project site boundary on Telegraph Avenue where Claremont Avenue intersects	11:42 a.m.	66.5	79.2	56.1	Traffic on Telegraph Avenue and the intersection of Claremont/ 52nd Street.
LT-1	Approximately 50 feet from the project site boundary on Telegraph Avenue and 60 feet north of the 51st Street project site boundary	12:30 p.m.	60.3	94.5	43.1	Telegraph Avenue and 51st Street traffic noise.

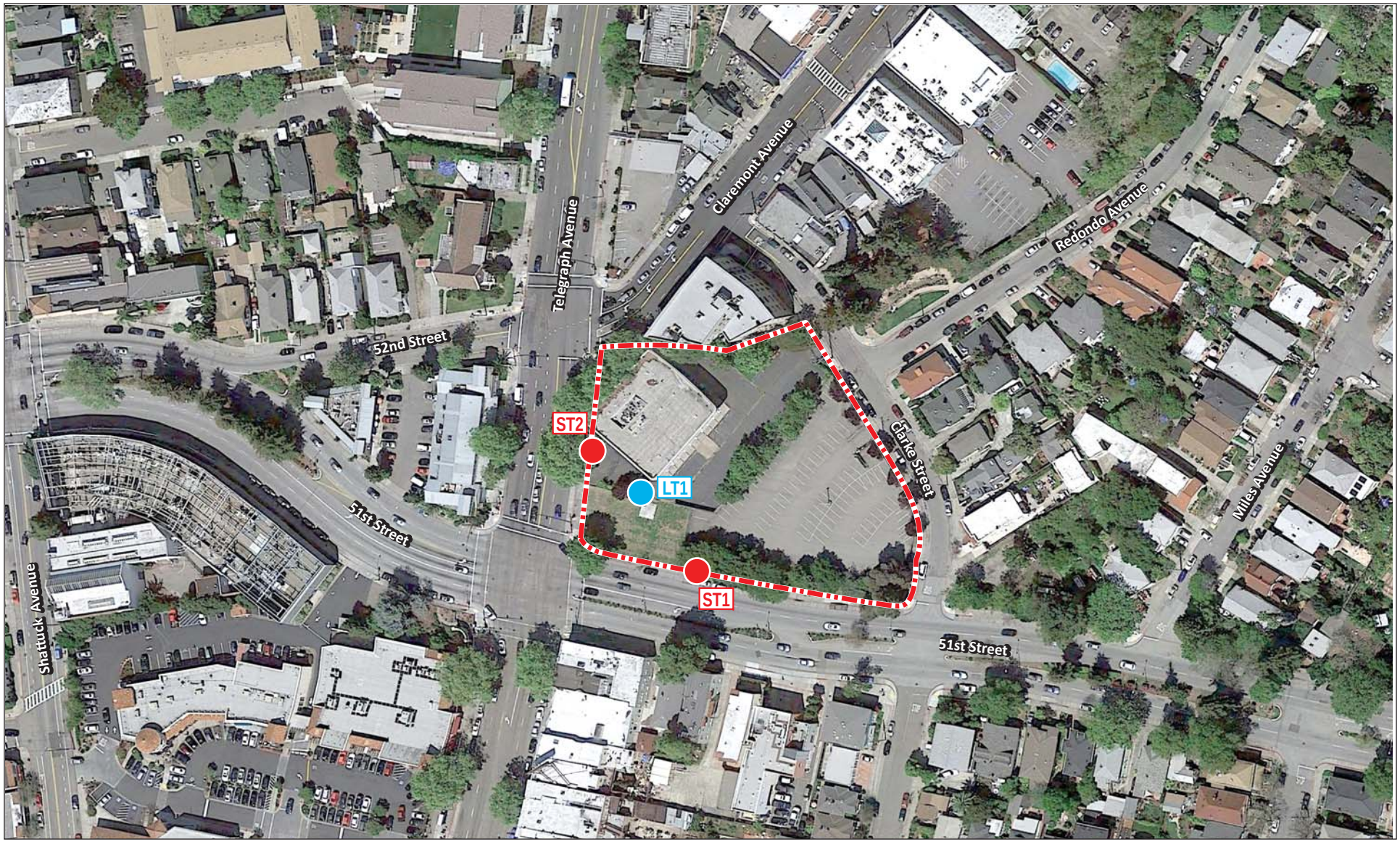
[a] L_{eq} represents the average of the sound energy occurring over the measurement time period.
[b] L_{max} is the highest sound level measured during the measurement time period.
[c] L_{min} is the lowest sound level measured during the measurement time period.

Source: LSA Associates, Inc., July 2015.

Table 6: Meteorological Conditions During Ambient Noise Monitoring

Location Number	Maximum Wind Speed (mph)	Average Wind Speed (mph)	Temperature (˚F)	Relative Humidity (percent)	Sky Conditions
ST-1	4.0	1.6	81.5	50	Sunny and clear
ST-2	5.1	2.6	77.6	58	Sunny and clear

Source: LSA Associates, Inc., July 2015.



LSA

FIGURE 3

N

0 80 160

FEET

ST# Short-Term Noise Monitoring Locations

LT# Long-Term Monitoring Location

Project Site

5110 Telegraph Avenue Project

Noise Monitoring Locations

SOURCES: GOOGLE EARTH, APRIL 2014; LSA ASSOCIATES, INC., 2015.

I:\NAU1501 5110 Telegraph\figures\Noise Report\Fig_3.ai (7/29/15)

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E. PROJECT IMPACTS

A project will normally have a significant effect on the environment related to noise if it will substantially increase the ambient noise levels for adjoining areas or conflict with adopted environmental plans and goals of the community in which it is located. The applicable noise standards governing the project site include the United States Environmental Protection Agency (U.S. EPA) and State standards as well as the standards found in the Noise Element of the City's General Plan, the City's SCAs, and Municipal Code.

1. Construction Noise

Short-term noise impacts would be associated with excavation, grading, and erecting of buildings on site during construction of the proposed project. Construction-related short-term noise levels would be higher than existing ambient noise levels currently in the project area but would no longer occur once construction of the project is completed.

Two types of short-term noise impacts could occur during the construction of the proposed project. The first type involves construction crew commutes and the transport of construction equipment and materials to the site for the proposed project, which would incrementally increase noise levels on access roads leading to the site. As shown in Table 7, there would be a relatively high single-event noise exposure potential at a maximum level of 87 dBA L_{max} with trucks passing at 50 feet. However, the projected construction traffic would be minor when compared to the existing traffic volumes on Telegraph Avenue and 51st Street, and its associated short-term noise-level changes would not be perceptible.

The second type of short-term noise impact is related to noise generated during excavation, grading, and construction on the project site and off-site infrastructural connection areas. Construction is performed in discrete steps, or phases, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase.

Table 7 lists maximum noise levels recommended for noise impact assessments for typical construction equipment, based on a distance of 50 feet between the equipment and a noise receptor. Typical maximum noise levels range up to 91 dBA L_{max} at 50 feet during the noisiest construction phases. The site preparation phase, which includes excavation and grading of the site, tends to generate the highest noise levels because earthmoving machinery is the noisiest construction equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. 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.

Table 7: RCNM Default Noise Emission Reference Levels and Usage Factors

Equipment Description	Impact Device?	Acoustical Usage Factor	Spec. 721.560 L_{max} at 50 feet (dBA, slow)	Actual Measured L_{max} at 50 feet (dBA, slow)	Number of Actual Data Samples (Count)
All other Equipment > 5 HP	No	50	85	N/A	0
Backhoe	No	40	80	78	372
Blasting	Yes	N/A	94	N/A	0
Boring Jack Power Unit	No	50	80	83	1
Compactor (ground)	No	20	80	83	57
Compressor (air)	No	40	80	78	18
Concrete Batch Plant	No	15	83	N/A	0
Concrete Mixer Truck	No	40	85	79	40
Concrete Pump Truck	No	20	82	81	30
Crane	No	16	85	81	405
Dozer	No	40	85	82	55
Drill Rig Truck	No	20	84	79	22
Dump Truck	No	40	84	76	31
Excavator	No	40	85	81	170
Flat Bed Truck	No	40	84	74	4
Front End Loader	No	40	80	79	96
Generator	No	50	82	81	19
Generator (< 25 kVA, VMS Signs)	No	50	70	73	74
Grader	No	40	85	N/A	0
Impact Derive	Yes	20	95	101	11
Jackhammer	Yes	20	85	89	133
Man Lift	No	20	85	75	23
Mounted Impact Hammer (hoe ram)	Yes	20	90	90	212
Paver	No	50	85	77	9
Pickup Truck	No	40	55	75	1
Pneumatic Tools	No	50	85	85	90
Pumps	No	50	77	81	17
Refrigerator Unit	No	100	82	73	3
Roller	No	20	85	80	16
Scraper	No	40	85	84	12
Tractor	No	40	84	N/A	0
Vacuum Excavator (Vac-Truck)	No	40	85	85	149
Ventilation Fan	No	100	85	79	13
Vibratory Pile Driver	No	20	95	101	44
Warning Horn	No	5	85	83	12
Welder/Torch	No	40	73	74	5

N/A = Not Applicable
dBA = A-weighted decibels

Source: *FHWA Highway Construction Noise Handbook,* August 2006.

Sensitive receptors are located approximately 15 feet to the north, 50 feet to the east, and 100 feet to the south of the project site. Based on attenuation the closest residences may be subject to short-term construction noise reaching 101 dBA L_{max}, 91 dBA L_{max}, and 85 dBA L_{max}, respectively, when construction is occurring at the project site boundary. The proposed buildings are set back approximately 15 feet from the western, eastern, and southern project site boundaries, and 50 feet from the northern project site boundary; during building construction sensitive receptors would be approximately 65 feet and 115 feet from the primary activity locations and experience noise levels of approximately 89 dBA L_{max} and 84 dBA L_{max}, respectively. The City's SCA 58 would require normal

construction activities to occur between 7:00 a.m. and 7:00 p.m. Monday through Friday, and pier drilling, pile driving, and/or extreme noise generating activities greater than 90 dBA are limited to between 8:00 a.m. and 4:00 p.m. Saturday construction times are from 9:00 a.m. to 5:00 p.m. and no extreme generating activities greater than 90 dBA are permitted. Construction is prohibited on Sundays and federal holidays.[7] SCA 59 would require noise reduction measures to reduce noise impacts due to construction. Since the project would be considered as generating extreme construction noise, the project applicant would be required to provide a Noise Reduction Plan under SCA 60. Additionally, a Construction Noise Management Plan would be required under SCA 61 that would include a set of site-specific noise attenuation measures to further reduce construction noise impacts a result of this noise analysis. The proposed project would construct more than 50 residential units and therefore is required under SCA 62 to submit to the City for review and approval a set of procedures for responding to and tracking construction noise complaints. These procedures are to be implemented during construction.

Implementation of the SCAs requirements would reduce construction noise impacts at the nearby sensitive receptors.

2. Land Use Compatibility

The dominant noise source in the project vicinity is traffic on Telegraph Avenue and 51st Street. As shown in Table 5, the measured noise level at the long-term noise monitoring site (LT-1, Figure 3), is 63 dBA CNEL. The measurement was located approximately 50 feet from the western project site boundary and 60 feet north of the 51st Street project site boundary.

The City of Oakland's land use compatibility guidelines for residential land use is normally acceptable for noise levels up to 60 dBA CNEL and conditionally acceptable for noise levels between 60 dBA and 70 dBA CNEL.[8] The project site would be considered as conditionally acceptable. Therefore SCA 63 would require the project applicant submit a Noise Reduction Plan that contains noise reduction measures to reduce interior noise levels not to exceed 45 dBA CNEL in the residential units. The commercial spaces included as part of the proposed project would be considered as normally acceptable under the City's land use compatibility guidelines, and would be required to have interior noise levels below 55 dBA CNEL.

Based on the U.S EPA's Protective Noise Levels, with a combination of walls, doors, and windows (STC-24 to STC-28), standard construction for Northern California residential buildings would provide more than 25 dBA in exterior-to-interior noise reduction with windows closed and 15 dBA or more with windows open.[9] With windows open, interior noise in residential units would not meet the City's noise standard for residential uses of 45 dBA CNEL (i.e., 63 dBA – 15 dBA = 48 dBA). Therefore, an alternate form of ventilation, such as an air-conditioning system, would be required to ensure that windows can remain closed for a prolonged period of time. This would reduce interior noise levels in residential units with windows closed to below the City's interior noise standard of 45

[7] Oakland, City of, 2015. Standard Conditions of Approval. July 22.

[8] Oakland, City of, 2000. *Oakland General Plan, Noise Element.*

[9] Environmental Protection Agency, 1978. *Protective Noise Levels, Condensed Version of EPA Levels Document*. November.

dBA (i.e., 63 dBA – 25 dBA = 38 dBA); the interior noise levels for commercial land uses would be 48 dBA which would meet City Standards with windows open and therefore would not require additional noise reduction measures.

Oakland Fire Station No. 8 is located across 51st Street from the proposed project. Firetruck noise is a single event that generates noise levels up to 88 dBA L_{max} at the nearest building façade. Interior noise levels would be 63 dBA L_{max}, however over a 24-hour period this would not be a substantial noise level. Noise associated with Fire Station activities are generated as single events and would not exceed the City's standards.

3. Operational Noise

The proposed project would be a multi-use residential over commercial development and would not include substantial sources of noise. Of the on-site stationary noise sources, noise generated by delivery truck activity would generate the highest maximum noise levels. While parking activities, such as people conversing or doors slamming, would generate noise levels of approximately 60 dBA to 70 dBA L_{max} at 50 feet, delivery truck loading and unloading activities would result in maximum noise levels from 75 dBA to 85 dBA L_{max} at 50 feet. The proposed project would include a subterranean parking structure therefore noise associated with parking activities would not impact the nearby noise-sensitive receptors.

There are generally two types of loading that would occur on the site: small deliveries like parcels and packages, and large deliveries such as retail items or weekly food deliveries for dining and market facilities. The former are typically made via passenger car, van, or single-unit truck. These activities are potential point sources of noise that could affect noise-sensitive receptors in the project site vicinity.

The proposed project would locate a loading zone at an off-street location accessed from Clarke Street. The loading dock would be inside an enclosure reducing the activity noise levels. An enclosure can reduce noise levels up to 25 dBA L_{max}, therefore at 50 feet away, loading and unloading noise levels would be 50 dBA to 60 dBA L_{max}. Maximum allowable receiving noise level standards at residential land uses for daytime hours between 7:00 a.m. and 10:00 p.m. are 60 dBA L_{max} for a cumulative number of 20 minutes in a one-hour period, 65 dBA L_{max} for 10 minutes in a one-hour period, 70 dBA L_{max} for 5 minutes in a one-hour period, and 75 dBA L_{max} for 1 minute in a one-hour period. Should loading and unloading activities occur during nighttime hours the maximum noise levels should not exceed 45 dBA L_{max}, 50 dBA L_{max}, 55 dBA L_{max}, 60 dBA L_{max}, or 65 dBA L_{max} for a cumulative period of 20-minutes, 10-minutes, 5-minutes, 1-minute, or at any time during a one-hour time period.

Noise-sensitive receptors are located approximately 50 feet from the loading and unloading dock. To remain a less-than-significant noise impact loading and unloading activities shall occur during daytime hours as defined by the Municipal Code. Therefore, loading and unloading activities occurring inside of the proposed enclosure would be below the City's standards for operational noise and would not create a substantial increase at the nearby sensitive receptors.

The parking garage entrance for the proposed project would be located on Clarke Street at Redondo Avenue. Based on the traffic analysis conducted for the project, the estimated trip generation associated with the project, would be approximately 1,330 total weekday trips on Clarke Street.

FHWA modeling predicts that associated noise levels would be 52 dBA CNEL at a distance of 50 feet from the street's centerline. The existing multi-family residential dwellings located on Clarke Street, southwest of the proposed garage entrance is located with the nearest building façades approximately 35 feet from the street centerline, resulting in exposure to traffic noise levels of 54 dBA L_{dn}. Sound propagation from the traffic noise on Telegraph Avenue and 51st Street would be reduced by 3 dBA per doubling distance. Based on the long-term noise measurement, noise levels on Clarke Street, generated by Telegraph Avenue, would be approximately 53 dBA CNEL. The additional traffic on Clarke Street attributable to the proposed project would not be significantly higher than the existing traffic-related noise levels in this area.

4. Groundborne Vibration

Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings and is rarely perceived as a problem outdoors. Vibration energy propagates from a source, through intervening soil and rock layers, to the foundations of nearby buildings. The vibration then propagates from the foundation throughout the remainder of the structure. Building vibration may be perceived by the occupants as the motion of building surfaces, rattling of items on shelves or hanging on walls, or as a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings radiating sound waves. Annoyance from vibration often occurs when the vibration exceeds the threshold of perception by 10 dB or less. This is an order of magnitude below the damage threshold for normal buildings.

Typical sources of groundborne vibration are construction activities (e.g., pavement breaking and operating heavy-duty earthmoving equipment), and occasional traffic on rough roads. In general, groundborne vibration from standard construction practices is only a potential issue when within 25 feet of sensitive uses. Groundborne vibration levels from construction activities very rarely reach levels that can damage structures; however, these levels are perceptible near the active construction site. With the exception of old buildings built prior to the 1950s or buildings of historic significance, potential structural damage from heavy construction activities rarely occurs. When roadways are smooth, vibration from traffic (even heavy trucks) is rarely perceptible.

The streets surrounding the project area are paved, smooth, and unlikely to cause significant groundborne vibration. In addition, the rubber tires and suspension systems of buses and other on-road vehicles make it unusual for on-road vehicles to cause groundborne noise or vibration problems. Vibration produced by loaded trucks is 0.076 peak particle velocity (PPV) at 25 feet which is below the maximum vibration level recommendations for residential structures of 1.0 PPV and the vibration level which is distinctly perceptible by humans, 0.24 PPV.[10] The future sensitive receptors and the proposed project would not be adversely affected by on-road vibration. Therefore, no vehicular vibration impacts would occur.

The four-story multi-family residential units located north of the project site would be approximately 65 feet from major building construction; a proposed walkway would separate the existing and proposed multi-family residential buildings. The abutting north four-story residential building would not be susceptible to significant groundborne vibration levels. Typical construction equipment could

[10] California Department of Transportation, 2004. *Transportation and Construction-Induced Vibration Guidance Manual.* June.

produce vibration levels up to 0.21 PPV at 25 feet away.[11] Therefore, based on vibration attenuation, the residences located 65 feet from the active construction areas could be exposed to groundborne vibration on the order of 0.07 PPV. Construction-related groundborne vibration generated by the proposed project would be below human perception and below thresholds that could cause structural damage to buildings; therefore the proposed project would not generate a significant impact related to vibration, and no mitigation is required.

5. Cumulative Impacts

The proposed project would not create a cumulatively considerable contribution to regional noise conditions. Operational noise related to the proposed project would not contribute to a cumulatively significant increase in existing noise in the project area. Additionally, the project would not double the amount of traffic on the nearby streets, and therefore would not increase the increase traffic noise environment by 3 dBA or more. As shown above, the proposed project would not generate a significant impact under cumulative noise conditions.

[11] Ibid.

APPENDIX A

Noise Monitoring Data

CNEL	63

Date	Time		Leq	Lmax	Lmin	Leq'	
7/28/15	12:30 PM	D	63.6	87.1	52.2	63.6	2286482
7/28/15	1:00 PM	D	60.7	79.0	52.1	60.7	1186740
7/28/15	1:30 PM	D	60.3	77.0	53.2	60.3	1077506
7/28/15	2:00 PM	D	60.9	77.9	52.4	60.9	1231032
7/28/15	2:30 PM	D	59.6	74.5	52.2	59.6	909739.9
7/28/15	3:00 PM	D	61.0	78.5	52.7	61.0	1265388
7/28/15	3:30 PM	D	60.1	72.2	53.2	60.1	1017124
7/28/15	4:00 PM	D	63.7	89.5	52.3	63.7	2340701
7/28/15	4:30 PM	D	61.1	78.2	54.1	61.1	1290131
7/28/15	5:00 PM	D	66.7	94.5	55.4	66.7	4703840
7/28/15	5:30 PM	D	60.3	71.5	51.9	60.3	1061924
7/28/15	6:00 PM	D	60.0	78.5	52.0	60.0	1005444
7/28/15	6:30 PM	D	59.7	77.5	52.4	59.7	924767.2
7/28/15	7:00 PM	E	63.6	86.8	52.4	68.6	7298467
7/28/15	7:30 PM	E	62.0	85.5	51.4	67.0	5038223
7/28/15	8:00 PM	E	61.1	87.0	51.0	66.1	4060326
7/28/15	8:30 PM	E	58.5	74.1	51.8	63.5	2217633
7/28/15	9:00 PM	E	57.8	71.0	52.0	62.8	1911940
7/28/15	9:30 PM	E	59.5	76.2	52.6	64.5	2834732
7/28/15	10:00 PM	N	57.8	69.2	52.7	67.8	6065639
7/28/15	10:30 PM	N	56.5	70.7	50.3	66.5	4515151
7/28/15	11:00 PM	N	56.0	70.1	48.6	66.0	3948725
7/28/15	11:30 PM	N	54.8	70.6	47.9	64.8	3049997
7/29/15	12:00 AM	N	54.3	72.8	46.4	64.3	2714562
7/29/15	12:30 AM	N	53.8	71.8	45.5	63.8	2414991
7/29/15	1:00 AM	N	51.3	63.9	45.1	61.3	1360460
7/29/15	1:30 AM	N	54.9	72.1	45.7	64.9	3118015
7/29/15	2:00 AM	N	51.7	68.4	43.1	61.7	1467842
7/29/15	2:30 AM	N	49.5	67.6	44.1	59.5	886390.2
7/29/15	3:00 AM	N	51.6	67.2	44.5	61.6	1455830
7/29/15	3:30 AM	N	51.7	69.1	45.6	61.7	1465449
7/29/15	4:00 AM	N	51.1	68.2	45.0	61.1	1282790
7/29/15	4:30 AM	N	55.2	75.0	47.0	65.2	3280685
7/29/15	5:00 AM	N	54.6	69.4	48.2	64.6	2898929
7/29/15	5:30 AM	N	56.2	68.6	49.4	66.2	4134370
7/29/15	6:00 AM	D	58.7	72.6	50.8	58.7	740557.4
7/29/15	6:30 AM	D	60.3	79.1	50.8	60.3	1075976
7/29/15	7:00 AM	D	59.5	70.4	50.9	59.5	898375.8
7/29/15	7:30 AM	D	60.7	75.0	54.3	60.7	1175822
7/29/15	8:00 AM	D	60.4	74.2	53.1	60.4	1095268
7/29/15	8:30 AM	D	60.6	76.6	50.2	60.6	1156730
7/29/15	9:00 AM	D	60.8	71.4	52.0	60.8	1193641
7/29/15	9:30 AM	D	63.3	83.8	50.7	63.3	2147985
7/29/15	10:00 AM	D	60.7	76.5	51.4	60.7	1172019
7/29/15	10:30 AM	D	60.9	77.5	52.0	60.9	1242116
7/29/15	11:00 AM	D	60.5	74.3	51.4	60.5	1122523
7/29/15	11:30 AM	D	60.9	76.6	52.9	60.9	1233533
7/29/15	12:00 PM	D	62.0	77.2	53.3	62.0	1590797

	Leq Ref	Leq Clark Street	Leq'	
D	63.6	53.1	53.1	203783
D	60.7	50.2	50.2	105768.3
D	60.3	49.8	49.8	96032.8
D	60.9	50.4	50.4	109715.9
D	59.6	49.1	49.1	81080.65
D	61.0	50.5	50.5	112777.8
D	60.1	49.6	49.6	90651.25
D	63.7	53.2	53.2	208615.2
D	61.1	50.6	50.6	114983.1
D	66.7	56.2	56.2	419230.2
D	60.3	49.8	49.8	94644.04
D	60.0	49.5	49.5	89610.29
D	59.7	49.2	49.2	82419.96
E	63.6	53.1	58.1	650476.6
E	62.0	51.5	56.5	449032.1
E	61.1	50.6	55.6	361877
E	58.5	48.0	53.0	197646.7
E	57.8	47.3	52.3	170401.8
E	59.5	49.0	54.0	252645.7
N	57.8	47.3	57.3	540600.7
N	56.5	46.0	56.0	402413.2
N	56.0	45.5	55.5	351930.5
N	54.8	44.3	54.3	271831.3
N	54.3	43.8	53.8	241935.6
N	53.8	43.3	53.3	215236.3
N	51.3	40.8	50.8	121251.1
N	54.9	44.4	54.4	277893.4
N	51.7	41.2	51.2	130821.6
N	49.5	39.0	49.0	78999.61
N	51.6	41.1	51.1	129751
N	51.7	41.2	51.2	130608.3
N	51.1	40.6	50.6	114328.7
N	55.2	44.7	54.7	292391.3
N	54.6	44.1	54.1	258367.3
N	56.2	45.7	55.7	368476.1
D	58.7	48.2	48.2	66002.25
D	60.3	49.8	49.8	95896.5
D	59.5	49.0	49.0	80067.82
D	60.7	50.2	50.2	104795.2
D	60.4	49.9	49.9	97615.83
D	60.6	50.1	50.1	103093.7
D	60.8	50.3	50.3	106383.4
D	63.3	52.8	52.8	191439.4
D	60.7	50.2	50.2	104456.3
D	60.9	50.4	50.4	110703.7
D	60.5	50.0	50.0	100045
D	60.9	50.4	50.4	109938.7
D	62.0	51.5	51.5	141779.9

CNEL	53

nearest residential property line 300 feet away
propagation of 3 dBA per doubling distance

reference at 25 feet

50	-3
100	-6
200	-9
400	-12
800	-15

Summary

Filename	HMB 15tZ.015
Serial Number	4025
Model	SoundTrack LxT®
Firmware Version	2.206
User	
Location	
Job Description	
Note	
Measurement Description	TEST
Start	2015/07/28 12:21:33
Stop	2015/07/29 12:30:00
Duration	1 Day 00:08:26.4
Run Time	1 Day 00:08:26.4
Pause	0:00:00.0
Pre Calibration	2015/07/28 11:18:39
Post Calibration	None
Calibration Deviation	---

Overall Settings

RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamp	PRMLxT1L
Microphone Correction	Off
Integration Method	Exponential
Overload	119.7 dB

	A	**C**	**Z**	
Under Range Peak	76.0	73.0	**78.0**	dB
Under Range Limit	**24.7**	24.7	29.4	dB
Noise Floor	15.6	15.6	20.2	dB

Results

LASeq	60.3	dB
LASE	109.7	dB
EAS	10.261	mPa²h
EAS8	3.401	mPa²h
EAS40	17.003	mPa²h
LZpeak (max)	2015/07/28 12:26:52	120.2 dB
LASmax	2015/07/28 17:04:18	94.5 dB
LASmin	2015/07/29 2:11:34	43.1 dB
SEA	133.3	dB

LAS > 73.0 dB (Exceedence Counts / Duration)	78	344.2 s
LAS > 115.0 dB (Exceedence Counts / Duration)	0	0.0 s
LZpeak > 135.0 dB (Exceedence Counts / Duration)	0	0.0 s
LZpeak > 137.0 dB (Exceedence Counts / Duration)	0	0.0 s
LZpeak > 140.0 dB (Exceedence Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**LDay 07:00-23:00**	**LNight 23:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-23:00**	**LNight 23:00-07:00**
	63.1	61.5	55.1	63.8	61.9	60.2	55.1

LCSeq	74.1	dB
LASeq	60.3	dB
LCSeq - LASeq	13.8	dB
LAleq	65.0	dB
LAeq	60.3	dB
LAleq - LAeq	4.7	dB
# Overloads	[redacted]	
Overload Duration	12.8	s

Dose Settings

Dose Name	OSHA-1	OSHA-2	
Exch. Rate	5	5	dB
Threshold	90	80	dB
Criterion Level	90	90	dB
Criterion Duration	8	8	h

Results

Dose	0.01	0.08	%
Projected Dose	0.00	0.03	%
TWA (Projected)	16.0	30.9	dB
TWA (t)	24.0	38.8	dB
Lep (t)	65.1	65.1	dB

Statistics

LAS5.00	63.9	dB
LAS10.00	61.8	dB
LAS33.30	58.4	dB
LAS50.00	56.9	dB
LAS66.60	55.0	dB
LAS90.00	49.0	dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**
PRMLxT1L	2015/07/28 11:18:39	-26.0
PRMLxT1L	2015/07/28 11:18:03	-26.2
PRMLxT1L	2015/07/14 12:24:47	-27.9
PRMLxT1L	2015/07/14 12:23:36	-27.9
PRMLxT1L	2015/07/09 11:28:56	-27.0
PRMLxT1L	2015/07/09 11:28:29	-27.1
PRMLxT1L	2015/06/16 10:06:09	-27.3
PRMLxT1L	2015/06/16 10:05:39	-27.1
PRMLxT1L	2015/06/01 13:19:17	-27.0
PRMLxT1L	2015/06/01 13:18:40	-26.2
PRMLxT1L	2015/04/28 13:13:48	-28.0

6.3 8.0 10.0 12.5 16.0 20.0 25.0 31.5 40.0 50.0 63.0 80.0 100 125 160 200 250 315 400 500 630 800 1000 1250 1600 2000 2500 3150 4000 5000 6300 8000 10000 12500 16000 20000

Record #	Date	Time	Record Type	Cause	#	TH Record
1	2015/07/28	12:21:33	Run	Key	1	1
2	2015/07/29	12:30:00	Stop	Timer	1	51

Statistics		
Level (dB)	**Count**	**Percent**
Under	0	0.00
43.1	52	0.00
43.2	123	0.00
43.3	141	0.00
43.4	108	0.00
43.5	21	0.00
43.6	33	0.00
43.7	181	0.00
43.8	190	0.00
43.9	283	0.00
44.0	385	0.00
44.1	357	0.00
44.2	389	0.00
44.3	560	0.01
44.4	455	0.01
44.5	662	0.01
44.6	687	0.01
44.7	1194	0.01
44.8	2104	0.02
44.9	2965	0.03
45.0	3689	0.04
45.1	5113	0.06
45.2	6126	0.07
45.3	6504	0.07
45.4	7634	0.09
45.5	8931	0.10
45.6	11061	0.13
45.7	10958	0.13
45.8	12810	0.15
45.9	14404	0.17
46.0	16120	0.19
46.1	17207	0.20
46.2	17417	0.20
46.3	18236	0.21
46.4	21328	0.25
46.5	23146	0.27
46.6	23294	0.27
46.7	24896	0.29
46.8	24206	0.28
46.9	25646	0.30
47.0	24664	0.28
47.1	24985	0.29
47.2	25748	0.30
47.3	26263	0.30
47.4	27418	0.32

47.5	29222	0.34
47.6	30905	0.36
47.7	31072	0.36
47.8	29105	0.33
47.9	29526	0.34
48.0	29415	0.34
48.1	27953	0.32
48.2	27086	0.31
48.3	28868	0.33
48.4	29822	0.34
48.5	27206	0.31
48.6	26673	0.31
48.7	25699	0.30
48.8	25799	0.30
48.9	25618	0.29
49.0	25534	0.29
49.1	25567	0.29
49.2	24023	0.28
49.3	25252	0.29
49.4	24575	0.28
49.5	24017	0.28
49.6	23226	0.27
49.7	22683	0.26
49.8	22676	0.26
49.9	23692	0.27
50.0	23586	0.27
50.1	23108	0.27
50.2	24339	0.28
50.3	24343	0.28
50.4	24933	0.29
50.5	26318	0.30
50.6	27290	0.31
50.7	24990	0.29
50.8	24655	0.28
50.9	23936	0.28
51.0	25490	0.29
51.1	26189	0.30
51.2	25476	0.29
51.3	25445	0.29
51.4	26401	0.30
51.5	28242	0.32
51.6	26998	0.31
51.7	27357	0.31
51.8	25472	0.29
51.9	24364	0.28
52.0	25413	0.29
52.1	26284	0.30
52.2	28180	0.32
52.3	29042	0.33
52.4	29033	0.33
52.5	30096	0.35
52.6	31802	0.37
52.7	31809	0.37
52.8	33454	0.38
52.9	33820	0.39
53.0	34302	0.39
53.1	37229	0.43
53.2	36400	0.42
53.3	37508	0.43
53.4	38385	0.44
53.5	39683	0.46
53.6	41461	0.48
53.7	43181	0.50
53.8	44458	0.51
53.9	45106	0.52
54.0	45919	0.53
54.1	46685	0.54
54.2	50595	0.58
54.3	51717	0.60
54.4	52886	0.61
54.5	55928	0.64
54.6	57525	0.66
54.7	58268	0.67
54.8	62081	0.71
54.9	61476	0.71
55.0	62577	0.72
55.1	65604	0.75
55.2	67307	0.77
55.3	69661	0.80
55.4	67943	0.78
55.5	69837	0.80
55.6	72268	0.83
55.7	72721	0.84
55.8	74334	0.86
55.9	77339	0.89
56.0	78912	0.91
56.1	80712	0.93
56.2	82105	0.94
56.3	83197	0.96
56.4	83894	0.97
56.5	86445	0.99
56.6	89354	1.03
56.7	91469	1.05
56.8	93958	1.08

56.9	93436	1.08
57.0	93296	1.07
57.1	94192	1.08
57.2	94268	1.08
57.3	92230	1.06
57.4	91146	1.05
57.5	93230	1.07
57.6	95382	1.10
57.7	93884	1.08
57.8	91605	1.05
57.9	90733	1.04
58.0	91085	1.05
58.1	91762	1.06
58.2	92567	1.07
58.3	90540	1.04
58.4	88655	1.02
58.5	86900	1.00
58.6	87863	1.01
58.7	85490	0.98
58.8	85467	0.98
58.9	84014	0.97
59.0	82160	0.95
59.1	79551	0.92
59.2	79545	0.92
59.3	76773	0.88
59.4	74210	0.85
59.5	74333	0.86
59.6	69750	0.80
59.7	69576	0.80
59.8	66862	0.77
59.9	66541	0.77
60.0	65686	0.76
60.1	63044	0.73
60.2	60632	0.70
60.3	57616	0.66
60.4	55760	0.64
60.5	55106	0.63
60.6	51527	0.59
60.7	47131	0.54
60.8	44968	0.52
60.9	42984	0.49
61.0	41658	0.48
61.1	40752	0.47
61.2	39117	0.45
61.3	38603	0.44
61.4	36060	0.41
61.5	34416	0.40
61.6	33880	0.39
61.7	32235	0.37
61.8	31158	0.36
61.9	28653	0.33
62.0	27811	0.32
62.1	26428	0.30
62.2	25263	0.29
62.3	24585	0.28
62.4	23277	0.27
62.5	21559	0.25
62.6	20641	0.24
62.7	20965	0.24
62.8	20300	0.23
62.9	20482	0.24
63.0	19067	0.22
63.1	18697	0.22
63.2	18974	0.22
63.3	17927	0.21
63.4	17186	0.20
63.5	16143	0.19
63.6	15064	0.17
63.7	15208	0.17
63.8	15366	0.18
63.9	14248	0.16
64.0	13861	0.16
64.1	13940	0.16
64.2	13928	0.16
64.3	13499	0.16
64.4	12532	0.14
64.5	11510	0.13
64.6	10909	0.13
64.7	10358	0.12
64.8	10413	0.12
64.9	9935	0.11
65.0	9533	0.11
65.1	9375	0.11
65.2	9354	0.11
65.3	8669	0.10
65.4	8444	0.10
65.5	8309	0.10
65.6	7910	0.09
65.7	7733	0.09
65.8	7611	0.09
65.9	7233	0.08
66.0	6496	0.07
66.1	6260	0.07
66.2	6193	0.07

66.3	5946	0.07
66.4	5682	0.07
66.5	5883	0.07
66.6	5545	0.06
66.7	5345	0.06
66.8	5351	0.06
66.9	4939	0.06
67.0	4631	0.05
67.1	4750	0.05
67.2	4598	0.05
67.3	4463	0.05
67.4	4859	0.06
67.5	4422	0.05
67.6	4266	0.05
67.7	4373	0.05
67.8	3857	0.04
67.9	3817	0.04
68.0	3971	0.05
68.1	3703	0.04
68.2	3384	0.04
68.3	3153	0.04
68.4	3270	0.04
68.5	3171	0.04
68.6	2992	0.03
68.7	2704	0.03
68.8	2682	0.03
68.9	2671	0.03
69.0	2434	0.03
69.1	2345	0.03
69.2	2493	0.03
69.3	2396	0.03
69.4	2214	0.03
69.5	2096	0.02
69.6	1889	0.02
69.7	2057	0.02
69.8	2036	0.02
69.9	1865	0.02
70.0	1806	0.02
70.1	1915	0.02
70.2	1993	0.02
70.3	1613	0.02
70.4	1581	0.02
70.5	1585	0.02
70.6	1418	0.02
70.7	1285	0.01
70.8	1253	0.01
70.9	1341	0.02
71.0	1202	0.01
71.1	1074	0.01
71.2	1090	0.01
71.3	995	0.01
71.4	948	0.01
71.5	988	0.01
71.6	915	0.01
71.7	875	0.01
71.8	825	0.01
71.9	843	0.01
72.0	924	0.01
72.1	864	0.01
72.2	842	0.01
72.3	855	0.01
72.4	945	0.01
72.5	955	0.01
72.6	1040	0.01
72.7	911	0.01
72.8	895	0.01
72.9	752	0.01
73.0	648	0.01
73.1	648	0.01
73.2	584	0.01
73.3	601	0.01
73.4	561	0.01
73.5	557	0.01
73.6	549	0.01
73.7	571	0.01
73.8	615	0.01
73.9	541	0.01
74.0	519	0.01
74.1	512	0.01
74.2	464	0.01
74.3	366	0.00
74.4	375	0.00
74.5	468	0.01
74.6	427	0.00
74.7	423	0.00
74.8	418	0.00
74.9	445	0.01
75.0	431	0.00
75.1	374	0.00
75.2	364	0.00
75.3	419	0.00
75.4	338	0.00
75.5	336	0.00
75.6	297	0.00

75.7	316	0.00
75.8	339	0.00
75.9	341	0.00
76.0	340	0.00
76.1	291	0.00
76.2	322	0.00
76.3	282	0.00
76.4	267	0.00
76.5	235	0.00
76.6	242	0.00
76.7	253	0.00
76.8	295	0.00
76.9	268	0.00
77.0	278	0.00
77.1	228	0.00
77.2	254	0.00
77.3	210	0.00
77.4	215	0.00
77.5	235	0.00
77.6	206	0.00
77.7	236	0.00
77.8	204	0.00
77.9	160	0.00
78.0	154	0.00
78.1	175	0.00
78.2	153	0.00
78.3	160	0.00
78.4	168	0.00
78.5	167	0.00
78.6	152	0.00
78.7	154	0.00
78.8	149	0.00
78.9	128	0.00
79.0	111	0.00
79.1	80	0.00
79.2	70	0.00
79.3	84	0.00
79.4	90	0.00
79.5	102	0.00
79.6	103	0.00
79.7	127	0.00
79.8	108	0.00
79.9	129	0.00
80.0	105	0.00
80.1	111	0.00
80.2	123	0.00
80.3	104	0.00
80.4	104	0.00
80.5	101	0.00
80.6	92	0.00
80.7	81	0.00
80.8	94	0.00
80.9	72	0.00
81.0	62	0.00
81.1	80	0.00
81.2	72	0.00
81.3	50	0.00
81.4	70	0.00
81.5	81	0.00
81.6	100	0.00
81.7	85	0.00
81.8	49	0.00
81.9	49	0.00
82.0	55	0.00
82.1	40	0.00
82.2	47	0.00
82.3	55	0.00
82.4	53	0.00
82.5	44	0.00
82.6	46	0.00
82.7	41	0.00
82.8	46	0.00
82.9	65	0.00
83.0	60	0.00
83.1	76	0.00
83.2	113	0.00
83.3	94	0.00
83.4	38	0.00
83.5	37	0.00
83.6	47	0.00
83.7	43	0.00
83.8	50	0.00
83.9	32	0.00
84.0	31	0.00
84.1	29	0.00
84.2	39	0.00
84.3	37	0.00
84.4	40	0.00
84.5	43	0.00
84.6	53	0.00
84.7	69	0.00
84.8	69	0.00
84.9	64	0.00
85.0	86	0.00

85.1	65	0.00
85.2	84	0.00
85.3	51	0.00
85.4	111	0.00
85.5	53	0.00
85.6	35	0.00
85.7	35	0.00
85.8	37	0.00
85.9	37	0.00
86.0	26	0.00
86.1	39	0.00
86.2	31	0.00
86.3	32	0.00
86.4	35	0.00
86.5	48	0.00
86.6	48	0.00
86.7	50	0.00
86.8	36	0.00
86.9	52	0.00
87.0	42	0.00
87.1	21	0.00
87.2	15	0.00
87.3	19	0.00
87.4	14	0.00
87.5	19	0.00
87.6	18	0.00
87.7	13	0.00
87.8	18	0.00
87.9	14	0.00
88.0	19	0.00
88.1	21	0.00
88.2	18	0.00
88.3	20	0.00
88.4	20	0.00
88.5	17	0.00
88.6	18	0.00
88.7	18	0.00
88.8	18	0.00
88.9	23	0.00
89.0	14	0.00
89.1	17	0.00
89.2	21	0.00
89.3	29	0.00
89.4	18	0.00
89.5	14	0.00
89.6	10	0.00
89.7	12	0.00
89.8	11	0.00
89.9	9	0.00
90.0	8	0.00
90.1	7	0.00
90.2	8	0.00
90.3	6	0.00
90.4	9	0.00
90.5	6	0.00
90.6	8	0.00
90.7	9	0.00
90.8	6	0.00
90.9	8	0.00
91.0	7	0.00
91.1	6	0.00
91.2	8	0.00
91.3	6	0.00
91.4	5	0.00
91.5	6	0.00
91.6	3	0.00
91.7	3	0.00
91.8	3	0.00
91.9	3	0.00
92.0	3	0.00
92.1	3	0.00
92.2	4	0.00
92.3	3	0.00
92.4	3	0.00
92.5	3	0.00
92.6	2	0.00
92.7	4	0.00
92.8	2	0.00
92.9	4	0.00
93.0	3	0.00
93.1	2	0.00
93.2	4	0.00
93.3	2	0.00
93.4	5	0.00
93.5	3	0.00
93.6	3	0.00
93.7	4	0.00
93.8	5	0.00
93.9	3	0.00
94.0	5	0.00
94.1	5	0.00
94.2	8	0.00
94.3	5	0.00
94.4	7	0.00

94.5	4	0.00
Over	0	0.00
Total Count	8690640	

Record #	Record Type	Date	Time	LASeq	LZpeak	LASmax	LASmin	Ovrld.	OBA Ovrld.	Marker
1	Run	2015/07/28	12:21:33	0.0	0.0	0.0	0.0	No	No	
2		2015/07/28	12:21:33	70.7	120.2	91.5	52.1	Yes	No	
3		2015/07/28	12:30:00	63.6	106.9	87.1	52.2	No	No	
4		2015/07/28	13:00:00	60.7	103.5	79.0	52.1	No	No	
5		2015/07/28	13:30:00	60.3	104.2	77.0	53.2	No	No	
6		2015/07/28	14:00:00	60.9	102.3	77.9	52.4	No	No	
7		2015/07/28	14:30:00	59.6	97.3	74.5	52.2	No	No	
8		2015/07/28	15:00:00	61.0	101.4	78.5	52.7	No	No	
9		2015/07/28	15:30:00	60.1	96.0	72.2	53.2	No	No	
10		2015/07/28	16:00:00	63.7	102.2	89.5	52.3	No	No	
11		2015/07/28	16:30:00	61.1	101.2	78.2	54.1	No	No	
12		2015/07/28	17:00:00	66.7	117.3	94.5	55.4	No	No	
13		2015/07/28	17:30:00	60.3	100.0	71.5	51.9	No	No	
14		2015/07/28	18:00:00	60.0	100.4	78.5	52.0	No	No	
15		2015/07/28	18:30:00	59.7	103.8	77.5	52.4	No	No	
16		2015/07/28	19:00:00	63.6	99.8	86.8	52.4	No	No	
17		2015/07/28	19:30:00	62.0	110.4	85.5	51.4	No	No	
18		2015/07/28	20:00:00	61.1	110.6	87.0	51.0	No	No	
19		2015/07/28	20:30:00	58.5	99.2	74.1	51.8	No	No	
20		2015/07/28	21:00:00	57.8	95.8	71.0	52.0	No	No	
21		2015/07/28	21:30:00	59.5	102.6	76.2	52.6	No	No	
22		2015/07/28	22:00:00	57.8	95.2	69.2	52.7	No	No	
23		2015/07/28	22:30:00	56.5	96.5	70.7	50.3	No	No	
24		2015/07/28	23:00:00	56.0	96.6	70.1	48.6	No	No	
25		2015/07/28	23:30:00	54.8	100.8	70.6	47.9	No	No	
26		2015/07/29	00:00:00	54.3	96.6	72.8	46.4	No	No	
27		2015/07/29	00:30:00	53.8	99.9	71.8	45.5	No	No	
28		2015/07/29	01:00:00	51.3	90.0	63.9	45.1	No	No	
29		2015/07/29	01:30:00	54.9	97.1	72.1	45.7	No	No	
30		2015/07/29	02:00:00	51.7	95.7	68.4	43.1	No	No	
31		2015/07/29	02:30:00	49.5	94.3	67.6	44.1	No	No	
32		2015/07/29	03:00:00	51.6	94.6	67.2	44.5	No	No	
33		2015/07/29	03:30:00	51.7	95.9	69.1	45.6	No	No	
34		2015/07/29	04:00:00	51.1	95.7	68.2	45.0	No	No	
35		2015/07/29	04:30:00	55.2	94.4	75.0	47.0	No	No	
36		2015/07/29	05:00:00	54.6	93.1	69.4	48.2	No	No	
37		2015/07/29	05:30:00	56.2	94.1	68.6	49.4	No	No	
38		2015/07/29	06:00:00	58.7	98.6	72.6	50.8	No	No	
39		2015/07/29	06:30:00	60.3	103.2	79.1	50.8	No	No	
40		2015/07/29	07:00:00	59.5	97.6	70.4	50.9	No	No	
41		2015/07/29	07:30:00	60.7	97.5	75.0	54.3	No	No	
42		2015/07/29	08:00:00	60.4	100.3	74.2	53.1	No	No	
43		2015/07/29	08:30:00	60.6	101.8	76.6	50.2	No	No	
44		2015/07/29	09:00:00	60.8	97.5	71.4	52.0	No	No	
45		2015/07/29	09:30:00	63.3	98.1	83.8	50.7	No	No	
46		2015/07/29	10:00:00	60.7	100.8	76.5	51.4	No	No	
47		2015/07/29	10:30:00	60.9	102.2	77.5	52.0	No	No	

48		2015/07/29	11:00:00	60.5	101.6	74.3	51.4	No	No
49		2015/07/29	11:30:00	60.9	102.4	76.6	52.9	No	No
50		2015/07/29	12:00:00	62.0	100.9	77.2	53.3	No	No
51	Stop	2015/07/29	12:30:00	0.0	0.0	0.0	0.0	No	No

Record #	Date	Time	Duration	Run Time	Pause	LASeq	LASE	LASmin	LASmin Time	LASmax	LASmax Time	LZpeak (max)	LZpeak (max) Time	SPL 1 Count	Duration	SPL 2 Count	Duration	Peak 1 Count	Duration	Peak 2 Count	Duration	Peak 3 Count	Duration	TWA(Projected) 0	TWA(Projected) 1	LAS5.00	LAS10.00	LAS33.30	LAS50.00	LAS66.60	LAS90.00	SEA	LCSeq	LASeq	LCSeq - LASeq	LAleq	LAeq	LAleq-LAeq	# Overloads	Duration
1	2015/07/28	12:21:33	00:38:26.4	00:38:26.4	00:00:00.0	66.4	100.1	52.1	12:26:18	91.5	12:26:52	120.2	12:26:52	16	75.6	0	0.0	0	0.0	0	0.0	0	0.0	28.2	49.1	68.6	64.7	60.0	58.5	57.3	55.4	133.3	77.2	66.4	10.8	77.8	66.4	11.4	5	12.8
	2015/07/28	13:00:00	23:30:00.0	23:30:00.0	00:00:00.0	59.9	109.1	43.1	02:11:34	94.5	17:04:18	117.3	17:04:18	62	268.6	0	0.0	0	0.0	0	0.0	0	0.0	15.1	28.1	63.7	61.7	58.4	56.8	54.9	48.9	101.9	74.0	59.9	14.1	62.0	59.9	2.1	0	0.0

Summary

Filename	HMB 15tZ.013	
Serial Number	4025	
Model	SoundTrack LxT®	
Firmware Version	2.206	
User		
Location		
Job Description		
Note		
Measurement Description	TEST	
Start	2015/07/28 11:23:25	
Stop	2015/07/28 11:38:25	
Duration	0:15:00.0	
Run Time	0:15:00.0	
Pause	0:00:00.0	
Pre Calibration	2015/07/28 11:18:39	
Post Calibration	None	
Calibration Deviation	---	

Overall Settings

RMS Weight	A Weighting	
Peak Weight	Z Weighting	
Detector	Slow	
Preamp	PRMLxT1L	
Microphone Correction	Off	
Integration Method	Exponential	
Overload	119.7	dB

	A	C	Z	
Under Range Peak	76.0	73.0	**78.0**	dB
Under Range Limit	**24.7**	24.7	29.4	dB
Noise Floor	15.6	15.6	20.2	dB

Results

LASeq	63.3	dB	
LASE	92.8	dB	
EAS	211.751	µPa²h	
EAS8	6.776	mPa²h	
EAS40	33.880	mPa²h	
LZpeak (max)	2015/07/28 11:31:58	103.3	dB
LASmax	2015/07/28 11:27:14	77.2	dB
LASmin	2015/07/28 11:33:44	50.0	dB
SEA	-99.9	dB	

LAS > 73.0 dB (Exceedence Counts / Duration)	3	7.8	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0	0.0	s
LZpeak > 135.0 dB (Exceedence Counts / Duration)	0	0.0	s
LZpeak > 137.0 dB (Exceedence Counts / Duration)	0	0.0	s
LZpeak > 140.0 dB (Exceedence Counts / Duration)	0	0.0	s

Community Noise	**Ldn**	**LDay 07:00-23:00**	**LNight 23:00-07:00**	**Lden**	**LDay 07:00-19:00**	**LEvening 19:00-23:00**	**LNight 23:00-07:00**
	63.3	63.3	-99.9	63.3	63.3	-99.9	-99.9

LCSeq	75.6	dB
LASeq	63.3	dB
LCSeq - LASeq	12.4	dB
LAleq	66.5	dB
LAeq	63.3	dB
LAleq - LAeq	3.3	dB
# Overloads	0	
Overload Duration	0.0	s

Dose Settings

Dose Name	OSHA-1	OSHA-2	
Exch. Rate	5	5	dB
Threshold	90	80	dB
Criterion Level	90	90	dB
Criterion Duration	8	8	h

Results

Dose	-99.9	-99.9	%
Projected Dose	-99.9	-99.9	%
TWA (Projected)	-99.9	-99.9	dB
TWA (t)	-99.9	-99.9	dB
Lep (t)	48.2	48.2	dB

Statistics

LAS5.00	68.1	dB
LAS10.00	66.5	dB
LAS33.30	62.6	dB
LAS50.00	61.1	dB
LAS66.60	59.4	dB
LAS90.00	56.0	dB

Calibration History

Preamp	**Date**	**dB re. 1V/Pa**
PRMLxT1L	2015/07/28 11:18:39	-26.0
PRMLxT1L	2015/07/28 11:18:03	-26.2
PRMLxT1L	2015/07/14 12:24:47	-27.9
PRMLxT1L	2015/07/14 12:23:36	-27.9
PRMLxT1L	2015/07/09 11:28:56	-27.0
PRMLxT1L	2015/07/09 11:28:29	-27.1
PRMLxT1L	2015/06/16 10:06:09	-27.3
PRMLxT1L	2015/06/16 10:05:39	-27.1
PRMLxT1L	2015/06/01 13:19:17	-27.0
PRMLxT1L	2015/06/01 13:18:40	-26.2
PRMLxT1L	2015/04/28 13:13:48	-28.0

6.3	**8.0**	**10.0**	**12.5**	**16.0**	**20.0**	**25.0**	**31.5**	**40.0**	**50.0**	**63.0**	**80.0**	**100**	**125**	**160**	**200**	**250**	**315**	**400**	**500**	**630**	**800**	**1000**	**1250**	**1600**	**2000**	**2500**	**3150**	**4000**	**5000**	**6300**	**8000**	**10000**	**12500**	**16000**	**20000**

Record #	Date	Time	Record Type	Cause	#	TH Record
1	2015/07/28	11:23:25	Run	Key	1	1
2	2015/07/28	11:38:25	Stop	Timer	1	18

Statistics Level (dB)	Count	Percent
Under	0	0.00
50.0	3	0.00
50.1	67	0.07
50.2	33	0.04
50.3	30	0.03
50.4	28	0.03
50.5	32	0.04
50.6	71	0.08
50.7	81	0.09
50.8	66	0.07
50.9	60	0.07
51.0	22	0.02
51.1	15	0.02
51.2	20	0.02
51.3	18	0.02
51.4	12	0.01
51.5	10	0.01
51.6	13	0.01
51.7	16	0.02
51.8	16	0.02
51.9	7	0.01
52.0	13	0.01
52.1	12	0.01
52.2	11	0.01
52.3	117	0.13
52.4	74	0.08
52.5	64	0.07
52.6	46	0.05
52.7	46	0.05
52.8	51	0.06
52.9	93	0.10
53.0	81	0.09
53.1	46	0.05
53.2	133	0.15
53.3	105	0.12
53.4	411	0.46
53.5	245	0.27
53.6	126	0.14
53.7	157	0.17
53.8	185	0.21
53.9	113	0.13
54.0	132	0.15
54.1	87	0.10
54.2	87	0.10
54.3	89	0.10

54.4	160	0.18
54.5	258	0.29
54.6	204	0.23
54.7	248	0.28
54.8	304	0.34
54.9	226	0.25
55.0	399	0.44
55.1	413	0.46
55.2	308	0.34
55.3	433	0.48
55.4	449	0.50
55.5	362	0.40
55.6	390	0.43
55.7	514	0.57
55.8	486	0.54
55.9	472	0.52
56.0	360	0.40
56.1	344	0.38
56.2	413	0.46
56.3	389	0.43
56.4	420	0.47
56.5	518	0.58
56.6	565	0.63
56.7	514	0.57
56.8	595	0.66
56.9	515	0.57
57.0	532	0.59
57.1	432	0.48
57.2	465	0.52
57.3	490	0.54
57.4	519	0.58
57.5	796	0.88
57.6	974	1.08
57.7	803	0.89
57.8	576	0.64
57.9	697	0.77
58.0	644	0.72
58.1	692	0.77
58.2	855	0.95
58.3	684	0.76
58.4	858	0.95
58.5	767	0.85
58.6	744	0.83
58.7	767	0.85
58.8	683	0.76
58.9	601	0.67
59.0	559	0.62

59.1	652	0.72
59.2	618	0.69
59.3	794	0.88
59.4	824	0.92
59.5	807	0.90
59.6	856	0.95
59.7	877	0.97
59.8	1059	1.18
59.9	1091	1.21
60.0	1125	1.25
60.1	980	1.09
60.2	839	0.93
60.3	789	0.88
60.4	837	0.93
60.5	950	1.06
60.6	856	0.95
60.7	933	1.04
60.8	947	1.05
60.9	778	0.86
61.0	802	0.89
61.1	800	0.89
61.2	968	1.08
61.3	880	0.98
61.4	995	1.11
61.5	885	0.98
61.6	923	1.03
61.7	1026	1.14
61.8	1122	1.25
61.9	1282	1.42
62.0	1152	1.28
62.1	867	0.96
62.2	1055	1.17
62.3	974	1.08
62.4	973	1.08
62.5	923	1.03
62.6	838	0.93
62.7	1005	1.12
62.8	839	0.93
62.9	795	0.88
63.0	739	0.82
63.1	784	0.87
63.2	892	0.99
63.3	791	0.88
63.4	833	0.93
63.5	656	0.73
63.6	502	0.56
63.7	548	0.61

63.8	525	0.58
63.9	595	0.66
64.0	642	0.71
64.1	724	0.80
64.2	511	0.57
64.3	485	0.54
64.4	516	0.57
64.5	384	0.43
64.6	482	0.54
64.7	515	0.57
64.8	481	0.53
64.9	492	0.55
65.0	524	0.58
65.1	479	0.53
65.2	478	0.53
65.3	358	0.40
65.4	413	0.46
65.5	439	0.49
65.6	394	0.44
65.7	308	0.34
65.8	287	0.32
65.9	333	0.37
66.0	374	0.42
66.1	365	0.41
66.2	286	0.32
66.3	321	0.36
66.4	275	0.31
66.5	261	0.29
66.6	330	0.37
66.7	280	0.31
66.8	274	0.30
66.9	314	0.35
67.0	278	0.31
67.1	258	0.29
67.2	276	0.31
67.3	303	0.34
67.4	313	0.35
67.5	323	0.36
67.6	290	0.32
67.7	287	0.32
67.8	171	0.19
67.9	213	0.24
68.0	185	0.21
68.1	160	0.18
68.2	127	0.14
68.3	157	0.17
68.4	200	0.22

68.5	177	0.20
68.6	98	0.11
68.7	108	0.12
68.8	134	0.15
68.9	117	0.13
69.0	102	0.11
69.1	119	0.13
69.2	171	0.19
69.3	129	0.14
69.4	128	0.14
69.5	92	0.10
69.6	130	0.14
69.7	132	0.15
69.8	129	0.14
69.9	115	0.13
70.0	74	0.08
70.1	103	0.11
70.2	148	0.16
70.3	128	0.14
70.4	124	0.14
70.5	113	0.13
70.6	85	0.09
70.7	59	0.07
70.8	39	0.04
70.9	62	0.07
71.0	52	0.06
71.1	42	0.05
71.2	30	0.03
71.3	31	0.03
71.4	28	0.03
71.5	31	0.03
71.6	83	0.09
71.7	43	0.05
71.8	32	0.04
71.9	32	0.04
72.0	33	0.04
72.1	26	0.03
72.2	23	0.03
72.3	22	0.02
72.4	24	0.03
72.5	32	0.04
72.6	50	0.06
72.7	19	0.02
72.8	17	0.02
72.9	26	0.03
73.0	41	0.05
73.1	36	0.04

73.2	10	0.01
73.3	20	0.02
73.4	4	0.00
73.5	7	0.01
73.6	5	0.01
73.7	6	0.01
73.8	5	0.01
73.9	24	0.03
74.0	14	0.02
74.1	13	0.01
74.2	11	0.01
74.3	12	0.01
74.4	11	0.01
74.5	12	0.01
74.6	10	0.01
74.7	12	0.01
74.8	9	0.01
74.9	13	0.01
75.0	17	0.02
75.1	16	0.02
75.2	15	0.02
75.3	19	0.02
75.4	22	0.02
75.5	19	0.02
75.6	18	0.02
75.7	18	0.02
75.8	18	0.02
75.9	14	0.02
76.0	9	0.01
76.1	8	0.01
76.2	14	0.02
76.3	12	0.01
76.4	2	0.00
76.5	4	0.00
76.6	2	0.00
76.7	3	0.00
76.8	2	0.00
76.9	3	0.00
77.0	2	0.00
77.1	4	0.00
77.2	4	0.00
Over	0	0.00
Total Count	90000	

Record #	Record Type	Date	Time	LASeq	LZpeak	LASmax	LASmin	Ovrld.	OBA Ovrld.	Marker
1	Run	2015/07/28	11:23:25	0.0	0.0	0.0	0.0	No	No	
2		2015/07/28	11:23:25	65.7	94.5	69.1	59.3	No	No	
3		2015/07/28	11:24:00	63.2	100.5	70.0	53.4	No	No	
4		2015/07/28	11:25:00	61.2	93.8	72.2	52.3	No	No	
5		2015/07/28	11:26:00	62.0	98.8	72.6	55.7	No	No	
6		2015/07/28	11:27:00	66.5	100.6	77.2	56.6	No	No	
7		2015/07/28	11:28:00	63.6	99.4	70.7	57.5	No	No	
8		2015/07/28	11:29:00	61.6	101.5	68.6	58.0	No	No	
9		2015/07/28	11:30:00	65.5	95.8	73.1	58.1	No	No	
10		2015/07/28	11:31:00	62.1	103.3	65.1	59.3	No	No	
11		2015/07/28	11:32:00	60.7	93.5	68.1	52.3	No	No	
12		2015/07/28	11:33:00	62.2	101.2	70.6	50.0	No	No	
13		2015/07/28	11:34:00	60.7	98.0	66.6	54.7	No	No	
14		2015/07/28	11:35:00	60.6	93.3	67.1	56.2	No	No	
15		2015/07/28	11:36:00	61.2	100.8	67.3	55.2	No	No	
16		2015/07/28	11:37:00	62.0	95.4	68.0	56.8	No	No	
17		2015/07/28	11:38:00	68.6	96.5	76.3	55.0	No	No	
18	Stop	2015/07/28	11:38:25	0.0	0.0	0.0	0.0	No	No	

Record #	Date	Time	Duration	Run Time	Pause	LASeq	LASE	LASmin	LASmin Time	LASmax	LASmax Time	LZpeak (max)	LZpeak (max) Time	SPL 1 Count	Duration	SPL 2 Count	Duration	Peak 1 Count	Duration	Peak 2 Count	Duration	Peak 3 Count	Duration	TWA(Projected) 0	TWA(Projected) 1	LAS5.00	LAS10.00	LAS33.30	LAS50.00	LAS66.60	LAS90.00	SEA	LCSeq	LASeq	LCSeq - LASeq	LAleq	LAeq	LAleq-LAeq	# Overloads	Duration
	2015/07/28	11:23:25	00:15:00.0	00:15:00.0	00:00:00.0	63.3	92.8	50.0	11:33:44	77.2	11:27:14	103.3	11:31:58	3	7.8	0	0.0	0	0.0	0	0.0	0	0.0	-99.9	-99.9	68.1	66.5	62.6	61.1	59.4	56.0	-99.9	75.6	63.3	12.4	66.5	63.3	3.3	0	0.0

Summary					
Filename	HMB 15tZ.014				
Serial Number	4025				
Model	SoundTrack LxT®				
Firmware Version	2.206				
User					
Location					
Job Description					
Note					
Measurement Description	TEST				
Start	2015/07/28 11:42:15				
Stop	2015/07/28 11:57:15				
Duration	0:15:00.0				
Run Time	0:15:00.0				
Pause	0:00:00.0				
Pre Calibration	2015/07/28 11:18:39				
Post Calibration	None				
Calibration Deviation	---				

Overall Settings			
RMS Weight	A Weighting		
Peak Weight	Z Weighting		
Detector	Slow		
Preamp	PRMLxT1L		
Microphone Correction	Off		
Integration Method	Exponential		
Overload	119.7	dB	
	A	**C**	**Z**
Under Range Peak	76.0	73.0	**78.0** dB
Under Range Limit	**24.7**	24.7	29.4 dB
Noise Floor	15.6	15.6	20.2 dB

Results			
LASeq	66.5	dB	
LASE	96.0	dB	
EAS	442.139	μPa^2h	
EAS8	14.148	mPa^2h	
EAS40	70.742	mPa^2h	
LZpeak (max)	2015/07/28 11:51:43	108.6	dB
LASmax	2015/07/28 11:55:43	79.2	dB
LASmin	2015/07/28 11:48:45	56.1	dB
SEA	-99.9	dB	

LAS > 73.0 dB (Exceedence Counts / Duration)	7	33.8	s
LAS > 115.0 dB (Exceedence Counts / Duration)	0	0.0	s
LZpeak > 135.0 dB (Exceedence Counts / Duration)	0	0.0	s
LZpeak > 137.0 dB (Exceedence Counts / Duration)	0	0.0	s
LZpeak > 140.0 dB (Exceedence Counts / Duration)	0	0.0	s

Community Noise	Ldn	LDay 07:00-23:00	LNight 23:00-07:00	Lden	LDay 07:00-19:00	LEvening 19:00-23:00	LNight 23:00-07:00
	66.5	66.5	-99.9	66.5	66.5	-99.9	-99.9

LCSeq	78.0	dB
LASeq	66.5	dB
LCSeq - LASeq	11.5	dB
LAleq	68.0	dB
LAeq	66.5	dB
LAleq - LAeq	1.6	dB
# Overloads	0	
Overload Duration	0.0	s

Dose Settings			
Dose Name	OSHA-1	OSHA-2	
Exch. Rate	5	5	dB
Threshold	90	80	dB
Criterion Level	90	90	dB
Criterion Duration	8	8	h

Results			
Dose	-99.9	-99.9	%
Projected Dose	-99.9	-99.9	%
TWA (Projected)	-99.9	-99.9	dB
TWA (t)	-99.9	-99.9	dB
Lep (t)	51.4	51.4	dB

Statistics		
LAS5.00	71.0	dB
LAS10.00	69.3	dB
LAS33.30	66.1	dB
LAS50.00	64.1	dB
LAS66.60	62.4	dB
LAS90.00	59.5	dB

Calibration History		
Preamp	**Date**	**dB re. 1V/Pa**
PRMLxT1L	2015/07/28 11:18:39	-26.0
PRMLxT1L	2015/07/28 11:18:03	-26.2
PRMLxT1L	2015/07/14 12:24:47	-27.9
PRMLxT1L	2015/07/14 12:23:36	-27.9
PRMLxT1L	2015/07/09 11:28:56	-27.0
PRMLxT1L	2015/07/09 11:28:29	-27.1
PRMLxT1L	2015/06/16 10:06:09	-27.3
PRMLxT1L	2015/06/16 10:05:39	-27.1
PRMLxT1L	2015/06/01 13:19:17	-27.0
PRMLxT1L	2015/06/01 13:18:40	-26.2
PRMLxT1L	2015/04/28 13:13:48	-28.0

6.3	**8.0**	**10.0**	**12.5**	**16.0**	**20.0**	**25.0**	**31.5**	**40.0**	**50.0**	**63.0**	**80.0**	**100**	**125**	**160**	**200**	**250**	**315**	**400**	**500**	**630**	**800**	**1000**	**1250**	**1600**	**2000**	**2500**	**3150**	**4000**	**5000**	**6300**	**8000**	**10000**	**12500**	**16000**	**20000**

Record #	Date	Time	Record Type	Cause	#	TH Record
1	2015/07/28	11:42:15	Run	Key	1	1
2	2015/07/28	11:57:15	Stop	Timer	1	18

Statistics Level (dB)	Count	Percent
Under	0	0.00
56.1	5	0.01
56.2	66	0.07
56.3	40	0.04
56.4	49	0.05
56.5	30	0.03
56.6	29	0.03
56.7	23	0.03
56.8	25	0.03
56.9	41	0.05
57.0	25	0.03
57.1	37	0.04
57.2	89	0.10
57.3	119	0.13
57.4	101	0.11
57.5	189	0.21
57.6	113	0.13
57.7	184	0.20
57.8	222	0.25
57.9	337	0.37
58.0	233	0.26
58.1	265	0.29
58.2	160	0.18
58.3	292	0.32
58.4	369	0.41
58.5	278	0.31
58.6	340	0.38
58.7	393	0.44
58.8	358	0.40
58.9	554	0.62
59.0	617	0.69
59.1	630	0.70
59.2	597	0.66
59.3	808	0.90
59.4	807	0.90
59.5	685	0.76
59.6	697	0.77
59.7	693	0.77
59.8	625	0.69
59.9	788	0.88
60.0	498	0.55
60.1	667	0.74
60.2	671	0.75
60.3	555	0.62
60.4	710	0.79

60.5	805	0.89
60.6	726	0.81
60.7	878	0.98
60.8	900	1.00
60.9	737	0.82
61.0	646	0.72
61.1	631	0.70
61.2	531	0.59
61.3	607	0.67
61.4	567	0.63
61.5	639	0.71
61.6	774	0.86
61.7	883	0.98
61.8	994	1.10
61.9	852	0.95
62.0	785	0.87
62.1	789	0.88
62.2	862	0.96
62.3	831	0.92
62.4	920	1.02
62.5	920	1.02
62.6	917	1.02
62.7	1176	1.31
62.8	909	1.01
62.9	1107	1.23
63.0	1031	1.15
63.1	926	1.03
63.2	902	1.00
63.3	912	1.01
63.4	629	0.70
63.5	772	0.86
63.6	903	1.00
63.7	695	0.77
63.8	616	0.68
63.9	684	0.76
64.0	807	0.90
64.1	767	0.85
64.2	828	0.92
64.3	887	0.99
64.4	714	0.79
64.5	728	0.81
64.6	800	0.89
64.7	870	0.97
64.8	662	0.74
64.9	661	0.73
65.0	791	0.88
65.1	682	0.76

65.2	564	0.63
65.3	602	0.67
65.4	664	0.74
65.5	682	0.76
65.6	785	0.87
65.7	785	0.87
65.8	769	0.85
65.9	866	0.96
66.0	888	0.99
66.1	969	1.08
66.2	1056	1.17
66.3	849	0.94
66.4	770	0.86
66.5	745	0.83
66.6	587	0.65
66.7	614	0.68
66.8	664	0.74
66.9	650	0.72
67.0	845	0.94
67.1	628	0.70
67.2	738	0.82
67.3	748	0.83
67.4	653	0.73
67.5	669	0.74
67.6	640	0.71
67.7	645	0.72
67.8	607	0.67
67.9	733	0.81
68.0	624	0.69
68.1	582	0.65
68.2	699	0.78
68.3	611	0.68
68.4	699	0.78
68.5	738	0.82
68.6	680	0.76
68.7	610	0.68
68.8	563	0.63
68.9	503	0.56
69.0	532	0.59
69.1	518	0.58
69.2	461	0.51
69.3	329	0.37
69.4	324	0.36
69.5	234	0.26
69.6	325	0.36
69.7	261	0.29
69.8	239	0.27

69.9	269	0.30
70.0	266	0.30
70.1	260	0.29
70.2	280	0.31
70.3	350	0.39
70.4	235	0.26
70.5	279	0.31
70.6	231	0.26
70.7	273	0.30
70.8	172	0.19
70.9	190	0.21
71.0	231	0.26
71.1	193	0.21
71.2	199	0.22
71.3	150	0.17
71.4	158	0.18
71.5	147	0.16
71.6	155	0.17
71.7	155	0.17
71.8	196	0.22
71.9	134	0.15
72.0	132	0.15
72.1	73	0.08
72.2	78	0.09
72.3	79	0.09
72.4	64	0.07
72.5	58	0.06
72.6	83	0.09
72.7	80	0.09
72.8	61	0.07
72.9	77	0.09
73.0	66	0.07
73.1	68	0.08
73.2	54	0.06
73.3	78	0.09
73.4	67	0.07
73.5	51	0.06
73.6	54	0.06
73.7	53	0.06
73.8	41	0.05
73.9	59	0.07
74.0	48	0.05
74.1	40	0.04
74.2	38	0.04
74.3	44	0.05
74.4	38	0.04
74.5	48	0.05

74.6	41	0.05
74.7	41	0.05
74.8	41	0.05
74.9	39	0.04
75.0	45	0.05
75.1	43	0.05
75.2	56	0.06
75.3	48	0.05
75.4	59	0.07
75.5	57	0.06
75.6	64	0.07
75.7	40	0.04
75.8	16	0.02
75.9	15	0.02
76.0	16	0.02
76.1	16	0.02
76.2	16	0.02
76.3	17	0.02
76.4	17	0.02
76.5	21	0.02
76.6	18	0.02
76.7	22	0.02
76.8	20	0.02
76.9	17	0.02
77.0	20	0.02
77.1	23	0.03
77.2	30	0.03
77.3	32	0.04
77.4	14	0.02
77.5	14	0.02
77.6	16	0.02
77.7	15	0.02
77.8	15	0.02
77.9	17	0.02
78.0	20	0.02
78.1	14	0.02
78.2	20	0.02
78.3	21	0.02
78.4	25	0.03
78.5	22	0.02
78.6	13	0.01
78.7	22	0.02
78.8	18	0.02
78.9	28	0.03
79.0	12	0.01
79.1	9	0.01
79.2	26	0.03

Over	0	0.00
Total Count	90000	

Record #	Record Type	Date	Time	LASeq	LZpeak	LASmax	LASmin	Ovrld.	OBA Ovrld.	Marker
1	Run	2015/07/28	11:42:15	0.0	0.0	0.0	0.0	No	No	
2		2015/07/28	11:42:15	63.8	94.2	69.7	59.4	No	No	
3		2015/07/28	11:43:00	65.6	97.5	71.5	57.6	No	No	
4		2015/07/28	11:44:00	62.2	94.0	65.2	59.0	No	No	
5		2015/07/28	11:45:00	63.3	90.0	68.7	57.9	No	No	
6		2015/07/28	11:46:00	64.8	99.8	69.0	58.9	No	No	
7		2015/07/28	11:47:00	65.0	97.3	72.1	59.2	No	No	
8		2015/07/28	11:48:00	65.0	95.6	71.2	56.1	No	No	
9		2015/07/28	11:49:00	67.1	100.3	75.7	59.1	No	No	
10		2015/07/28	11:50:00	66.3	102.3	73.7	57.8	No	No	
11		2015/07/28	11:51:00	64.3	108.6	70.5	57.1	No	No	
12		2015/07/28	11:52:00	69.4	105.0	79.0	59.0	No	No	
13		2015/07/28	11:53:00	65.9	104.1	70.4	62.1	No	No	
14		2015/07/28	11:54:00	67.6	102.1	75.5	58.6	No	No	
15		2015/07/28	11:55:00	69.9	99.8	79.2	62.4	No	No	
16		2015/07/28	11:56:00	67.8	98.4	75.7	61.9	No	No	
17		2015/07/28	11:57:00	67.2	95.8	69.4	62.4	No	No	
18	Stop	2015/07/28	11:57:15	0.0	0.0	0.0	0.0	No	No	

Record #	Date	Time	Duration	Run Time	Pause	LASeq	LASE	LASmin	LASmin Time	LASmax	LASmax Time	LZpeak (max)	LZpeak (max) Time	SPL 1 Count	Duration	SPL 2 Count	Duration	Peak 1 Count	Duration	Peak 2 Count	Duration	Peak 3 Count	Duration	TWA(Projected) 0	TWA(Projected) 1	LAS5.00	LAS10.00	LAS33.30	LAS50.00	LAS66.60	LAS90.00	SEA	LCSeq	LASeq	LCSeq - LASeq	LAleq	LAeq	LAleq-LAeq	# Overloads	Duration
	2015/07/28	11:42:15	00:15:00.0	00:15:00.0	00:00:00.0	66.5	96.0	56.1	11:48:45	79.2	11:55:43	108.6	11:51:43	7	33.8	0	0.0	0	0.0	0	0.0	0	0.0	-99.9	-99.9	71.0	69.1	66.1	64.1	62.4	59.5	-99.9	78.0	66.5	11.5	68.0	66.5	1.6	0	0.0

APPENDIX C

5110 TELEGRAPH AVENUE
AIR QUALITY IMPACT ANALYSIS

AIR QUALITY IMPACT ANALYSIS

5110 TELEGRAPH AVENUE PROJECT

CITY OF OAKLAND, CALIFORNIA

LSA

January 2016

AIR QUALITY IMPACT ANALYSIS

5110 TELEGRAPH AVENUE PROJECT

CITY OF OAKLAND, CALIFORNIA

Submitted to:
City of Oakland
Planning & Building Department
250 Frank H. Ogawa Plaza, Suite 2114
Oakland, CA 94612

Prepared by:

LSA Associates, Inc.
5084 N. Fruit Avenue Suite 103
Fresno, CA 93711
559-490-1210

LSA

January 2016

TABLE OF CONTENTS

A. INTRODUCTION 1

B. PROJECT DESCRIPTION 1

C. BACKGROUND 3
1. AIR POLLUTANTS AND HEALTH EFFECTS 3
2. CALIFORNIA AIR RESOURCES BOARD (ARB) HANDBOOK 4
3. GENERAL HEALTH RISKS OF TOXICS 5
4. ANALYSIS OF SITE-SPECIFIC TOXICS 6
5. SIGNIFICANCE CRITERIA 6

D. AIR POLLUTANT EMISSIONS ASSESSMENT 10
1. CONSTRUCTION EMISSIONS 10
2. OPERATIONAL EMISSIONS 11

E. HEALTH RISK ASSESSMENT 12
1. CONSTRUCTION HEALTH RISK ASSESSMENT 12
2. STATIONARY AND MOBILE SOURCES ASSESSMENT 13

F. CONCLUSIONS 13

APPENDICES

Appendix A: CalEEMod Data
Appendix B: Construction HRA Model Data
Appendix C: BAAQMD Stationary and Mobile Screening

FIGURES AND TABLES

FIGURES

Figure 1: Project Vicinity 2

TABLES

Table 1: Project Construction Emissions in Pounds Per Day 10
Table 2: Project Operational Emissions 11
Table 3: Inhalation Health Risks from Project Construction to Off-Site Receptors 12
Table 4: Stationary and Mobile Sources in the Project Vicinity 13

A. INTRODUCTION

LSA Associates, Inc. (LSA) has completed a health risk assessment (HRA) and air pollutant emission analysis for the proposed 5110 Telegraph Avenue Project (project) located at 5110 Telegraph Avenue in the City of Oakland. The project location and a detailed vicinity map are shown in Figure 1.

This Air Quality Impact Analysis has been prepared using the methodology and assumptions contained in the Bay Area Air Quality Management District's (BAAQMDs) *CEQA Air Quality Guidelines.*[1] This analysis includes a screening level analysis of stationary source emissions from land uses in the vicinity of the project site and local roadways using tools provided by the BAAQMD. Appropriate measures to reduce the potential health risk due of exposure to toxic air contaminants, consistent with the City of Oakland's Standard Conditions of Approval (SCAs).[2] The analysis also includes an air dispersion analysis of project construction emissions. The construction health risk assessment (HRA) considered the site-specific meteorological conditions and the proximity of the project site to adjacent sensitive receptors to evaluate exposures from project construction emissions, including diesel particulate matter (DPM).

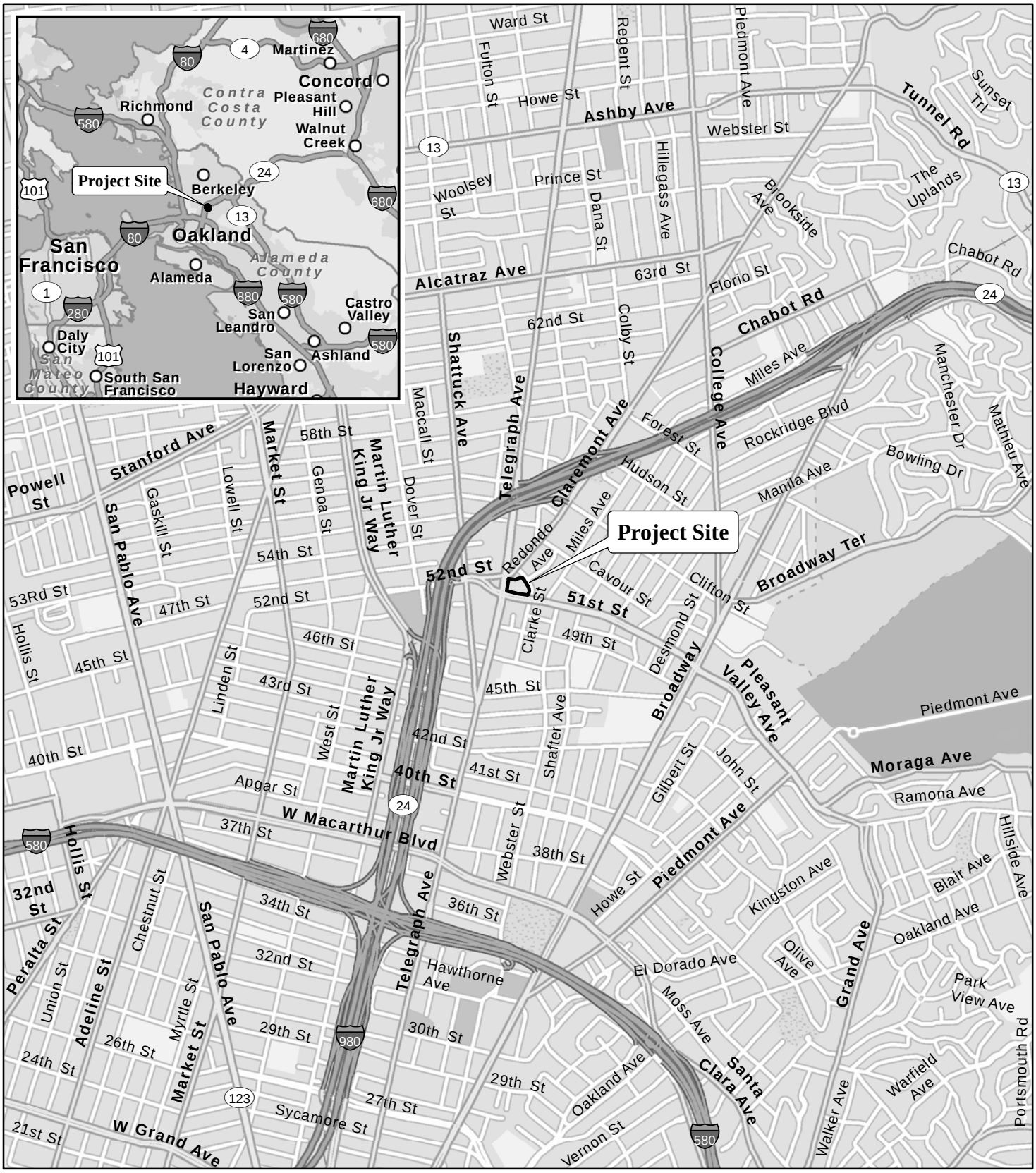
An air quality emission analysis was conducted using the California Emissions Estimator Model version 2013.2.2 (CalEEMod) to assess the potential air quality emissions associated with construction and operation of the project.

B. PROJECT DESCRIPTION

The proposed project would develop a six-story, mixed-use building with residential uses above ground-floor commercial on the corner of 51st Street and Telegraph Avenue. The applicant proposes to construct a new mixed-use building including approximately 34,000 square feet of commercial space, 297 parking spaces, and 204 housing units. Parking would be provided in two subterranean levels and would include 153 residential parking spaces and 144 commercial parking spaces. The commercial space would be located on the ground floor and would be divided into four retail spaces, including a space for a grocery store. The ground floor would also include a residential lobby, studio loft units, as well as common outdoor areas. Floors two through six, which would be set back from Clarke Street, would also include residential unit, while the fifth level would include private decks along the Clarke Street frontage. The roof would include space for rooftop greenhouses and storage. Project construction would include excavation and construction of the subterranean parking structure, construction of the above-grade retail and residential structure, and site finishes and landscaping. Excavation for the subterranean parking structure would occur over approximately six months, utilizing backhoes, bulldozers, and excavators. Subterranean construction would not include pile driving. Construction of the retail and residential building would occur in two phases over a 10-month period, while site finishes and landscaping would occur over approximately 2 months. Traffic during construction of the retail and residential portions of the project would consist primarily of light-duty truck trips to and from the site, with additional truck trips for materials delivery. Site finishes and landscaping would be performed using small grading and earthwork equipment such as backhoes and whackers. The total construction period is expected to be approximately 19 months, with project completion by December 2017.

[1] Bay Area Air Quality Management District, 2012. *CEQA Air Quality Guidelines.* May.

[2] Oakland, City of, 2015. *Standard Conditions of Approval.* July 22.



LSA

FIGURE 1

N

0 1000 2000
FEET

5110 Telegraph Avenue Project
Project Location and Regional Vicinity Map

SOURCE: ESRI STREETMAP NORTH AMERICA (2012).

I:\NAU1501 5110 Telegraph\figures\Fig_1.ai (7/24/15)

C. BACKGROUND

This section provides background information on air pollutants and their health effects. It also provides information the California Air Resources Board's Air Quality and Land Use Handbook[3] (ARB Handbook), a description of the general health risks of toxics, and the significance criteria for project evaluation.

1. Air Pollutants and Health Effects

Both State and federal governments have established health-based Ambient Air Quality Standards for six criteria air pollutants:[4] carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead (Pb), and suspended particulate matter (PM). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Long-term exposure to elevated levels of criteria pollutants may result in adverse health effects. However, emission thresholds established by an air district are used to manage total regional emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual projects that would contribute to regional emissions and pollutant concentrations and could adversely affect or delay the projected attainment target year for certain criteria pollutants.

Because of the conservative nature of the thresholds, and the basin-wide context of individual project emissions, there is no direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like nitrogen oxides (NO_x) and reactive organic gases (ROG).

Occupants of facilities such as schools, day care centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. Recreational uses are also considered sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise.

(1) Ozone. Ozone is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving ROG and NO_x. The main sources of ROG and NO_x, often referred to as ozone precursors, are combustion processes (including combustion in motor vehicle engines) and the evaporation of solvents, paints, and fuels. In the Bay Area, automobiles are the

[3] California Air Resources Board, 2005. *Air Quality and Land Use Handbook: A Community Health Perspective.* April.

[4] Criteria pollutants are defined as those pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

single largest source of ozone precursors. Ozone is referred to as a regional air pollutant because its precursors are transported and diffused by wind concurrently with ozone production through the photochemical reaction process. Ozone causes eye irritation, airway constriction, and shortness of breath and can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

(2) Carbon Monoxide.CO is an odorless, colorless gas usually formed as the result of the incomplete combustion of fuels. The single largest source of CO is motor vehicles. While CO transport is limited, it disperses with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations near congested roadways or intersections may reach unhealthful levels that adversely affect local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service (LOS) or with extremely high traffic volumes. Exposure to high concentrations of CO reduces the oxygen-carrying capacity of the blood and can cause headaches, nausea, dizziness, and fatigue, impair central nervous system function, and induce angina (chest pain) in persons with serious heart disease. Extremely high levels of CO, such as those generated when a vehicle is running in an unventilated garage, can be fatal.

(3) Particulate Matter. Particulate matter is a class of air pollutants that consists of heterogeneous solid and liquid airborne particles from manmade and natural sources. Particulate matter is categorized in two size ranges: PM_{10} for particles less than 10 microns in diameter and $PM_{2.5}$ for particles less than 2.5 microns in diameter. In the Bay Area, motor vehicles generate about half of the air basin's particulates, through tailpipe emissions as well as brake pad and tire wear. Wood burning in fireplaces and stoves, industrial facilities, and ground-disturbing activities such as construction are other sources of such fine particulates. These fine particulates are small enough to be inhaled into the deepest parts of the human lung and can cause adverse health effects. According to the California Air Resources Board (ARB), studies in the United States and elsewhere have demonstrated a strong link between elevated particulate levels and premature deaths, hospital admissions, emergency room visits, and asthma attacks, and studies of children's health in California have demonstrated that particle pollution may significantly reduce lung function growth in children. The ARB also reports that Statewide attainment of particulate matter standards could prevent thousands of premature deaths, lower hospital admissions for cardiovascular and respiratory disease and asthma-related emergency room visits, and avoid hundreds of thousands of episodes of respiratory illness in California.[5] **Nitrogen Dioxide.** NO_2 is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. NO_2 decreases lung function and may reduce resistance to infection. On January 22, 2010, the U.S. Environmental Protection Agency (U.S. EPA) strengthened the health-based National Ambient Air Quality Standards (NAAQS) for NO_2.

2. California Air Resources Board (ARB) Handbook

The California Air Resources Board (ARB) has developed an Air Quality and Land Use Handbook which is intended to serve as a general reference guide for evaluating and reducing air pollution

[5] California Air Resources Board, 2011. *Fact Sheets*. Website: www.arb.ca.gov/htm/fslist.htm#Health.pdf. October.

impacts associated with new projects that go through the land use decision-making process. According to the ARB Handbook, recent air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high traffic roadways. 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. The ARB Handbook recommends that planning agencies strongly consider proximity to these sources when finding new locations for "sensitive" land uses such as homes, medical facilities, daycare centers, schools and playgrounds.

Air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the ARB Handbook include taking steps to avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
- Within 1,000 feet of a major service and maintenance rail yard.
- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries.
- Within 300 feet of any dry cleaning operation (or within 500 feet for operations with two or more machines).
- Within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

The ARB Handbook specifically states that its recommendations are advisory and acknowledges land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

The recommendations are generalized and do not consider site specific meteorology, freeway truck percentages or other factors that influence risk for a particular project site. The purpose of this analysis is to further examine the project site for actual health risks associated with the location of new housing on the project site.

3. General Health Risks of Toxics

Determining how hazardous a substance is depends on many factors, including the amount of the substance in the air, how it enters the body, how long the exposure lasts, and what organs in the body are affected. One major way hazardous substances might enter the body is through inhalation of either gases or particulates. Many gases and very small particles that penetrate deeply into the lungs are potentially harmful and can contribute to a variety of health problems. Exhaust from diesel engines is a major source of harmful airborne particles. The inhalation of diesel exhaust particulates is associated with both cancer and non-cancer health effects.

California’s Office of Environmental Health Hazard Assessment (OEHHA) has determined that long-term exposure to diesel exhaust particulates poses the highest cancer risk of any toxic air contaminant (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, lightheaded-ness, and nausea. In studies with human volunteers, diesel exhaust particles made people with aller-

gies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks.

Fortunately, improvements to diesel fuel and diesel engines have already reduced emissions of some of the contaminants. When fully implemented these improvements result in a 75 percent reduction in particle emissions from diesel-powered trucks and other equipment today as compared to year 2000 levels and an 85 percent reduction is expected by 2020.[6] Similarly, improvements have been made to significantly reduce TAC emissions from gasoline-powered vehicles. These improvements are anticipated to continue into the foreseeable future.

4. Analysis of Site-Specific Toxics According to the ARB,[7] when conducting an HRA, the surrogate for whole diesel exhaust is DPM and is used as the basis for the potential risk calculations. When conducting an HRA, the potential cancer risk from inhalation exposure to DPM will outweigh the potential noncancerous health impacts. Therefore, inhalation cancer risk is required for every HRA. When comparing whole diesel exhaust to speciated diesel exhaust (i.e., speciation means looking at the individual components of the exhaust, such as polynuclear aromatic hydrocarbons and metals), potential cancer risk from inhalation exposure to whole diesel exhaust will outweigh the multipathway cancer risk from the speciated components. For this reason, there are few situations where an analysis of multipathway risk is necessary.[8] The analysis herein assesses whole diesel exhaust emissions as DPM and gasoline exhaust.

5. Significance Criteria The BAAQMD has established a maximum threshold for land use projects that have the potential to expose sensitive receptors (including residential areas) or the general public to substantial levels of toxic air contaminants. The BAAQMD thresholds of significance for toxic air contaminants for single sources are: 1) probability of contracting cancer for the Maximally Exposed Individual (MEI) exceeds 10 in one million; or 2) ground-level concentrations of non-carcinogenic toxic air contaminants would result in a Hazard Index greater than 1 for the MEI. The BAAQMD thresholds of significance under cumulative conditions (all sources) or construction emisisons are: 1) a cancer risk level greater than 100 in a million; 2) a non-cancer risk (chronic or acute) hazard index greater than 10.0; or 3) annual average $PM_{2.5}$ of greater than 0.8 micrograms per cubic meter.

The project would have a significant impact related to air emissions if the project would:

- During project construction result in average daily emissions of 54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10}; or

[6] California Environmental Protection Agency, Office of Environmental Health Hazard Assessment and American Lung Association of California, 2002. *Health Effects of Diesel Exhaust*. April.

[7] Air Resources Board, 2005. Website: www.arb.ca.gov/toxics/harp/docs/userguide/appendixK.pdf.

[8] California Office of Environmental Health Hazard Assessment, 2003. *Air Toxics Hot Spots Program Risk Assessment Guidelines, Appendix D, Risk Assessment Procedures to Evaluate Particulate Emissions from Diesel-Fueled Vehicles, Section B.* August.

- During project operation result in average daily emissions of 54 pounds per day of ROG, NO_x, or $PM_{2.5}$ or 82 pounds per day of PM_{10}; or result in maximum annual emissions of 10 tons per year of ROG, NO_x, or $PM_{2.5}$ or 15 tons per year of PM_{10}.

Pursuant to the BAAQMD CEQA Guidelines when siting new sensitive receptors, TAC sources located within 1,000 feet are considered including, but not limited to, stationary sources, freeways, major roadways (10,000 or greater vehicles per day), truck distribution centers, airports, seaports, ferry terminals, and rail lines. For these thresholds sensitive receptors include residential uses, schools, parks, daycare centers, nursing homes, and medical centers. [9]

City of Oakland's Standard Conditions of Approval. The City's SCAs relevant to this air quality analysis are listed below for reference.[10]

19. Construction-Related Air Pollution Controls (Dust and Equipment Emissions)

Requirement: The project applicant shall implement all of the following applicable air pollution control measures during construction of the project:

[BASIC CONTROLS (apply to ALL construction sites)]

a) Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible.
b) Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
d) Pave all roadways, driveways, sidewalks, etc. within one month of site grading or as soon as feasible. In addition, building pads should be laid within one month of grading or as soon as feasible unless seeding or soil binders are used.
e) Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).
f) Limit vehicle speeds on unpaved roads to 15 miles per hour.
g) Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points.
h) Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations").
i) All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

[9] BAAQMD, 2011. *Air Quality CEQA Guidelines.* May.

[10] City of Oakland's Standard Conditions of Approval, op.cit.

j) Portable equipment shall be powered by electricity if available. If electricity is not available, propane or natural gas shall be used if feasible. Diesel engines shall only be used if electricity is not available and it is not feasible to use propane or natural gas.

[ENHANCED CONTROLS: All "Basic" controls listed above plus the following controls if the project involves:

- 114 or more single-family dwelling units;
- 240 or more multi-family units;
- Nonresidential uses that exceed the applicable screening size listed in the Bay Area Air

Quality Management District's CEQA Guidelines;

- Demolition permit;
- Simultaneous occurrence of more than two construction phases (e.g., grading and building construction occurring simultaneously);
- Extensive site preparation (i.e., the construction site is four acres or more in size); or
- Extensive soil transport (i.e., 10,000 or more cubic yards of soil import/export).]

k) All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.
l) All excavation, grading, and demolition activities shall be suspended when average wind speeds exceed 20 mph.
m) Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
n) Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for one month or more).
o) Designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress.
p) Install appropriate wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed areas of the construction site to minimize wind-blown dust. Wind breaks must have a maximum 50 percent air porosity.
q) Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
r) Activities such as excavation, grading, and other ground-disturbing construction activities shall be phased to minimize the amount of disturbed surface area at any one time.
s) All trucks and equipment, including tires, shall be washed off prior to leaving the site.
t) Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12 inch compacted layer of wood chips, mulch, or gravel.
u) All equipment to be used on the construction site and subject to the requirements of Title 13, Section 2449, of the California Code of Regulations ("California Air Resources Board Off-Road Diesel Regulations") must meet emissions and performance requirements one year in advance of any fleet deadlines. Upon request by the City, the project applicant shall provide written documentation that fleet requirements have been met.
v) Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., BAAQMD Regulation 8, Rule 3: Architectural Coatings).
w) All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NOx and PM.
x) Off-road heavy diesel engines shall meet the California Air Resources Board's most recent certification standard.
y) Post a publicly-visible large on-site sign that includes the contact name and phone number for the project complaint manager responsible for responding to dust complaints and the telephone numbers of

the City's Code Enforcement unit and the Bay Area Air Quality Management District. When contacted, the project complaint manager shall respond and take corrective action within 48 hours.

When Required: During construction
Initial Approval: N/A
Monitoring/Inspection: Bureau of Building

20. Exposure to Air Pollution (Toxic Air Contaminants)
a. Health Risk Reduction Measures

Requirement: The project applicant shall incorporate appropriate measures into the project design in order to reduce the potential health risk due to exposure to toxic air contaminants. The project applicant shall choose one of the following methods:

i. The project applicant shall retain a qualified air quality consultant to prepare a Health Risk Assessment (HRA) in accordance with California Air Resources Board (CARB) and Office of Environmental Health and Hazard Assessment requirements to determine the health risk of exposure of project residents/occupants/users to air pollutants. The HRA shall be submitted to the City for review and approval. If the HRA concludes that the health risk is at or below acceptable levels, then health risk reduction measures are not required. If the HRA concludes that the health risk exceeds acceptable levels, health risk reduction measures shall be identified to reduce the health risk to acceptable levels. Identified risk reduction measures shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City.

- or -

i. The project applicant shall incorporate the following health risk reduction measures into the project. These features shall be submitted to the City for review and approval and be included on the project drawings submitted for the construction-related permit or on other documentation submitted to the City:

- Installation of air filtration to reduce cancer risks and Particulate Matter (PM) exposure for residents and other sensitive populations in the project that are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 [insert MERV-16 for projects located in the West Oakland Specific Plan area] or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required.
- Where appropriate, install passive electrostatic filtering systems, especially those with low air velocities (i.e., 1 mph). Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible.
- The project shall be designed to locate sensitive receptors as far away as feasible from the source(s) of air pollution. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall be located as far away as feasible from a loading dock or where trucks concentrate to deliver goods.
- Sensitive receptors shall be located on the upper floors of buildings, if feasible.
- Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (*Pinus nigra* var. *maritima*), Cypress (*X Cupressocyparis leylandii*), Hybrid popular (*Populus deltoids X trichocarpa*), and Redwood *(Sequoia sempervirens*).
- Sensitive receptors shall be located as far away from truck activity areas, such as loading docks and delivery areas, as feasible.
- Existing and new diesel generators shall meet CARB's Tier 4 emission standards, if feasible.

- Emissions from diesel trucks shall be reduced through implementing the following measures, if feasible:
    - Installing electrical hook-ups for diesel trucks at loading docks.
    - Requiring trucks to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards.
    - Requiring truck-intensive projects to use advanced exhaust technology (e.g., hybrid) or alternative fuels.
    - Prohibiting trucks from idling for more than two minutes.
    - Establishing truck routes to avoid sensitive receptors in the project. A truck route program, along with truck calming, parking, and delivery restrictions, shall be implemented.

When Required: Prior to approval of construction-related permit
Initial Approval: Bureau of Planning
Monitoring/Inspection: Bureau of Building

b. Maintenance of Health Risk Reduction Measures

Requirement: The project applicant shall maintain, repair, and/or replace installed health risk reduction measures, including but not limited to the HVAC system (if applicable), on an ongoing and as-needed basis. Prior to occupancy, the project applicant shall prepare and then distribute to the building manager/operator an operation and maintenance manual for the HVAC system and filter including the maintenance and replacement schedule for the filter.

When Required: Ongoing
Initial Approval: N/A
Monitoring/Inspection: Bureau of Building

D. AIR POLLUTANT EMISSIONS ASSESSMENT

Air emissions associated with project construction and operation, were estimated using CalEEMod. Detailed calculations are provided in Appendix A.

1. Construction Emissions

During construction, short-term degradation of air quality may occur due to the release of particulate matter emissions generated by excavation, grading, hauling, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, ROG, directly-emitted particulate matter ($PM_{2.5}$ and PM_{10}), and TACs such as diesel exhaust particulate matter. TAC's impacts are discussed under Section E. Health Risk Assessment, below.

Site preparation and project construction would involve building reconstruction, clearing, grading, and building activities. These emissions would be temporary and limited to the immediate area surrounding the construction sites.

Construction emissions were calculated using the CalEEMod. Average daily construction emissions were calculated assuming 19 month construction duration. As shown in Table 1, construction emissions would not exceed the BAAQMD's threshold for average daily construction emissions for ROG, NO_x, $PM_{2.5}$, or PM_{10}.

Table 1: Project Construction Emissions in Pounds Per Day

Project Construction	ROG	NO_x	Exhaust $PM_{2.5}$	Total $PM_{2.5}$	Exhaust PM_{10}	Total PM_{10}
Average Daily Emissions	22.1	21.6	3.7	7.5	3.9	13.2
BAAQMD Thresholds	54.0	54.0	54.0	NA	82.0	NA
Exceed Threshold?	No	No	No	--	No	--

NA = Not Applicable, the BAAQMD does not have threshold

Source: LSA Associates, Inc., 2015.

The BAAQMD has established standard measures for reducing fugitive dust emissions ($PM_{2.5}$ and PM_{10}) including the use of water or other soil stabilizers. With the implementation of standard construction measures such as frequent watering (e.g., two times per day at a minimum), fugitive dust emissions from construction activities would not result in adverse air quality impacts.[11] Implementation of the measures included in the City's SCA-19 would reduce construction dust impacts to a less than significant level.[12]

2. Operational Emissions

The project would generate long-term air emissions associated with changes in the permanent use of the project site. These long-term emissions are primarily mobile source emissions that would result from vehicle trips associated with the proposed project. Area sources, such as natural gas heaters, landscape equipment, and use of consumer products such as pressurized air canisters would also result in pollutant emissions.

Default trip rates were used in CalEEMod to determine mobile source emissions. CalEEMod estimates that the project would generate 4,555 weekday trips. Area source emissions associated with the project would include consumer product use, architectural coatings, and the use of landscaping equipment which were estimated and calculated using default values in CalEEMod.

The new daily and annual emissions associated with the project are identified in Table 2 for ROG, NO_x, PM_{10}, and $PM_{2.5}$. All calculation details are provided in Appendix A. The results indicate the project emissions would not exceed the BAAQMD's threshold for ROG, NO_x, $PM_{2.5}$ and PM_{10}; therefore, the proposed project would not have a significant effect on regional air quality and additional measures to reduce operational impacts would not be required.

Table 2: Project Operational Emissions

Emission Category	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO_x)	PM_{10}	$PM_{2.5}$
Emissions in Pounds Per Day				
Area Source	10.3	0.2	0.1	0.1
Energy Source	0.1	0.6	0.0	0.0

[11] Bay Area Air Quality Management District, 2012. *Air Quality CEQA Guidelines.* May.

[12] City of Oakland Standard Conditions of Approval, op.cit.

Mobile Source	20.0	34.1	20.5	5.6
Total Emissions	**30.4**	**34.9**	**20.6**	**5.7**
BAAQMD Significance Threshold	**54.0**	**54.0**	**82.0**	**54.0**
Exceed?	**No**	**No**	**No**	**No**
Emissions in Tons Per Year				
Area Source	1.8	0.0	0.0	0.0
Energy Source	0.0	0.1	0.0	0.0
Mobile Source	2.5	4.6	2.8	0.8
Total Emissions	**4.3**	**4.7**	**2.8**	**0.8**
BAAQMD Significance Threshold	**10.0**	**10.0**	**15.0**	**10.0**
Exceed?	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc., 2015.

E. HEALTH RISK ASSESSMENT

The HRA evaluated construction period health risk to off-site receptors and stationary and mobile source emissions and their related health risk impacts for future residents of the project. According to the BAAQMD, a project would result in a significant impact if it would individually expose sensitive receptors to TACs resulting in an increased cancer risk greater than 10.0 in 1 million, an increased non-cancer risk of greater than 1.0 on the hazard index (chronic or acute), or an annual average ambient $PM_{2.5}$ increase greater than 0.3 µg/m^3. A significant cumulative impact would occur if the project, in combination with other projects located within a 1,000-foot radius of the project site, would expose sensitive receptors to TACs resulting in an increased cancer risk greater than 100.0 in one million, an increased non-cancer risk of greater than 10.0 on the hazard index (chronic), or an ambient $PM_{2.5}$ increase greater than 0.8 µg/m^3 on an annual average basis.

1. Construction Health Risk Assessment

The project site is located in an urban area in close proximity to existing residential uses that could be exposed to diesel emission exhaust during the construction period. To estimate the potential cancer risk associated with construction of the proposed project from equipment exhaust (including diesel particulate matter), 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., a nearby residence). 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 ARB's exposure methodology, with the air dispersion modeling performed using the U.S. EPA dispersion model AERMOD. 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 site-specific meteorological data. Results of the analysis are shown in Table 3 and indicate construction of the project would not expose nearby sensitive receptors to substantial pollutant concentrations. Model input and output data used in the construction health risk assessment are shown in Appendix B.

Table 3: Inhalation Health Risks from Project Construction to Off-Site Receptors

	Carcinogenic Inhalation Health Risk in One Million	Chronic Inhalation Hazard Index	Acute Inhalation Hazard Index	Annual Average $PM_{2.5}$ Concentration (µg/m^3)
Maximum Exposed Individual Location	7.84	0.055	0.000	0.277
Threshold	**>10.0 in one million**	**>1.0**	**>1.0**	**>0.30**

Source: LSA Associates, Inc., 2015.

2. Stationary and Mobile Sources Assessment

The stationary source analysis evaluated the risk levels from permitted sources in the project vicinity, using the toxic air contaminant emissions provided by the BAAQMD sources identified in the project vicinity. Three sources of emissions identified were within 1,000 feet of the project site, including a generator, a gas station, and Highway 24. The results of the stationary and mobile source analysis are presented in Table 4. The results indicate that the generator, located at 463 51st street would exceed the single source threshold for risk without implementation of SCA-20.

Table 4: Stationary and Mobile Sources in the Project Vicinity

Source (Name & Address)	Health Risk (in 1 million)	$PM_{2.5}$ ($\mu g/m^3$)	Hazard Index
City of Oakland Environmental Sciences Division, 463 51st Street (generator)	13.14	0.005	0.008
ARCO Facility #06148, 5131 Shattuck Avenue	1.49	NA	0.083
Highway 24	8.43	0.084	0.007
BAAQMD Single Source Threshold	**10 in 1 million**	**0.3**	**1.0**
Exceeds Threshold?	**Yes**	**No**	**No**

Source: Bay Area Air Quality Management District, 2015

Therefore, the proposed project would require implementation of SCA-20, which includes the following health risk reduction measure:

- Installation of air filtration to reduce cancer risks and particulate matter exposure for residents and other sensitive populations in the project which are in close proximity to sources of air pollution. Air filter devices shall be rated MERV-13 or higher. As part of implementing this measure, an ongoing maintenance plan for the buildings HVAC air filtratation system shall be required.

Implementation of this SCA would reduce particulate matter indoors by 80 to 90 percent resulting in a health risk reduction from 13.14 in 1 million to 2.63 in 1 million which would be below the BAAQMD's significance threshold. Data pertaining to this Analysis is provided in Appendix C.

F. CONCLUSIONS

As shown in Table 1 and Table 2, construction and operation of the proposed project would not result in the generation of criterial air pollutants that would exceed City of Oakland or BAAQMD standards. Additionally, as shown in Table 4 the stationary source emissions at the proposed residential units on the project site would result in a maximum exposure of future residents to a risk level that could exceed the criterion of significance for cancer health effects and the individual level. Implementation of the City of Oakland's SCA-20 would require the project to incorporate air filtration devices that would reduce the health risk to a less-than-significant level. Therefore, health risk associated with the location of new sensitive receptors on the project site would not be significant.

APPENDIX A

CALEEMOD DATA

5110 Telegraph Avenue Mixed-Use Development

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	347.00	Space	0.00	138,800.00	0
Apartments Mid Rise	203.00	Dwelling Unit	0.34	220,000.00	581
Strip Mall	8.00	1000sqft	0.18	8,000.00	0
Supermarket	28.00	1000sqft	0.64	28,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Per PG&E emission factors april 2013

Land Use - Per project description

Construction Phase - Per Proejct description

Energy Use - ..

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblConstructionPhase	NumDays	200.00	305.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	4.00	183.00
tblConstructionPhase	PhaseEndDate	12/14/2017	4/7/2017
tblConstructionPhase	PhaseEndDate	4/21/2017	11/25/2016
tblConstructionPhase	PhaseEndDate	1/25/2016	2/1/2016
tblConstructionPhase	PhaseStartDate	10/14/2016	2/6/2016
tblConstructionPhase	PhaseStartDate	4/8/2017	11/12/2016
tblConstructionPhase	PhaseStartDate	1/22/2016	1/29/2016
tblGrading	AcresOfGrading	68.63	1.50
tblLandUse	LandUseSquareFeet	203,000.00	220,000.00
tblLandUse	LotAcreage	5.34	0.34
tblLandUse	LotAcreage	3.12	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	6.2437	5.3890	5.4910	8.4100e-003	0.6980	0.2951	0.9932	0.3050	0.2790	0.5840		710.8188	710.8188	0.1044	0.0000	713.0107
2017	0.1490	0.8632	1.1021	2.0000e-003	0.0798	0.0457	0.1256	0.0215	0.0440	0.0654		161.6617	161.6617	0.0170	0.0000	162.0181

Total	**6.3927**	**6.2522**	**6.5931**	**0.0104**	**0.7779**	**0.3408**	**1.1187**	**0.3265**	**0.3230**	**0.6494**		**872.4805**	**872.4805**	**0.1214**	**0.0000**	**875.0288**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	6.2437	5.3890	5.4910	8.4100e-003	0.6980	0.2951	0.9932	0.3050	0.2790	0.5840		710.8184	710.8184	0.1044	0.0000	713.0103
2017	0.1490	0.8632	1.1021	2.0000e-003	0.0798	0.0457	0.1256	0.0215	0.0440	0.0654		161.6616	161.6616	0.0170	0.0000	162.0180
Total	**6.3927**	**6.2522**	**6.5931**	**0.0104**	**0.7779**	**0.3408**	**1.1187**	**0.3265**	**0.3229**	**0.6494**		**872.4800**	**872.4800**	**0.1214**	**0.0000**	**875.0283**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.0121	0.0232	1.9250	8.6000e-004		0.0702	0.0702		0.0702	0.0702		7.8366	15.0522	0.0268	2.8000e-004	15.7014
Energy	0.0125	0.1091	0.0601	6.8000e-004		8.6600e-003	8.6600e-003		8.6600e-003	8.6600e-003		511.0571	511.0571	0.0411	0.0103	515.1071
Mobile	2.5350	4.6078	21.9790	0.0402	2.7458	0.0587	2.8045	0.7369	0.0540	0.7909		3,003.0958	3,003.0958	0.1254	0.0000	3,005.7295
Waste						0.0000	0.0000		0.0000	0.0000		0.0000	52.7168	3.1155	0.0000	118.1416
Water						0.0000	0.0000		0.0000	0.0000		16.3479	21.8269	0.5644	0.0136	37.9032
Total	**4.5596**	**4.7401**	**23.9641**	**0.0418**	**2.7458**	**0.1375**	**2.8833**	**0.7369**	**0.1328**	**0.8697**		**3,538.3374**	**3,603.7488**	**3.8732**	**0.0242**	**3,692.5829**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.8350	0.0177	1.5215	8.0000e-005		8.3000e-003	8.3000e-003		8.3000e-003	8.3000e-003		2.4690	2.4690	2.4600e-003	0.0000	2.5206
Energy	0.0125	0.1091	0.0601	6.8000e-004		8.6600e-003	8.6600e-003		8.6600e-003	8.6600e-003		511.0571	511.0571	0.0411	0.0103	515.1071
Mobile	2.5350	4.6078	21.9790	0.0402	2.7458	0.0587	2.8045	0.7369	0.0540	0.7909		3,003.0958	3,003.0958	0.1254	0.0000	3,005.7295
Waste						0.0000	0.0000		0.0000	0.0000		0.0000	52.7168	3.1155	0.0000	118.1416
Water						0.0000	0.0000		0.0000	0.0000		16.3479	21.8269	0.5643	0.0136	37.8945
Total	**4.3826**	**4.7345**	**23.5606**	**0.0410**	**2.7458**	**0.0756**	**2.8215**	**0.7369**	**0.0710**	**0.8079**		**3,532.9698**	**3,591.1656**	**3.8487**	**0.0239**	**3,679.3933**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**3.88**	**0.12**	**1.68**	**1.87**	**0.00**	**44.99**	**2.15**	**0.00**	**46.56**	**7.11**	**0.00**	**0.15**	**0.35**	**0.63**	**1.28**	**0.36**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	1/21/2016	5	15	
2	Site Preparation	Site Preparation	1/29/2016	2/1/2016	5	2	

3	Grading	Grading	2/2/2016	10/13/2016	5	183	
4	Building Construction	Building Construction	2/6/2016	4/7/2017	5	305	
5	Paving	Paving	11/12/2016	11/25/2016	5	10	
6	Architectural Coating	Architectural Coating	11/26/2016	12/9/2016	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 445,500; Residential Outdoor: 148,500; Non-Residential Indoor: 262,200; Non-Residential Outdoor: 87,400

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	216.00	50.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	43.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0218	0.2119	0.1612	1.8000e-004		0.0131	0.0131		0.0123	0.0123		16.9221	16.9221	4.2800e-003	0.0000	17.0120
Total	**0.0218**	**0.2119**	**0.1612**	**1.8000e-004**		**0.0131**	**0.0131**		**0.0123**	**0.0123**		**16.9221**	**16.9221**	**4.2800e-003**	**0.0000**	**17.0120**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr											MT/yr				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	5.4000e-004	5.1900e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.9000e-004	2.4000e-004	1.0000e-005	2.4000e-004		0.8026	0.8026	4.0000e-005	0.0000	0.8035
Total	**3.7000e-004**	**5.4000e-004**	**5.1900e-003**	**1.0000e-005**	**8.8000e-004**	**1.0000e-005**	**8.9000e-004**	**2.4000e-004**	**1.0000e-005**	**2.4000e-004**		**0.8026**	**0.8026**	**4.0000e-005**	**0.0000**	**0.8035**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr											MT/yr				
Off-Road	0.0218	0.2119	0.1612	1.8000e-004		0.0131	0.0131		0.0123	0.0123		16.9221	16.9221	4.2800e-003	0.0000	17.0120
Total	**0.0218**	**0.2119**	**0.1612**	**1.8000e-004**		**0.0131**	**0.0131**		**0.0123**	**0.0123**		**16.9221**	**16.9221**	**4.2800e-003**	**0.0000**	**17.0120**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr											MT/yr				

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	5.4000e-004	5.1900e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.9000e-004	2.4000e-004	1.0000e-005	2.4000e-004		0.8026	0.8026	4.0000e-005	0.0000	0.8035
Total	**3.7000e-004**	**5.4000e-004**	**5.1900e-003**	**1.0000e-005**	**8.8000e-004**	**1.0000e-005**	**8.9000e-004**	**2.4000e-004**	**1.0000e-005**	**2.4000e-004**		**0.8026**	**0.8026**	**4.0000e-005**	**0.0000**	**0.8035**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr											MT/yr				
Fugitive Dust					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003		0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4400e-003	0.0258	0.0165	2.0000e-005		1.4000e-003	1.4000e-003		1.2900e-003	1.2900e-003		1.6158	1.6158	4.9000e-004	0.0000	1.6260
Total	**2.4400e-003**	**0.0258**	**0.0165**	**2.0000e-005**	**5.8000e-003**	**1.4000e-003**	**7.2000e-003**	**2.9500e-003**	**1.2900e-003**	**4.2400e-003**		**1.6158**	**1.6158**	**4.9000e-004**	**0.0000**	**1.6260**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr											MT/yr				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	4.3000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005		0.0659	0.0659	0.0000	0.0000	0.0659
Total	**3.0000e-005**	**4.0000e-005**	**4.3000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**		**0.0659**	**0.0659**	**0.0000**	**0.0000**	**0.0659**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.8000e-003	0.0000	5.8000e-003	2.9500e-003	0.0000	2.9500e-003		0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4400e-003	0.0258	0.0165	2.0000e-005		1.4000e-003	1.4000e-003		1.2900e-003	1.2900e-003		1.6158	1.6158	4.9000e-004	0.0000	1.6260
Total	**2.4400e-003**	**0.0258**	**0.0165**	**2.0000e-005**	**5.8000e-003**	**1.4000e-003**	**7.2000e-003**	**2.9500e-003**	**1.2900e-003**	**4.2400e-003**		**1.6158**	**1.6158**	**4.9000e-004**	**0.0000**	**1.6260**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	4.0000e-005	4.3000e-004	0.0000	7.0000e-005	0.0000	7.0000e-005	2.0000e-005	0.0000	2.0000e-005		0.0659	0.0659	0.0000	0.0000	0.0659
Total	**3.0000e-005**	**4.0000e-005**	**4.3000e-004**	**0.0000**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**2.0000e-005**	**0.0000**	**2.0000e-005**		**0.0659**	**0.0659**	**0.0000**	**0.0000**	**0.0659**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4141	0.0000	0.4141	0.2273	0.0000	0.2273		0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1822	1.9248	1.2508	1.2900e-003		0.1044	0.1044		0.0960	0.0960		121.4271	121.4271	0.0366	0.0000	122.1963
Total	**0.1822**	**1.9248**	**1.2508**	**1.2900e-003**	**0.4141**	**0.1044**	**0.5184**	**0.2273**	**0.0960**	**0.3233**		**121.4271**	**121.4271**	**0.0366**	**0.0000**	**122.1963**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7800e-003	4.0200e-003	0.0390	8.0000e-005	6.6400e-003	6.0000e-005	6.7000e-003	1.7700e-003	5.0000e-005	1.8200e-003		6.0258	6.0258	3.3000e-004	0.0000	6.0327
Total	**2.7800e-003**	**4.0200e-003**	**0.0390**	**8.0000e-005**	**6.6400e-003**	**6.0000e-005**	**6.7000e-003**	**1.7700e-003**	**5.0000e-005**	**1.8200e-003**		**6.0258**	**6.0258**	**3.3000e-004**	**0.0000**	**6.0327**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4141	0.0000	0.4141	0.2273	0.0000	0.2273		0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.1822	1.9248	1.2508	1.2900e-003		0.1044	0.1044		0.0960	0.0960		121.4270	121.4270	0.0366	0.0000	122.1961
Total	**0.1822**	**1.9248**	**1.2508**	**1.2900e-003**	**0.4141**	**0.1044**	**0.5184**	**0.2273**	**0.0960**	**0.3233**		**121.4270**	**121.4270**	**0.0366**	**0.0000**	**122.1961**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7800e-003	4.0200e-003	0.0390	8.0000e-005	6.6400e-003	6.0000e-005	6.7000e-003	1.7700e-003	5.0000e-005	1.8200e-003		6.0258	6.0258	3.3000e-004	0.0000	6.0327
Total	**2.7800e-003**	**4.0200e-003**	**0.0390**	**8.0000e-005**	**6.6400e-003**	**6.0000e-005**	**6.7000e-003**	**1.7700e-003**	**5.0000e-005**	**1.8200e-003**		**6.0258**	**6.0258**	**3.3000e-004**	**0.0000**	**6.0327**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3868	2.4141	1.7281	2.5800e-003		0.1605	0.1605		0.1548	0.1548		218.1923	218.1923	0.0480	0.0000	219.1994
Total	**0.3868**	**2.4141**	**1.7281**	**2.5800e-003**		**0.1605**	**0.1605**		**0.1548**	**0.1548**		**218.1923**	**218.1923**	**0.0480**	**0.0000**	**219.1994**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0748	0.5888	0.8690	1.4000e-003	0.0378	8.7800e-003	0.0466	0.0109	8.0700e-003	0.0189		127.0523	127.0523	1.0200e-003	0.0000	127.0737
Worker	0.0962	0.1395	1.3509	2.7400e-003	0.2302	1.9200e-003	0.2322	0.0612	1.7600e-003	0.0630		208.9263	208.9263	0.0115	0.0000	209.1680
Total	**0.1710**	**0.7283**	**2.2200**	**4.1400e-003**	**0.2680**	**0.0107**	**0.2788**	**0.0721**	**9.8300e-003**	**0.0819**		**335.9786**	**335.9786**	**0.0125**	**0.0000**	**336.2417**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3868	2.4141	1.7281	2.5800e-003		0.1605	0.1605		0.1548	0.1548		218.1920	218.1920	0.0480	0.0000	219.1991
Total	**0.3868**	**2.4141**	**1.7281**	**2.5800e-003**		**0.1605**	**0.1605**		**0.1548**	**0.1548**		**218.1920**	**218.1920**	**0.0480**	**0.0000**	**219.1991**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0748	0.5888	0.8690	1.4000e-003	0.0378	6.7800e-003	0.0466	0.0109	6.0700e-003	0.0189		127.0523	127.0523	1.0200e-003	0.0000	127.0737
Worker	0.0962	0.1395	1.3509	2.7400e-003	0.2302	1.9200e-003	0.2322	0.0612	1.7600e-003	0.0630		208.9263	208.9263	0.0115	0.0000	209.1680
Total	**0.1710**	**0.7283**	**2.2200**	**4.1400e-003**	**0.2680**	**0.0107**	**0.2788**	**0.0721**	**9.8300e-003**	**0.0819**		**335.9786**	**335.9786**	**0.0125**	**0.0000**	**336.2417**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1034	0.6688	0.5009	7.7000e-004		0.0429	0.0429		0.0414	0.0414		64.5916	64.5916	0.0136	0.0000	64.8762
Total	**0.1034**	**0.6688**	**0.5009**	**7.7000e-004**		**0.0429**	**0.0429**		**0.0414**	**0.0414**		**64.5916**	**64.5916**	**0.0136**	**0.0000**	**64.8762**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0202	0.1572	0.2433	4.2000e-004	0.0113	2.2600e-003	0.0135	3.2300e-003	2.0800e-003	5.3100e-003		37.2067	37.2067	2.9000e-004	0.0000	37.2127
Worker	0.0254	0.0372	0.3579	8.2000e-004	0.0686	5.5000e-004	0.0691	0.0182	5.0000e-004	0.0188		59.8635	59.8635	3.1300e-003	0.0000	59.9292
Total	**0.0456**	**0.1944**	**0.6012**	**1.2400e-003**	**0.0798**	**2.8100e-003**	**0.0827**	**0.0215**	**2.5800e-003**	**0.0241**		**97.0701**	**97.0701**	**3.4200e-003**	**0.0000**	**97.1419**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1034	0.6688	0.5009	7.7000e-004		0.0429	0.0429		0.0414	0.0414		64.5915	64.5915	0.0136	0.0000	64.8761
Total	**0.1034**	**0.6688**	**0.5009**	**7.7000e-004**		**0.0429**	**0.0429**		**0.0414**	**0.0414**		**64.5915**	**64.5915**	**0.0136**	**0.0000**	**64.8761**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0202	0.1572	0.2433	4.2000e-004	0.0113	2.2600e-003	0.0135	3.2300e-003	2.0800e-003	5.3100e-003		37.2067	37.2067	2.9000e-004	0.0000	37.2127
Worker	0.0254	0.0372	0.3579	8.2000e-004	0.0686	5.5000e-004	0.0691	0.0182	5.0000e-004	0.0188		59.8635	59.8635	3.1300e-003	0.0000	59.9292
Total	**0.0456**	**0.1944**	**0.6012**	**1.2400e-003**	**0.0798**	**2.8100e-003**	**0.0827**	**0.0215**	**2.5800e-003**	**0.0241**		**97.0701**	**97.0701**	**3.4200e-003**	**0.0000**	**97.1419**

3.6 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.4400e-003	0.0660	0.0454	7.0000e-005		4.0400e-003	4.0400e-003		3.7200e-003	3.7200e-003		6.2071	6.2071	1.8400e-003	0.0000	6.2457
Paving	0.0000					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4400e-003**	**0.0660**	**0.0454**	**7.0000e-005**		**4.0400e-003**	**4.0400e-003**		**3.7200e-003**	**3.7200e-003**		**6.2071**	**6.2071**	**1.8400e-003**	**0.0000**	**6.2457**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	3.6000e-004	3.4600e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004		0.5351	0.5351	3.0000e-005	0.0000	0.5357
Total	**2.5000e-004**	**3.6000e-004**	**3.4600e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**		**0.5351**	**0.5351**	**3.0000e-005**	**0.0000**	**0.5357**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.4400e-003	0.0660	0.0454	7.0000e-005		4.0400e-003	4.0400e-003		3.7200e-003	3.7200e-003		6.2071	6.2071	1.8400e-003	0.0000	6.2457

Paving	0.0000					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.4400e-003**	**0.0660**	**0.0454**	**7.0000e-005**		**4.0400e-003**	**4.0400e-003**		**3.7200e-003**	**3.7200e-003**		**6.2071**	**6.2071**	**1.8400e-003**	**0.0000**	**6.2457**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5000e-004	3.6000e-004	3.4600e-003	1.0000e-005	5.9000e-004	0.0000	5.9000e-004	1.6000e-004	0.0000	1.6000e-004		0.5351	0.5351	3.0000e-005	0.0000	0.5357
Total	**2.5000e-004**	**3.6000e-004**	**3.4600e-003**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**5.9000e-004**	**1.6000e-004**	**0.0000**	**1.6000e-004**		**0.5351**	**0.5351**	**3.0000e-005**	**0.0000**	**0.5357**

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	5.4670					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8400e-003	0.0119	9.4200e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004		1.2766	1.2766	1.5000e-004	0.0000	1.2798
Total	**5.4688**	**0.0119**	**9.4200e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.8000e-004**	**9.8000e-004**		**1.2766**	**1.2766**	**1.5000e-004**	**0.0000**	**1.2798**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.2000e-004	1.1800e-003	0.0114	2.0000e-005	1.9500e-003	2.0000e-005	1.9700e-003	5.2000e-004	1.0000e-005	5.3000e-004		1.7699	1.7699	1.0000e-004	0.0000	1.7719
Total	**8.2000e-004**	**1.1800e-003**	**0.0114**	**2.0000e-005**	**1.9500e-003**	**2.0000e-005**	**1.9700e-003**	**5.2000e-004**	**1.0000e-005**	**5.3000e-004**		**1.7699**	**1.7699**	**1.0000e-004**	**0.0000**	**1.7719**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	5.4670					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8400e-003	0.0119	9.4200e-003	1.0000e-005		9.8000e-004	9.8000e-004		9.8000e-004	9.8000e-004		1.2766	1.2766	1.5000e-004	0.0000	1.2798
Total	**5.4688**	**0.0119**	**9.4200e-003**	**1.0000e-005**		**9.8000e-004**	**9.8000e-004**		**9.8000e-004**	**9.8000e-004**		**1.2766**	**1.2766**	**1.5000e-004**	**0.0000**	**1.2798**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.2000e-004	1.1800e-003	0.0114	2.0000e-005	1.9500e-003	2.0000e-005	1.9700e-003	5.2000e-004	1.0000e-005	5.3000e-004		1.7699	1.7699	1.0000e-004	0.0000	1.7719
Total	**8.2000e-004**	**1.1800e-003**	**0.0114**	**2.0000e-005**	**1.9500e-003**	**2.0000e-005**	**1.9700e-003**	**5.2000e-004**	**1.0000e-005**	**5.3000e-004**		**1.7699**	**1.7699**	**1.0000e-004**	**0.0000**	**1.7719**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.5350	4.6078	21.9790	0.0402	2.7458	0.0587	2.8045	0.7369	0.0540	0.7909		3,003.0958	3,003.0958	0.1254	0.0000	3,005.7295
Unmitigated	2.5350	4.6078	21.9790	0.0402	2.7458	0.0587	2.8045	0.7369	0.0540	0.7909		3,003.0958	3,003.0958	0.1254	0.0000	3,005.7295

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,337.77	1,453.48	1232.21	2,989,629	2,989,629
Strip Mall	354.56	336.32	163.44	499,974	499,974
Supermarket	2,862.72	4,972.52	4660.32	3,891,103	3,891,103
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	4,555.05	6,762.32	6,055.97	7,380,707	7,380,707

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by

Apartments Mid Rise	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546229	0.063048	0.174586	0.122573	0.033968	0.004845	0.015596	0.024745	0.002089	0.003270	0.006707	0.000678	0.001667

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000		387.0596	387.0596	0.0387	8.0100e-003	390.3549
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000		387.0596	387.0596	0.0387	8.0100e-003	390.3549
NaturalGas Mitigated	0.0125	0.1091	0.0601	6.8000e-004		8.6600e-003	8.6600e-003		8.6600e-003	8.6600e-003		123.9976	123.9976	2.3800e-003	2.2700e-003	124.7522
NaturalGas Unmitigated	0.0125	0.1091	0.0601	6.8000e-004		8.6600e-003	8.6600e-003		8.6600e-003	8.6600e-003		123.9976	123.9976	2.3800e-003	2.2700e-003	124.7522

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.64991e+006	8.9000e-003	0.0760	0.0324	4.9000e-004		6.1500e-003	6.1500e-003		6.1500e-003	6.1500e-003		88.0453	88.0453	1.6900e-003	1.6100e-003	88.5811
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	19920	1.1000e-004	9.8000e-004	8.2000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		1.0630	1.0630	2.0000e-005	2.0000e-005	1.0695
Supermarket	653800	3.5300e-003	0.0321	0.0269	1.9000e-004		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003		34.8893	34.8893	6.7000e-004	6.4000e-004	35.1016
Total		**0.0125**	**0.1091**	**0.0601**	**6.9000e-004**		**8.6600e-003**	**8.6600e-003**		**8.6600e-003**	**8.6600e-003**		**123.9976**	**123.9976**	**2.3800e-003**	**2.2700e-003**	**124.7522**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	19920	1.1000e-004	9.8000e-004	8.2000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005		1.0630	1.0630	2.0000e-005	2.0000e-005	1.0695
Supermarket	653800	3.5300e-003	0.0321	0.0269	1.9000e-004		2.4400e-003	2.4400e-003		2.4400e-003	2.4400e-003		34.8893	34.8893	6.7000e-004	6.4000e-004	35.1016
Apartments Mid Rise	1.64991e+006	8.9000e-003	0.0760	0.0324	4.9000e-004		6.1500e-003	6.1500e-003		6.1500e-003	6.1500e-003		88.0453	88.0453	1.6900e-003	1.6100e-003	88.5811
Total		**0.0125**	**0.1091**	**0.0601**	**6.9000e-004**		**8.6600e-003**	**8.6600e-003**		**8.6600e-003**	**8.6600e-003**		**123.9976**	**123.9976**	**2.3800e-003**	**2.2700e-003**	**124.7522**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e

Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	715892	94.1697	9.4200e-003	1.9500e-003	94.9714
Enclosed Parking with Elevator	935512	123.0589	0.0123	2.5500e-003	124.1066
Strip Mall	93520	12.3018	1.2300e-003	2.5000e-004	12.4065
Supermarket	1.19756e+006	157.5292	0.0158	3.2600e-003	158.8704
Total		**387.0596**	**0.0387**	**8.0100e-003**	**390.3549**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	715892	94.1697	9.4200e-003	1.9500e-003	94.9714
Enclosed Parking with Elevator	935512	123.0589	0.0123	2.5500e-003	124.1066
Strip Mall	93520	12.3018	1.2300e-003	2.5000e-004	12.4065
Supermarket	1.19756e+006	157.5292	0.0158	3.2600e-003	158.8704
Total		**387.0596**	**0.0387**	**8.0100e-003**	**390.3549**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.8350	0.0177	1.5215	8.0000e-005		8.3000e-003	8.3000e-003		8.3000e-003	8.3000e-003		2.4690	2.4690	2.4600e-003	0.0000	2.5206
Unmitigated	2.0121	0.0232	1.9250	8.6000e-004		0.0702	0.0702		0.0702	0.0702		7.8366	15.0522	0.0268	2.8000e-004	15.7014

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2460					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5419					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.1771	5.5800e-003	0.4035	7.8000e-004		0.0619	0.0619		0.0619	0.0619		5.3676	12.5832	0.0244	2.8000e-004	13.1808
Landscaping	0.0471	0.0177	1.5215	8.0000e-005		8.3000e-003	8.3000e-003		8.3000e-003	8.3000e-003		2.4690	2.4690	2.4600e-003	0.0000	2.5206
Total	**2.0121**	**0.0232**	**1.9250**	**8.6000e-004**		**0.0702**	**0.0702**		**0.0702**	**0.0702**		**7.8366**	**15.0522**	**0.0268**	**2.8000e-004**	**15.7014**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2460					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Consumer Products	1.5419					0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0471	0.0177	1.5215	8.0000e-005		8.3000e-003	8.3000e-003		8.3000e-003	8.3000e-003		2.4690	2.4690	2.4600e-003	0.0000	2.5206
Total	**1.8350**	**0.0177**	**1.5215**	**8.0000e-005**		**8.3000e-003**	**8.3000e-003**		**8.3000e-003**	**8.3000e-003**		**2.4690**	**2.4690**	**2.4600e-003**	**0.0000**	**2.5206**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	21.8269	0.5643	0.0136	37.8945
Unmitigated	21.8269	0.5644	0.0136	37.9032

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	13.2263 / 8.3383	17.4491	0.4323	0.0105	29.7671
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.59258 / 0.363194	0.7770	0.0194	4.7000e-004	1.3288
Supermarket	3.45151 / 0.106748	3.6008	0.1127	2.7100e-003	6.8072
Total		**21.8269**	**0.5644**	**0.0136**	**37.9032**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	13.2263 / 8.3383	17.4491	0.4322	0.0104	29.7604
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.59258 / 0.363194	0.7770	0.0194	4.7000e-004	1.3285
Supermarket	3.45151 / 0.106748	3.6008	0.1127	2.7000e-003	6.8055
Total		**21.8269**	**0.5643**	**0.0136**	**37.8945**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	52.7168	3.1155	0.0000	118.1416
Unmitigated	52.7168	3.1155	0.0000	118.1416

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	93.38	18.9553	1.1202	0.0000	42.4800
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	8.4	1.7051	0.1008	0.0000	3.8213
Supermarket	157.92	32.0563	1.8945	0.0000	71.8403
Total		**52.7168**	**3.1155**	**0.0000**	**118.1416**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	93.38	18.9553	1.1202	0.0000	42.4800
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	8.4	1.7051	0.1008	0.0000	3.8213
Supermarket	157.92	32.0563	1.8945	0.0000	71.8403
Total		**52.7168**	**3.1155**	**0.0000**	**118.1416**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

5110 Telegraph Avenue Mixed-Use Development

Bay Area AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	347.00	Space	0.00	138,800.00	0
Apartments Mid Rise	203.00	Dwelling Unit	0.34	220,000.00	581
Strip Mall	8.00	1000sqft	0.18	8,000.00	0
Supermarket	28.00	1000sqft	0.64	28,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Per PG&E emission factors april 2013

Land Use - Per project description

Construction Phase - Per Proejct description

Energy Use - ..

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblConstructionPhase	NumDays	200.00	305.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	4.00	183.00
tblConstructionPhase	PhaseEndDate	12/14/2017	4/7/2017
tblConstructionPhase	PhaseEndDate	4/21/2017	11/25/2016
tblConstructionPhase	PhaseEndDate	1/25/2016	2/1/2016
tblConstructionPhase	PhaseStartDate	10/14/2016	2/6/2016
tblConstructionPhase	PhaseStartDate	4/8/2017	11/12/2016
tblConstructionPhase	PhaseStartDate	1/22/2016	1/29/2016
tblGrading	AcresOfGrading	68.63	1.50
tblLandUse	LandUseSquareFeet	203,000.00	220,000.00
tblLandUse	LotAcreage	5.34	0.34
tblLandUse	LotAcreage	3.12	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1,098.6725	47.5155	46.8734	0.0739	6.9700	2.5977	9.5677	3.1388	2.4510	5.5897		6,888.9347	6,888.9347	1.0126	0.0000	6,910.1994
2017	4.2512	24.3916	30.6254	0.0589	2.3694	1.3056	3.6750	0.6352	1.2559	1.8910		5,235.3261	5,235.3261	0.5345	0.0000	5,246.5494

Total	**1,102.9237**	**71.9071**	**77.4988**	**0.1329**	**9.3394**	**3.9033**	**13.2427**	**3.7739**	**3.7068**	**7.4808**		**12,124.26 08**	**12,124.260 8**	**1.5471**	**0.0000**	**12,156.748 8**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1,098.6725	47.5155	46.8734	0.0739	6.9700	2.5977	9.5677	3.1388	2.4510	5.5897		6,888.934 7	6,888.9347	1.0126	0.0000	6,910.1993
2017	4.2512	24.3916	30.6254	0.0589	2.3694	1.3056	3.6750	0.6352	1.2559	1.8910		5,235.326 1	5,235.3261	0.5345	0.0000	5,246.5494
Total	**1,102.9237**	**71.9071**	**77.4988**	**0.1329**	**9.3394**	**3.9033**	**13.2427**	**3.7739**	**3.7068**	**7.4808**		**12,124.26 08**	**12,124.260 8**	**1.5471**	**0.0000**	**12,156.748 8**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	100.8670	3.9853	277.7279	0.5996		40.7909	40.7909		40.7891	40.7891		2,788.651 7	8,247.5592	20.7376	0.1424	8,727.1902
Energy	0.0687	0.5975	0.3293	3.7400e-003		0.0474	0.0474		0.0474	0.0474		748.9531	748.9531	0.0144	0.0137	753.5111
Mobile	18.9452	30.8066	143.3143	0.3000	20.0622	0.4139	20.4761	5.3669	0.3812	5.7481		24,634.05 24	24,634.052 4	0.9803		24,654.638 3
Total	**119.8809**	**35.3895**	**421.3714**	**0.9033**	**20.0622**	**41.2522**	**61.3144**	**5.3669**	**41.2177**	**46.5846**		**28,171.65 72**	**33,630.564 7**	**21.7323**	**0.1561**	**34,135.339 6**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.3205	0.1961	16.9058	8.9000e-004		0.0922	0.0922		0.0922	0.0922		30.2399	30.2399	0.0301	0.0000	30.8724
Energy	0.0687	0.5975	0.3293	3.7400e-003		0.0474	0.0474		0.0474	0.0474		748.9531	748.9531	0.0144	0.0137	753.5111
Mobile	18.9452	30.8066	143.3143	0.3000	20.0622	0.4139	20.4761	5.3669	0.3812	5.7481		24,634.05 24	24,634.052 4	0.9803		24,654.638 3
Total	**29.3343**	**31.6003**	**160.5494**	**0.3046**	**20.0622**	**0.5535**	**20.6157**	**5.3669**	**0.5209**	**5.8877**		**25,413.24 54**	**25,413.245 4**	**1.0248**	**0.0137**	**25,439.021 8**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**75.53**	**10.71**	**61.90**	**66.28**	**0.00**	**98.66**	**66.38**	**0.00**	**98.74**	**87.36**	**0.00**	**9.79**	**24.43**	**95.28**	**91.21**	**25.48**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	1/21/2016	5	15	
2	Site Preparation	Site Preparation	1/29/2016	2/1/2016	5	2	
3	Grading	Grading	2/2/2016	10/13/2016	5	183	
4	Building Construction	Building Construction	2/6/2016	4/7/2017	5	305	
5	Paving	Paving	11/12/2016	11/25/2016	5	10	
6	Architectural Coating	Architectural Coating	11/26/2016	12/9/2016	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 445,500; Residential Outdoor: 148,500; Non-Residential Indoor: 262,200; Non-Residential Outdoor: 87,400

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	216.00	50.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	43.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9066	28.2579	21.4980	0.0245		1.7445	1.7445		1.6328	1.6328		2,487.1296	2,487.1296	0.6288		2,500.3343
Total	**2.9066**	**28.2579**	**21.4980**	**0.0245**		**1.7445**	**1.7445**		**1.6328**	**1.6328**		**2,487.1296**	**2,487.1296**	**0.6288**		**2,500.3343**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0527	0.0631	0.7379	1.5100e-003	0.1226	9.9000e-004	0.1236	0.0325	9.0000e-004	0.0334		126.7140	126.7140	6.5000e-003		126.8504
Total	**0.0527**	**0.0631**	**0.7379**	**1.5100e-003**	**0.1226**	**9.9000e-004**	**0.1236**	**0.0325**	**9.0000e-004**	**0.0334**		**126.7140**	**126.7140**	**6.5000e-003**		**126.8504**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	2.9066	28.2579	21.4980	0.0245		1.7445	1.7445		1.6328	1.6328		2,487.1296	2,487.1296	0.6288		2,500.3343
Total	**2.9066**	**28.2579**	**21.4980**	**0.0245**		**1.7445**	**1.7445**		**1.6328**	**1.6328**		**2,487.1296**	**2,487.1296**	**0.6288**		**2,500.3343**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0527	0.0631	0.7379	1.5100e-003	0.1226	9.9000e-004	0.1236	0.0325	9.0000e-004	0.0334		126.7140	126.7140	6.5000e-003		126.8504
Total	**0.0527**	**0.0631**	**0.7379**	**1.5100e-003**	**0.1226**	**9.9000e-004**	**0.1236**	**0.0325**	**9.0000e-004**	**0.0334**		**126.7140**	**126.7140**	**6.5000e-003**		**126.8504**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.4428	25.7718	16.5144	0.0171		1.3985	1.3985		1.2866	1.2866		1,781.0872	1,781.0872	0.5372		1,792.3693
Total	**2.4428**	**25.7718**	**16.5144**	**0.0171**	**5.7996**	**1.3985**	**7.1981**	**2.9537**	**1.2866**	**4.2403**		**1,781.0872**	**1,781.0872**	**0.5372**		**1,792.3693**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0325	0.0389	0.4541	9.3000e-004	0.0754	6.1000e-004	0.0761	0.0200	5.6000e-004	0.0206		77.9778	77.9778	4.0000e-003		78.0618
Total	**0.0325**	**0.0389**	**0.4541**	**9.3000e-004**	**0.0754**	**6.1000e-004**	**0.0761**	**0.0200**	**5.6000e-004**	**0.0206**		**77.9778**	**77.9778**	**4.0000e-003**		**78.0618**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				

Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.4428	25.7718	16.5144	0.0171		1.3985	1.3985		1.2866	1.2866		1,781.0872	1,781.0872	0.5372		1,792.3693
Total	**2.4428**	**25.7718**	**16.5144**	**0.0171**	**5.7996**	**1.3985**	**7.1981**	**2.9537**	**1.2866**	**4.2403**		**1,781.0872**	**1,781.0872**	**0.5372**		**1,792.3693**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0325	0.0389	0.4541	9.3000e-004	0.0754	6.1000e-004	0.0761	0.0200	5.6000e-004	0.0206		77.9778	77.9778	4.0000e-003		78.0618
Total	**0.0325**	**0.0389**	**0.4541**	**9.3000e-004**	**0.0754**	**6.1000e-004**	**0.0761**	**0.0200**	**5.6000e-004**	**0.0206**		**77.9778**	**77.9778**	**4.0000e-003**		**78.0618**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.5253	0.0000	4.5253	2.4836	0.0000	2.4836			0.0000			0.0000
Off-Road	1.9908	21.0361	13.6704	0.0141		1.1407	1.1407		1.0494	1.0494		1,462.8468	1,462.8468	0.4413		1,472.1130
Total	**1.9908**	**21.0361**	**13.6704**	**0.0141**	**4.5253**	**1.1407**	**5.6660**	**2.4836**	**1.0494**	**3.5330**		**1,462.8468**	**1,462.8468**	**0.4413**		**1,472.1130**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0325	0.0389	0.4541	9.3000e-004	0.0754	6.1000e-004	0.0761	0.0200	5.6000e-004	0.0206		77.9778	77.9778	4.0000e-003		78.0618
Total	**0.0325**	**0.0389**	**0.4541**	**9.3000e-004**	**0.0754**	**6.1000e-004**	**0.0761**	**0.0200**	**5.6000e-004**	**0.0206**		**77.9778**	**77.9778**	**4.0000e-003**		**78.0618**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.5253	0.0000	4.5253	2.4836	0.0000	2.4836			0.0000			0.0000
Off-Road	1.9908	21.0361	13.6704	0.0141		1.1407	1.1407		1.0494	1.0494		1,462.8468	1,462.8468	0.4413		1,472.1130
Total	**1.9908**	**21.0361**	**13.6704**	**0.0141**	**4.5253**	**1.1407**	**5.6660**	**2.4836**	**1.0494**	**3.5330**		**1,462.8468**	**1,462.8468**	**0.4413**		**1,472.1130**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0325	0.0389	0.4541	9.3000e-004	0.0754	6.1000e-004	0.0761	0.0200	5.6000e-004	0.0206		77.9778	77.9778	4.0000e-003		78.0618
Total	**0.0325**	**0.0389**	**0.4541**	**9.3000e-004**	**0.0754**	**6.1000e-004**	**0.0761**	**0.0200**	**5.6000e-004**	**0.0206**		**77.9778**	**77.9778**	**4.0000e-003**		**78.0618**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	3.2915	20.5459	14.7074	0.0220		1.3656	1.3656		1.3176	1.3176		2,046.9432	2,046.9432	0.4499		2,056.3913
Total	**3.2915**	**20.5459**	**14.7074**	**0.0220**		**1.3656**	**1.3656**		**1.3176**	**1.3176**		**2,046.9432**	**2,046.9432**	**0.4499**		**2,056.3913**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5653	4.8455	5.7814	0.0119	0.3324	0.0744	0.4068	0.0949	0.0684	0.1633		1,195.7653	1,195.7653	9.4800e-003		1,195.9643
Worker	0.8763	1.0491	12.2602	0.0251	2.0370	0.0164	2.0533	0.5403	0.0150	0.5553		2,105.4015	2,105.4015	0.1080		2,107.6689
Total	**1.4416**	**5.8947**	**18.0416**	**0.0370**	**2.3693**	**0.0908**	**2.4601**	**0.6352**	**0.0834**	**0.7186**		**3,301.1668**	**3,301.1668**	**0.1175**		**3,303.6332**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	3.2915	20.5459	14.7074	0.0220		1.3656	1.3656		1.3176	1.3176		2,046.9432	2,046.9432	0.4499		2,056.3913
Total	**3.2915**	**20.5459**	**14.7074**	**0.0220**		**1.3656**	**1.3656**		**1.3176**	**1.3176**		**2,046.9432**	**2,046.9432**	**0.4499**		**2,056.3913**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5653	4.8455	5.7814	0.0119	0.3324	0.0744	0.4068	0.0949	0.0684	0.1633		1,195.7653	1,195.7653	9.4800e-003		1,195.9643
Worker	0.8763	1.0491	12.2602	0.0251	2.0370	0.0164	2.0533	0.5403	0.0150	0.5553		2,105.4015	2,105.4015	0.1080		2,107.6689
Total	**1.4416**	**5.8947**	**18.0416**	**0.0370**	**2.3693**	**0.0908**	**2.4601**	**0.6352**	**0.0834**	**0.7186**		**3,301.1668**	**3,301.1668**	**0.1175**		**3,303.6332**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823		2,034.2860	2,034.2860	0.4268		2,043.2497
Total	**2.9546**	**19.1088**	**14.3110**	**0.0220**		**1.2257**	**1.2257**		**1.1823**	**1.1823**		**2,034.2860**	**2,034.2860**	**0.4268**		**2,043.2497**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5140	4.3435	5.3550	0.0119	0.3324	0.0644	0.3968	0.0949	0.0592	0.1541		1,175.5968	1,175.5968	8.9800e-003		1,175.7855
Worker	0.7826	0.9392	10.9594	0.0251	2.0370	0.0156	2.0526	0.5403	0.0144	0.5546		2,025.4432	2,025.4432	0.0986		2,027.5142
Total	**1.2966**	**5.2828**	**16.3144**	**0.0370**	**2.3694**	**0.0800**	**2.4494**	**0.6352**	**0.0736**	**0.7087**		**3,201.0400**	**3,201.0400**	**0.1076**		**3,203.2997**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823		2,034.2860	2,034.2860	0.4268		2,043.2497
Total	**2.9546**	**19.1088**	**14.3110**	**0.0220**		**1.2257**	**1.2257**		**1.1823**	**1.1823**		**2,034.2860**	**2,034.2860**	**0.4268**		**2,043.2497**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.5140	4.3435	5.3550	0.0119	0.3324	0.0644	0.3968	0.0949	0.0592	0.1541		1,175.5968	1,175.5968	8.9800e-003		1,175.7855
Worker	0.7826	0.9392	10.9594	0.0251	2.0370	0.0156	2.0526	0.5403	0.0144	0.5546		2,025.4432	2,025.4432	0.0986		2,027.5142
Total	**1.2966**	**5.2828**	**16.3144**	**0.0370**	**2.3694**	**0.0800**	**2.4494**	**0.6352**	**0.0736**	**0.7087**		**3,201.0400**	**3,201.0400**	**0.1076**		**3,203.2997**

3.6 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2872	13.2076	9.0880	0.0133		0.8075	0.8075		0.7438	0.7438		1,368.4366	1,368.4366	0.4053		1,376.9473
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2872**	**13.2076**	**9.0880**	**0.0133**		**0.8075**	**0.8075**		**0.7438**	**0.7438**		**1,368.4366**	**1,368.4366**	**0.4053**		**1,376.9473**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0527	0.0631	0.7379	1.5100e-003	0.1226	9.9000e-004	0.1236	0.0325	9.0000e-004	0.0334		126.7140	126.7140	6.5000e-003		126.8504
Total	**0.0527**	**0.0631**	**0.7379**	**1.5100e-003**	**0.1226**	**9.9000e-004**	**0.1236**	**0.0325**	**9.0000e-004**	**0.0334**		**126.7140**	**126.7140**	**6.5000e-003**		**126.8504**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2872	13.2076	9.0880	0.0133		0.8075	0.8075		0.7438	0.7438		1,368.4366	1,368.4366	0.4053		1,376.9473
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2872**	**13.2076**	**9.0880**	**0.0133**		**0.8075**	**0.8075**		**0.7438**	**0.7438**		**1,368.4366**	**1,368.4366**	**0.4053**		**1,376.9473**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0527	0.0631	0.7379	1.5100e-003	0.1226	9.9000e-004	0.1236	0.0325	9.0000e-004	0.0334		126.7140	126.7140	6.5000e-003		126.8504
Total	**0.0527**	**0.0631**	**0.7379**	**1.5100e-003**	**0.1226**	**9.9000e-004**	**0.1236**	**0.0325**	**9.0000e-004**	**0.0334**		**126.7140**	**126.7140**	**6.5000e-003**		**126.8504**

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1,093.3965					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**1,093.7650**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1745	0.2089	2.4407	4.9900e-003	0.4055	3.2600e-003	0.4088	0.1076	2.9900e-003	0.1105		419.1309	419.1309	0.0215		419.5822

Total	**0.1745**	**0.2089**	**2.4407**	**4.9900e-003**	**0.4055**	**3.2600e-003**	**0.4088**	**0.1076**	**2.9900e-003**	**0.1105**		**419.1309**	**419.1309**	**0.0215**		**419.5822**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1,093.3965					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**1,093.7650**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1745	0.2089	2.4407	4.9900e-003	0.4055	3.2600e-003	0.4088	0.1076	2.9900e-003	0.1105		419.1309	419.1309	0.0215		419.5822
Total	**0.1745**	**0.2089**	**2.4407**	**4.9900e-003**	**0.4055**	**3.2600e-003**	**0.4088**	**0.1076**	**2.9900e-003**	**0.1105**		**419.1309**	**419.1309**	**0.0215**		**419.5822**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	18.9452	30.8066	143.3143	0.3000	20.0622	0.4139	20.4761	5.3669	0.3812	5.7481		24,634.0524	24,634.0524	0.9803		24,654.6383
Unmitigated	18.9452	30.8066	143.3143	0.3000	20.0622	0.4139	20.4761	5.3669	0.3812	5.7481		24,634.0524	24,634.0524	0.9803		24,654.6383

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,337.77	1,453.48	1232.21	2,989,629	2,989,629
Strip Mall	354.56	336.32	163.44	499,974	499,974
Supermarket	2,862.72	4,972.52	4660.32	3,891,103	3,891,103
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	4,555.05	6,762.32	6,055.97	7,380,707	7,380,707

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546229	0.063048	0.174586	0.122573	0.033968	0.004845	0.015596	0.024745	0.002089	0.003270	0.006707	0.000678	0.001667

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0687	0.5975	0.3293	3.7400e-003		0.0474	0.0474		0.0474	0.0474		748.9531	748.9531	0.0144	0.0137	753.5111
NaturalGas Unmitigated	0.0687	0.5975	0.3293	3.7400e-003		0.0474	0.0474		0.0474	0.0474		748.9531	748.9531	0.0144	0.0137	753.5111

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	4520.29	0.0488	0.4166	0.1773	2.6600e-003		0.0337	0.0337		0.0337	0.0337		531.7992	531.7992	0.0102	9.7500e-003	535.0356
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	54.5753	5.9000e-004	5.3500e-003	4.4900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004		6.4206	6.4206	1.2000e-004	1.2000e-004	6.4597
Supermarket	1791.23	0.0193	0.1756	0.1475	1.0500e-003		0.0134	0.0134		0.0134	0.0134		210.7333	210.7333	4.0400e-003	3.8600e-003	212.0158
Total		**0.0687**	**0.5975**	**0.3293**	**3.7400e-003**		**0.0474**	**0.0474**		**0.0474**	**0.0474**		**748.9531**	**748.9531**	**0.0144**	**0.0137**	**753.5111**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0545753	5.9000e-004	5.3500e-003	4.4900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004		6.4206	6.4206	1.2000e-004	1.2000e-004	6.4597
Supermarket	1.79123	0.0193	0.1756	0.1475	1.0500e-003		0.0134	0.0134		0.0134	0.0134		210.7333	210.7333	4.0400e-003	3.8600e-003	212.0158
Apartments Mid Rise	4.52029	0.0488	0.4166	0.1773	2.6600e-003		0.0337	0.0337		0.0337	0.0337		531.7992	531.7992	0.0102	9.7500e-003	535.0356
Total		**0.0687**	**0.5975**	**0.3293**	**3.7400e-003**		**0.0474**	**0.0474**		**0.0474**	**0.0474**		**748.9531**	**748.9531**	**0.0144**	**0.0137**	**753.5111**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.3205	0.1961	16.9058	8.9000e-004		0.0922	0.0922		0.0922	0.0922		30.2399	30.2399	0.0301	0.0000	30.8724
Unmitigated	100.8670	3.9853	277.7279	0.5996		40.7909	40.7909		40.7891	40.7891		2,788.6517	8,247.5592	20.7376	0.1424	8,727.1902

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.3480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.4487					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	90.5466	3.7892	260.8220	0.5987		40.6987	40.6987		40.6969	40.6969		2,758.4118	8,217.3193	20.7075	0.1424	8,696.3178
Landscaping	0.5237	0.1961	16.9058	8.9000e-004		0.0922	0.0922		0.0922	0.0922		30.2399	30.2399	0.0301		30.8724
Total	**100.8670**	**3.9853**	**277.7279**	**0.5996**		**40.7909**	**40.7909**		**40.7891**	**40.7891**		**2,788.6517**	**8,247.5592**	**20.7376**	**0.1424**	**8,727.1902**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.3480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.4487					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.5237	0.1961	16.9058	8.9000e-004		0.0922	0.0922		0.0922	0.0922		30.2399	30.2399	0.0301		30.8724
Total	**10.3205**	**0.1961**	**16.9058**	**8.9000e-004**		**0.0922**	**0.0922**		**0.0922**	**0.0922**		**30.2399**	**30.2399**	**0.0301**	**0.0000**	**30.8724**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

5110 Telegraph Avenue Mixed-Use Development

Bay Area AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	347.00	Space	0.00	138,800.00	0
Apartments Mid Rise	203.00	Dwelling Unit	0.34	220,000.00	581
Strip Mall	8.00	1000sqft	0.18	8,000.00	0
Supermarket	28.00	1000sqft	0.64	28,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Per PG&E emission factors april 2013

Land Use - Per project description

Construction Phase - Per Proejct description

Energy Use - ..

Area Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	250.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	250.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	250.00
tblConstructionPhase	NumDays	200.00	305.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	4.00	183.00
tblConstructionPhase	PhaseEndDate	12/14/2017	4/7/2017
tblConstructionPhase	PhaseEndDate	4/21/2017	11/25/2016
tblConstructionPhase	PhaseEndDate	1/25/2016	2/1/2016
tblConstructionPhase	PhaseStartDate	10/14/2016	2/6/2016
tblConstructionPhase	PhaseStartDate	4/8/2017	11/12/2016
tblConstructionPhase	PhaseStartDate	1/22/2016	1/29/2016
tblGrading	AcresOfGrading	68.63	1.50
tblLandUse	LandUseSquareFeet	203,000.00	220,000.00
tblLandUse	LotAcreage	5.34	0.34
tblLandUse	LotAcreage	3.12	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblProjectCharacteristics	OperationalYear	2014	2018

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1,098.8302	48.0016	49.7771	0.0719	6.9700	2.5985	9.5685	3.1388	2.4517	5.5905		6,710.9778	6,710.9778	1.0128	0.0000	6,732.2473
2017	4.3816	24.8172	33.4252	0.0569	2.3694	1.3063	3.6757	0.6352	1.2565	1.8916		5,069.4757	5,069.4757	0.5347	0.0000	5,080.7040

Total	**1,103.2118**	**72.8187**	**83.2023**	**0.1288**	**9.3394**	**3.9048**	**13.2442**	**3.7739**	**3.7081**	**7.4821**		**11,780.4535**	**11,780.4535**	**1.5475**	**0.0000**	**11,812.9513**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1,098.8302	48.0016	49.7771	0.0719	6.9700	2.5985	9.5685	3.1388	2.4517	5.5905		6,710.9778	6,710.9778	1.0128	0.0000	6,732.2473
2017	4.3816	24.8172	33.4252	0.0569	2.3694	1.3063	3.6757	0.6352	1.2565	1.8916		5,069.4757	5,069.4757	0.5347	0.0000	5,080.7040
Total	**1,103.2118**	**72.8187**	**83.2023**	**0.1288**	**9.3394**	**3.9048**	**13.2442**	**3.7739**	**3.7081**	**7.4821**		**11,780.4535**	**11,780.4535**	**1.5475**	**0.0000**	**11,812.9513**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**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**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	100.8670	3.9853	277.7279	0.5996		40.7909	40.7909		40.7891	40.7891		2,788.6517	8,247.5592	20.7376	0.1424	8,727.1902
Energy	0.0687	0.5975	0.3293	3.7400e-003		0.0474	0.0474		0.0474	0.0474		748.9531	748.9531	0.0144	0.0137	753.5111
Mobile	20.0100	34.0768	178.2268	0.2822	20.0622	0.4171	20.4793	5.3669	0.3842	5.7511		23,182.9230	23,182.9230	0.9819		23,203.5420
Total	**120.9456**	**38.6597**	**456.2840**	**0.8855**	**20.0622**	**41.2554**	**61.3177**	**5.3669**	**41.2207**	**46.5876**		**26,720.5278**	**32,179.4353**	**21.7338**	**0.1561**	**32,684.2433**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.3205	0.1961	16.9058	8.9000e-004		0.0922	0.0922		0.0922	0.0922		30.2399	30.2399	0.0301	0.0000	30.8724
Energy	0.0687	0.5975	0.3293	3.7400e-003		0.0474	0.0474		0.0474	0.0474		748.9531	748.9531	0.0144	0.0137	753.5111
Mobile	20.0100	34.0768	178.2268	0.2822	20.0622	0.4171	20.4793	5.3669	0.3842	5.7511		23,182.9230	23,182.9230	0.9819		23,203.5420
Total	**30.3991**	**34.8705**	**195.4620**	**0.2868**	**20.0622**	**0.5567**	**20.6190**	**5.3669**	**0.5239**	**5.8907**		**23,962.1160**	**23,962.1160**	**1.0263**	**0.0137**	**23,987.9255**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**74.87**	**9.80**	**57.16**	**67.61**	**0.00**	**98.65**	**66.37**	**0.00**	**98.73**	**87.36**	**0.00**	**10.32**	**25.54**	**95.28**	**91.21**	**26.61**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2016	1/21/2016	5	15	
2	Site Preparation	Site Preparation	1/29/2016	2/1/2016	5	2	
3	Grading	Grading	2/2/2016	10/13/2016	5	183	
4	Building Construction	Building Construction	2/6/2016	4/7/2017	5	305	
5	Paving	Paving	11/12/2016	11/25/2016	5	10	
6	Architectural Coating	Architectural Coating	11/26/2016	12/9/2016	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 445,500; Residential Outdoor: 148,500; Non-Residential Indoor: 262,200; Non-Residential Outdoor: 87,400

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	174	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	174	0.41
Grading	Rubber Tired Dozers	1	6.00	255	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Cranes	1	6.00	226	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Paving	Pavers	1	6.00	125	0.42
Paving	Paving Equipment	1	8.00	130	0.36
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	216.00	50.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	43.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9066	28.2579	21.4980	0.0245		1.7445	1.7445		1.6328	1.6328		2,487.1296	2,487.1296	0.6288		2,500.3343
Total	**2.9066**	**28.2579**	**21.4980**	**0.0245**		**1.7445**	**1.7445**		**1.6328**	**1.6328**		**2,487.1296**	**2,487.1296**	**0.6288**		**2,500.3343**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0530	0.0781	0.7211	1.3900e-003	0.1226	9.9000e-004	0.1236	0.0325	9.0000e-004	0.0334		116.9168	116.9168	6.5000e-003		117.0533
Total	**0.0530**	**0.0781**	**0.7211**	**1.3900e-003**	**0.1226**	**9.9000e-004**	**0.1236**	**0.0325**	**9.0000e-004**	**0.0334**		**116.9168**	**116.9168**	**6.5000e-003**		**117.0533**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	2.9066	28.2579	21.4980	0.0245		1.7445	1.7445		1.6328	1.6328		2,487.1296	2,487.1296	0.6288		2,500.3343
Total	**2.9066**	**28.2579**	**21.4980**	**0.0245**		**1.7445**	**1.7445**		**1.6328**	**1.6328**		**2,487.1296**	**2,487.1296**	**0.6288**		**2,500.3343**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0530	0.0781	0.7211	1.3900e-003	0.1226	9.9000e-004	0.1236	0.0325	9.0000e-004	0.0334		116.9168	116.9168	6.5000e-003		117.0533
Total	**0.0530**	**0.0781**	**0.7211**	**1.3900e-003**	**0.1226**	**9.9000e-004**	**0.1236**	**0.0325**	**9.0000e-004**	**0.0334**		**116.9168**	**116.9168**	**6.5000e-003**		**117.0533**

3.3 Site Preparation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.4428	25.7718	16.5144	0.0171		1.3985	1.3985		1.2866	1.2866		1,781.0872	1,781.0872	0.5372		1,792.3693
Total	**2.4428**	**25.7718**	**16.5144**	**0.0171**	**5.7996**	**1.3985**	**7.1981**	**2.9537**	**1.2866**	**4.2403**		**1,781.0872**	**1,781.0872**	**0.5372**		**1,792.3693**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0326	0.0481	0.4438	8.6000e-004	0.0754	6.1000e-004	0.0761	0.0200	5.6000e-004	0.0206		71.9488	71.9488	4.0000e-003		72.0328
Total	**0.0326**	**0.0481**	**0.4438**	**8.6000e-004**	**0.0754**	**6.1000e-004**	**0.0761**	**0.0200**	**5.6000e-004**	**0.0206**		**71.9488**	**71.9488**	**4.0000e-003**		**72.0328**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				

Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	2.4428	25.7718	16.5144	0.0171		1.3985	1.3985		1.2866	1.2866		1,781.0872	1,781.0872	0.5372		1,792.3693
Total	**2.4428**	**25.7718**	**16.5144**	**0.0171**	**5.7996**	**1.3985**	**7.1981**	**2.9537**	**1.2866**	**4.2403**		**1,781.0872**	**1,781.0872**	**0.5372**		**1,792.3693**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0326	0.0481	0.4438	8.6000e-004	0.0754	6.1000e-004	0.0761	0.0200	5.6000e-004	0.0206		71.9488	71.9488	4.0000e-003		72.0328
Total	**0.0326**	**0.0481**	**0.4438**	**8.6000e-004**	**0.0754**	**6.1000e-004**	**0.0761**	**0.0200**	**5.6000e-004**	**0.0206**		**71.9488**	**71.9488**	**4.0000e-003**		**72.0328**

3.4 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.5253	0.0000	4.5253	2.4836	0.0000	2.4836			0.0000			0.0000
Off-Road	1.9908	21.0361	13.6704	0.0141		1.1407	1.1407		1.0494	1.0494		1,462.8468	1,462.8468	0.4413		1,472.1130
Total	**1.9908**	**21.0361**	**13.6704**	**0.0141**	**4.5253**	**1.1407**	**5.6660**	**2.4836**	**1.0494**	**3.5330**		**1,462.8468**	**1,462.8468**	**0.4413**		**1,472.1130**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0326	0.0481	0.4438	8.6000e-004	0.0754	6.1000e-004	0.0761	0.0200	5.6000e-004	0.0206		71.9488	71.9488	4.0000e-003		72.0328
Total	**0.0326**	**0.0481**	**0.4438**	**8.6000e-004**	**0.0754**	**6.1000e-004**	**0.0761**	**0.0200**	**5.6000e-004**	**0.0206**		**71.9488**	**71.9488**	**4.0000e-003**		**72.0328**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.5253	0.0000	4.5253	2.4836	0.0000	2.4836			0.0000			0.0000
Off-Road	1.9908	21.0361	13.6704	0.0141		1.1407	1.1407		1.0494	1.0494		1,462.8468	1,462.8468	0.4413		1,472.1130
Total	**1.9908**	**21.0361**	**13.6704**	**0.0141**	**4.5253**	**1.1407**	**5.6660**	**2.4836**	**1.0494**	**3.5330**		**1,462.8468**	**1,462.8468**	**0.4413**		**1,472.1130**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0326	0.0481	0.4438	8.6000e-004	0.0754	6.1000e-004	0.0761	0.0200	5.6000e-004	0.0206		71.9488	71.9488	4.0000e-003		72.0328
Total	**0.0326**	**0.0481**	**0.4438**	**8.6000e-004**	**0.0754**	**6.1000e-004**	**0.0761**	**0.0200**	**5.6000e-004**	**0.0206**		**71.9488**	**71.9488**	**4.0000e-003**		**72.0328**

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	3.2915	20.5459	14.7074	0.0220		1.3656	1.3656		1.3176	1.3176		2,046.9432	2,046.9432	0.4499		2,056.3913
Total	**3.2915**	**20.5459**	**14.7074**	**0.0220**		**1.3656**	**1.3656**		**1.3176**	**1.3176**		**2,046.9432**	**2,046.9432**	**0.4499**		**2,056.3913**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7174	5.0736	8.9743	0.0119	0.3324	0.0752	0.4076	0.0949	0.0691	0.1640		1,186.6215	1,186.6215	9.7100e-003		1,186.8254
Worker	0.8810	1.2979	11.9813	0.0231	2.0370	0.0164	2.0533	0.5403	0.0150	0.5553		1,942.6174	1,942.6174	0.1080		1,944.8848
Total	**1.5983**	**6.3715**	**20.9556**	**0.0350**	**2.3693**	**0.0916**	**2.4609**	**0.6352**	**0.0841**	**0.7193**		**3,129.2389**	**3,129.2389**	**0.1177**		**3,131.7102**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Off-Road	3.2915	20.5459	14.7074	0.0220		1.3656	1.3656		1.3176	1.3176		2,046.9432	2,046.9432	0.4499		2,056.3913
Total	**3.2915**	**20.5459**	**14.7074**	**0.0220**		**1.3656**	**1.3656**		**1.3176**	**1.3176**		**2,046.9432**	**2,046.9432**	**0.4499**		**2,056.3913**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day											lb/day				
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7174	5.0736	8.9743	0.0119	0.3324	0.0752	0.4076	0.0949	0.0691	0.1640		1,186.6215	1,186.6215	9.7100e-003		1,186.8254
Worker	0.8810	1.2979	11.9813	0.0231	2.0370	0.0164	2.0533	0.5403	0.0150	0.5553		1,942.6174	1,942.6174	0.1080		1,944.8848
Total	**1.5983**	**6.3715**	**20.9556**	**0.0350**	**2.3693**	**0.0916**	**2.4609**	**0.6352**	**0.0841**	**0.7193**		**3,129.2389**	**3,129.2389**	**0.1177**		**3,131.7102**

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823		2,034.2860	2,034.2860	0.4268		2,043.2497
Total	**2.9546**	**19.1088**	**14.3110**	**0.0220**		**1.2257**	**1.2257**		**1.1823**	**1.1823**		**2,034.2860**	**2,034.2860**	**0.4268**		**2,043.2497**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6473	4.5460	8.4969	0.0119	0.3324	0.0650	0.3975	0.0949	0.0598	0.1547		1,166.5786	1,166.5786	9.2200e-003		1,166.7722
Worker	0.7797	1.1624	10.6173	0.0231	2.0370	0.0156	2.0526	0.5403	0.0144	0.5546		1,868.6111	1,868.6111	0.0986		1,870.6822
Total	**1.4270**	**5.7084**	**19.1142**	**0.0350**	**2.3694**	**0.0806**	**2.4500**	**0.6352**	**0.0742**	**0.7093**		**3,035.1897**	**3,035.1897**	**0.1078**		**3,037.4544**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.9546	19.1088	14.3110	0.0220		1.2257	1.2257		1.1823	1.1823		2,034.2860	2,034.2860	0.4268		2,043.2497
Total	**2.9546**	**19.1088**	**14.3110**	**0.0220**		**1.2257**	**1.2257**		**1.1823**	**1.1823**		**2,034.2860**	**2,034.2860**	**0.4268**		**2,043.2497**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6473	4.5460	8.4969	0.0119	0.3324	0.0650	0.3975	0.0949	0.0598	0.1547		1,166.5786	1,166.5786	9.2200e-003		1,166.7722
Worker	0.7797	1.1624	10.6173	0.0231	2.0370	0.0156	2.0526	0.5403	0.0144	0.5546		1,868.6111	1,868.6111	0.0986		1,870.6822
Total	**1.4270**	**5.7084**	**19.1142**	**0.0350**	**2.3694**	**0.0806**	**2.4500**	**0.6352**	**0.0742**	**0.7093**		**3,035.1897**	**3,035.1897**	**0.1078**		**3,037.4544**

3.6 Paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2872	13.2076	9.0880	0.0133		0.8075	0.8075		0.7438	0.7438		1,368.4366	1,368.4366	0.4053		1,376.9473
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2872**	**13.2076**	**9.0880**	**0.0133**		**0.8075**	**0.8075**		**0.7438**	**0.7438**		**1,368.4366**	**1,368.4366**	**0.4053**		**1,376.9473**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0530	0.0781	0.7211	1.3900e-003	0.1226	9.9000e-004	0.1236	0.0325	9.0000e-004	0.0334		116.9168	116.9168	6.5000e-003		117.0533
Total	**0.0530**	**0.0781**	**0.7211**	**1.3900e-003**	**0.1226**	**9.9000e-004**	**0.1236**	**0.0325**	**9.0000e-004**	**0.0334**		**116.9168**	**116.9168**	**6.5000e-003**		**117.0533**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2872	13.2076	9.0880	0.0133		0.8075	0.8075		0.7438	0.7438		1,368.4366	1,368.4366	0.4053		1,376.9473
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2872**	**13.2076**	**9.0880**	**0.0133**		**0.8075**	**0.8075**		**0.7438**	**0.7438**		**1,368.4366**	**1,368.4366**	**0.4053**		**1,376.9473**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0530	0.0781	0.7211	1.3900e-003	0.1226	9.9000e-004	0.1236	0.0325	9.0000e-004	0.0334		116.9168	116.9168	6.5000e-003		117.0533
Total	**0.0530**	**0.0781**	**0.7211**	**1.3900e-003**	**0.1226**	**9.9000e-004**	**0.1236**	**0.0325**	**9.0000e-004**	**0.0334**		**116.9168**	**116.9168**	**6.5000e-003**		**117.0533**

3.7 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1,093.3965					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**1,093.7650**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1754	0.2584	2.3852	4.6000e-003	0.4055	3.2600e-003	0.4088	0.1076	2.9900e-003	0.1105		386.7248	386.7248	0.0215		387.1761

Total	**0.1754**	**0.2584**	**2.3852**	**4.6000e-003**	**0.4055**	**3.2600e-003**	**0.4088**	**0.1076**	**2.9900e-003**	**0.1105**		**386.7248**	**386.7248**	**0.0215**		**387.1761**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	1,093.3965					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	**1,093.7650**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**		**281.4481**	**281.4481**	**0.0332**		**282.1449**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1754	0.2584	2.3852	4.6000e-003	0.4055	3.2600e-003	0.4088	0.1076	2.9900e-003	0.1105		386.7248	386.7248	0.0215		387.1761
Total	**0.1754**	**0.2584**	**2.3852**	**4.6000e-003**	**0.4055**	**3.2600e-003**	**0.4088**	**0.1076**	**2.9900e-003**	**0.1105**		**386.7248**	**386.7248**	**0.0215**		**387.1761**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	20.0100	34.0768	178.2268	0.2822	20.0622	0.4171	20.4793	5.3669	0.3842	5.7511		23,182.9230	23,182.9230	0.9819		23,203.5420
Unmitigated	20.0100	34.0768	178.2268	0.2822	20.0622	0.4171	20.4793	5.3669	0.3842	5.7511		23,182.9230	23,182.9230	0.9819		23,203.5420

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,337.77	1,453.48	1232.21	2,989,629	2,989,629
Strip Mall	354.56	336.32	163.44	499,974	499,974
Supermarket	2,862.72	4,972.52	4660.32	3,891,103	3,891,103
Enclosed Parking with Elevator	0.00	0.00	0.00		
Total	4,555.05	6,762.32	6,055.97	7,380,707	7,380,707

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.546229	0.063048	0.174586	0.122573	0.033968	0.004845	0.015596	0.024745	0.002089	0.003270	0.006707	0.000678	0.001667

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0687	0.5975	0.3293	3.7400e-003		0.0474	0.0474		0.0474	0.0474		748.9531	748.9531	0.0144	0.0137	753.5111
NaturalGas Unmitigated	0.0687	0.5975	0.3293	3.7400e-003		0.0474	0.0474		0.0474	0.0474		748.9531	748.9531	0.0144	0.0137	753.5111

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	4520.29	0.0488	0.4166	0.1773	2.6600e-003		0.0337	0.0337		0.0337	0.0337		531.7992	531.7992	0.0102	9.7500e-003	535.0356
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	54.5753	5.9000e-004	5.3500e-003	4.4900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004		6.4206	6.4206	1.2000e-004	1.2000e-004	6.4597
Supermarket	1791.23	0.0193	0.1756	0.1475	1.0500e-003		0.0134	0.0134		0.0134	0.0134		210.7333	210.7333	4.0400e-003	3.8600e-003	212.0158
Total		**0.0687**	**0.5975**	**0.3293**	**3.7400e-003**		**0.0474**	**0.0474**		**0.0474**	**0.0474**		**748.9531**	**748.9531**	**0.0144**	**0.0137**	**753.5111**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0545753	5.9000e-004	5.3500e-003	4.4900e-003	3.0000e-005		4.1000e-004	4.1000e-004		4.1000e-004	4.1000e-004		6.4206	6.4206	1.2000e-004	1.2000e-004	6.4597
Supermarket	1.79123	0.0193	0.1756	0.1475	1.0500e-003		0.0134	0.0134		0.0134	0.0134		210.7333	210.7333	4.0400e-003	3.8600e-003	212.0158
Apartments Mid Rise	4.52029	0.0488	0.4166	0.1773	2.6600e-003		0.0337	0.0337		0.0337	0.0337		531.7992	531.7992	0.0102	9.7500e-003	535.0356
Total		**0.0687**	**0.5975**	**0.3293**	**3.7400e-003**		**0.0474**	**0.0474**		**0.0474**	**0.0474**		**748.9531**	**748.9531**	**0.0144**	**0.0137**	**753.5111**

6.0 Area Detail

6.1 Mitigation Measures Area

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.3205	0.1961	16.9058	8.9000e-004		0.0922	0.0922		0.0922	0.0922		30.2399	30.2399	0.0301	0.0000	30.8724
Unmitigated	100.8670	3.9853	277.7279	0.5996		40.7909	40.7909		40.7891	40.7891		2,788.6517	8,247.5592	20.7376	0.1424	8,727.1902

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.3480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.4487					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	90.5466	3.7892	260.8220	0.5987		40.6987	40.6987		40.6969	40.6969		2,758.4118	8,217.3193	20.7075	0.1424	8,696.3178
Landscaping	0.5237	0.1961	16.9058	8.9000e-004		0.0922	0.0922		0.0922	0.0922		30.2399	30.2399	0.0301		30.8724
Total	**100.8670**	**3.9853**	**277.7279**	**0.5996**		**40.7909**	**40.7909**		**40.7891**	**40.7891**		**2,788.6517**	**8,247.5592**	**20.7376**	**0.1424**	**8,727.1902**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.3480					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.4487					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.5237	0.1961	16.9058	8.9000e-004		0.0922	0.0922		0.0922	0.0922		30.2399	30.2399	0.0301		30.8724
Total	**10.3205**	**0.1961**	**16.9058**	**8.9000e-004**		**0.0922**	**0.0922**		**0.0922**	**0.0922**		**30.2399**	**30.2399**	**0.0301**	**0.0000**	**30.8724**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

APPENDIX B

CONSTRUCTION HRA MODEL DATA

How to Use the Distance Adjustment Multiplier Tool for Diesel Internal Combustion (IC) Engines

This distance multiplier tool refines the screening values for cancer risk and PM2.5 concentrations found in the District's Stationary Source Screening Analysis Tool for permitted facilities which contain only diesel IC engines, to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions.

1. Obtain the facility diesel IC engine(s) cancer risk and/or PM2.5 concentration from the District's Stationary Source Screening Analysis tool only for facilities where the source is listed as "generator." If the distance to the nearest receptor is less than 25 meters, the distance adjustment multiplier table cannot be used and an air dispersion modeling analysis using site-specific information is needed to refine the cancer risk, chronic hazard index or PM2.5 estimates.

2. Determine the shortest distance from each diesel IC engine to the nearest receptor. Select the shortest distance to receptor found.

3. In the table below, enter the cancer risk and/or PM2.5 concentration found in step 1 for the diesel IC engine in the row which aligns with the shortest distance from each diesel IC engine to the nearest receptor (found in step 2). If the shortest distance to the receptor falls between two distance values, select the multiplier corresponding to the smaller distance. For distances beyond 280 meters, use the multiplier 0.04. The resulting product is the adjusted cancer risk in a million or the adjusted PM2.5 concentration for the diesel IC engine

Note: This distance adjustment multiplier may be used only for the screening level health risk values indicated in the District's Stationary Source Screening Analysis tool for diesel IC engines. This distance multiplier tool may not be used to adjust values from an HRA if an HRA for the facility was conducted.

Note: This distance adjustment multiplier may also be used to adjust the screening values for chronic hazard index found in the District's Stationary Source Screening Analysis Tool for facilities with only diesel IC engines.

Distance (meters)	Distance (feet)	Distance Adjustment Multiplier	Enter Cancer Risk Estimate	Adjusted Cancer Risk Estimate	Enter PM2.5 Concentration	Adjusted PM2.5 Concentration
25	82	0.85		0		0
30	98.4	0.73		0		0
35	115	0.64		0		0
40	131	0.58	22.66	13.1428	0.005	0.0029
50	164	0.5		0		0
60	197	0.41		0		0
70	230	0.31		0		0
80	262	0.28		0		0
90	295	0.25		0		0
100	328	0.22		0		0
110	361	0.18		0		0
120	394	0.16		0		0
130	426	0.15		0		0
140	459	0.14		0		0
150	492	0.12		0		0
160	525	0.1		0		0
180	590	0.09		0		0
200	656	0.08		0		0
220	722	0.07		0		0
240	787	0.06		0		0
260	853	0.05		0		0
280	918	0.04		0		0

How to Use the Distance Adjustment Multiplier Tool for Gasoline Dispensing Facilities (GDF)

This distance multiplier tool refines the screening values for cancer risk and chronic hazard index found in the District's Stationary Source Screening Analysis Tool to represent adjusted risk and hazard impacts that can be expected with farther distances from the source of emissions (GDF's).

1. Obtain the GDF cancer risk and/or chronic hazard index from the District's Stationary Source Screening Analysis tool for facilities where the Plant No. is preceded with a 'G'. If the distance to the nearest receptor is less than 20 meters, the distance adjustment multiplier table cannot be used and an air dispersion modeling analysis using site-specific information is needed to refine the cancer risk and/or chronic hazard index estimate.

2. Determine the shortest distance from the GDF to the nearest receptor.

3. In the table below, enter the cancer risk and/or chronic hazard index found in step 1 for the GDF in the row which aligns with the shortest distance from each GDF to the nearest receptor (found in step 2). If the shortest distance to the receptor falls between two distance values, select the multiplier corresponding to the smaller distance. For distances beyond 300 meters, use the multiplier 0.015. The resulting product is the adjusted cancer risk in a million or the adjusted chronic hazard index for the GDF.

Note: These distance adjustment multipliers may be used only for the screening level health risk values indicated in the District's Stationary Source Screening Analysis tool for gasoline dispensing facilities. This distance multiplier tool may not be used to adjust values from an HRA if an HRA for the facility was conducted.

Distance meters	Distance feet	Distance adjustment multiplier	Enter Cancer Risk	Adjusted Cancer Risk	Enter Chronic Hazard Index	Adjusted Chronic Hazard Index
20	66	1.000		0		0
25	82	0.728		0		0
30	98	0.559		0		0
35	115	0.445		0		0
40	131	0.365		0		0
45	148	0.305		0		0
50	164	0.260		0		0
55	180	0.225		0		0
60	197	0.197		0		0
65	213	0.174		0		0
70	230	0.155		0		0
75	246	0.139		0		0
80	262	0.126		0		0
85	279	0.114		0		0
90	295	0.104		0		0
95	312	0.096		0		0
100	328	0.088		0		0
105	344	0.082		0		0
110	361	0.076		0		0
115	377	0.071		0		0
120	394	0.066		0		0
125	410	0.062		0		0
130	426	0.058		0		0
135	443	0.055		0		0
140	459	0.052		0		0
145	476	0.049		0		0
150	492	0.046		0		0
155	508	0.044		0		0
160	525	0.042		0		0
165	541	0.040		0		0
170	558	0.038		0		0
175	574	0.036		0		0
180	590	0.034		0		0

185	607	0.033		0		0
190	623	0.031		0		0
195	640	0.030		0		0
200	656	0.029		0		0
205	672	0.028		0		0
210	689	0.027	55.61	1.485975429		0
215	705	0.026		0		0
220	722	0.025		0		0
225	738	0.024		0		0
230	754	0.023		0		0
235	771	0.022		0		0
240	787	0.022		0		0
245	804	0.021		0		0
250	820	0.020		0		0
255	836	0.020		0		0
260	853	0.019		0		0
265	869	0.018		0		0
270	886	0.018		0		0
275	902	0.017		0		0
280	918	0.017		0		0
285	935	0.016		0		0
290	951	0.016		0		0
295	968	0.015		0		0
300	984	0.015	4.96	0.074225034	0.002	2.99294E-05

APPENDIX C

STATIONARY SOURCE DATA

Calculate Emissions

ID	Phase Type (Select a drop down list item in Column B; if "Other", please specify in Column C)[1]		Phase Start Date	Phase End Date	Equipment Operating Hours Per Day[1]	Work Days Per Week	Equipment Type (Select a drop down list item in Column H; if "Other" please specify in Column I)		Number of Equipment	Horsepower (if known)	Load Factor (if known)	Engine Mfg Year	Engine Tier Rating (Tier 2, Tier 4i)[4]	Diesel Particuate Filter (Level)[5]	Engine Hours	Days (Calculated)	2016	2017
1	Demolition	Demolition	2016/01/01	2016/01/21	7	5	Concrete/Industrial Saws	Concrete/Industrial Saws	1	81	0.73	2010				20	20	0
2	Demolition	Demolition	2016/01/01	2016/01/21	7	5	Rubber Tired Dozers	Rubber Tired Dozers	1	255	0.4	2010				20	20	0
3	Demolition	Demolition	2016/01/01	2016/01/21	7	5	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	97	0.37	2010				20	20	0
4	Site Preparation	Site Preparation	2016/01/29	2016/02/01	7	5	Graders	Graders	1	174	0.41	2010				3	3	0
5	Site Preparation	Site Preparation	2016/01/29	2016/02/01	7	5	Rubber Tired Dozers	Rubber Tired Dozers	1	255	0.4	2010				3	3	0
6	Site Preparation	Site Preparation	2016/01/29	2016/02/01	8	5	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	97	0.37	2010				3	3	0
7	Grading	Grading	2016/02/02	2016/02/05	6	5	Graders	Graders	1	174	0.41	2010				3	3	0
8	Grading	Grading	2016/02/02	2016/02/05	6	5	Rubber Tired Dozers	Rubber Tired Dozers	1	255	0.4	2010				3	3	0
9	Grading	Grading	2016/02/02	2016/02/05	6	5	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	97	0.37	2010				3	3	0
10	Building Construction	Building Construction	2017/02/06	2017/8/25	6	5	Cranes	Cranes	1	226	0.29	2010				200	0	200
11	Building Construction	Building Construction	2017/02/06	2017/8/25	6	5	Forklifts	Forklifts	1	89	0.2	2010				200	0	200
12	Building Construction	Building Construction	2017/02/06	2017/8/25	6	5	Generator Sets	Generator Sets	1	84	0.74	2004				200	0	200
13	Building Construction	Building Construction	2017/02/06	2017/8/25	6	5	Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	97	0.37	2010				200	0	200
14	Building Construction	Building Construction	2017/02/06	2017/8/25	6	5	Welders	Welders	1	46	0.45	2015				200	0	200
15	Architectural Coating	Architectural Coating	2017/11/12	2017/11/22	6	5	Air Compressors	Air Compressors	1	78	0.48	2010				10	0	10

Project Summary By Year

Year	ROG Tons/Yr	CO Tons/Yr	NOx Tons/Yr	*PM10 Tons/Yr	CO2 MT/Yr	CH4 MT/Yr	CO2e MT/Yr
2016	0.03	0.15	0.23	0.01	20.37	0.00	20.43
2017	0.10	0.67	0.84	0.05	139.09	0.02	139.58
Totals	0.12	0.82	1.07	0.06	159	0	160

Maximum Daily Emissions

ROG Lbs/Day	CO Lbs/Day	NOx Lbs/Day	*PM10 Lbs/Day	CO2 MT/Day	CH4 MT/Day	CO2e MT/Day
2.25	11.56	18.47	1.07	0.78	0.00	0.79

1, 2, 3,

Year	ROG Tons/Yr	CO Tons/Yr	NOx Tons/Yr	PM10 Tons/Yr	CO2 MT/Yr	CH4 MT/Yr	CO2e MT/Yr	SOx Tons/yr
2016								
Const. Equip	0.03	0.15	0.23	0.013	20.37	0.00	20.43	0.0000
Const. Mobil Offsite	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000
Const. Mobil Onsite	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.0000
Const. Mobil Idling	0.000	0.000	0.000	0.0000000	0.000	0.000	0.000	0.0000
Total	0.03	0.15	0.23	0.01	20.37	0.00	20.43	0.000

Year	ROG Lb/Day	CO Lb/Day	NOx Lb/Day	PM10 Lb/Day	CO2 MT/Day	CH4 MT/Day	CO2e MT/Day	SOx Lb/Day
2016								
Const. Equip	0.29	1.62	2.47	0.14	0.11	0.00	0.11	0.00
Const. Mobil Offsite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Const. Mobil Onsite	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Const. Mobil Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.29	1.62	2.47	0.14	0.11	0.00	0.11	0.00

Year	ROG Tons/Yr	CO Tons/Yr	NOx Tons/Yr	PM10 Tons/Yr	CO2 MT/Yr	CH4 MT/Yr	CO2e MT/Yr	SOx Tons/yr
2017								
Const. Equip	0.10	0.67	0.84	0.05	139.09	0.02	139.58	0.00
Const. Mobil Offsite	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00
Const. Mobil Onsite	0.000	0.000	0.000	0.0000	0.000	0.000	0.000	0.00
Const. Mobil Idling	0.000	0.000	0.000	0.0000000	0.000	0.000	0.000	0.00
Total	0.10	0.67	0.84	0.05	139.09	0.02	139.58	0.00

Year	ROG Lb/Day	CO Lb/Day	NOx Lb/Day	PM10 Lb/Day	CO2 MT/Day	CH4 MT/Day	CO2e MT/Day
2017							
Const. Equip	0.53	3.69	4.59	0.26	0.38	0.00	0.38
Const. Mobil Offsite	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Const. Mobil Onsite	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Const. Mobil Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.53	3.69	4.59	0.26	0.38	0.00	0.38

Year	ROG Tons/Yr	CO Tons/Yr	NOx Tons/Yr	PM10 Tons/Yr	CO2 MT/Yr	CH4 MT/Yr	CO2e MT/Yr
0							
Const. Equip	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Const. Mobil Offsite	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Const. Mobil Onsite	0.000	0.000	0.000	0.0000	0.000	0.000	0.000
Const. Mobil Idling	0.000	0.000	0.000	0.0000000	0.000	0.000	0.000
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Year	ROG Lb/Day	CO Lb/Day	NOx Lb/Day	PM10 Lb/Day	CO2 MT/Day	CH4 MT/Day	CO2e MT/Day
0							
Const. Equip	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Const. Mobil Offsite	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Const. Mobil Onsite	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Const. Mobil Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Year	ROG Tons/Yr	CO Tons/Yr	NOx Tons/Yr	PM10 Tons/Yr	CO2 MT/Yr	CH4 MT/Yr	CO2e MT/Yr
0							
Const. Equip	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Const. Mobil Offsite	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Const. Mobil Onsite	0.000	0.000	0.000	0.0000	0.000	0.000	0.000
Const. Mobil Idling	0.000	0.000	0.000	0.0000000	0.000	0.000	0.000
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Year	ROG Lb/Day	CO Lb/Day	NOx Lb/Day	PM10 Lb/Day	CO2 MT/Day	CH4 MT/Day	CO2e MT/Day
0							
Const. Equip	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Const. Mobil Offsite	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Const. Mobil Onsite	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Const. Mobil Idling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00

HARP 2 Diesel lbs/Yr
25.6549
93.3276
0.0000
0.00000

		2016	2017	0	0	0
Days / Yr		184	365	365	9	1
	NOx Control	**0%**	**0%**			

TOTAL PROJECT EMISSIONS SUMMARY

Project Emission Summary	ROG Pounds/Day	CO Pounds/Day	NOx Pounds/Day	PM10 Pounds/Day
Total Average Daily Project	**0.29**	**1.62**	**2.47**	**0.14**
Construction Equipment	0.29	1.62	2.47	0.14
Mobile Off-Site	0.00	0.00	0.00	0.00
Mobile On-Site	0.00	0.00	0.00	0.00
Mobile Idling	0.00	0.00	0.00	0.00

TOTAL PROJECT EMISSIONS SUMMARY

Project Emission Summary	ROG Pounds/Day	CO Pounds/Day	NOx Pounds/Day	PM10 Pounds/Day
Total Average Daily Project	**0.53**	**3.69**	**4.59**	**0.26**
Construction Equipment	0.53	3.69	4.59	0.26
Mobile Off-Site	0.00	0.00	0.00	0.00
Mobile On-Site	0.00	0.00	0.00	0.00
Mobile Idling	0.00	0.00	0.00	0.00

TOTAL PROJECT EMISSIONS SUMMARY

Project Emission Summary	ROG Pounds/Day	CO Pounds/Day	NOx Pounds/Day	PM10 Pounds/Day
Total Average Daily Project	**0.00**	**0.00**	**0.00**	**0.00**
Construction Equipment	0.00	0.00	0.00	0.00
Mobile Off-Site	0.00	0.00	0.00	0.00
Mobile On-Site	0.00	0.00	0.00	0.00
Mobile Idling	0.00	0.00	0.00	0.00

TOTAL PROJECT EMISSIONS SUMMARY

Project Emission Summary	ROG Pounds/Day	CO Pounds/Day	NOx Pounds/Day	PM10 Pounds/Day
Total Average Daily Project	**0.00**	**0.00**	**0.00**	**0.00**
Construction Equipment	0.00	0.00	0.00	0.00
Mobile Off-Site	0.00	0.00	0.00	0.00
Mobile On-Site	0.00	0.00	0.00	0.00
Mobile Idling	0.00	0.00	0.00	0.00

Cancer (In a Million)		
Height	**Construction**	**Total**
0 Feet	7.84	7.84

$PM_{2.5}$		
Height	**Construction**	**Total**
0 Feet	0.277	0.277

Chronic HI		
Height	**Construction**	**Total**
0 Feet	0.055	0.055

Acute HI		
Height	**Construction**	**Total**
0 Feet	0.000	0.00E+00

Age Range	Fraction of Time at Residence	Number of Years	Percent Of Time	Adjusted TAH
3rd Trimester<2	0.85	2.25	3.2%	2.7%
2<16	0.72	14	19.9%	14.3%
16-70	0.73	54	76.9%	56.1%
	Total Years	70.25	Lifetime TAH	73.2%
			Lifetime Risk Adjustment	26.8%

Year	2016		2017	
	PM10 lbs/Yr	G/sec	PM10 lbs/Yr	G/sec
	25.70	0.000369676	93.33	0.001342383
Const. Equip	Lb/hr		Lb/hr	
	0.002933938	0.000369676	0.010653837	0.001342383

Dose = dose through inhalation (mg/kg-day)

1	Cair = air concentration (µg/m3) from air dispersion model (normalized air concentration of 1 ug/m3 is used)
302	DBR = daily breathing rate (302 L\kg body weight-day for adult and 581 L/kg-day for child)
130	EF = exposure frequency (350 days/year)*
1	ED = exposure duration (70 years)
1.00E-06	CF = conversion factor (10-6 ([mg/µg] * [m3/L])
25,550	AT = averaging time (25,550 days or 70 years)

***Worst case 6 (2016) and 11 (2017) months of exposure 5 days/week (130 and 220 days)**

	2016	2017
Dose =	1.54E-06	2.60E-06

Cancer Risk = (Dose * Modeled Concentration * Toxic Emissions * CRAF * Cancer Potency Factor)

where:

Cancer Risk = risk (potential chances per million)
Modeled Concentraion = ISCST3 Modeled Concentration using a normalizedemissions rate of 1 g/sec
Toxic Emissions = Sum of all toxic pollutants with a cancer potency value

1.54E-06	Dose = dose through inhalation (mg/kg-day)
10	CRAF = 1.7 for residential receptors 70 years or 10 for child

Cancer Potency Factor = toxicity factor (mg/kg-day-1)

Cancer Adjustment Factors	
2016	2017
Diesel	Diesel
1.69E-05	2.86E-05

		2016	2017		
	Row	35	35	35	
	Maximum Value	1.29E-06	7.94E-06	9.23E-06	TAH
X	Y	CONSTR	CONSTR	Total	Adjusted
565052.9	4188027	1.29E-06	7.94E-06	9.23E-06	7.84E-06
565049.5	4188013	1.18E-06	7.22E-06	8.40E-06	7.14E-06
565063.1	4188028	9.92E-07	6.10E-06	7.09E-06	6.03E-06
565061	4188018	9.63E-07	5.92E-06	6.88E-06	5.85E-06
565072.9	4188027	7.88E-07	4.84E-06	5.63E-06	4.78E-06
565070.7	4188015	7.61E-07	4.68E-06	5.44E-06	4.62E-06
565082.8	4188026	6.44E-07	3.96E-06	4.60E-06	3.91E-06
565080.4	4188013	6.22E-07	3.82E-06	4.44E-06	3.78E-06
565092.4	4188022	5.37E-07	3.30E-06	3.83E-06	3.26E-06
565090.1	4188010	5.20E-07	3.20E-06	3.72E-06	3.16E-06
565102.2	4188021	4.57E-07	2.81E-06	3.26E-06	2.77E-06
565099.8	4188008	4.43E-07	2.72E-06	3.17E-06	2.69E-06
565112	4188019	3.94E-07	2.42E-06	2.82E-06	2.39E-06
565129	4188001	2.96E-07	1.82E-06	2.12E-06	1.80E-06
565141.1	4188012	2.70E-07	1.66E-06	1.93E-06	1.64E-06
565142.7	4188025	2.69E-07	1.65E-06	1.92E-06	1.63E-06
565138.7	4187999	2.64E-07	1.62E-06	1.89E-06	1.60E-06
565150.8	4188009	2.41E-07	1.48E-06	1.73E-06	1.47E-06
565152.1	4188020	2.42E-07	1.49E-06	1.73E-06	1.47E-06
565148.4	4187996	2.37E-07	1.46E-06	1.70E-06	1.44E-06
565160.5	4188007	2.18E-07	1.34E-06	1.56E-06	1.32E-06
565162	4188019	2.18E-07	1.34E-06	1.56E-06	1.33E-06
565158.1	4187994	2.14E-07	1.32E-06	1.53E-06	1.30E-06
565170.3	4188005	1.98E-07	1.22E-06	1.41E-06	1.20E-06
565171.9	4188018	1.98E-07	1.22E-06	1.41E-06	1.20E-06
565167.8	4187991	1.95E-07	1.20E-06	1.39E-06	1.18E-06
565179.9	4188002	1.81E-07	1.11E-06	1.29E-06	1.10E-06
565181.4	4188014	1.81E-07	1.11E-06	1.29E-06	1.10E-06
565182.8	4188026	1.78E-07	1.10E-06	1.27E-06	1.08E-06
565177.5	4187989	1.78E-07	1.09E-06	1.27E-06	1.08E-06
565189.7	4188000	1.66E-07	1.02E-06	1.18E-06	1.01E-06
565191.2	4188013	1.66E-07	1.02E-06	1.18E-06	1.01E-06
565192.7	4188025	1.63E-07	1.00E-06	1.17E-06	9.91E-07
565187.2	4187987	1.64E-07	1.00E-06	1.17E-06	9.93E-07
565199.5	4187998	1.52E-07	9.37E-07	1.09E-06	9.26E-07
565201.1	4188011	1.53E-07	9.37E-07	1.09E-06	9.26E-07
565202.7	4188025	1.50E-07	9.21E-07	1.07E-06	9.10E-07
565196.9	4187984	1.51E-07	9.26E-07	1.08E-06	9.16E-07
565209.1	4187995	1.41E-07	8.65E-07	1.01E-06	8.55E-07
565210.6	4188007	1.41E-07	8.67E-07	1.01E-06	8.57E-07
565212	4188019	1.39E-07	8.57E-07	9.96E-07	8.47E-07
565206.7	4187982	1.39E-07	8.57E-07	9.97E-07	8.47E-07
565218.8	4187993	1.31E-07	8.03E-07	9.33E-07	7.93E-07
565220.4	4188006	1.31E-07	8.04E-07	9.34E-07	7.94E-07
565222	4188019	1.29E-07	7.93E-07	9.23E-07	7.84E-07
565216.4	4187980	1.30E-07	7.96E-07	9.25E-07	7.87E-07
565228.6	4187991	1.22E-07	7.47E-07	8.68E-07	7.38E-07
565230.2	4188004	1.22E-07	7.47E-07	8.69E-07	7.38E-07
565231.9	4188018	1.20E-07	7.37E-07	8.57E-07	7.28E-07
565226.1	4187977	1.21E-07	7.41E-07	8.62E-07	7.32E-07
565238.2	4187988	1.13E-07	6.97E-07	8.10E-07	6.89E-07
565239.8	4188000	1.13E-07	6.97E-07	8.11E-07	6.89E-07
565241.3	4188013	1.12E-07	6.91E-07	8.03E-07	6.83E-07
565242.8	4188025	1.10E-07	6.76E-07	7.87E-07	6.69E-07
565235.8	4187975	1.13E-07	6.92E-07	8.05E-07	6.84E-07
565248	4187986	1.06E-07	6.52E-07	7.58E-07	6.44E-07
565249.6	4187999	1.06E-07	6.52E-07	7.58E-07	6.45E-07
565251.1	4188012	1.05E-07	6.45E-07	7.50E-07	6.38E-07
565252.7	4188025	1.03E-07	6.31E-07	7.34E-07	6.24E-07
565245.5	4187972	1.05E-07	6.48E-07	7.54E-07	6.41E-07
565257.7	4187984	9.95E-08	6.11E-07	7.11E-07	6.04E-07
565259.4	4187997	9.95E-08	6.11E-07	7.11E-07	6.04E-07
565261	4188011	9.84E-08	6.05E-07	7.03E-07	5.97E-07
565262.7	4188025	9.61E-08	5.91E-07	6.87E-07	5.84E-07
565267.4	4187981	9.35E-08	5.75E-07	6.68E-07	5.68E-07
565268.9	4187994	9.36E-08	5.75E-07	6.68E-07	5.68E-07
565270.5	4188006	9.28E-08	5.70E-07	6.63E-07	5.63E-07
565272	4188019	9.12E-08	5.60E-07	6.51E-07	5.54E-07
565280.3	4188005	8.73E-08	5.36E-07	6.24E-07	5.30E-07
565296.6	4187974	7.86E-08	4.83E-07	5.62E-07	4.77E-07
565298.1	4187987	7.86E-08	4.83E-07	5.62E-07	4.77E-07
565302.7	4188025	7.51E-08	4.62E-07	5.37E-07	4.56E-07
565306.3	4187972	7.45E-08	4.58E-07	5.32E-07	4.52E-07
565307.9	4187985	7.44E-08	4.57E-07	5.32E-07	4.52E-07
565309.5	4187998	7.38E-08	4.54E-07	5.28E-07	4.49E-07
565311.1	4188012	7.27E-08	4.47E-07	5.20E-07	4.42E-07
565312.7	4188025	7.10E-08	4.36E-07	5.07E-07	4.31E-07
565316	4187970	7.07E-08	4.34E-07	5.05E-07	4.29E-07
565317.7	4187983	7.06E-08	4.34E-07	5.05E-07	4.29E-07
565319.4	4187997	7.00E-08	4.30E-07	5.00E-07	4.25E-07
565321	4188011	6.89E-08	4.23E-07	4.92E-07	4.18E-07
565322.7	4188025	6.72E-08	4.13E-07	4.80E-07	4.08E-07
565325.7	4187967	6.71E-08	4.13E-07	4.80E-07	4.08E-07
565327.3	4187980	6.71E-08	4.12E-07	4.80E-07	4.08E-07
565328.8	4187993	6.66E-08	4.10E-07	4.76E-07	4.05E-07
565330.4	4188006	6.57E-08	4.04E-07	4.70E-07	3.99E-07
565331.9	4188019	6.44E-08	3.96E-07	4.60E-07	3.91E-07
565335.4	4187965	6.39E-08	3.93E-07	4.57E-07	3.88E-07
565337.1	4187978	6.39E-08	3.92E-07	4.56E-07	3.88E-07
565338.7	4187991	6.34E-08	3.89E-07	4.53E-07	3.85E-07
565340.3	4188005	6.25E-08	3.84E-07	4.46E-07	3.79E-07

565341.9	4188018	6.12E-08	3.76E-07	4.37E-07	3.71E-07
565345.2	4187963	6.09E-08	3.74E-07	4.35E-07	3.70E-07
565346.8	4187976	6.08E-08	3.74E-07	4.35E-07	3.69E-07
565348.5	4187990	6.04E-08	3.71E-07	4.31E-07	3.67E-07
565350.2	4188004	5.94E-08	3.65E-07	4.25E-07	3.61E-07
565351.8	4188018	5.82E-08	3.58E-07	4.16E-07	3.53E-07
565354.9	4187960	5.81E-08	3.57E-07	4.15E-07	3.53E-07
565356.4	4187973	5.81E-08	3.57E-07	4.15E-07	3.53E-07
565358	4187986	5.77E-08	3.55E-07	4.12E-07	3.50E-07
565359.6	4187999	5.70E-08	3.50E-07	4.07E-07	3.46E-07
565361.1	4188012	5.59E-08	3.44E-07	4.00E-07	3.40E-07
565362.7	4188025	5.47E-08	3.36E-07	3.91E-07	3.32E-07
565364.6	4187958	5.55E-08	3.41E-07	3.97E-07	3.37E-07
565366.2	4187971	5.55E-08	3.41E-07	3.96E-07	3.37E-07
565367.8	4187985	5.51E-08	3.39E-07	3.94E-07	3.35E-07
565369.5	4187998	5.44E-08	3.34E-07	3.88E-07	3.30E-07
565371.1	4188011	5.34E-08	3.28E-07	3.81E-07	3.24E-07
565372.7	4188025	5.21E-08	3.20E-07	3.73E-07	3.17E-07
565374.3	4187955	5.31E-08	3.26E-07	3.80E-07	3.23E-07
565376	4187969	5.30E-08	3.26E-07	3.79E-07	3.22E-07
565377.7	4187983	5.27E-08	3.24E-07	3.76E-07	3.20E-07
565379.3	4187997	5.20E-08	3.19E-07	3.71E-07	3.16E-07
565381	4188011	5.10E-08	3.13E-07	3.64E-07	3.10E-07
565382.7	4188025	4.98E-08	3.06E-07	3.56E-07	3.02E-07
565384	4187953	5.09E-08	3.13E-07	3.63E-07	3.09E-07
565385.6	4187966	5.08E-08	3.12E-07	3.63E-07	3.08E-07
565387.2	4187979	5.05E-08	3.10E-07	3.61E-07	3.07E-07
565388.8	4187992	4.99E-08	3.07E-07	3.57E-07	3.03E-07
565390.3	4188005	4.91E-08	3.02E-07	3.51E-07	2.98E-07
565391.9	4188018	4.81E-08	2.96E-07	3.44E-07	2.92E-07
565393.7	4187950	4.88E-08	3.00E-07	3.48E-07	2.96E-07
565395.4	4187964	4.87E-08	2.99E-07	3.48E-07	2.96E-07
565397	4187978	4.84E-08	2.97E-07	3.46E-07	2.94E-07
565398.6	4187991	4.78E-08	2.94E-07	3.42E-07	2.90E-07
565400.2	4188005	4.70E-08	2.89E-07	3.36E-07	2.86E-07
565401.9	4188018	4.60E-08	2.83E-07	3.29E-07	2.80E-07
565403.5	4187948	4.68E-08	2.87E-07	3.34E-07	2.84E-07
565405.1	4187962	4.67E-08	2.87E-07	3.34E-07	2.84E-07
565406.8	4187976	4.64E-08	2.85E-07	3.31E-07	2.82E-07
565408.5	4187990	4.59E-08	2.82E-07	3.28E-07	2.78E-07
565410.2	4188004	4.51E-08	2.77E-07	3.22E-07	2.74E-07
565411.8	4188018	4.41E-08	2.71E-07	3.15E-07	2.68E-07
565400.9	4187934	4.68E-08	2.88E-07	3.34E-07	2.84E-07
565413.1	4187946	4.49E-08	2.76E-07	3.21E-07	2.73E-07
565414.7	4187959	4.49E-08	2.76E-07	3.21E-07	2.72E-07
565416.3	4187972	4.46E-08	2.74E-07	3.19E-07	2.71E-07
565417.9	4187985	4.42E-08	2.71E-07	3.16E-07	2.68E-07
565419.5	4187999	4.35E-08	2.67E-07	3.11E-07	2.64E-07
565421.1	4188012	4.27E-08	2.62E-07	3.05E-07	2.59E-07
565422.7	4188025	4.18E-08	2.57E-07	2.98E-07	2.54E-07
565410.7	4187932	4.49E-08	2.76E-07	3.21E-07	2.73E-07
565422.9	4187943	4.32E-08	2.65E-07	3.09E-07	2.62E-07
565424.5	4187957	4.31E-08	2.65E-07	3.08E-07	2.62E-07
565426.1	4187971	4.29E-08	2.63E-07	3.06E-07	2.60E-07
565427.8	4187984	4.24E-08	2.61E-07	3.03E-07	2.58E-07
565429.4	4187998	4.18E-08	2.57E-07	2.99E-07	2.54E-07
565431.1	4188011	4.10E-08	2.52E-07	2.93E-07	2.49E-07
565432.7	4188025	4.01E-08	2.46E-07	2.86E-07	2.43E-07
565420.4	4187930	4.32E-08	2.66E-07	3.09E-07	2.62E-07
565017.1	4187982	5.79E-07	3.56E-06	4.14E-06	3.52E-06
565008.1	4187982	5.86E-07	3.60E-06	4.18E-06	3.56E-06
564999.1	4187983	5.81E-07	3.57E-06	4.15E-06	3.53E-06
564990.1	4187984	5.67E-07	3.48E-06	4.05E-06	3.44E-06
565045.3	4187977	4.71E-07	2.89E-06	3.36E-06	2.86E-06
565016.4	4187972	4.39E-07	2.70E-06	3.14E-06	2.67E-06
565007.3	4187972	4.41E-07	2.71E-06	3.15E-06	2.68E-06
564998.3	4187973	4.37E-07	2.68E-06	3.12E-06	2.65E-06
564989.3	4187974	4.27E-07	2.63E-06	3.05E-06	2.60E-06
565049.5	4187968	3.82E-07	2.35E-06	2.73E-06	2.32E-06
565062.6	4187977	4.36E-07	2.68E-06	3.12E-06	2.65E-06
565015.6	4187962	3.45E-07	2.12E-06	2.47E-06	2.10E-06
565006.6	4187962	3.45E-07	2.12E-06	2.47E-06	2.10E-06
564997.6	4187963	3.41E-07	2.10E-06	2.44E-06	2.07E-06
564988.6	4187964	3.35E-07	2.06E-06	2.39E-06	2.03E-06
565047.7	4187958	3.12E-07	1.92E-06	2.23E-06	1.89E-06
565068.2	4187969	3.59E-07	2.21E-06	2.56E-06	2.18E-06
565014.8	4187952	2.80E-07	1.72E-06	2.00E-06	1.70E-06
565005.8	4187952	2.78E-07	1.71E-06	1.99E-06	1.69E-06
564996.8	4187953	2.75E-07	1.69E-06	1.97E-06	1.67E-06
564987.8	4187954	2.70E-07	1.66E-06	1.93E-06	1.64E-06
565046.3	4187948	2.59E-07	1.59E-06	1.85E-06	1.58E-06
565061.8	4187952	2.71E-07	1.67E-06	1.94E-06	1.65E-06
565074	4187961	3.02E-07	1.85E-06	2.16E-06	1.83E-06
565083	4187974	3.55E-07	2.18E-06	2.54E-06	2.16E-06
565014.1	4187942	2.31E-07	1.42E-06	1.65E-06	1.41E-06
565005	4187942	2.30E-07	1.41E-06	1.64E-06	1.40E-06
564996	4187943	2.27E-07	1.39E-06	1.62E-06	1.38E-06
564987	4187944	2.23E-07	1.37E-06	1.59E-06	1.35E-06
565045	4187937	2.19E-07	1.35E-06	1.57E-06	1.33E-06
565060.2	4187942	2.30E-07	1.42E-06	1.65E-06	1.40E-06
565079.8	4187953	2.58E-07	1.59E-06	1.85E-06	1.57E-06
565088.6	4187966	3.01E-07	1.85E-06	2.15E-06	1.83E-06
565013.3	4187932	1.95E-07	1.20E-06	1.39E-06	1.18E-06
565004.3	4187932	1.93E-07	1.19E-06	1.38E-06	1.17E-06
564995.3	4187933	1.90E-07	1.17E-06	1.36E-06	1.16E-06
564986.3	4187934	1.87E-07	1.15E-06	1.34E-06	1.14E-06
565047.1	4187928	1.90E-07	1.17E-06	1.36E-06	1.16E-06
565064.2	4187933	2.01E-07	1.23E-06	1.43E-06	1.22E-06
565086.2	4187945	2.26E-07	1.39E-06	1.62E-06	1.38E-06
565096.1	4187960	2.65E-07	1.63E-06	1.90E-06	1.61E-06
565012.5	4187922	1.67E-07	1.02E-06	1.19E-06	1.01E-06
565003.5	4187922	1.65E-07	1.01E-06	1.18E-06	1.00E-06
564994.5	4187923	1.62E-07	9.97E-07	1.16E-06	9.85E-07
564985.5	4187924	1.59E-07	9.78E-07	1.14E-06	9.67E-07
565029.1	4187913	1.52E-07	9.35E-07	1.09E-06	9.24E-07
565062.2	4187923	1.74E-07	1.07E-06	1.24E-06	1.06E-06
565078.8	4187928	1.81E-07	1.11E-06	1.29E-06	1.10E-06
565091.9	4187937	1.98E-07	1.22E-06	1.42E-06	1.20E-06
565101.5	4187951	2.30E-07	1.41E-06	1.64E-06	1.40E-06
565111.1	4187966	2.58E-07	1.59E-06	1.84E-06	1.57E-06
565011.8	4187912	1.44E-07	8.85E-07	1.03E-06	8.75E-07
565002.7	4187913	1.42E-07	8.73E-07	1.02E-06	8.63E-07
564993.7	4187913	1.40E-07	8.60E-07	1.00E-06	8.50E-07
564984.7	4187914	1.37E-07	8.45E-07	9.82E-07	8.35E-07
565028.1	4187903	1.33E-07	8.16E-07	9.49E-07	8.07E-07
565044.3	4187908	1.43E-07	8.81E-07	1.02E-06	8.71E-07

565097.7	4187929	1.76E-07	1.08E-06	1.25E-06	1.07E-06
565107.1	4187943	2.01E-07	1.24E-06	1.44E-06	1.22E-06
565116.5	4187957	2.26E-07	1.39E-06	1.61E-06	1.37E-06
565011	4187902	1.26E-07	7.72E-07	8.98E-07	7.63E-07
565002	4187903	1.24E-07	7.62E-07	8.86E-07	7.53E-07
564993	4187903	1.22E-07	7.50E-07	8.72E-07	7.41E-07
564984	4187904	1.20E-07	7.37E-07	8.57E-07	7.29E-07
565027.2	4187893	1.17E-07	7.19E-07	8.36E-07	7.10E-07
565043.1	4187898	1.26E-07	7.75E-07	9.01E-07	7.66E-07
565059	4187902	1.34E-07	8.23E-07	9.57E-07	8.14E-07
565103.5	4187921	1.57E-07	9.64E-07	1.12E-06	9.52E-07
565112.7	4187934	1.78E-07	1.10E-06	1.27E-06	1.08E-06
565121.9	4187948	1.99E-07	1.22E-06	1.42E-06	1.21E-06
565131.1	4187962	2.16E-07	1.33E-06	1.54E-06	1.31E-06
565001.2	4187893	1.09E-07	6.71E-07	7.80E-07	6.63E-07
564992.2	4187893	1.07E-07	6.60E-07	7.68E-07	6.53E-07
564983.2	4187894	1.06E-07	6.49E-07	7.55E-07	6.42E-07
565027.1	4187884	1.04E-07	6.40E-07	7.45E-07	6.33E-07
565044.3	4187889	1.13E-07	6.94E-07	8.07E-07	6.86E-07
565061.6	4187893	1.21E-07	7.41E-07	8.61E-07	7.32E-07
565078.8	4187898	1.27E-07	7.78E-07	9.05E-07	7.69E-07
565109.7	4187913	1.42E-07	8.73E-07	1.02E-06	8.63E-07
565114.7	4187920	1.52E-07	9.33E-07	1.09E-06	9.22E-07
565119.7	4187928	1.62E-07	9.95E-07	1.16E-06	9.83E-07
565129.7	4187943	1.81E-07	1.11E-06	1.29E-06	1.10E-06
565134.7	4187950	1.90E-07	1.17E-06	1.35E-06	1.15E-06
565139.7	4187958	1.97E-07	1.21E-06	1.41E-06	1.19E-06
565000.4	4187883	9.69E-08	5.95E-07	6.92E-07	5.88E-07
564991.4	4187883	9.53E-08	5.86E-07	6.81E-07	5.79E-07
564982.4	4187884	9.37E-08	5.76E-07	6.70E-07	5.69E-07
565026.1	4187874	9.31E-08	5.72E-07	6.65E-07	5.65E-07
565043	4187878	1.01E-07	6.19E-07	7.19E-07	6.11E-07
565059.9	4187883	1.07E-07	6.60E-07	7.68E-07	6.53E-07
565076.8	4187888	1.13E-07	6.95E-07	8.08E-07	6.87E-07
565093.7	4187893	1.18E-07	7.23E-07	8.40E-07	7.14E-07
565125.3	4187919	1.45E-07	8.93E-07	1.04E-06	8.82E-07
565135.1	4187934	1.62E-07	9.95E-07	1.16E-06	9.83E-07
565144.8	4187948	1.76E-07	1.08E-06	1.26E-06	1.07E-06
564999.7	4187873	8.66E-08	5.32E-07	6.19E-07	5.26E-07
564990.7	4187873	8.52E-08	5.23E-07	6.09E-07	5.17E-07
564981.7	4187874	8.37E-08	5.14E-07	5.98E-07	5.08E-07
565025.2	4187864	8.36E-08	5.14E-07	5.98E-07	5.08E-07
565041.8	4187868	9.02E-08	5.54E-07	6.45E-07	5.48E-07
565058.4	4187873	9.63E-08	5.92E-07	6.88E-07	5.85E-07
565075	4187878	1.02E-07	6.24E-07	7.26E-07	6.17E-07
565091.6	4187882	1.06E-07	6.50E-07	7.56E-07	6.43E-07
565108.2	4187887	1.09E-07	6.70E-07	7.79E-07	6.62E-07
565130.9	4187911	1.31E-07	8.07E-07	9.38E-07	7.97E-07
565140.5	4187925	1.46E-07	8.94E-07	1.04E-06	8.84E-07
564998.9	4187863	7.79E-08	4.79E-07	5.57E-07	4.73E-07
564989.9	4187863	7.66E-08	4.71E-07	5.47E-07	4.65E-07
564980.9	4187864	7.53E-08	4.63E-07	5.38E-07	4.57E-07
565040.7	4187858	8.14E-08	5.00E-07	5.81E-07	4.94E-07
565057	4187863	8.67E-08	5.33E-07	6.20E-07	5.27E-07
565073.3	4187867	9.15E-08	5.62E-07	6.54E-07	5.56E-07
565089.7	4187872	9.57E-08	5.88E-07	6.83E-07	5.81E-07
565106	4187877	9.88E-08	6.07E-07	7.06E-07	6.00E-07
565127.1	4187888	1.07E-07	6.58E-07	7.65E-07	6.50E-07
565058.8	4187854	7.95E-08	4.88E-07	5.68E-07	4.83E-07
565067.5	4187856	8.18E-08	5.03E-07	5.85E-07	4.97E-07
565076.1	4187858	8.40E-08	5.16E-07	6.01E-07	5.10E-07
565084.8	4187861	8.61E-08	5.29E-07	6.15E-07	5.23E-07
565102.2	4187866	8.96E-08	5.50E-07	6.40E-07	5.44E-07
565110.8	4187868	9.10E-08	5.59E-07	6.50E-07	5.52E-07
565119.5	4187871	9.21E-08	5.66E-07	6.58E-07	5.60E-07
565133.2	4187881	9.87E-08	6.06E-07	7.05E-07	5.99E-07
565163.4	4187926	1.33E-07	8.15E-07	9.48E-07	8.06E-07
565168.4	4187933	1.37E-07	8.44E-07	9.81E-07	8.34E-07
565173.4	4187941	1.41E-07	8.68E-07	1.01E-06	8.58E-07
565178.5	4187948	1.44E-07	8.87E-07	1.03E-06	8.77E-07
565183.5	4187955	1.46E-07	9.00E-07	1.05E-06	8.89E-07
564997.4	4187843	6.41E-08	3.94E-07	4.58E-07	3.89E-07
564988.4	4187843	6.31E-08	3.88E-07	4.51E-07	3.83E-07
564979.4	4187844	6.22E-08	3.82E-07	4.44E-07	3.78E-07
565023.2	4187834	6.28E-08	3.86E-07	4.48E-07	3.81E-07
565074.3	4187848	7.64E-08	4.70E-07	5.46E-07	4.64E-07
565091.4	4187853	8.01E-08	4.92E-07	5.72E-07	4.86E-07
565108.5	4187858	8.31E-08	5.10E-07	5.93E-07	5.04E-07
565125.5	4187863	8.53E-08	5.24E-07	6.09E-07	5.18E-07
565158.8	4187902	1.11E-07	6.83E-07	7.94E-07	6.75E-07
565168.7	4187917	1.21E-07	7.43E-07	8.64E-07	7.34E-07
565178.6	4187931	1.29E-07	7.93E-07	9.22E-07	7.84E-07
565188.4	4187946	1.35E-07	8.27E-07	9.62E-07	8.18E-07
564996.6	4187833	5.86E-08	3.60E-07	4.19E-07	3.56E-07
564987.6	4187833	5.77E-08	3.55E-07	4.12E-07	3.51E-07
564978.6	4187834	5.69E-08	3.50E-07	4.06E-07	3.45E-07
565022.3	4187824	5.75E-08	3.53E-07	4.11E-07	3.49E-07
565039.1	4187829	6.19E-08	3.80E-07	4.42E-07	3.76E-07
565089.5	4187843	7.32E-08	4.50E-07	5.23E-07	4.45E-07
565106.3	4187847	7.60E-08	4.67E-07	5.43E-07	4.62E-07
565123.1	4187852	7.83E-08	4.81E-07	5.59E-07	4.76E-07
565154.5	4187879	9.29E-08	5.71E-07	6.64E-07	5.64E-07
565164.3	4187893	1.02E-07	6.26E-07	7.28E-07	6.19E-07
565174	4187908	1.11E-07	6.80E-07	7.91E-07	6.72E-07
565183.8	4187922	1.18E-07	7.27E-07	8.45E-07	7.18E-07
565193.5	4187937	1.24E-07	7.62E-07	8.86E-07	7.53E-07
565203.2	4187951	1.27E-07	7.81E-07	9.08E-07	7.71E-07
564995.8	4187823	5.38E-08	3.31E-07	3.84E-07	3.27E-07
564986.8	4187823	5.30E-08	3.26E-07	3.79E-07	3.22E-07
564977.8	4187824	5.23E-08	3.21E-07	3.74E-07	3.17E-07
565021.4	4187814	5.29E-08	3.25E-07	3.78E-07	3.21E-07
565038	4187818	5.67E-08	3.49E-07	4.05E-07	3.44E-07
565054.6	4187823	6.05E-08	3.72E-07	4.32E-07	3.68E-07
565071.1	4187828	6.40E-08	3.93E-07	4.57E-07	3.89E-07
565104.3	4187837	6.98E-08	4.29E-07	4.99E-07	4.24E-07
565120.9	4187842	7.20E-08	4.43E-07	5.15E-07	4.37E-07
565150.6	4187856	7.81E-08	4.80E-07	5.58E-07	4.75E-07
565160.2	4187870	8.59E-08	5.28E-07	6.14E-07	5.22E-07
565169.8	4187885	9.39E-08	5.77E-07	6.71E-07	5.70E-07
565179.4	4187899	1.02E-07	6.25E-07	7.26E-07	6.17E-07
565189.1	4187913	1.09E-07	6.68E-07	7.77E-07	6.60E-07
565198.7	4187928	1.14E-07	7.03E-07	8.17E-07	6.95E-07
565208.3	4187942	1.18E-07	7.24E-07	8.42E-07	7.16E-07
564986.1	4187813	4.89E-08	3.00E-07	3.49E-07	2.97E-07
564977.1	4187814	4.82E-08	2.96E-07	3.45E-07	2.93E-07
565020.5	4187804	4.88E-08	3.00E-07	3.49E-07	2.96E-07

565036.9	4187808	5.22E-08	3.21E-07	3.73E-07	3.17E-07
565053.3	4187813	5.56E-08	3.42E-07	3.98E-07	3.38E-07
565069.7	4187818	5.89E-08	3.62E-07	4.21E-07	3.58E-07
565086.1	4187822	6.18E-08	3.80E-07	4.42E-07	3.75E-07
565156.4	4187848	7.28E-08	4.47E-07	5.20E-07	4.42E-07
565165.9	4187862	7.97E-08	4.90E-07	5.70E-07	4.84E-07
565175.4	4187876	8.68E-08	5.33E-07	6.20E-07	5.27E-07
565184.9	4187890	9.38E-08	5.76E-07	6.70E-07	5.70E-07
565194.4	4187904	1.00E-07	6.16E-07	7.17E-07	6.09E-07
565203.9	4187919	1.06E-07	6.50E-07	7.55E-07	6.42E-07
565213.4	4187933	1.10E-07	6.73E-07	7.82E-07	6.65E-07
565222.9	4187947	1.11E-07	6.84E-07	7.95E-07	6.76E-07
564985.3	4187804	4.52E-08	2.78E-07	3.23E-07	2.75E-07
564976.3	4187804	4.46E-08	2.74E-07	3.19E-07	2.71E-07
565020.1	4187794	4.53E-08	2.78E-07	3.24E-07	2.75E-07
565037.3	4187799	4.85E-08	2.98E-07	3.47E-07	2.95E-07
565054.5	4187804	5.18E-08	3.18E-07	3.70E-07	3.15E-07
565071.7	4187808	5.49E-08	3.38E-07	3.92E-07	3.34E-07
565088.8	4187813	5.77E-08	3.55E-07	4.12E-07	3.50E-07
565106	4187818	6.01E-08	3.69E-07	4.30E-07	3.65E-07
565162.5	4187840	6.82E-08	4.19E-07	4.87E-07	4.14E-07
565167.5	4187847	7.14E-08	4.39E-07	5.10E-07	4.34E-07
565177.4	4187862	7.81E-08	4.80E-07	5.58E-07	4.74E-07
565182.4	4187870	8.15E-08	5.01E-07	5.82E-07	4.95E-07
565192.4	4187885	8.81E-08	5.41E-07	6.29E-07	5.35E-07
565202.3	4187899	9.42E-08	5.79E-07	6.73E-07	5.72E-07
565207.3	4187907	9.70E-08	5.96E-07	6.93E-07	5.89E-07
565217.2	4187922	1.01E-07	6.23E-07	7.24E-07	6.16E-07
565222.2	4187929	1.03E-07	6.32E-07	7.35E-07	6.25E-07
565232.2	4187944	1.04E-07	6.42E-07	7.47E-07	6.35E-07
564984.5	4187794	4.20E-08	2.58E-07	3.00E-07	2.55E-07
564975.5	4187794	4.15E-08	2.55E-07	2.96E-07	2.52E-07
565019.3	4187784	4.21E-08	2.59E-07	3.01E-07	2.56E-07
565036.2	4187789	4.50E-08	2.76E-07	3.21E-07	2.73E-07
565053.2	4187793	4.79E-08	2.94E-07	3.42E-07	2.91E-07
565070.1	4187798	5.08E-08	3.12E-07	3.63E-07	3.08E-07
565087.1	4187803	5.34E-08	3.28E-07	3.81E-07	3.24E-07
565104	4187808	5.57E-08	3.42E-07	3.98E-07	3.38E-07
565168.3	4187832	6.38E-08	3.92E-07	4.56E-07	3.88E-07
565178.1	4187847	6.97E-08	4.28E-07	4.98E-07	4.23E-07
565188	4187861	7.57E-08	4.65E-07	5.41E-07	4.60E-07
565197.8	4187876	8.17E-08	5.02E-07	5.84E-07	4.96E-07
565207.6	4187890	8.74E-08	5.37E-07	6.24E-07	5.31E-07
565217.4	4187905	9.22E-08	5.67E-07	6.59E-07	5.60E-07
565227.3	4187920	9.59E-08	5.89E-07	6.85E-07	5.82E-07
565237.1	4187934	9.80E-08	6.02E-07	7.00E-07	5.95E-07
564983.8	4187784	3.91E-08	2.40E-07	2.79E-07	2.37E-07
564974.8	4187784	3.86E-08	2.37E-07	2.76E-07	2.35E-07
565018.4	4187774	3.92E-08	2.41E-07	2.80E-07	2.38E-07
565035.2	4187779	4.18E-08	2.57E-07	2.99E-07	2.54E-07
565051.9	4187783	4.45E-08	2.73E-07	3.18E-07	2.70E-07
565068.7	4187788	4.71E-08	2.89E-07	3.36E-07	2.86E-07
565085.5	4187793	4.95E-08	3.04E-07	3.54E-07	3.01E-07
565102.2	4187798	5.17E-08	3.18E-07	3.69E-07	3.14E-07
565174.1	4187824	5.99E-08	3.68E-07	4.28E-07	3.64E-07
565183.8	4187838	6.52E-08	4.00E-07	4.66E-07	3.96E-07
565193.6	4187853	7.06E-08	4.34E-07	5.05E-07	4.29E-07
565203.3	4187867	7.61E-08	4.67E-07	5.44E-07	4.62E-07
565213	4187882	8.12E-08	4.99E-07	5.80E-07	4.93E-07
565222.7	4187896	8.58E-08	5.27E-07	6.13E-07	5.21E-07
565232.4	4187910	8.95E-08	5.50E-07	6.39E-07	5.43E-07
565242.1	4187925	9.19E-08	5.64E-07	6.56E-07	5.58E-07
565251.8	4187939	9.27E-08	5.70E-07	6.63E-07	5.63E-07
565001	4187772	3.75E-08	2.30E-07	2.68E-07	2.28E-07
564983	4187774	3.65E-08	2.24E-07	2.61E-07	2.22E-07
564974	4187774	3.61E-08	2.22E-07	2.58E-07	2.19E-07
565017.6	4187764	3.66E-08	2.25E-07	2.62E-07	2.22E-07
565034.1	4187769	3.90E-08	2.40E-07	2.79E-07	2.37E-07
565050.7	4187773	4.14E-08	2.54E-07	2.96E-07	2.51E-07
565067.3	4187778	4.37E-08	2.69E-07	3.13E-07	2.66E-07
565083.9	4187783	4.60E-08	2.83E-07	3.29E-07	2.80E-07
565100.5	4187787	4.81E-08	2.96E-07	3.44E-07	2.92E-07
565150.3	4187801	5.27E-08	3.24E-07	3.77E-07	3.20E-07
565166.8	4187806	5.37E-08	3.30E-07	3.84E-07	3.26E-07
565189.6	4187830	6.11E-08	3.76E-07	4.37E-07	3.71E-07
565199.2	4187844	6.60E-08	4.06E-07	4.72E-07	4.01E-07
565208.8	4187858	7.10E-08	4.36E-07	5.07E-07	4.31E-07
565218.4	4187873	7.57E-08	4.65E-07	5.41E-07	4.60E-07
565228	4187887	8.00E-08	4.92E-07	5.72E-07	4.86E-07
565237.6	4187901	8.36E-08	5.14E-07	5.97E-07	5.08E-07
565247.2	4187916	8.62E-08	5.30E-07	6.16E-07	5.23E-07
565256.9	4187930	8.75E-08	5.37E-07	6.25E-07	5.31E-07
565000.3	4187762	3.50E-08	2.15E-07	2.50E-07	2.13E-07
564982.2	4187764	3.42E-08	2.10E-07	2.44E-07	2.08E-07
564973.2	4187764	3.38E-08	2.07E-07	2.41E-07	2.05E-07
565017.1	4187754	3.44E-08	2.11E-07	2.45E-07	2.09E-07
565034.4	4187759	3.66E-08	2.25E-07	2.61E-07	2.22E-07
565051.6	4187764	3.89E-08	2.39E-07	2.78E-07	2.36E-07
565068.9	4187769	4.11E-08	2.53E-07	2.94E-07	2.50E-07
565086.1	4187774	4.33E-08	2.66E-07	3.10E-07	2.63E-07
565103.4	4187778	4.54E-08	2.79E-07	3.24E-07	2.76E-07
565137.9	4187788	4.86E-08	2.98E-07	3.47E-07	2.95E-07
565155.1	4187793	4.98E-08	3.06E-07	3.56E-07	3.02E-07
565172.4	4187798	5.07E-08	3.12E-07	3.62E-07	3.08E-07
565201	4187830	6.01E-08	3.69E-07	4.29E-07	3.65E-07
565206	4187837	6.24E-08	3.84E-07	4.46E-07	3.79E-07
565211	4187845	6.48E-08	3.98E-07	4.63E-07	3.94E-07
565221	4187860	6.95E-08	4.27E-07	4.96E-07	4.22E-07
565226	4187867	7.17E-08	4.41E-07	5.12E-07	4.36E-07
565231	4187875	7.38E-08	4.54E-07	5.28E-07	4.48E-07
565236	4187882	7.58E-08	4.66E-07	5.42E-07	4.61E-07
565246	4187897	7.92E-08	4.87E-07	5.66E-07	4.81E-07
565251	4187904	8.06E-08	4.95E-07	5.76E-07	4.89E-07
565256	4187912	8.16E-08	5.02E-07	5.83E-07	4.96E-07
565266	4187927	8.28E-08	5.09E-07	5.92E-07	5.03E-07
565271	4187934	8.29E-08	5.09E-07	5.92E-07	5.03E-07
564999.5	4187752	3.29E-08	2.02E-07	2.35E-07	2.00E-07
564981.5	4187754	3.21E-08	1.97E-07	2.29E-07	1.95E-07
564972.5	4187754	3.17E-08	1.95E-07	2.26E-07	1.92E-07
565016.3	4187744	3.22E-08	1.98E-07	2.30E-07	1.96E-07
565033.3	4187749	3.43E-08	2.11E-07	2.45E-07	2.08E-07
565050.4	4187754	3.64E-08	2.23E-07	2.60E-07	2.21E-07
565067.4	4187758	3.84E-08	2.36E-07	2.75E-07	2.33E-07
565084.5	4187763	4.05E-08	2.49E-07	2.89E-07	2.46E-07
565101.6	4187768	4.24E-08	2.60E-07	3.03E-07	2.57E-07
565135.7	4187778	4.55E-08	2.79E-07	3.25E-07	2.76E-07

565152.7	4187783	4.67E-08	2.87E-07	3.33E-07	2.83E-07
565169.8	4187787	4.76E-08	2.93E-07	3.40E-07	2.89E-07
565191.8	4187800	5.03E-08	3.09E-07	3.59E-07	3.06E-07
565211.6	4187829	5.86E-08	3.60E-07	4.19E-07	3.56E-07
565221.5	4187844	6.29E-08	3.87E-07	4.50E-07	3.82E-07
565231.4	4187858	6.71E-08	4.12E-07	4.80E-07	4.08E-07
565241.3	4187873	7.10E-08	4.36E-07	5.07E-07	4.31E-07
565251.1	4187888	7.43E-08	4.56E-07	5.31E-07	4.51E-07
565261	4187903	7.68E-08	4.72E-07	5.48E-07	4.66E-07
565266	4187910	7.76E-08	4.77E-07	5.55E-07	4.71E-07
565275.9	4187925	7.85E-08	4.83E-07	5.61E-07	4.77E-07
564998.7	4187742	3.09E-08	1.90E-07	2.21E-07	1.87E-07
564971.7	4187744	2.98E-08	1.83E-07	2.13E-07	1.81E-07
565015.4	4187734	3.03E-08	1.86E-07	2.16E-07	1.84E-07
565032.3	4187739	3.21E-08	1.98E-07	2.30E-07	1.95E-07
565049.2	4187744	3.41E-08	2.09E-07	2.43E-07	2.07E-07
565066.1	4187748	3.60E-08	2.21E-07	2.57E-07	2.19E-07
565083	4187753	3.79E-08	2.33E-07	2.70E-07	2.30E-07
565099.8	4187758	3.96E-08	2.43E-07	2.83E-07	2.41E-07
565133.6	4187767	4.26E-08	2.62E-07	3.05E-07	2.59E-07
565150.5	4187772	4.38E-08	2.69E-07	3.13E-07	2.66E-07
565167.4	4187777	4.48E-08	2.75E-07	3.20E-07	2.72E-07
565184.3	4187782	4.56E-08	2.80E-07	3.25E-07	2.77E-07
565197.6	4187791	4.76E-08	2.93E-07	3.40E-07	2.89E-07
565217.2	4187821	5.52E-08	3.39E-07	3.94E-07	3.35E-07
565227	4187835	5.91E-08	3.63E-07	4.22E-07	3.59E-07
565236.8	4187850	6.30E-08	3.87E-07	4.50E-07	3.82E-07
565246.6	4187864	6.66E-08	4.09E-07	4.76E-07	4.04E-07
565256.4	4187879	6.97E-08	4.29E-07	4.98E-07	4.24E-07
565266.2	4187893	7.22E-08	4.44E-07	5.16E-07	4.39E-07
565275.9	4187908	7.39E-08	4.54E-07	5.28E-07	4.49E-07
565285.7	4187922	7.46E-08	4.59E-07	5.33E-07	4.53E-07
564998	4187732	2.90E-08	1.78E-07	2.07E-07	1.76E-07
564970.9	4187734	2.80E-08	1.72E-07	2.00E-07	1.70E-07
565014.6	4187724	2.85E-08	1.75E-07	2.04E-07	1.73E-07
565031.3	4187729	3.02E-08	1.86E-07	2.16E-07	1.84E-07
565048	4187733	3.20E-08	1.97E-07	2.29E-07	1.94E-07
565064.8	4187738	3.38E-08	2.07E-07	2.41E-07	2.05E-07
565081.5	4187743	3.55E-08	2.18E-07	2.54E-07	2.16E-07
565098.2	4187748	3.71E-08	2.28E-07	2.65E-07	2.26E-07
565131.7	4187757	4.00E-08	2.46E-07	2.86E-07	2.43E-07
565148.4	4187762	4.12E-08	2.53E-07	2.94E-07	2.50E-07
565165.1	4187767	4.22E-08	2.59E-07	3.01E-07	2.56E-07
565181.9	4187771	4.30E-08	2.64E-07	3.07E-07	2.61E-07
565203.5	4187783	4.52E-08	2.78E-07	3.23E-07	2.74E-07
565213.2	4187798	4.85E-08	2.98E-07	3.47E-07	2.95E-07
565222.9	4187812	5.20E-08	3.20E-07	3.72E-07	3.16E-07
565232.5	4187827	5.56E-08	3.42E-07	3.97E-07	3.38E-07
565242.2	4187841	5.92E-08	3.64E-07	4.23E-07	3.59E-07
565251.9	4187855	6.26E-08	3.84E-07	4.47E-07	3.80E-07
565261.6	4187870	6.56E-08	4.03E-07	4.69E-07	3.98E-07
565271.3	4187884	6.81E-08	4.18E-07	4.86E-07	4.13E-07
565281	4187899	6.99E-08	4.29E-07	4.99E-07	4.24E-07
565290.7	4187913	7.08E-08	4.35E-07	5.06E-07	4.30E-07
565300.4	4187928	7.09E-08	4.36E-07	5.07E-07	4.31E-07
564997.2	4187722	2.74E-08	1.68E-07	1.96E-07	1.66E-07
564970.2	4187724	2.65E-08	1.63E-07	1.89E-07	1.61E-07
565014.1	4187714	2.69E-08	1.65E-07	1.92E-07	1.63E-07
565031.4	4187719	2.86E-08	1.76E-07	2.04E-07	1.74E-07
565040	4187721	2.94E-08	1.81E-07	2.10E-07	1.79E-07
565057.3	4187726	3.11E-08	1.91E-07	2.22E-07	1.89E-07
565074.7	4187731	3.28E-08	2.02E-07	2.35E-07	1.99E-07
565083.3	4187734	3.37E-08	2.07E-07	2.40E-07	2.04E-07
565100.6	4187739	3.52E-08	2.17E-07	2.52E-07	2.14E-07
565135.2	4187748	3.81E-08	2.34E-07	2.72E-07	2.31E-07
565152.5	4187753	3.92E-08	2.41E-07	2.80E-07	2.38E-07
565169.9	4187758	4.01E-08	2.46E-07	2.87E-07	2.44E-07
565187.2	4187763	4.09E-08	2.51E-07	2.92E-07	2.48E-07
565209.5	4187775	4.30E-08	2.64E-07	3.07E-07	2.61E-07
565214.5	4187783	4.45E-08	2.74E-07	3.18E-07	2.71E-07
565219.5	4187790	4.62E-08	2.84E-07	3.30E-07	2.80E-07
565234.6	4187813	5.12E-08	3.15E-07	3.66E-07	3.11E-07
565239.6	4187820	5.30E-08	3.25E-07	3.78E-07	3.22E-07
565249.6	4187835	5.64E-08	3.46E-07	4.03E-07	3.42E-07
565254.6	4187843	5.80E-08	3.57E-07	4.15E-07	3.52E-07
565259.7	4187850	5.96E-08	3.66E-07	4.26E-07	3.62E-07
565264.7	4187857	6.11E-08	3.76E-07	4.37E-07	3.71E-07
565269.7	4187865	6.25E-08	3.84E-07	4.47E-07	3.80E-07
565274.7	4187872	6.38E-08	3.92E-07	4.56E-07	3.87E-07
565284.7	4187887	6.58E-08	4.05E-07	4.70E-07	4.00E-07
565289.7	4187895	6.66E-08	4.09E-07	4.76E-07	4.04E-07
565294.8	4187902	6.71E-08	4.13E-07	4.80E-07	4.08E-07
565299.8	4187910	6.75E-08	4.15E-07	4.82E-07	4.10E-07
565304.8	4187917	6.76E-08	4.15E-07	4.83E-07	4.11E-07
565309.8	4187925	6.75E-08	4.15E-07	4.82E-07	4.10E-07
565030.4	4187709	2.69E-08	1.66E-07	1.93E-07	1.64E-07
565047.5	4187714	2.85E-08	1.75E-07	2.04E-07	1.73E-07
565064.6	4187719	3.01E-08	1.85E-07	2.15E-07	1.83E-07
565081.8	4187724	3.17E-08	1.95E-07	2.26E-07	1.92E-07
565098.9	4187728	3.32E-08	2.04E-07	2.37E-07	2.01E-07
565133.2	4187738	3.58E-08	2.20E-07	2.56E-07	2.18E-07
565150.4	4187743	3.69E-08	2.27E-07	2.64E-07	2.24E-07
565167.5	4187748	3.79E-08	2.33E-07	2.71E-07	2.30E-07
565184.6	4187753	3.86E-08	2.37E-07	2.76E-07	2.35E-07
565201.8	4187757	3.92E-08	2.41E-07	2.80E-07	2.38E-07
565215.3	4187767	4.09E-08	2.51E-07	2.92E-07	2.48E-07
565225.2	4187782	4.38E-08	2.69E-07	3.13E-07	2.66E-07
565245.1	4187812	5.00E-08	3.07E-07	3.57E-07	3.04E-07
565255	4187826	5.32E-08	3.27E-07	3.80E-07	3.23E-07
565265	4187841	5.62E-08	3.45E-07	4.01E-07	3.41E-07
565274.9	4187856	5.89E-08	3.62E-07	4.21E-07	3.58E-07
565284.9	4187871	6.13E-08	3.77E-07	4.38E-07	3.72E-07
565294.8	4187885	6.31E-08	3.88E-07	4.51E-07	3.83E-07
565304.7	4187900	6.41E-08	3.94E-07	4.58E-07	3.90E-07
565309.7	4187908	6.44E-08	3.96E-07	4.60E-07	3.91E-07
565319.6	4187922	6.43E-08	3.95E-07	4.60E-07	3.91E-07
564968.6	4187705	2.37E-08	1.46E-07	1.70E-07	1.44E-07
565012.4	4187694	2.41E-08	1.48E-07	1.72E-07	1.46E-07
565046.4	4187704	2.69E-08	1.65E-07	1.92E-07	1.63E-07
565063.3	4187709	2.84E-08	1.74E-07	2.03E-07	1.72E-07
565080.3	4187713	2.98E-08	1.83E-07	2.13E-07	1.81E-07
565097.3	4187718	3.12E-08	1.92E-07	2.23E-07	1.90E-07
565131.3	4187728	3.38E-08	2.08E-07	2.41E-07	2.05E-07
565148.3	4187733	3.48E-08	2.14E-07	2.49E-07	2.12E-07
565165.3	4187737	3.58E-08	2.20E-07	2.56E-07	2.17E-07
565182.2	4187742	3.65E-08	2.25E-07	2.61E-07	2.22E-07

565199.2	4187747	3.72E-08	2.28E-07	2.66E-07	2.26E-07
565221.1	4187759	3.89E-08	2.39E-07	2.78E-07	2.36E-07
565231	4187774	4.16E-08	2.56E-07	2.97E-07	2.53E-07
565240.8	4187788	4.44E-08	2.73E-07	3.17E-07	2.70E-07
565260.5	4187818	5.02E-08	3.09E-07	3.59E-07	3.05E-07
565270.4	4187832	5.30E-08	3.26E-07	3.79E-07	3.22E-07
565280.2	4187847	5.57E-08	3.42E-07	3.98E-07	3.38E-07
565290	4187862	5.79E-08	3.56E-07	4.14E-07	3.52E-07
565299.9	4187876	5.98E-08	3.67E-07	4.27E-07	3.63E-07
565309.7	4187891	6.10E-08	3.75E-07	4.36E-07	3.70E-07
565319.6	4187906	6.15E-08	3.78E-07	4.40E-07	3.74E-07
565329.4	4187920	6.14E-08	3.77E-07	4.39E-07	3.73E-07
564994.9	4187692	2.32E-08	1.43E-07	1.66E-07	1.41E-07
564985.9	4187693	2.30E-08	1.41E-07	1.64E-07	1.40E-07
564976.9	4187694	2.27E-08	1.40E-07	1.62E-07	1.38E-07
564967.9	4187695	2.25E-08	1.38E-07	1.61E-07	1.37E-07
565011.5	4187684	2.29E-08	1.41E-07	1.63E-07	1.39E-07
565028.4	4187689	2.41E-08	1.48E-07	1.72E-07	1.46E-07
565078.9	4187703	2.81E-08	1.73E-07	2.01E-07	1.71E-07
565095.8	4187708	2.95E-08	1.81E-07	2.11E-07	1.79E-07
565129.4	4187717	3.19E-08	1.96E-07	2.28E-07	1.94E-07
565146.3	4187722	3.29E-08	2.02E-07	2.35E-07	2.00E-07
565163.1	4187727	3.38E-08	2.08E-07	2.42E-07	2.05E-07
565180	4187732	3.46E-08	2.13E-07	2.47E-07	2.10E-07
565196.8	4187736	3.52E-08	2.17E-07	2.52E-07	2.14E-07
565213.7	4187741	3.57E-08	2.20E-07	2.55E-07	2.17E-07
565227	4187751	3.71E-08	2.28E-07	2.65E-07	2.26E-07
565236.7	4187765	3.96E-08	2.43E-07	2.83E-07	2.41E-07
565246.5	4187780	4.22E-08	2.59E-07	3.01E-07	2.56E-07
565266	4187809	4.75E-08	2.92E-07	3.40E-07	2.89E-07
565275.8	4187824	5.02E-08	3.08E-07	3.58E-07	3.05E-07
565285.5	4187838	5.26E-08	3.24E-07	3.76E-07	3.20E-07
565295.3	4187853	5.49E-08	3.37E-07	3.92E-07	3.33E-07
565305.1	4187867	5.67E-08	3.48E-07	4.05E-07	3.44E-07
565314.8	4187882	5.80E-08	3.56E-07	4.14E-07	3.52E-07
565324.6	4187896	5.87E-08	3.61E-07	4.20E-07	3.57E-07
565334.3	4187911	5.88E-08	3.62E-07	4.20E-07	3.57E-07
564994.1	4187682	2.21E-08	1.36E-07	1.58E-07	1.34E-07
564985.1	4187683	2.18E-08	1.34E-07	1.56E-07	1.33E-07
564976.1	4187684	2.16E-08	1.33E-07	1.54E-07	1.31E-07
564967.1	4187685	2.14E-08	1.32E-07	1.53E-07	1.30E-07
565011	4187674	2.18E-08	1.34E-07	1.55E-07	1.32E-07
565019.7	4187677	2.23E-08	1.37E-07	1.60E-07	1.36E-07
565028.4	4187679	2.29E-08	1.41E-07	1.64E-07	1.39E-07
565045.7	4187684	2.42E-08	1.49E-07	1.73E-07	1.47E-07
565089.1	4187696	2.75E-08	1.69E-07	1.96E-07	1.67E-07
565123.8	4187706	2.99E-08	1.84E-07	2.14E-07	1.82E-07
565132.5	4187709	3.05E-08	1.87E-07	2.18E-07	1.85E-07
565141.2	4187711	3.10E-08	1.90E-07	2.21E-07	1.88E-07
565149.9	4187713	3.14E-08	1.93E-07	2.25E-07	1.91E-07
565167.2	4187718	3.23E-08	1.99E-07	2.31E-07	1.96E-07
565175.9	4187721	3.27E-08	2.01E-07	2.34E-07	1.99E-07
565184.6	4187723	3.31E-08	2.03E-07	2.36E-07	2.01E-07
565193.2	4187726	3.34E-08	2.05E-07	2.39E-07	2.03E-07
565201.9	4187728	3.37E-08	2.07E-07	2.41E-07	2.05E-07
565219.3	4187733	3.42E-08	2.10E-07	2.44E-07	2.08E-07
565233	4187743	3.55E-08	2.18E-07	2.54E-07	2.16E-07
565238	4187750	3.67E-08	2.25E-07	2.62E-07	2.23E-07
565243	4187758	3.79E-08	2.33E-07	2.71E-07	2.30E-07
565248.1	4187765	3.91E-08	2.40E-07	2.79E-07	2.38E-07
565253.1	4187773	4.04E-08	2.48E-07	2.88E-07	2.45E-07
565258.1	4187780	4.16E-08	2.56E-07	2.97E-07	2.53E-07
565263.2	4187788	4.29E-08	2.64E-07	3.07E-07	2.61E-07
565278.2	4187810	4.68E-08	2.87E-07	3.34E-07	2.84E-07
565283.3	4187818	4.80E-08	2.95E-07	3.43E-07	2.92E-07
565288.3	4187825	4.93E-08	3.03E-07	3.52E-07	2.99E-07
565293.3	4187833	5.04E-08	3.10E-07	3.60E-07	3.06E-07
565298.4	4187840	5.15E-08	3.17E-07	3.68E-07	3.13E-07
565303.4	4187848	5.25E-08	3.23E-07	3.75E-07	3.19E-07
565308.4	4187855	5.35E-08	3.29E-07	3.82E-07	3.25E-07
565313.4	4187863	5.43E-08	3.34E-07	3.88E-07	3.30E-07
565318.5	4187870	5.50E-08	3.38E-07	3.93E-07	3.34E-07
565323.5	4187878	5.55E-08	3.41E-07	3.97E-07	3.37E-07
565328.5	4187885	5.60E-08	3.44E-07	4.00E-07	3.40E-07
565333.6	4187893	5.62E-08	3.46E-07	4.02E-07	3.41E-07
565338.6	4187900	5.63E-08	3.46E-07	4.03E-07	3.42E-07
565343.6	4187908	5.63E-08	3.46E-07	4.02E-07	3.42E-07
565353.7	4187923	5.58E-08	3.43E-07	3.99E-07	3.39E-07
564993.4	4187673	2.10E-08	1.29E-07	1.50E-07	1.27E-07
564984.3	4187673	2.08E-08	1.28E-07	1.48E-07	1.26E-07
564975.3	4187674	2.06E-08	1.26E-07	1.47E-07	1.25E-07
564966.3	4187675	2.04E-08	1.25E-07	1.46E-07	1.24E-07
565010.2	4187664	2.07E-08	1.27E-07	1.48E-07	1.26E-07
565027.4	4187669	2.18E-08	1.34E-07	1.56E-07	1.32E-07
565044.6	4187674	2.29E-08	1.41E-07	1.64E-07	1.39E-07
565061.8	4187679	2.41E-08	1.48E-07	1.72E-07	1.47E-07
565113.4	4187693	2.78E-08	1.71E-07	1.98E-07	1.69E-07
565130.6	4187698	2.88E-08	1.77E-07	2.06E-07	1.75E-07
565147.8	4187703	2.98E-08	1.83E-07	2.13E-07	1.81E-07
565165	4187708	3.06E-08	1.88E-07	2.19E-07	1.86E-07
565182.2	4187713	3.14E-08	1.93E-07	2.24E-07	1.91E-07
565199.4	4187718	3.20E-08	1.97E-07	2.29E-07	1.95E-07
565216.6	4187723	3.25E-08	2.00E-07	2.32E-07	1.98E-07
565238.8	4187735	3.40E-08	2.09E-07	2.43E-07	2.06E-07
565243.8	4187742	3.50E-08	2.15E-07	2.50E-07	2.13E-07
565253.8	4187757	3.73E-08	2.29E-07	2.66E-07	2.26E-07
565258.7	4187765	3.84E-08	2.36E-07	2.75E-07	2.33E-07
565263.7	4187772	3.96E-08	2.43E-07	2.83E-07	2.41E-07
565288.7	4187809	4.56E-08	2.80E-07	3.25E-07	2.77E-07
565293.6	4187816	4.67E-08	2.87E-07	3.34E-07	2.84E-07
565303.6	4187831	4.89E-08	3.00E-07	3.49E-07	2.97E-07
565313.6	4187846	5.08E-08	3.12E-07	3.63E-07	3.08E-07
565318.6	4187854	5.16E-08	3.17E-07	3.68E-07	3.13E-07
565323.5	4187861	5.23E-08	3.21E-07	3.74E-07	3.18E-07
565333.5	4187876	5.34E-08	3.28E-07	3.81E-07	3.24E-07
565338.5	4187883	5.37E-08	3.30E-07	3.84E-07	3.26E-07
565348.5	4187898	5.40E-08	3.32E-07	3.86E-07	3.28E-07
565353.5	4187905	5.39E-08	3.32E-07	3.85E-07	3.28E-07
565363.4	4187920	5.34E-08	3.28E-07	3.82E-07	3.24E-07
564992.6	4187663	2.00E-08	1.23E-07	1.43E-07	1.21E-07
564983.6	4187663	1.98E-08	1.22E-07	1.41E-07	1.20E-07
564974.6	4187664	1.96E-08	1.21E-07	1.40E-07	1.19E-07
564965.6	4187665	1.94E-08	1.19E-07	1.39E-07	1.18E-07
565009.4	4187654	1.97E-08	1.21E-07	1.41E-07	1.20E-07
565026.4	4187659	2.07E-08	1.27E-07	1.48E-07	1.26E-07
565043.5	4187664	2.18E-08	1.34E-07	1.56E-07	1.32E-07

565060.5	4187669	2.29E-08	1.41E-07	1.64E-07	1.39E-07
565077.6	4187674	2.40E-08	1.48E-07	1.72E-07	1.46E-07
565162.9	4187698	2.91E-08	1.79E-07	2.08E-07	1.77E-07
565180	4187702	2.98E-08	1.83E-07	2.13E-07	1.81E-07
565197	4187707	3.05E-08	1.87E-07	2.18E-07	1.85E-07
565214.1	4187712	3.10E-08	1.90E-07	2.21E-07	1.88E-07
565231.2	4187717	3.14E-08	1.93E-07	2.24E-07	1.91E-07
565244.6	4187727	3.25E-08	2.00E-07	2.32E-07	1.98E-07
565254.5	4187741	3.45E-08	2.12E-07	2.47E-07	2.10E-07
565264.4	4187756	3.66E-08	2.25E-07	2.62E-07	2.23E-07
565269.4	4187763	3.77E-08	2.32E-07	2.70E-07	2.29E-07
565279.2	4187778	3.99E-08	2.45E-07	2.85E-07	2.43E-07
565299	4187808	4.43E-08	2.72E-07	3.17E-07	2.69E-07
565308.9	4187822	4.64E-08	2.85E-07	3.31E-07	2.82E-07
565313.9	4187830	4.73E-08	2.91E-07	3.38E-07	2.87E-07
565323.7	4187844	4.90E-08	3.01E-07	3.50E-07	2.98E-07
565333.6	4187859	5.04E-08	3.10E-07	3.60E-07	3.06E-07
565343.5	4187874	5.13E-08	3.15E-07	3.67E-07	3.12E-07
565353.4	4187889	5.18E-08	3.18E-07	3.70E-07	3.14E-07
565358.3	4187896	5.18E-08	3.18E-07	3.70E-07	3.15E-07
565368.2	4187911	5.15E-08	3.17E-07	3.68E-07	3.13E-07
564991.8	4187653	1.91E-08	1.17E-07	1.36E-07	1.16E-07
564982.8	4187653	1.89E-08	1.16E-07	1.35E-07	1.15E-07
564973.8	4187654	1.87E-08	1.15E-07	1.34E-07	1.14E-07
564964.8	4187655	1.86E-08	1.14E-07	1.33E-07	1.13E-07
565008.5	4187644	1.88E-08	1.16E-07	1.34E-07	1.14E-07
565025.5	4187649	1.97E-08	1.21E-07	1.41E-07	1.20E-07
565042.4	4187654	2.07E-08	1.27E-07	1.48E-07	1.26E-07
565059.3	4187659	2.18E-08	1.34E-07	1.56E-07	1.32E-07
565076.2	4187663	2.28E-08	1.40E-07	1.63E-07	1.39E-07
565093.2	4187668	2.39E-08	1.47E-07	1.71E-07	1.45E-07
565127	4187678	2.59E-08	1.59E-07	1.85E-07	1.58E-07
565211.7	4187702	2.95E-08	1.81E-07	2.11E-07	1.79E-07
565228.6	4187706	2.99E-08	1.84E-07	2.14E-07	1.82E-07
565250.5	4187719	3.12E-08	1.92E-07	2.23E-07	1.89E-07
565260.3	4187733	3.30E-08	2.03E-07	2.36E-07	2.01E-07
565270.1	4187748	3.50E-08	2.15E-07	2.50E-07	2.13E-07
565279.9	4187762	3.70E-08	2.27E-07	2.64E-07	2.25E-07
565289.7	4187777	3.91E-08	2.40E-07	2.79E-07	2.37E-07
565309.3	4187806	4.31E-08	2.65E-07	3.08E-07	2.62E-07
565319.2	4187821	4.50E-08	2.77E-07	3.22E-07	2.73E-07
565329	4187835	4.67E-08	2.87E-07	3.33E-07	2.83E-07
565338.8	4187850	4.80E-08	2.95E-07	3.43E-07	2.92E-07
565348.6	4187865	4.90E-08	3.01E-07	3.50E-07	2.98E-07
565358.4	4187879	4.96E-08	3.05E-07	3.54E-07	3.01E-07
565368.2	4187894	4.97E-08	3.06E-07	3.55E-07	3.02E-07
565378	4187908	4.94E-08	3.04E-07	3.53E-07	3.00E-07
564991.1	4187643	1.82E-08	1.12E-07	1.30E-07	1.10E-07
564982	4187643	1.80E-08	1.11E-07	1.29E-07	1.09E-07
564973	4187644	1.79E-08	1.10E-07	1.28E-07	1.08E-07
564964	4187645	1.77E-08	1.09E-07	1.27E-07	1.08E-07
565007.7	4187634	1.80E-08	1.10E-07	1.28E-07	1.09E-07
565024.5	4187639	1.88E-08	1.16E-07	1.35E-07	1.14E-07
565041.3	4187644	1.97E-08	1.21E-07	1.41E-07	1.20E-07
565058.1	4187649	2.07E-08	1.27E-07	1.48E-07	1.26E-07
565074.9	4187653	2.17E-08	1.33E-07	1.55E-07	1.32E-07
565091.7	4187658	2.27E-08	1.39E-07	1.62E-07	1.38E-07
565125.4	4187668	2.46E-08	1.51E-07	1.76E-07	1.50E-07
565142.2	4187672	2.55E-08	1.57E-07	1.82E-07	1.55E-07
565159	4187677	2.63E-08	1.62E-07	1.88E-07	1.60E-07
565175.8	4187682	2.70E-08	1.66E-07	1.93E-07	1.64E-07
565226.2	4187696	2.86E-08	1.76E-07	2.04E-07	1.73E-07
565243	4187701	2.89E-08	1.78E-07	2.07E-07	1.76E-07
565256.3	4187710	2.99E-08	1.84E-07	2.14E-07	1.82E-07
565266	4187725	3.17E-08	1.95E-07	2.26E-07	1.92E-07
565275.8	4187739	3.35E-08	2.06E-07	2.39E-07	2.03E-07
565285.5	4187754	3.53E-08	2.17E-07	2.52E-07	2.15E-07
565295.3	4187768	3.73E-08	2.29E-07	2.66E-07	2.26E-07
565314.7	4187797	4.11E-08	2.52E-07	2.93E-07	2.49E-07
565324.5	4187812	4.28E-08	2.63E-07	3.06E-07	2.60E-07
565334.2	4187826	4.44E-08	2.73E-07	3.18E-07	2.70E-07
565344	4187841	4.58E-08	2.81E-07	3.27E-07	2.78E-07
565353.7	4187855	4.69E-08	2.88E-07	3.35E-07	2.85E-07
565363.5	4187870	4.75E-08	2.92E-07	3.40E-07	2.89E-07
565373.2	4187884	4.78E-08	2.94E-07	3.42E-07	2.90E-07
565382.9	4187899	4.77E-08	2.93E-07	3.41E-07	2.90E-07
564990.3	4187633	1.74E-08	1.07E-07	1.24E-07	1.06E-07
564981.3	4187633	1.72E-08	1.06E-07	1.23E-07	1.05E-07
564972.3	4187634	1.71E-08	1.05E-07	1.22E-07	1.04E-07
564963.3	4187635	1.69E-08	1.04E-07	1.21E-07	1.03E-07
565007.1	4187624	1.72E-08	1.06E-07	1.23E-07	1.04E-07
565024.4	4187629	1.80E-08	1.11E-07	1.29E-07	1.09E-07
565041.6	4187634	1.89E-08	1.16E-07	1.35E-07	1.15E-07
565058.9	4187639	1.98E-08	1.22E-07	1.42E-07	1.20E-07
565076.2	4187644	2.08E-08	1.28E-07	1.49E-07	1.26E-07
565093.4	4187649	2.18E-08	1.34E-07	1.55E-07	1.32E-07
565127.9	4187659	2.36E-08	1.45E-07	1.69E-07	1.44E-07
565145.2	4187663	2.45E-08	1.51E-07	1.75E-07	1.49E-07
565162.4	4187668	2.53E-08	1.55E-07	1.81E-07	1.53E-07
565179.7	4187673	2.59E-08	1.59E-07	1.85E-07	1.58E-07
565196.9	4187678	2.65E-08	1.63E-07	1.90E-07	1.61E-07
565231.4	4187688	2.75E-08	1.69E-07	1.96E-07	1.67E-07
565248.7	4187693	2.78E-08	1.71E-07	1.99E-07	1.69E-07
565262.3	4187702	2.87E-08	1.77E-07	2.05E-07	1.75E-07
565267.3	4187710	2.96E-08	1.82E-07	2.11E-07	1.80E-07
565277.3	4187725	3.13E-08	1.92E-07	2.24E-07	1.90E-07
565287.3	4187740	3.31E-08	2.03E-07	2.36E-07	2.01E-07
565297.3	4187755	3.49E-08	2.15E-07	2.49E-07	2.12E-07
565302.3	4187762	3.58E-08	2.20E-07	2.56E-07	2.18E-07
565307.3	4187769	3.68E-08	2.26E-07	2.63E-07	2.23E-07
565327.3	4187799	4.04E-08	2.48E-07	2.89E-07	2.45E-07
565337.3	4187814	4.20E-08	2.58E-07	3.00E-07	2.55E-07
565342.3	4187822	4.28E-08	2.63E-07	3.06E-07	2.60E-07
565347.3	4187829	4.35E-08	2.67E-07	3.11E-07	2.64E-07
565352.3	4187836	4.41E-08	2.71E-07	3.15E-07	2.68E-07
565362.3	4187851	4.51E-08	2.77E-07	3.22E-07	2.74E-07
565367.3	4187859	4.55E-08	2.79E-07	3.25E-07	2.76E-07
565372.3	4187866	4.57E-08	2.81E-07	3.27E-07	2.78E-07
565382.3	4187881	4.60E-08	2.83E-07	3.29E-07	2.79E-07
565387.3	4187888	4.60E-08	2.83E-07	3.29E-07	2.79E-07
565392.3	4187896	4.59E-08	2.82E-07	3.28E-07	2.79E-07
564989.5	4187623	1.66E-08	1.02E-07	1.19E-07	1.01E-07
564980.5	4187623	1.65E-08	1.01E-07	1.18E-07	1.00E-07
564971.5	4187624	1.63E-08	1.00E-07	1.17E-07	9.92E-08
564962.5	4187625	1.62E-08	9.96E-08	1.16E-07	9.85E-08
565006.3	4187614	1.64E-08	1.01E-07	1.18E-07	9.99E-08

565023.4	4187619	1.72E-08	1.06E-07	1.23E-07	1.05E-07
565040.6	4187624	1.81E-08	1.11E-07	1.29E-07	1.10E-07
565057.7	4187629	1.89E-08	1.16E-07	1.35E-07	1.15E-07
565074.8	4187634	1.98E-08	1.22E-07	1.42E-07	1.20E-07
565091.9	4187639	2.07E-08	1.27E-07	1.48E-07	1.26E-07
565126.2	4187648	2.25E-08	1.38E-07	1.61E-07	1.37E-07
565143.3	4187653	2.33E-08	1.43E-07	1.67E-07	1.42E-07
565160.4	4187658	2.41E-08	1.48E-07	1.72E-07	1.46E-07
565177.5	4187663	2.47E-08	1.52E-07	1.77E-07	1.50E-07
565194.7	4187668	2.53E-08	1.56E-07	1.81E-07	1.54E-07
565211.8	4187672	2.58E-08	1.59E-07	1.85E-07	1.57E-07
565228.9	4187677	2.63E-08	1.61E-07	1.88E-07	1.59E-07
565246	4187682	2.66E-08	1.63E-07	1.90E-07	1.61E-07
565268.1	4187694	2.76E-08	1.70E-07	1.97E-07	1.68E-07
565278	4187709	2.92E-08	1.79E-07	2.09E-07	1.77E-07
565288	4187724	3.08E-08	1.89E-07	2.20E-07	1.87E-07
565292.9	4187731	3.17E-08	1.95E-07	2.26E-07	1.92E-07
565302.9	4187746	3.34E-08	2.05E-07	2.38E-07	2.03E-07
565312.8	4187761	3.51E-08	2.16E-07	2.51E-07	2.13E-07
565317.7	4187768	3.60E-08	2.21E-07	2.57E-07	2.19E-07
565337.6	4187798	3.93E-08	2.42E-07	2.81E-07	2.39E-07
565347.5	4187812	4.08E-08	2.51E-07	2.92E-07	2.48E-07
565357.4	4187827	4.21E-08	2.59E-07	3.01E-07	2.56E-07
565367.4	4187842	4.32E-08	2.65E-07	3.08E-07	2.62E-07
565377.3	4187857	4.39E-08	2.70E-07	3.14E-07	2.66E-07
565382.2	4187864	4.41E-08	2.71E-07	3.15E-07	2.68E-07
565392.2	4187879	4.43E-08	2.72E-07	3.17E-07	2.69E-07
565402.1	4187894	4.41E-08	2.71E-07	3.15E-07	2.68E-07
564988.7	4187613	1.59E-08	9.79E-08	1.14E-07	9.67E-08
564979.7	4187613	1.58E-08	9.70E-08	1.13E-07	9.59E-08
564970.7	4187614	1.57E-08	9.63E-08	1.12E-07	9.51E-08
564961.7	4187615	1.55E-08	9.56E-08	1.11E-07	9.44E-08
564976.3	4187986	5.58E-07	3.43E-06	3.98E-06	3.39E-06
564966.6	4187989	5.42E-07	3.33E-06	3.87E-06	3.29E-06
564956.9	4187991	5.20E-07	3.20E-06	3.72E-06	3.16E-06
564947.2	4187993	4.89E-07	3.00E-06	3.49E-06	2.97E-06
564937.5	4187995	4.49E-07	2.76E-06	3.21E-06	2.73E-06
564927.8	4187997	4.07E-07	2.50E-06	2.90E-06	2.47E-06
564974.2	4187977	4.20E-07	2.58E-06	3.00E-06	2.55E-06
564964.5	4187979	4.13E-07	2.54E-06	2.95E-06	2.51E-06
564954.8	4187981	4.01E-07	2.46E-06	2.86E-06	2.43E-06
564945.1	4187983	3.82E-07	2.35E-06	2.73E-06	2.32E-06
564935.4	4187985	3.57E-07	2.19E-06	2.55E-06	2.17E-06
564925.7	4187987	3.28E-07	2.01E-06	2.34E-06	1.99E-06
564972.1	4187967	3.30E-07	2.03E-06	2.36E-06	2.01E-06
564962.4	4187969	3.26E-07	2.00E-06	2.33E-06	1.98E-06
564952.7	4187971	3.18E-07	1.96E-06	2.27E-06	1.93E-06
564943	4187973	3.06E-07	1.88E-06	2.19E-06	1.86E-06
564933.3	4187975	2.90E-07	1.78E-06	2.07E-06	1.76E-06
564923.6	4187977	2.71E-07	1.67E-06	1.94E-06	1.65E-06
564969.9	4187957	2.67E-07	1.64E-06	1.91E-06	1.62E-06
564960.2	4187959	2.64E-07	1.62E-06	1.88E-06	1.60E-06
564950.5	4187961	2.58E-07	1.59E-06	1.84E-06	1.57E-06
564940.8	4187963	2.51E-07	1.54E-06	1.79E-06	1.52E-06
564931.1	4187966	2.40E-07	1.48E-06	1.72E-06	1.46E-06
564921.5	4187968	2.29E-07	1.41E-06	1.63E-06	1.39E-06
564977.5	4187945	2.20E-07	1.35E-06	1.58E-06	1.34E-06
564967.8	4187947	2.20E-07	1.35E-06	1.57E-06	1.33E-06
564958.1	4187949	2.17E-07	1.34E-06	1.55E-06	1.32E-06
564948.4	4187952	2.14E-07	1.31E-06	1.53E-06	1.30E-06
564938.7	4187954	2.09E-07	1.28E-06	1.49E-06	1.27E-06
564929	4187956	2.03E-07	1.25E-06	1.45E-06	1.23E-06
564919.3	4187958	1.95E-07	1.20E-06	1.39E-06	1.19E-06
564975.4	4187935	1.85E-07	1.13E-06	1.32E-06	1.12E-06
564965.7	4187938	1.84E-07	1.13E-06	1.32E-06	1.12E-06
564956	4187940	1.83E-07	1.12E-06	1.31E-06	1.11E-06
564946.3	4187942	1.80E-07	1.11E-06	1.29E-06	1.10E-06
564936.6	4187944	1.77E-07	1.09E-06	1.26E-06	1.08E-06
564926.9	4187946	1.73E-07	1.06E-06	1.23E-06	1.05E-06
564917.2	4187948	1.68E-07	1.03E-06	1.20E-06	1.02E-06
564973.3	4187926	1.57E-07	9.65E-07	1.12E-06	9.54E-07
564963.6	4187928	1.57E-07	9.63E-07	1.12E-06	9.52E-07
564953.9	4187930	1.56E-07	9.58E-07	1.11E-06	9.46E-07
564944.2	4187932	1.54E-07	9.47E-07	1.10E-06	9.36E-07
564934.5	4187934	1.52E-07	9.33E-07	1.08E-06	9.22E-07
564924.8	4187936	1.49E-07	9.16E-07	1.06E-06	9.05E-07
564915.1	4187938	1.46E-07	8.96E-07	1.04E-06	8.86E-07
564971.1	4187916	1.35E-07	8.32E-07	9.68E-07	8.23E-07
564961.4	4187918	1.35E-07	8.30E-07	9.66E-07	8.21E-07
564951.7	4187920	1.35E-07	8.27E-07	9.61E-07	8.17E-07
564942	4187922	1.33E-07	8.19E-07	9.52E-07	8.10E-07
564932.3	4187924	1.32E-07	8.09E-07	9.41E-07	8.00E-07
564922.6	4187926	1.30E-07	7.97E-07	9.27E-07	7.88E-07
564912.9	4187929	1.28E-07	7.85E-07	9.13E-07	7.76E-07
564969	4187906	1.18E-07	7.26E-07	8.44E-07	7.17E-07
564959.3	4187908	1.18E-07	7.24E-07	8.42E-07	7.16E-07
564949.6	4187910	1.17E-07	7.21E-07	8.39E-07	7.13E-07
564939.9	4187912	1.17E-07	7.16E-07	8.33E-07	7.08E-07
564930.2	4187915	1.16E-07	7.10E-07	8.26E-07	7.02E-07
564920.5	4187917	1.14E-07	7.03E-07	8.17E-07	6.95E-07
564910.8	4187919	1.13E-07	6.95E-07	8.08E-07	6.87E-07
564966.9	4187896	1.04E-07	6.39E-07	7.43E-07	6.31E-07
564957.2	4187898	1.04E-07	6.38E-07	7.41E-07	6.30E-07
564947.5	4187901	1.03E-07	6.35E-07	7.39E-07	6.28E-07
564937.8	4187903	1.03E-07	6.32E-07	7.35E-07	6.25E-07
564928.1	4187905	1.02E-07	6.28E-07	7.31E-07	6.21E-07
564918.4	4187907	1.02E-07	6.24E-07	7.26E-07	6.17E-07
564908.7	4187909	1.01E-07	6.20E-07	7.20E-07	6.12E-07
564964.8	4187887	9.21E-08	5.66E-07	6.58E-07	5.59E-07
564955.1	4187889	9.20E-08	5.65E-07	6.57E-07	5.59E-07
564945.4	4187891	9.18E-08	5.64E-07	6.56E-07	5.57E-07
564935.7	4187893	9.15E-08	5.62E-07	6.54E-07	5.56E-07
564926	4187895	9.11E-08	5.60E-07	6.51E-07	5.54E-07
564916.3	4187897	9.08E-08	5.58E-07	6.49E-07	5.52E-07
564906.6	4187899	9.04E-08	5.56E-07	6.46E-07	5.49E-07
564972.1	4187875	8.29E-08	5.10E-07	5.93E-07	5.04E-07
564962.6	4187877	8.22E-08	5.05E-07	5.87E-07	4.99E-07
564952.9	4187879	8.21E-08	5.05E-07	5.87E-07	4.99E-07
564943.2	4187881	8.20E-08	5.04E-07	5.86E-07	4.98E-07
564933.5	4187883	8.19E-08	5.03E-07	5.85E-07	4.97E-07
564923.8	4187885	8.18E-08	5.03E-07	5.84E-07	4.97E-07
564914.1	4187887	8.17E-08	5.02E-07	5.84E-07	4.96E-07
564904.4	4187889	8.15E-08	5.01E-07	5.82E-07	4.95E-07
564967.3	4187866	7.43E-08	4.57E-07	5.31E-07	4.51E-07
564902.3	4187880	7.37E-08	4.53E-07	5.27E-07	4.48E-07
564964	4187846	6.13E-08	3.76E-07	4.38E-07	3.72E-07

564946.5	4187850	6.09E-08	3.74E-07	4.35E-07	3.70E-07
564936.8	4187852	6.09E-08	3.74E-07	4.35E-07	3.70E-07
564927.1	4187854	6.11E-08	3.75E-07	4.36E-07	3.71E-07
564917.4	4187856	6.12E-08	3.76E-07	4.37E-07	3.71E-07
564907.7	4187858	6.12E-08	3.76E-07	4.37E-07	3.72E-07
564898.1	4187860	6.12E-08	3.76E-07	4.38E-07	3.72E-07
564962.3	4187837	5.60E-08	3.44E-07	4.00E-07	3.40E-07
564944.4	4187840	5.57E-08	3.42E-07	3.98E-07	3.38E-07
564934.7	4187842	5.58E-08	3.43E-07	3.99E-07	3.39E-07
564925	4187844	5.59E-08	3.44E-07	4.00E-07	3.40E-07
564915.3	4187846	5.60E-08	3.44E-07	4.00E-07	3.40E-07
564905.6	4187848	5.61E-08	3.45E-07	4.01E-07	3.41E-07
564895.9	4187850	5.62E-08	3.45E-07	4.02E-07	3.41E-07
564960.6	4187827	5.15E-08	3.16E-07	3.68E-07	3.13E-07
564942.3	4187830	5.12E-08	3.15E-07	3.66E-07	3.11E-07
564932.6	4187832	5.13E-08	3.15E-07	3.66E-07	3.11E-07
564922.9	4187834	5.14E-08	3.16E-07	3.68E-07	3.12E-07
564913.2	4187836	5.16E-08	3.17E-07	3.68E-07	3.13E-07
564903.5	4187839	5.17E-08	3.18E-07	3.69E-07	3.14E-07
564893.8	4187841	5.18E-08	3.18E-07	3.70E-07	3.15E-07
564958.9	4187817	4.75E-08	2.92E-07	3.39E-07	2.88E-07
564968	4187816	4.78E-08	2.94E-07	3.42E-07	2.90E-07
564949.9	4187818	4.72E-08	2.90E-07	3.37E-07	2.87E-07
564940.2	4187820	4.72E-08	2.90E-07	3.38E-07	2.87E-07
564930.5	4187822	4.73E-08	2.91E-07	3.38E-07	2.87E-07
564920.8	4187825	4.75E-08	2.92E-07	3.39E-07	2.88E-07
564911.1	4187827	4.76E-08	2.93E-07	3.40E-07	2.89E-07
564901.4	4187829	4.77E-08	2.93E-07	3.41E-07	2.90E-07
564891.7	4187831	4.79E-08	2.94E-07	3.42E-07	2.91E-07
564957.3	4187807	4.40E-08	2.70E-07	3.14E-07	2.67E-07
564966.8	4187806	4.43E-08	2.72E-07	3.16E-07	2.69E-07
564947.7	4187808	4.37E-08	2.69E-07	3.12E-07	2.65E-07
564938	4187811	4.37E-08	2.69E-07	3.13E-07	2.66E-07
564928.3	4187813	4.38E-08	2.69E-07	3.13E-07	2.66E-07
564918.6	4187815	4.40E-08	2.70E-07	3.14E-07	2.67E-07
564908.9	4187817	4.41E-08	2.71E-07	3.15E-07	2.68E-07
564899.2	4187819	4.43E-08	2.72E-07	3.16E-07	2.69E-07
564889.5	4187821	4.44E-08	2.73E-07	3.18E-07	2.70E-07
564953.1	4187798	4.08E-08	2.50E-07	2.91E-07	2.48E-07
564935.9	4187801	4.06E-08	2.50E-07	2.90E-07	2.47E-07
564926.2	4187803	4.07E-08	2.50E-07	2.91E-07	2.47E-07
564916.5	4187805	4.09E-08	2.51E-07	2.92E-07	2.48E-07
564906.8	4187807	4.10E-08	2.52E-07	2.93E-07	2.49E-07
564897.1	4187809	4.12E-08	2.53E-07	2.94E-07	2.50E-07
564887.4	4187811	4.14E-08	2.54E-07	2.96E-07	2.51E-07
564951.3	4187788	3.80E-08	2.33E-07	2.71E-07	2.31E-07
564933.8	4187791	3.78E-08	2.32E-07	2.70E-07	2.30E-07
564924.1	4187793	3.79E-08	2.33E-07	2.71E-07	2.30E-07
564914.4	4187795	3.80E-08	2.34E-07	2.72E-07	2.31E-07
564904.7	4187797	3.82E-08	2.35E-07	2.73E-07	2.32E-07
564895	4187799	3.84E-08	2.36E-07	2.74E-07	2.33E-07
564885.3	4187802	3.86E-08	2.37E-07	2.76E-07	2.34E-07
564949.5	4187778	3.54E-08	2.18E-07	2.53E-07	2.15E-07
564931.7	4187781	3.53E-08	2.17E-07	2.52E-07	2.14E-07
564922	4187783	3.54E-08	2.17E-07	2.53E-07	2.15E-07
564912.3	4187785	3.55E-08	2.18E-07	2.54E-07	2.16E-07
564902.6	4187788	3.57E-08	2.19E-07	2.55E-07	2.17E-07
564892.9	4187790	3.59E-08	2.20E-07	2.56E-07	2.18E-07
564883.2	4187792	3.61E-08	2.22E-07	2.58E-07	2.19E-07
564947.7	4187768	3.32E-08	2.04E-07	2.37E-07	2.01E-07
564929.5	4187771	3.30E-08	2.03E-07	2.36E-07	2.01E-07
564919.8	4187774	3.31E-08	2.03E-07	2.37E-07	2.01E-07
564910.1	4187776	3.33E-08	2.04E-07	2.38E-07	2.02E-07
564900.4	4187778	3.34E-08	2.05E-07	2.39E-07	2.03E-07
564890.7	4187780	3.36E-08	2.07E-07	2.40E-07	2.04E-07
564881	4187782	3.38E-08	2.08E-07	2.42E-07	2.06E-07
564945.9	4187758	3.11E-08	1.91E-07	2.22E-07	1.89E-07
564927.4	4187762	3.10E-08	1.91E-07	2.22E-07	1.88E-07
564917.7	4187764	3.11E-08	1.91E-07	2.22E-07	1.89E-07
564908	4187766	3.12E-08	1.92E-07	2.23E-07	1.90E-07
564898.3	4187768	3.14E-08	1.93E-07	2.24E-07	1.91E-07
564888.6	4187770	3.16E-08	1.94E-07	2.26E-07	1.92E-07
564878.9	4187772	3.18E-08	1.95E-07	2.27E-07	1.93E-07
564944.2	4187748	2.92E-08	1.80E-07	2.09E-07	1.78E-07
564953.3	4187747	2.94E-08	1.80E-07	2.10E-07	1.78E-07
564962.5	4187746	2.95E-08	1.82E-07	2.11E-07	1.79E-07
564935	4187750	2.91E-08	1.79E-07	2.08E-07	1.77E-07
564925.3	4187752	2.92E-08	1.79E-07	2.09E-07	1.77E-07
564915.6	4187754	2.93E-08	1.80E-07	2.09E-07	1.78E-07
564905.9	4187756	2.94E-08	1.81E-07	2.10E-07	1.79E-07
564896.2	4187758	2.96E-08	1.82E-07	2.11E-07	1.80E-07
564886.5	4187760	2.98E-08	1.83E-07	2.13E-07	1.81E-07
564876.8	4187762	2.99E-08	1.84E-07	2.14E-07	1.82E-07
564942.4	4187739	2.76E-08	1.69E-07	1.97E-07	1.67E-07
564951.9	4187737	2.77E-08	1.70E-07	1.98E-07	1.68E-07
564961.4	4187736	2.78E-08	1.71E-07	1.99E-07	1.69E-07
564932.8	4187740	2.75E-08	1.69E-07	1.96E-07	1.67E-07
564923.1	4187742	2.75E-08	1.69E-07	1.97E-07	1.67E-07
564913.4	4187744	2.76E-08	1.70E-07	1.97E-07	1.68E-07
564903.7	4187746	2.78E-08	1.71E-07	1.98E-07	1.69E-07
564894	4187748	2.79E-08	1.71E-07	1.99E-07	1.69E-07
564884.3	4187751	2.81E-08	1.73E-07	2.01E-07	1.71E-07
564874.7	4187753	2.83E-08	1.74E-07	2.02E-07	1.72E-07
564938.6	4187729	2.60E-08	1.60E-07	1.86E-07	1.58E-07
564954.4	4187727	2.62E-08	1.61E-07	1.87E-07	1.59E-07
564921	4187732	2.60E-08	1.60E-07	1.86E-07	1.58E-07
564911.3	4187734	2.61E-08	1.60E-07	1.87E-07	1.59E-07
564901.6	4187737	2.62E-08	1.61E-07	1.87E-07	1.59E-07
564891.9	4187739	2.64E-08	1.62E-07	1.88E-07	1.60E-07
564882.2	4187741	2.65E-08	1.63E-07	1.90E-07	1.61E-07
564872.5	4187743	2.67E-08	1.64E-07	1.91E-07	1.62E-07
564934.9	4187709	2.34E-08	1.44E-07	1.67E-07	1.42E-07
564951.8	4187707	2.35E-08	1.44E-07	1.68E-07	1.43E-07
564916.8	4187713	2.34E-08	1.44E-07	1.67E-07	1.42E-07
564907.1	4187715	2.35E-08	1.44E-07	1.68E-07	1.42E-07
564897.4	4187717	2.36E-08	1.45E-07	1.68E-07	1.43E-07
564887.7	4187719	2.37E-08	1.45E-07	1.69E-07	1.44E-07
564878	4187721	2.38E-08	1.46E-07	1.70E-07	1.44E-07
564868.3	4187723	2.39E-08	1.47E-07	1.71E-07	1.45E-07
564933	4187700	2.22E-08	1.36E-07	1.58E-07	1.35E-07
564950.5	4187697	2.23E-08	1.37E-07	1.59E-07	1.36E-07
564914.6	4187703	2.22E-08	1.36E-07	1.59E-07	1.35E-07
564904.9	4187705	2.23E-08	1.37E-07	1.59E-07	1.35E-07
564895.2	4187707	2.24E-08	1.37E-07	1.60E-07	1.36E-07
564885.5	4187709	2.25E-08	1.38E-07	1.61E-07	1.36E-07
564875.8	4187711	2.26E-08	1.39E-07	1.61E-07	1.37E-07

564866.1	4187714	2.27E-08	1.39E-07	1.62E-07	1.38E-07
564931.2	4187690	2.11E-08	1.30E-07	1.51E-07	1.28E-07
564940.2	4187689	2.11E-08	1.30E-07	1.51E-07	1.28E-07
564949.1	4187687	2.12E-08	1.30E-07	1.52E-07	1.29E-07
564958.1	4187686	2.13E-08	1.31E-07	1.52E-07	1.29E-07
564922.2	4187691	2.11E-08	1.29E-07	1.50E-07	1.28E-07
564912.5	4187693	2.11E-08	1.30E-07	1.51E-07	1.28E-07
564902.8	4187695	2.12E-08	1.30E-07	1.51E-07	1.29E-07
564893.1	4187697	2.12E-08	1.31E-07	1.52E-07	1.29E-07
564883.4	4187700	2.14E-08	1.31E-07	1.53E-07	1.30E-07
564873.7	4187702	2.15E-08	1.32E-07	1.53E-07	1.30E-07
564864	4187704	2.16E-08	1.33E-07	1.54E-07	1.31E-07
564929.3	4187680	2.01E-08	1.23E-07	1.43E-07	1.22E-07
564938.6	4187679	2.01E-08	1.24E-07	1.44E-07	1.22E-07
564947.8	4187677	2.02E-08	1.24E-07	1.44E-07	1.23E-07
564957.1	4187676	2.03E-08	1.25E-07	1.45E-07	1.23E-07
564920.1	4187681	2.00E-08	1.23E-07	1.43E-07	1.22E-07
564910.4	4187683	2.01E-08	1.23E-07	1.44E-07	1.22E-07
564900.7	4187686	2.01E-08	1.24E-07	1.44E-07	1.22E-07
564891	4187688	2.02E-08	1.24E-07	1.44E-07	1.23E-07
564881.3	4187690	2.03E-08	1.25E-07	1.45E-07	1.23E-07
564871.6	4187692	2.04E-08	1.26E-07	1.46E-07	1.24E-07
564861.9	4187694	2.06E-08	1.26E-07	1.47E-07	1.25E-07
564927.5	4187670	1.91E-08	1.18E-07	1.37E-07	1.16E-07
564937	4187669	1.92E-08	1.18E-07	1.37E-07	1.17E-07
564946.5	4187667	1.93E-08	1.18E-07	1.38E-07	1.17E-07
564956	4187666	1.93E-08	1.19E-07	1.38E-07	1.18E-07
564918	4187672	1.91E-08	1.17E-07	1.36E-07	1.16E-07
564908.3	4187674	1.91E-08	1.18E-07	1.37E-07	1.16E-07
564898.6	4187676	1.92E-08	1.18E-07	1.37E-07	1.17E-07
564888.9	4187678	1.93E-08	1.19E-07	1.38E-07	1.17E-07
564879.2	4187680	1.94E-08	1.19E-07	1.39E-07	1.18E-07
564869.5	4187682	1.95E-08	1.20E-07	1.39E-07	1.18E-07
564859.8	4187684	1.96E-08	1.21E-07	1.40E-07	1.19E-07
564925.6	4187660	1.83E-08	1.12E-07	1.30E-07	1.11E-07
564935.4	4187659	1.83E-08	1.12E-07	1.31E-07	1.11E-07
564945.2	4187658	1.84E-08	1.13E-07	1.31E-07	1.12E-07
564955	4187656	1.85E-08	1.14E-07	1.32E-07	1.12E-07
564915.8	4187662	1.82E-08	1.12E-07	1.30E-07	1.11E-07
564906.1	4187664	1.83E-08	1.12E-07	1.31E-07	1.11E-07
564896.4	4187666	1.83E-08	1.13E-07	1.31E-07	1.11E-07
564886.7	4187668	1.84E-08	1.13E-07	1.32E-07	1.12E-07
564877	4187670	1.85E-08	1.14E-07	1.32E-07	1.12E-07
564867.3	4187672	1.86E-08	1.14E-07	1.33E-07	1.13E-07
564857.6	4187675	1.87E-08	1.15E-07	1.34E-07	1.14E-07
564922.1	4187651	1.74E-08	1.07E-07	1.25E-07	1.06E-07
564938.9	4187648	1.75E-08	1.08E-07	1.25E-07	1.06E-07
564904	4187654	1.75E-08	1.07E-07	1.25E-07	1.06E-07
564894.3	4187656	1.75E-08	1.08E-07	1.25E-07	1.07E-07
564884.6	4187658	1.76E-08	1.08E-07	1.26E-07	1.07E-07
564874.9	4187661	1.77E-08	1.09E-07	1.27E-07	1.08E-07
564865.2	4187663	1.78E-08	1.09E-07	1.27E-07	1.08E-07
564855.5	4187665	1.79E-08	1.10E-07	1.28E-07	1.09E-07
564920.2	4187641	1.67E-08	1.03E-07	1.19E-07	1.01E-07
564937.4	4187639	1.68E-08	1.03E-07	1.20E-07	1.02E-07
564901.9	4187644	1.67E-08	1.03E-07	1.20E-07	1.02E-07
564892.2	4187647	1.68E-08	1.03E-07	1.20E-07	1.02E-07
564882.5	4187649	1.69E-08	1.04E-07	1.21E-07	1.02E-07
564872.8	4187651	1.70E-08	1.04E-07	1.21E-07	1.03E-07
564863.1	4187653	1.71E-08	1.05E-07	1.22E-07	1.04E-07
564853.4	4187655	1.72E-08	1.05E-07	1.23E-07	1.04E-07
564918.3	4187631	1.60E-08	9.83E-08	1.14E-07	9.72E-08
564936	4187629	1.61E-08	9.86E-08	1.15E-07	9.75E-08
564944.8	4187627	1.61E-08	9.89E-08	1.15E-07	9.77E-08
564899.7	4187635	1.60E-08	9.86E-08	1.15E-07	9.74E-08
564890	4187637	1.61E-08	9.89E-08	1.15E-07	9.78E-08
564880.3	4187639	1.62E-08	9.94E-08	1.16E-07	9.82E-08
564870.6	4187641	1.63E-08	9.99E-08	1.16E-07	9.87E-08
564861	4187643	1.63E-08	1.00E-07	1.17E-07	9.92E-08
564851.3	4187645	1.64E-08	1.01E-07	1.17E-07	9.98E-08
564916.4	4187621	1.53E-08	9.43E-08	1.10E-07	9.32E-08
564925.5	4187620	1.54E-08	9.44E-08	1.10E-07	9.33E-08
564934.5	4187619	1.54E-08	9.46E-08	1.10E-07	9.35E-08
564943.6	4187617	1.54E-08	9.48E-08	1.10E-07	9.37E-08
564952.7	4187616	1.55E-08	9.52E-08	1.11E-07	9.41E-08
564907.3	4187623	1.53E-08	9.43E-08	1.10E-07	9.32E-08
564897.6	4187625	1.54E-08	9.46E-08	1.10E-07	9.35E-08
564887.9	4187627	1.54E-08	9.49E-08	1.10E-07	9.38E-08
564878.2	4187629	1.55E-08	9.53E-08	1.11E-07	9.42E-08
564868.5	4187631	1.56E-08	9.58E-08	1.11E-07	9.47E-08
564858.8	4187633	1.57E-08	9.63E-08	1.12E-07	9.52E-08
564849.1	4187635	1.58E-08	9.68E-08	1.13E-07	9.57E-08
564895.5	4188040	3.24E-07	1.99E-06	2.31E-06	1.97E-06
564896.3	4188050	3.25E-07	2.00E-06	2.32E-06	1.97E-06
564897.1	4188059	3.17E-07	1.95E-06	2.26E-06	1.92E-06
564898	4188068	2.98E-07	1.83E-06	2.13E-06	1.81E-06
564898.8	4188078	2.72E-07	1.67E-06	1.95E-06	1.65E-06
564885.5	4188041	2.52E-07	1.55E-06	1.80E-06	1.53E-06
564886.3	4188051	2.51E-07	1.54E-06	1.79E-06	1.52E-06
564887.2	4188060	2.44E-07	1.50E-06	1.74E-06	1.48E-06
564888	4188069	2.32E-07	1.42E-06	1.65E-06	1.41E-06
564888.8	4188079	2.15E-07	1.32E-06	1.54E-06	1.31E-06
564881.8	4188007	2.16E-07	1.33E-06	1.55E-06	1.31E-06
564891.6	4187994	2.30E-07	1.41E-06	1.64E-06	1.39E-06
564876.4	4188051	2.01E-07	1.23E-06	1.43E-06	1.22E-06
564877.2	4188061	1.95E-07	1.20E-06	1.39E-06	1.18E-06
564878	4188070	1.86E-07	1.15E-06	1.33E-06	1.13E-06
564878.9	4188079	1.75E-07	1.08E-06	1.25E-06	1.07E-06
564871.6	4188009	1.83E-07	1.13E-06	1.31E-06	1.11E-06
564883.3	4187988	1.94E-07	1.19E-06	1.39E-06	1.18E-06
564866.4	4188052	1.65E-07	1.01E-06	1.18E-06	1.00E-06
564867.2	4188062	1.60E-07	9.85E-07	1.14E-06	9.73E-07
564868.1	4188071	1.54E-07	9.45E-07	1.10E-06	9.34E-07
564868.9	4188080	1.46E-07	8.97E-07	1.04E-06	8.87E-07
564861.4	4188011	1.57E-07	9.63E-07	1.12E-06	9.51E-07
564865.9	4187995	1.59E-07	9.77E-07	1.14E-06	9.65E-07
564875	4187982	1.67E-07	1.02E-06	1.19E-06	1.01E-06
564888.9	4187973	1.81E-07	1.11E-06	1.29E-06	1.10E-06
564857.3	4188063	1.35E-07	8.27E-07	9.61E-07	8.17E-07
564858.1	4188072	1.30E-07	7.97E-07	9.27E-07	7.88E-07
564859	4188081	1.24E-07	7.61E-07	8.85E-07	7.52E-07
564847	4188028	1.27E-07	7.79E-07	9.05E-07	7.69E-07
564851.4	4188012	1.35E-07	8.32E-07	9.67E-07	8.22E-07
564855.7	4187997	1.40E-07	8.57E-07	9.97E-07	8.47E-07
564866.8	4187977	1.46E-07	8.94E-07	1.04E-06	8.84E-07
564880.4	4187968	1.57E-07	9.67E-07	1.12E-06	9.56E-07

564848.2	4188073	1.11E-07	6.84E-07	7.95E-07	6.76E-07
564849	4188082	1.07E-07	6.57E-07	7.64E-07	6.49E-07
564837.3	4188028	1.10E-07	6.79E-07	7.89E-07	6.71E-07
564839.8	4188019	1.15E-07	7.08E-07	8.23E-07	7.00E-07
564842.2	4188010	1.19E-07	7.33E-07	8.52E-07	7.24E-07
564844.7	4188001	1.22E-07	7.50E-07	8.73E-07	7.42E-07
564847.1	4187993	1.24E-07	7.60E-07	8.84E-07	7.51E-07
564849.5	4187984	1.24E-07	7.62E-07	8.85E-07	7.53E-07
564859.6	4187970	1.29E-07	7.95E-07	9.25E-07	7.86E-07
564867.2	4187965	1.35E-07	8.31E-07	9.66E-07	8.21E-07
564874.9	4187960	1.40E-07	8.60E-07	1.00E-06	8.50E-07
564882.5	4187955	1.43E-07	8.79E-07	1.02E-06	8.69E-07
564827.3	4188029	9.67E-08	5.94E-07	6.91E-07	5.87E-07
564832	4188012	1.05E-07	6.43E-07	7.47E-07	6.35E-07
564836.8	4187995	1.10E-07	6.74E-07	7.84E-07	6.66E-07
564841.6	4187978	1.11E-07	6.82E-07	7.93E-07	6.74E-07
564851.3	4187964	1.15E-07	7.10E-07	8.25E-07	7.01E-07
564866.2	4187955	1.24E-07	7.62E-07	8.86E-07	7.53E-07
564881	4187945	1.28E-07	7.88E-07	9.16E-07	7.79E-07
564817.3	4188030	8.54E-08	5.25E-07	6.10E-07	5.19E-07
564821.9	4188013	9.24E-08	5.68E-07	6.60E-07	5.61E-07
564826.6	4187997	9.75E-08	5.99E-07	6.97E-07	5.92E-07
564831.2	4187980	1.00E-07	6.15E-07	7.15E-07	6.08E-07
564843.1	4187959	1.04E-07	6.38E-07	7.42E-07	6.31E-07
564857.6	4187949	1.11E-07	6.82E-07	7.93E-07	6.74E-07
564872.1	4187940	1.15E-07	7.06E-07	8.21E-07	6.98E-07
564815.8	4188047	8.04E-08	4.94E-07	5.74E-07	4.88E-07
564807.3	4188031	7.60E-08	4.67E-07	5.43E-07	4.62E-07
564811.8	4188015	8.22E-08	5.05E-07	5.87E-07	4.99E-07
564816.4	4187998	8.70E-08	5.35E-07	6.22E-07	5.28E-07
564821	4187982	9.00E-08	5.53E-07	6.43E-07	5.47E-07
564825.5	4187965	9.07E-08	5.58E-07	6.48E-07	5.51E-07
564834.9	4187953	9.40E-08	5.78E-07	6.72E-07	5.71E-07
564849.2	4187943	1.00E-07	6.15E-07	7.15E-07	6.08E-07
564863.4	4187934	1.04E-07	6.37E-07	7.41E-07	6.30E-07
564877.6	4187925	1.04E-07	6.39E-07	7.43E-07	6.32E-07
564805.8	4188048	7.17E-08	4.40E-07	5.12E-07	4.35E-07
564797.5	4188031	6.84E-08	4.21E-07	4.89E-07	4.16E-07
564800	4188022	7.14E-08	4.39E-07	5.10E-07	4.34E-07
564802.4	4188013	7.43E-08	4.57E-07	5.31E-07	4.51E-07
564804.9	4188005	7.68E-08	4.72E-07	5.49E-07	4.66E-07
564807.4	4187996	7.89E-08	4.85E-07	5.64E-07	4.79E-07
564809.9	4187987	8.06E-08	4.96E-07	5.76E-07	4.90E-07
564812.3	4187978	8.19E-08	5.04E-07	5.86E-07	4.98E-07
564814.8	4187969	8.27E-08	5.08E-07	5.91E-07	5.02E-07
564817.3	4187960	8.27E-08	5.08E-07	5.91E-07	5.03E-07
564827.5	4187946	8.57E-08	5.27E-07	6.13E-07	5.21E-07
564835.2	4187941	8.89E-08	5.46E-07	6.35E-07	5.40E-07
564842.9	4187936	9.14E-08	5.62E-07	6.53E-07	5.55E-07
564850.6	4187931	9.33E-08	5.73E-07	6.66E-07	5.67E-07
564858.3	4187926	9.45E-08	5.81E-07	6.75E-07	5.74E-07
564866	4187921	9.49E-08	5.83E-07	6.78E-07	5.76E-07
564873.7	4187916	9.44E-08	5.80E-07	6.75E-07	5.73E-07
564795	4188040	6.54E-08	4.02E-07	4.67E-07	3.97E-07
564795.9	4188049	6.44E-08	3.96E-07	4.60E-07	3.91E-07
564796.7	4188059	6.32E-08	3.89E-07	4.52E-07	3.84E-07
564787.5	4188032	6.17E-08	3.79E-07	4.41E-07	3.75E-07
564789.9	4188023	6.42E-08	3.95E-07	4.59E-07	3.90E-07
564792.3	4188015	6.67E-08	4.10E-07	4.77E-07	4.05E-07
564797.2	4187997	7.11E-08	4.37E-07	5.08E-07	4.32E-07
564799.6	4187989	7.28E-08	4.48E-07	5.20E-07	4.42E-07
564804.4	4187971	7.52E-08	4.62E-07	5.38E-07	4.57E-07
564806.9	4187963	7.58E-08	4.66E-07	5.42E-07	4.60E-07
564819.2	4187941	7.84E-08	4.82E-07	5.60E-07	4.76E-07
564834.3	4187931	8.32E-08	5.11E-07	5.94E-07	5.05E-07
564841.9	4187926	8.49E-08	5.22E-07	6.07E-07	5.16E-07
564857	4187916	8.66E-08	5.32E-07	6.19E-07	5.26E-07
564872.1	4187906	8.57E-08	5.27E-07	6.13E-07	5.21E-07
564785.9	4188050	5.82E-08	3.58E-07	4.16E-07	3.54E-07
564786.7	4188059	5.72E-08	3.52E-07	4.09E-07	3.47E-07
564777.5	4188033	5.59E-08	3.44E-07	3.99E-07	3.40E-07
564782.2	4188016	6.03E-08	3.70E-07	4.31E-07	3.66E-07
564787	4187999	6.43E-08	3.95E-07	4.60E-07	3.91E-07
564789.4	4187991	6.61E-08	4.06E-07	4.72E-07	4.01E-07
564794.1	4187974	6.87E-08	4.22E-07	4.91E-07	4.17E-07
564798.9	4187957	6.99E-08	4.29E-07	4.99E-07	4.24E-07
564811.1	4187935	7.20E-08	4.43E-07	5.15E-07	4.37E-07
564825.9	4187925	7.62E-08	4.69E-07	5.45E-07	4.63E-07
564840.7	4187915	7.89E-08	4.85E-07	5.63E-07	4.79E-07
564855.5	4187906	7.94E-08	4.88E-07	5.68E-07	4.82E-07
564870.4	4187896	7.81E-08	4.80E-07	5.58E-07	4.74E-07
564775.9	4188051	5.30E-08	3.25E-07	3.78E-07	3.22E-07
564776.8	4188060	5.21E-08	3.20E-07	3.72E-07	3.16E-07
564767.5	4188034	5.09E-08	3.13E-07	3.64E-07	3.09E-07
564772.2	4188017	5.47E-08	3.36E-07	3.91E-07	3.32E-07
564776.9	4188001	5.85E-08	3.59E-07	4.18E-07	3.55E-07
564781.5	4187984	6.16E-08	3.79E-07	4.40E-07	3.74E-07
564786.2	4187967	6.38E-08	3.92E-07	4.56E-07	3.88E-07
564790.9	4187950	6.47E-08	3.98E-07	4.62E-07	3.93E-07
564802.9	4187929	6.65E-08	4.09E-07	4.75E-07	4.04E-07
564817.5	4187919	7.03E-08	4.32E-07	5.02E-07	4.27E-07
564832.1	4187910	7.26E-08	4.46E-07	5.19E-07	4.41E-07
564846.7	4187900	7.33E-08	4.51E-07	5.24E-07	4.45E-07
564861.3	4187891	7.23E-08	4.44E-07	5.17E-07	4.39E-07
564766	4188052	4.83E-08	2.97E-07	3.45E-07	2.94E-07
564766.8	4188061	4.75E-08	2.92E-07	3.40E-07	2.89E-07
564762.6	4188017	5.04E-08	3.10E-07	3.60E-07	3.06E-07
564765.1	4188008	5.22E-08	3.21E-07	3.73E-07	3.17E-07
564767.6	4187999	5.40E-08	3.32E-07	3.86E-07	3.28E-07
564770.1	4187990	5.56E-08	3.42E-07	3.97E-07	3.38E-07
564772.6	4187981	5.71E-08	3.51E-07	4.08E-07	3.47E-07
564775.1	4187972	5.83E-08	3.58E-07	4.16E-07	3.54E-07
564777.6	4187963	5.92E-08	3.64E-07	4.23E-07	3.60E-07
564780.1	4187954	5.98E-08	3.68E-07	4.28E-07	3.63E-07
564782.6	4187946	6.01E-08	3.69E-07	4.29E-07	3.65E-07
564785	4187937	6.00E-08	3.68E-07	4.28E-07	3.64E-07
564795.3	4187923	6.18E-08	3.80E-07	4.42E-07	3.75E-07
564803	4187918	6.38E-08	3.92E-07	4.56E-07	3.87E-07
564810.8	4187913	6.54E-08	4.02E-07	4.67E-07	3.97E-07
564818.5	4187908	6.66E-08	4.09E-07	4.76E-07	4.04E-07
564826.3	4187903	6.74E-08	4.14E-07	4.82E-07	4.10E-07
564834.1	4187898	6.79E-08	4.17E-07	4.85E-07	4.12E-07
564841.8	4187892	6.79E-08	4.17E-07	4.85E-07	4.12E-07
564849.6	4187887	6.75E-08	4.15E-07	4.82E-07	4.10E-07
564857.3	4187882	6.68E-08	4.10E-07	4.77E-07	4.05E-07
564865.1	4187877	6.58E-08	4.04E-07	4.70E-07	3.99E-07

564767.2	4187966	5.45E-08	3.35E-07	3.90E-07	3.31E-07
564769.7	4187957	5.53E-08	3.40E-07	3.95E-07	3.36E-07
564772.1	4187948	5.58E-08	3.43E-07	3.99E-07	3.39E-07
564774.6	4187939	5.59E-08	3.44E-07	4.00E-07	3.40E-07
564777	4187931	5.58E-08	3.43E-07	3.99E-07	3.39E-07
564787.1	4187917	5.75E-08	3.53E-07	4.11E-07	3.49E-07
564802.3	4187907	6.07E-08	3.73E-07	4.34E-07	3.69E-07
564810	4187902	6.18E-08	3.80E-07	4.42E-07	3.75E-07
564817.6	4187897	6.26E-08	3.85E-07	4.47E-07	3.80E-07
564825.2	4187892	6.30E-08	3.87E-07	4.50E-07	3.83E-07
564840.5	4187882	6.28E-08	3.86E-07	4.49E-07	3.82E-07
564848.1	4187877	6.23E-08	3.83E-07	4.45E-07	3.78E-07
564855.7	4187872	6.15E-08	3.78E-07	4.40E-07	3.74E-07
564863.3	4187867	6.05E-08	3.72E-07	4.33E-07	3.68E-07
564737.7	4188037	3.97E-08	2.44E-07	2.83E-07	2.41E-07
564742.5	4188019	4.26E-08	2.62E-07	3.04E-07	2.59E-07
564778.9	4187911	5.37E-08	3.30E-07	3.83E-07	3.26E-07
564786.4	4187906	5.52E-08	3.39E-07	3.94E-07	3.35E-07
564801.5	4187896	5.76E-08	3.54E-07	4.11E-07	3.50E-07
564816.5	4187887	5.87E-08	3.61E-07	4.19E-07	3.56E-07
564831.5	4187877	5.86E-08	3.60E-07	4.19E-07	3.56E-07
564846.5	4187867	5.76E-08	3.54E-07	4.12E-07	3.50E-07
564861.6	4187857	5.59E-08	3.43E-07	3.99E-07	3.39E-07
564735.3	4188045	3.83E-08	2.35E-07	2.73E-07	2.32E-07
564736.1	4188055	3.77E-08	2.32E-07	2.70E-07	2.29E-07
564739.4	4188092	3.53E-08	2.17E-07	2.53E-07	2.15E-07
564727.7	4188038	3.68E-08	2.26E-07	2.63E-07	2.23E-07
564730.1	4188029	3.80E-08	2.34E-07	2.72E-07	2.31E-07
564734.8	4188012	4.07E-08	2.50E-07	2.91E-07	2.47E-07
564739.6	4187995	4.32E-08	2.66E-07	3.09E-07	2.63E-07
564744.3	4187978	4.55E-08	2.80E-07	3.25E-07	2.76E-07
564749.1	4187961	4.73E-08	2.91E-07	3.38E-07	2.87E-07
564785.6	4187896	5.28E-08	3.25E-07	3.77E-07	3.21E-07
564800.4	4187886	5.44E-08	3.34E-07	3.88E-07	3.30E-07
564815.2	4187876	5.49E-08	3.38E-07	3.92E-07	3.34E-07
564830.1	4187867	5.45E-08	3.35E-07	3.89E-07	3.31E-07
564844.9	4187857	5.35E-08	3.29E-07	3.82E-07	3.25E-07
564859.7	4187847	5.17E-08	3.18E-07	3.70E-07	3.14E-07
564726.1	4188055	3.50E-08	2.15E-07	2.50E-07	2.13E-07
564729.5	4188093	3.29E-08	2.02E-07	2.35E-07	2.00E-07
564717.8	4188038	3.43E-08	2.11E-07	2.45E-07	2.08E-07
564720.3	4188029	3.55E-08	2.18E-07	2.53E-07	2.15E-07
564722.8	4188020	3.67E-08	2.26E-07	2.62E-07	2.23E-07
564725.3	4188011	3.80E-08	2.33E-07	2.71E-07	2.31E-07
564727.8	4188002	3.92E-08	2.41E-07	2.80E-07	2.38E-07
564730.3	4187993	4.04E-08	2.48E-07	2.89E-07	2.46E-07
564732.8	4187984	4.16E-08	2.56E-07	2.97E-07	2.53E-07
564735.3	4187976	4.26E-08	2.62E-07	3.05E-07	2.59E-07
564737.8	4187967	4.35E-08	2.68E-07	3.11E-07	2.64E-07
564740.3	4187958	4.43E-08	2.72E-07	3.17E-07	2.69E-07
564742.8	4187949	4.50E-08	2.77E-07	3.22E-07	2.73E-07
564745.3	4187940	4.55E-08	2.80E-07	3.25E-07	2.77E-07
564747.8	4187931	4.59E-08	2.82E-07	3.28E-07	2.79E-07
564750.3	4187922	4.60E-08	2.83E-07	3.29E-07	2.79E-07
564752.8	4187913	4.59E-08	2.82E-07	3.28E-07	2.79E-07
564778.6	4187889	4.95E-08	3.04E-07	3.54E-07	3.01E-07
564786.4	4187884	5.04E-08	3.09E-07	3.60E-07	3.06E-07
564794.2	4187879	5.10E-08	3.13E-07	3.64E-07	3.09E-07
564802	4187874	5.14E-08	3.16E-07	3.67E-07	3.12E-07
564809.8	4187869	5.15E-08	3.16E-07	3.68E-07	3.13E-07
564817.6	4187864	5.14E-08	3.16E-07	3.67E-07	3.12E-07
564825.4	4187859	5.11E-08	3.14E-07	3.65E-07	3.10E-07
564833.1	4187853	5.07E-08	3.11E-07	3.62E-07	3.08E-07
564840.9	4187848	5.00E-08	3.07E-07	3.57E-07	3.04E-07
564848.7	4187843	4.92E-08	3.02E-07	3.52E-07	2.99E-07
564856.5	4187838	4.82E-08	2.96E-07	3.44E-07	2.93E-07
564864.3	4187833	4.71E-08	2.89E-07	3.36E-07	2.86E-07
564715.3	4188047	3.31E-08	2.03E-07	2.36E-07	2.01E-07
564719.5	4188094	3.07E-08	1.89E-07	2.20E-07	1.87E-07
564707.8	4188039	3.19E-08	1.96E-07	2.28E-07	1.94E-07
564710.3	4188030	3.30E-08	2.03E-07	2.36E-07	2.01E-07
564712.8	4188021	3.41E-08	2.10E-07	2.44E-07	2.07E-07
564715.2	4188013	3.53E-08	2.17E-07	2.52E-07	2.14E-07
564717.7	4188004	3.64E-08	2.24E-07	2.60E-07	2.21E-07
564720.2	4187995	3.75E-08	2.30E-07	2.68E-07	2.28E-07
564722.6	4187986	3.86E-08	2.37E-07	2.76E-07	2.34E-07
564725.1	4187977	3.96E-08	2.43E-07	2.83E-07	2.40E-07
564727.5	4187969	4.05E-08	2.49E-07	2.89E-07	2.46E-07
564730	4187960	4.12E-08	2.53E-07	2.95E-07	2.50E-07
564732.5	4187951	4.19E-08	2.58E-07	3.00E-07	2.55E-07
564734.9	4187942	4.25E-08	2.61E-07	3.04E-07	2.58E-07
564737.4	4187933	4.30E-08	2.64E-07	3.07E-07	2.61E-07
564739.8	4187925	4.32E-08	2.66E-07	3.09E-07	2.63E-07
564742.3	4187916	4.33E-08	2.66E-07	3.09E-07	2.63E-07
564744.8	4187907	4.32E-08	2.65E-07	3.08E-07	2.62E-07
564754.9	4187893	4.42E-08	2.72E-07	3.16E-07	2.69E-07
564777.9	4187878	4.71E-08	2.90E-07	3.37E-07	2.86E-07
564785.6	4187873	4.77E-08	2.93E-07	3.41E-07	2.90E-07
564793.3	4187868	4.81E-08	2.96E-07	3.44E-07	2.92E-07
564801	4187863	4.84E-08	2.97E-07	3.45E-07	2.94E-07
564808.6	4187858	4.84E-08	2.97E-07	3.46E-07	2.94E-07
564816.3	4187853	4.82E-08	2.96E-07	3.44E-07	2.93E-07
564824	4187848	4.79E-08	2.94E-07	3.42E-07	2.91E-07
564831.7	4187843	4.74E-08	2.91E-07	3.38E-07	2.88E-07
564839.3	4187838	4.67E-08	2.87E-07	3.33E-07	2.83E-07
564847	4187833	4.58E-08	2.82E-07	3.27E-07	2.78E-07
564854.7	4187828	4.48E-08	2.76E-07	3.20E-07	2.72E-07
564862.4	4187823	4.38E-08	2.69E-07	3.13E-07	2.66E-07
564705.4	4188048	3.09E-08	1.90E-07	2.21E-07	1.88E-07
564709.5	4188095	2.88E-08	1.77E-07	2.06E-07	1.75E-07
564697.9	4188040	2.98E-08	1.83E-07	2.13E-07	1.81E-07
564702.7	4188023	3.18E-08	1.95E-07	2.27E-07	1.93E-07
564705.1	4188014	3.28E-08	2.02E-07	2.34E-07	1.99E-07
564707.6	4188005	3.38E-08	2.08E-07	2.42E-07	2.05E-07
564710	4187997	3.49E-08	2.14E-07	2.49E-07	2.12E-07
564714.9	4187979	3.68E-08	2.26E-07	2.63E-07	2.24E-07
564717.3	4187970	3.77E-08	2.31E-07	2.69E-07	2.29E-07
564719.7	4187962	3.84E-08	2.36E-07	2.75E-07	2.33E-07
564722.2	4187953	3.91E-08	2.40E-07	2.80E-07	2.38E-07
564727	4187936	4.02E-08	2.47E-07	2.87E-07	2.44E-07
564729.5	4187927	4.06E-08	2.49E-07	2.90E-07	2.46E-07
564731.9	4187918	4.08E-08	2.51E-07	2.91E-07	2.48E-07
564734.3	4187910	4.08E-08	2.51E-07	2.92E-07	2.48E-07
564736.7	4187901	4.07E-08	2.50E-07	2.91E-07	2.47E-07
564746.8	4187887	4.16E-08	2.56E-07	2.97E-07	2.53E-07
564754.3	4187882	4.27E-08	2.62E-07	3.05E-07	2.59E-07

564792.2	4187858	4.55E-08	2.80E-07	3.25E-07	2.76E-07
564799.8	4187853	4.56E-08	2.80E-07	3.26E-07	2.77E-07
564815	4187843	4.52E-08	2.78E-07	3.23E-07	2.75E-07
564822.5	4187838	4.48E-08	2.75E-07	3.20E-07	2.72E-07
564837.7	4187828	4.36E-08	2.68E-07	3.11E-07	2.65E-07
564845.3	4187823	4.27E-08	2.63E-07	3.05E-07	2.59E-07
564860.4	4187813	4.08E-08	2.51E-07	2.92E-07	2.48E-07
564695.4	4188049	2.89E-08	1.78E-07	2.07E-07	1.76E-07
564699.6	4188095	2.70E-08	1.66E-07	1.93E-07	1.64E-07
564692.7	4188024	2.97E-08	1.82E-07	2.12E-07	1.80E-07
564695.1	4188015	3.06E-08	1.88E-07	2.19E-07	1.86E-07
564699.9	4187998	3.25E-08	2.00E-07	2.32E-07	1.97E-07
564704.7	4187981	3.43E-08	2.11E-07	2.45E-07	2.08E-07
564709.5	4187964	3.59E-08	2.20E-07	2.56E-07	2.18E-07
564711.9	4187955	3.66E-08	2.25E-07	2.61E-07	2.22E-07
564716.7	4187938	3.77E-08	2.31E-07	2.69E-07	2.29E-07
564721.5	4187921	3.84E-08	2.36E-07	2.74E-07	2.33E-07
564723.9	4187912	3.85E-08	2.37E-07	2.75E-07	2.34E-07
564728.7	4187895	3.85E-08	2.37E-07	2.75E-07	2.34E-07
564738.6	4187881	3.93E-08	2.41E-07	2.81E-07	2.39E-07
564746.1	4187877	4.02E-08	2.47E-07	2.87E-07	2.44E-07
564761.1	4187867	4.16E-08	2.56E-07	2.98E-07	2.53E-07
564791.1	4187847	4.31E-08	2.65E-07	3.08E-07	2.61E-07
564806	4187838	4.28E-08	2.63E-07	3.06E-07	2.60E-07
564813.5	4187833	4.25E-08	2.61E-07	3.03E-07	2.58E-07
564828.5	4187823	4.14E-08	2.55E-07	2.96E-07	2.52E-07
564843.5	4187813	3.99E-08	2.45E-07	2.85E-07	2.42E-07
564858.5	4187804	3.82E-08	2.35E-07	2.73E-07	2.32E-07
564689.6	4188096	2.54E-08	1.56E-07	1.82E-07	1.54E-07
564695.5	4187979	3.23E-08	1.99E-07	2.31E-07	1.96E-07
564698	4187970	3.32E-08	2.04E-07	2.37E-07	2.01E-07
564700.5	4187961	3.39E-08	2.08E-07	2.42E-07	2.06E-07
564703	4187952	3.46E-08	2.12E-07	2.47E-07	2.10E-07
564705.5	4187943	3.52E-08	2.16E-07	2.51E-07	2.13E-07
564708	4187934	3.56E-08	2.19E-07	2.55E-07	2.16E-07
564710.5	4187925	3.60E-08	2.21E-07	2.57E-07	2.19E-07
564713	4187916	3.63E-08	2.23E-07	2.60E-07	2.21E-07
564715.6	4187907	3.65E-08	2.24E-07	2.61E-07	2.22E-07
564718.1	4187898	3.66E-08	2.25E-07	2.61E-07	2.22E-07
564720.6	4187889	3.65E-08	2.24E-07	2.61E-07	2.22E-07
564730.9	4187875	3.73E-08	2.29E-07	2.66E-07	2.26E-07
564738.7	4187870	3.81E-08	2.34E-07	2.72E-07	2.31E-07
564746.5	4187865	3.89E-08	2.39E-07	2.78E-07	2.36E-07
564754.3	4187860	3.95E-08	2.43E-07	2.82E-07	2.40E-07
564762.1	4187855	4.01E-08	2.46E-07	2.86E-07	2.43E-07
564785.5	4187840	4.08E-08	2.50E-07	2.91E-07	2.48E-07
564793.3	4187835	4.07E-08	2.50E-07	2.91E-07	2.47E-07
564801.1	4187830	4.04E-08	2.48E-07	2.89E-07	2.45E-07
564808.9	4187825	4.00E-08	2.46E-07	2.86E-07	2.43E-07
564816.7	4187820	3.96E-08	2.43E-07	2.83E-07	2.40E-07
564824.5	4187814	3.90E-08	2.40E-07	2.79E-07	2.37E-07
564832.3	4187809	3.83E-08	2.36E-07	2.74E-07	2.33E-07
564840.1	4187804	3.76E-08	2.31E-07	2.68E-07	2.28E-07
564847.9	4187799	3.67E-08	2.26E-07	2.62E-07	2.23E-07
564855.7	4187794	3.58E-08	2.20E-07	2.56E-07	2.18E-07
564679.7	4188097	2.40E-08	1.47E-07	1.71E-07	1.45E-07
564692.7	4187954	3.24E-08	1.99E-07	2.32E-07	1.97E-07
564695.2	4187945	3.30E-08	2.03E-07	2.36E-07	2.00E-07
564697.7	4187936	3.35E-08	2.06E-07	2.39E-07	2.03E-07
564700.2	4187928	3.39E-08	2.08E-07	2.42E-07	2.06E-07
564702.6	4187919	3.43E-08	2.11E-07	2.45E-07	2.08E-07
564705.1	4187910	3.45E-08	2.12E-07	2.47E-07	2.10E-07
564707.6	4187901	3.47E-08	2.13E-07	2.48E-07	2.11E-07
564710.1	4187892	3.47E-08	2.14E-07	2.48E-07	2.11E-07
564712.5	4187883	3.47E-08	2.13E-07	2.48E-07	2.11E-07
564722.7	4187869	3.54E-08	2.17E-07	2.53E-07	2.15E-07
564730.4	4187864	3.61E-08	2.22E-07	2.58E-07	2.20E-07
564738.1	4187859	3.69E-08	2.27E-07	2.63E-07	2.24E-07
564745.8	4187854	3.75E-08	2.30E-07	2.68E-07	2.28E-07
564753.6	4187849	3.80E-08	2.33E-07	2.71E-07	2.31E-07
564761.3	4187844	3.83E-08	2.36E-07	2.74E-07	2.33E-07
564784.4	4187829	3.86E-08	2.37E-07	2.76E-07	2.34E-07
564792.1	4187824	3.84E-08	2.36E-07	2.74E-07	2.33E-07
564799.8	4187819	3.81E-08	2.34E-07	2.72E-07	2.31E-07
564807.5	4187814	3.77E-08	2.31E-07	2.69E-07	2.29E-07
564815.2	4187809	3.72E-08	2.29E-07	2.66E-07	2.26E-07
564822.9	4187804	3.66E-08	2.25E-07	2.62E-07	2.22E-07
564830.7	4187799	3.60E-08	2.21E-07	2.57E-07	2.18E-07
564838.4	4187794	3.52E-08	2.17E-07	2.52E-07	2.14E-07
564846.1	4187789	3.44E-08	2.12E-07	2.46E-07	2.09E-07
564853.8	4187784	3.36E-08	2.07E-07	2.40E-07	2.04E-07
564689.8	4187930	3.20E-08	1.96E-07	2.28E-07	1.94E-07
564692.3	4187921	3.23E-08	1.99E-07	2.31E-07	1.96E-07
564694.7	4187912	3.27E-08	2.01E-07	2.33E-07	1.98E-07
564697.2	4187904	3.29E-08	2.02E-07	2.35E-07	2.00E-07
564699.6	4187895	3.30E-08	2.03E-07	2.36E-07	2.01E-07
564702.1	4187886	3.31E-08	2.03E-07	2.36E-07	2.01E-07
564704.5	4187877	3.30E-08	2.03E-07	2.36E-07	2.00E-07
564714.6	4187864	3.36E-08	2.07E-07	2.40E-07	2.04E-07
564722.2	4187859	3.43E-08	2.11E-07	2.45E-07	2.09E-07
564737.4	4187849	3.56E-08	2.19E-07	2.54E-07	2.16E-07
564745.1	4187844	3.61E-08	2.22E-07	2.58E-07	2.19E-07
564752.7	4187839	3.64E-08	2.24E-07	2.60E-07	2.21E-07
564760.3	4187834	3.66E-08	2.25E-07	2.62E-07	2.22E-07
564790.8	4187814	3.63E-08	2.23E-07	2.59E-07	2.20E-07
564798.5	4187809	3.59E-08	2.21E-07	2.57E-07	2.18E-07
564813.7	4187799	3.50E-08	2.15E-07	2.50E-07	2.12E-07
564821.3	4187794	3.44E-08	2.12E-07	2.46E-07	2.09E-07
564829	4187789	3.38E-08	2.08E-07	2.41E-07	2.05E-07
564836.6	4187784	3.31E-08	2.04E-07	2.37E-07	2.01E-07
564851.8	4187774	3.16E-08	1.94E-07	2.26E-07	1.92E-07
564684.4	4187915	3.09E-08	1.90E-07	2.21E-07	1.88E-07
564689.2	4187897	3.14E-08	1.93E-07	2.24E-07	1.91E-07
564691.6	4187889	3.15E-08	1.93E-07	2.25E-07	1.91E-07
564696.5	4187871	3.14E-08	1.93E-07	2.25E-07	1.91E-07
564706.4	4187858	3.20E-08	1.97E-07	2.29E-07	1.94E-07
564714	4187853	3.27E-08	2.01E-07	2.33E-07	1.98E-07
564721.5	4187848	3.33E-08	2.04E-07	2.38E-07	2.02E-07
564736.6	4187838	3.43E-08	2.10E-07	2.45E-07	2.08E-07
564751.7	4187828	3.48E-08	2.14E-07	2.49E-07	2.11E-07
564759.3	4187823	3.49E-08	2.15E-07	2.49E-07	2.12E-07
564789.5	4187804	3.43E-08	2.11E-07	2.45E-07	2.08E-07
564797	4187799	3.39E-08	2.08E-07	2.42E-07	2.06E-07
564812.1	4187789	3.30E-08	2.02E-07	2.35E-07	2.00E-07
564827.2	4187779	3.18E-08	1.96E-07	2.27E-07	1.93E-07
564842.3	4187769	3.05E-08	1.87E-07	2.18E-07	1.85E-07

564849.9	4187765	2.98E-08	1.83E-07	2.13E-07	1.81E-07
564680.8	4187893	2.99E-08	1.84E-07	2.14E-07	1.82E-07
564683.3	4187884	3.00E-08	1.85E-07	2.15E-07	1.82E-07
564685.8	4187875	3.01E-08	1.85E-07	2.15E-07	1.83E-07
564688.3	4187866	3.00E-08	1.84E-07	2.14E-07	1.82E-07
564698.6	4187852	3.05E-08	1.88E-07	2.18E-07	1.85E-07
564706.5	4187846	3.12E-08	1.91E-07	2.23E-07	1.89E-07
564714.3	4187841	3.17E-08	1.95E-07	2.27E-07	1.93E-07
564722.1	4187836	3.22E-08	1.98E-07	2.30E-07	1.96E-07
564729.9	4187831	3.26E-08	2.01E-07	2.33E-07	1.98E-07
564737.7	4187826	3.30E-08	2.03E-07	2.36E-07	2.00E-07
564745.6	4187821	3.32E-08	2.04E-07	2.37E-07	2.02E-07
564753.4	4187816	3.33E-08	2.04E-07	2.38E-07	2.02E-07
564761.2	4187811	3.32E-08	2.04E-07	2.38E-07	2.02E-07
564792.5	4187791	3.22E-08	1.98E-07	2.30E-07	1.96E-07
564800.3	4187786	3.17E-08	1.95E-07	2.27E-07	1.93E-07
564808.1	4187781	3.12E-08	1.92E-07	2.23E-07	1.90E-07
564815.9	4187775	3.07E-08	1.89E-07	2.19E-07	1.86E-07
564823.7	4187770	3.01E-08	1.85E-07	2.15E-07	1.83E-07
564831.6	4187765	2.95E-08	1.81E-07	2.11E-07	1.79E-07
564839.4	4187760	2.88E-08	1.77E-07	2.06E-07	1.75E-07
564847.2	4187755	2.82E-08	1.73E-07	2.01E-07	1.71E-07
564677.8	4187868	2.87E-08	1.77E-07	2.05E-07	1.74E-07
564680.3	4187860	2.87E-08	1.76E-07	2.05E-07	1.74E-07
564690.5	4187846	2.91E-08	1.79E-07	2.08E-07	1.77E-07
564698.2	4187841	2.97E-08	1.83E-07	2.12E-07	1.81E-07
564706	4187836	3.02E-08	1.86E-07	2.16E-07	1.84E-07
564713.7	4187831	3.07E-08	1.88E-07	2.19E-07	1.86E-07
564721.4	4187826	3.11E-08	1.91E-07	2.22E-07	1.89E-07
564729.2	4187821	3.14E-08	1.93E-07	2.24E-07	1.91E-07
564736.9	4187816	3.16E-08	1.94E-07	2.26E-07	1.92E-07
564744.7	4187811	3.17E-08	1.95E-07	2.27E-07	1.93E-07
564752.4	4187806	3.17E-08	1.95E-07	2.27E-07	1.93E-07
564760.1	4187801	3.16E-08	1.94E-07	2.26E-07	1.92E-07
564767.9	4187795	3.15E-08	1.93E-07	2.25E-07	1.91E-07
564791.1	4187780	3.05E-08	1.87E-07	2.18E-07	1.85E-07
564798.8	4187775	3.00E-08	1.84E-07	2.14E-07	1.82E-07
564806.5	4187770	2.95E-08	1.81E-07	2.11E-07	1.79E-07
564814.3	4187765	2.90E-08	1.78E-07	2.07E-07	1.76E-07
564822	4187760	2.84E-08	1.75E-07	2.03E-07	1.73E-07
564829.8	4187755	2.78E-08	1.71E-07	1.99E-07	1.69E-07
564837.5	4187750	2.72E-08	1.67E-07	1.94E-07	1.65E-07
564845.2	4187745	2.66E-08	1.63E-07	1.90E-07	1.62E-07
564682.4	4187840	2.79E-08	1.71E-07	1.99E-07	1.69E-07
564690	4187835	2.84E-08	1.74E-07	2.03E-07	1.72E-07
564697.7	4187830	2.89E-08	1.77E-07	2.06E-07	1.75E-07
564705.4	4187825	2.93E-08	1.80E-07	2.09E-07	1.78E-07
564713	4187820	2.96E-08	1.82E-07	2.11E-07	1.80E-07
564720.7	4187815	2.99E-08	1.84E-07	2.14E-07	1.82E-07
564728.3	4187810	3.01E-08	1.85E-07	2.15E-07	1.83E-07
564736	4187805	3.02E-08	1.86E-07	2.16E-07	1.84E-07
564743.7	4187800	3.03E-08	1.86E-07	2.17E-07	1.84E-07
564751.3	4187795	3.02E-08	1.86E-07	2.16E-07	1.84E-07
564759	4187790	3.01E-08	1.85E-07	2.15E-07	1.83E-07
564789.6	4187770	2.89E-08	1.77E-07	2.06E-07	1.75E-07
564797.3	4187765	2.84E-08	1.75E-07	2.03E-07	1.72E-07
564804.9	4187760	2.79E-08	1.72E-07	1.99E-07	1.70E-07
564812.6	4187755	2.74E-08	1.68E-07	1.96E-07	1.66E-07
564820.3	4187750	2.69E-08	1.65E-07	1.92E-07	1.63E-07
564827.9	4187745	2.63E-08	1.62E-07	1.88E-07	1.60E-07
564843.2	4187735	2.52E-08	1.55E-07	1.80E-07	1.53E-07
564674.2	4187834	2.66E-08	1.64E-07	1.90E-07	1.62E-07
564681.8	4187829	2.71E-08	1.67E-07	1.94E-07	1.65E-07
564689.4	4187824	2.76E-08	1.70E-07	1.97E-07	1.68E-07
564704.6	4187814	2.83E-08	1.74E-07	2.02E-07	1.72E-07
564712.2	4187809	2.85E-08	1.75E-07	2.04E-07	1.73E-07
564727.4	4187799	2.89E-08	1.77E-07	2.06E-07	1.75E-07
564735	4187795	2.89E-08	1.78E-07	2.07E-07	1.76E-07
564742.6	4187790	2.89E-08	1.78E-07	2.07E-07	1.76E-07
564757.8	4187780	2.87E-08	1.76E-07	2.05E-07	1.74E-07
564765.3	4187775	2.84E-08	1.75E-07	2.03E-07	1.73E-07
564795.7	4187755	2.69E-08	1.65E-07	1.92E-07	1.63E-07
564810.9	4187745	2.60E-08	1.59E-07	1.85E-07	1.58E-07
564818.5	4187740	2.54E-08	1.56E-07	1.82E-07	1.54E-07
564833.7	4187730	2.44E-08	1.50E-07	1.74E-07	1.48E-07
564841.3	4187726	2.39E-08	1.47E-07	1.71E-07	1.45E-07
564674.3	4187823	2.60E-08	1.60E-07	1.86E-07	1.58E-07
564682.1	4187818	2.65E-08	1.63E-07	1.89E-07	1.61E-07
564689.9	4187813	2.68E-08	1.65E-07	1.92E-07	1.63E-07
564697.7	4187808	2.71E-08	1.67E-07	1.94E-07	1.65E-07
564705.6	4187802	2.73E-08	1.68E-07	1.95E-07	1.66E-07
564713.4	4187797	2.75E-08	1.69E-07	1.97E-07	1.67E-07
564721.2	4187792	2.76E-08	1.70E-07	1.97E-07	1.68E-07
564729.1	4187787	2.77E-08	1.70E-07	1.98E-07	1.68E-07
564736.9	4187782	2.77E-08	1.70E-07	1.98E-07	1.68E-07
564744.7	4187777	2.76E-08	1.69E-07	1.97E-07	1.68E-07
564752.5	4187772	2.74E-08	1.68E-07	1.96E-07	1.66E-07
564760.4	4187767	2.72E-08	1.67E-07	1.94E-07	1.65E-07
564768.2	4187762	2.69E-08	1.65E-07	1.92E-07	1.63E-07
564799.5	4187741	2.52E-08	1.55E-07	1.80E-07	1.53E-07
564807.3	4187736	2.47E-08	1.52E-07	1.77E-07	1.50E-07
564815.2	4187731	2.42E-08	1.49E-07	1.73E-07	1.47E-07
564823	4187726	2.37E-08	1.46E-07	1.70E-07	1.44E-07
564830.8	4187721	2.32E-08	1.43E-07	1.66E-07	1.41E-07
564838.7	4187716	2.27E-08	1.40E-07	1.62E-07	1.38E-07
564673.8	4187812	2.53E-08	1.56E-07	1.81E-07	1.54E-07
564681.6	4187807	2.57E-08	1.58E-07	1.84E-07	1.56E-07
564689.3	4187802	2.60E-08	1.60E-07	1.86E-07	1.58E-07
564697.1	4187797	2.62E-08	1.61E-07	1.87E-07	1.59E-07
564704.8	4187792	2.63E-08	1.62E-07	1.88E-07	1.60E-07
564712.6	4187787	2.64E-08	1.63E-07	1.89E-07	1.61E-07
564720.3	4187782	2.65E-08	1.63E-07	1.89E-07	1.61E-07
564728.1	4187777	2.65E-08	1.63E-07	1.89E-07	1.61E-07
564735.9	4187772	2.64E-08	1.63E-07	1.89E-07	1.61E-07
564743.6	4187767	2.63E-08	1.62E-07	1.88E-07	1.60E-07
564751.4	4187762	2.61E-08	1.60E-07	1.87E-07	1.59E-07
564759.1	4187757	2.59E-08	1.59E-07	1.85E-07	1.57E-07
564766.9	4187752	2.55E-08	1.57E-07	1.83E-07	1.55E-07
564774.6	4187746	2.52E-08	1.55E-07	1.80E-07	1.53E-07
564797.9	4187731	2.40E-08	1.47E-07	1.71E-07	1.45E-07
564805.7	4187726	2.35E-08	1.44E-07	1.68E-07	1.43E-07
564813.4	4187721	2.30E-08	1.42E-07	1.65E-07	1.40E-07
564821.2	4187716	2.26E-08	1.39E-07	1.61E-07	1.37E-07
564828.9	4187711	2.21E-08	1.36E-07	1.58E-07	1.34E-07
564836.7	4187706	2.16E-08	1.33E-07	1.54E-07	1.31E-07
564680.9	4187796	2.49E-08	1.53E-07	1.78E-07	1.51E-07

564688.6	4187791	2.51E-08	1.54E-07	1.79E-07	1.52E-07
564696.3	4187786	2.53E-08	1.55E-07	1.81E-07	1.53E-07
564704	4187781	2.54E-08	1.56E-07	1.81E-07	1.54E-07
564711.7	4187776	2.54E-08	1.56E-07	1.82E-07	1.54E-07
564719.4	4187771	2.54E-08	1.56E-07	1.82E-07	1.54E-07
564727	4187766	2.54E-08	1.56E-07	1.81E-07	1.54E-07
564734.7	4187761	2.53E-08	1.55E-07	1.81E-07	1.53E-07
564742.4	4187756	2.51E-08	1.54E-07	1.79E-07	1.53E-07
564750.1	4187751	2.49E-08	1.53E-07	1.78E-07	1.51E-07
564757.8	4187746	2.46E-08	1.51E-07	1.76E-07	1.50E-07
564765.5	4187741	2.43E-08	1.49E-07	1.74E-07	1.48E-07
564773.2	4187736	2.40E-08	1.47E-07	1.71E-07	1.46E-07
564796.2	4187721	2.28E-08	1.40E-07	1.63E-07	1.38E-07
564803.9	4187716	2.23E-08	1.37E-07	1.60E-07	1.36E-07
564811.6	4187711	2.19E-08	1.35E-07	1.57E-07	1.33E-07
564819.3	4187706	2.15E-08	1.32E-07	1.53E-07	1.30E-07
564827	4187701	2.10E-08	1.29E-07	1.50E-07	1.28E-07
564580.1	4188106	1.45E-08	8.89E-08	1.03E-07	8.78E-08
564568.4	4188052	1.49E-08	9.13E-08	1.06E-07	9.02E-08
564680.2	4187786	2.41E-08	1.48E-07	1.72E-07	1.46E-07
564687.8	4187781	2.43E-08	1.49E-07	1.73E-07	1.47E-07
564695.4	4187776	2.44E-08	1.50E-07	1.74E-07	1.48E-07
564710.7	4187766	2.44E-08	1.50E-07	1.74E-07	1.48E-07
564718.3	4187761	2.44E-08	1.50E-07	1.74E-07	1.48E-07
564725.9	4187756	2.43E-08	1.49E-07	1.74E-07	1.47E-07
564733.6	4187751	2.42E-08	1.48E-07	1.73E-07	1.47E-07
564748.8	4187741	2.38E-08	1.46E-07	1.70E-07	1.44E-07
564756.4	4187736	2.35E-08	1.44E-07	1.68E-07	1.43E-07
564764.1	4187731	2.32E-08	1.42E-07	1.66E-07	1.41E-07
564771.7	4187726	2.28E-08	1.40E-07	1.63E-07	1.39E-07
564802.2	4187706	2.13E-08	1.31E-07	1.52E-07	1.29E-07
564809.8	4187701	2.09E-08	1.28E-07	1.49E-07	1.27E-07
564825.1	4187691	2.00E-08	1.23E-07	1.43E-07	1.22E-07
564565.9	4188060	1.45E-08	8.93E-08	1.04E-07	8.82E-08
564566.8	4188070	1.44E-08	8.84E-08	1.03E-07	8.74E-08
564569.3	4188098	1.40E-08	8.60E-08	1.00E-07	8.50E-08
564570.1	4188107	1.39E-08	8.52E-08	9.90E-08	8.42E-08
564558.5	4188052	1.42E-08	8.75E-08	1.02E-07	8.64E-08
564673.4	4187779	2.32E-08	1.43E-07	1.66E-07	1.41E-07
564681.2	4187774	2.33E-08	1.43E-07	1.67E-07	1.42E-07
564689.1	4187769	2.34E-08	1.44E-07	1.67E-07	1.42E-07
564696.9	4187763	2.35E-08	1.44E-07	1.68E-07	1.43E-07
564704.7	4187758	2.35E-08	1.44E-07	1.68E-07	1.42E-07
564712.6	4187753	2.34E-08	1.44E-07	1.67E-07	1.42E-07
564720.4	4187748	2.33E-08	1.43E-07	1.67E-07	1.42E-07
564728.2	4187743	2.32E-08	1.42E-07	1.66E-07	1.41E-07
564736.1	4187738	2.30E-08	1.41E-07	1.64E-07	1.40E-07
564743.9	4187733	2.28E-08	1.40E-07	1.63E-07	1.38E-07
564751.8	4187728	2.25E-08	1.38E-07	1.61E-07	1.37E-07
564759.6	4187723	2.22E-08	1.36E-07	1.59E-07	1.35E-07
564767.4	4187718	2.19E-08	1.34E-07	1.56E-07	1.33E-07
564775.3	4187713	2.15E-08	1.32E-07	1.54E-07	1.31E-07
564798.8	4187697	2.04E-08	1.25E-07	1.46E-07	1.24E-07
564806.6	4187692	2.00E-08	1.23E-07	1.43E-07	1.21E-07
564814.5	4187687	1.96E-08	1.20E-07	1.40E-07	1.19E-07
564822.3	4187682	1.92E-08	1.18E-07	1.37E-07	1.16E-07
564556	4188061	1.39E-08	8.55E-08	9.94E-08	8.45E-08
564556.8	4188071	1.38E-08	8.47E-08	9.85E-08	8.37E-08
564557.6	4188080	1.37E-08	8.40E-08	9.76E-08	8.30E-08
564558.5	4188089	1.35E-08	8.32E-08	9.68E-08	8.22E-08
564559.3	4188099	1.34E-08	8.25E-08	9.59E-08	8.15E-08
564560.1	4188108	1.33E-08	8.17E-08	9.50E-08	8.08E-08
564548.5	4188053	1.36E-08	8.38E-08	9.74E-08	8.28E-08
564551	4188044	1.39E-08	8.56E-08	9.96E-08	8.46E-08
564672.7	4187768	2.24E-08	1.38E-07	1.60E-07	1.36E-07
564680.5	4187763	2.25E-08	1.38E-07	1.61E-07	1.37E-07
564688.2	4187758	2.26E-08	1.39E-07	1.61E-07	1.37E-07
564696	4187753	2.26E-08	1.39E-07	1.61E-07	1.37E-07
564703.8	4187748	2.25E-08	1.38E-07	1.61E-07	1.37E-07
564711.6	4187743	2.24E-08	1.38E-07	1.60E-07	1.36E-07
564719.3	4187738	2.23E-08	1.37E-07	1.60E-07	1.36E-07
564727.1	4187733	2.22E-08	1.36E-07	1.59E-07	1.35E-07
564734.9	4187728	2.20E-08	1.35E-07	1.57E-07	1.34E-07
564742.6	4187723	2.18E-08	1.34E-07	1.56E-07	1.32E-07
564750.4	4187718	2.15E-08	1.32E-07	1.54E-07	1.31E-07
564758.2	4187713	2.12E-08	1.30E-07	1.51E-07	1.29E-07
564766	4187708	2.09E-08	1.28E-07	1.49E-07	1.27E-07
564773.7	4187702	2.05E-08	1.26E-07	1.47E-07	1.25E-07
564804.8	4187682	1.91E-08	1.17E-07	1.36E-07	1.16E-07
564812.6	4187677	1.87E-08	1.15E-07	1.34E-07	1.14E-07
564820.4	4187672	1.83E-08	1.13E-07	1.31E-07	1.11E-07
564546	4188062	1.33E-08	8.20E-08	9.53E-08	8.10E-08
564546.8	4188071	1.32E-08	8.13E-08	9.45E-08	8.03E-08
564547.7	4188081	1.31E-08	8.06E-08	9.37E-08	7.96E-08
564548.5	4188090	1.30E-08	7.99E-08	9.29E-08	7.89E-08
564549.3	4188099	1.29E-08	7.92E-08	9.21E-08	7.83E-08
564550.2	4188109	1.28E-08	7.85E-08	9.13E-08	7.76E-08
564538.5	4188054	1.31E-08	8.03E-08	9.34E-08	7.94E-08
564541	4188045	1.33E-08	8.20E-08	9.54E-08	8.11E-08
564545.9	4188028	1.40E-08	8.57E-08	9.97E-08	8.47E-08
564548.4	4188019	1.43E-08	8.77E-08	1.02E-07	8.67E-08
564550.9	4188010	1.46E-08	8.97E-08	1.04E-07	8.86E-08
564553.4	4188001	1.49E-08	9.17E-08	1.07E-07	9.07E-08
564555.8	4187992	1.53E-08	9.38E-08	1.09E-07	9.27E-08
564558.3	4187983	1.56E-08	9.60E-08	1.12E-07	9.49E-08
564560.8	4187974	1.60E-08	9.81E-08	1.14E-07	9.70E-08
564563.3	4187966	1.63E-08	1.00E-07	1.17E-07	9.91E-08
564565.7	4187957	1.67E-08	1.02E-07	1.19E-07	1.01E-07
564671.9	4187757	2.17E-08	1.33E-07	1.55E-07	1.32E-07
564679.6	4187752	2.17E-08	1.34E-07	1.55E-07	1.32E-07
564687.3	4187747	2.18E-08	1.34E-07	1.55E-07	1.32E-07
564695.1	4187742	2.17E-08	1.33E-07	1.55E-07	1.32E-07
564702.8	4187737	2.16E-08	1.33E-07	1.55E-07	1.31E-07
564710.5	4187732	2.15E-08	1.32E-07	1.54E-07	1.31E-07
564718.2	4187727	2.14E-08	1.31E-07	1.53E-07	1.30E-07
564725.9	4187722	2.12E-08	1.30E-07	1.52E-07	1.29E-07
564733.6	4187717	2.10E-08	1.29E-07	1.50E-07	1.28E-07
564741.3	4187712	2.08E-08	1.28E-07	1.49E-07	1.26E-07
564749	4187707	2.05E-08	1.26E-07	1.47E-07	1.25E-07
564756.7	4187702	2.02E-08	1.24E-07	1.45E-07	1.23E-07
564764.5	4187697	1.99E-08	1.22E-07	1.42E-07	1.21E-07
564772.2	4187692	1.96E-08	1.21E-07	1.40E-07	1.19E-07
564779.9	4187687	1.93E-08	1.18E-07	1.38E-07	1.17E-07
564803	4187672	1.82E-08	1.12E-07	1.30E-07	1.11E-07
564810.7	4187667	1.79E-08	1.10E-07	1.28E-07	1.09E-07
564818.4	4187662	1.75E-08	1.08E-07	1.25E-07	1.07E-07

564536.1	4188063	1.28E-08	7.87E-08	9.15E-08	7.78E-08
564536.9	4188072	1.27E-08	7.81E-08	9.08E-08	7.72E-08
564537.7	4188082	1.26E-08	7.74E-08	9.00E-08	7.65E-08
564538.6	4188091	1.25E-08	7.67E-08	8.92E-08	7.58E-08
564539.4	4188100	1.24E-08	7.61E-08	8.85E-08	7.52E-08
564540.2	4188110	1.23E-08	7.54E-08	8.77E-08	7.46E-08
564528.6	4188055	1.25E-08	7.71E-08	8.97E-08	7.62E-08
564531	4188046	1.28E-08	7.87E-08	9.15E-08	7.78E-08
564535.9	4188029	1.34E-08	8.21E-08	9.55E-08	8.12E-08
564538.4	4188020	1.37E-08	8.39E-08	9.76E-08	8.29E-08
564540.8	4188011	1.40E-08	8.58E-08	9.98E-08	8.48E-08
564543.3	4188002	1.43E-08	8.77E-08	1.02E-07	8.67E-08
564545.7	4187994	1.46E-08	8.97E-08	1.04E-07	8.86E-08
564548.2	4187985	1.49E-08	9.17E-08	1.07E-07	9.06E-08
564550.6	4187976	1.52E-08	9.37E-08	1.09E-07	9.26E-08
564553.1	4187967	1.56E-08	9.58E-08	1.11E-07	9.47E-08
564555.6	4187958	1.59E-08	9.78E-08	1.14E-07	9.67E-08
564558	4187950	1.62E-08	9.98E-08	1.16E-07	9.87E-08
564560.5	4187941	1.66E-08	1.02E-07	1.18E-07	1.01E-07
564562.9	4187932	1.69E-08	1.04E-07	1.21E-07	1.03E-07
564565.4	4187923	1.72E-08	1.06E-07	1.23E-07	1.05E-07
564678.7	4187742	2.10E-08	1.29E-07	1.50E-07	1.27E-07
564686.4	4187737	2.09E-08	1.29E-07	1.50E-07	1.27E-07
564701.7	4187727	2.08E-08	1.28E-07	1.49E-07	1.26E-07
564709.3	4187722	2.07E-08	1.27E-07	1.48E-07	1.25E-07
564717	4187717	2.05E-08	1.26E-07	1.47E-07	1.25E-07
564724.6	4187712	2.03E-08	1.25E-07	1.45E-07	1.23E-07
564732.3	4187707	2.01E-08	1.24E-07	1.44E-07	1.22E-07
564739.9	4187702	1.99E-08	1.22E-07	1.42E-07	1.21E-07
564755.2	4187692	1.93E-08	1.19E-07	1.38E-07	1.17E-07
564762.9	4187687	1.90E-08	1.17E-07	1.36E-07	1.16E-07
564770.6	4187682	1.87E-08	1.15E-07	1.34E-07	1.14E-07
564778.2	4187677	1.84E-08	1.13E-07	1.32E-07	1.12E-07
564801.2	4187662	1.74E-08	1.07E-07	1.25E-07	1.06E-07
564816.5	4187652	1.68E-08	1.03E-07	1.20E-07	1.02E-07
564526.1	4188064	1.23E-08	7.56E-08	8.79E-08	7.47E-08
564526.9	4188073	1.22E-08	7.50E-08	8.72E-08	7.41E-08
564527.8	4188083	1.21E-08	7.44E-08	8.65E-08	7.35E-08
564528.6	4188092	1.20E-08	7.38E-08	8.58E-08	7.29E-08
564529.4	4188101	1.19E-08	7.32E-08	8.51E-08	7.23E-08
564530.3	4188111	1.18E-08	7.26E-08	8.44E-08	7.17E-08
564904.8	4188090	2.60E-07	1.60E-06	1.86E-06	1.58E-06
564897.8	4188097	2.01E-07	1.24E-06	1.44E-06	1.22E-06
564906.9	4188110	1.91E-07	1.17E-06	1.36E-06	1.16E-06
564890.8	4188105	1.62E-07	9.94E-07	1.16E-06	9.82E-07
564884.8	4188092	1.72E-07	1.06E-06	1.23E-06	1.04E-06
564899.9	4188117	1.53E-07	9.42E-07	1.10E-06	9.31E-07
564883.2	4188110	1.35E-07	8.27E-07	9.62E-07	8.18E-07
564876.1	4188095	1.44E-07	8.82E-07	1.03E-06	8.72E-07
564892.9	4188124	1.27E-07	7.79E-07	9.06E-07	7.70E-07
564905.3	4188136	1.19E-07	7.33E-07	8.53E-07	7.25E-07
564876.3	4188118	1.13E-07	6.96E-07	8.10E-07	6.88E-07
564869.4	4188103	1.21E-07	7.41E-07	8.62E-07	7.32E-07
564886	4188131	1.07E-07	6.57E-07	7.64E-07	6.50E-07
564898.3	4188143	1.01E-07	6.22E-07	7.23E-07	6.15E-07
564869.4	4188125	9.70E-08	5.96E-07	6.93E-07	5.89E-07
564862.6	4188111	1.03E-07	6.34E-07	7.37E-07	6.26E-07
564855.8	4188096	1.06E-07	6.54E-07	7.60E-07	6.46E-07
564879	4188138	9.18E-08	5.64E-07	6.56E-07	5.58E-07
564891.3	4188150	8.72E-08	5.36E-07	6.23E-07	5.29E-07
564862.5	4188132	8.42E-08	5.17E-07	6.01E-07	5.11E-07
564855.8	4188118	8.94E-08	5.49E-07	6.39E-07	5.43E-07
564849.1	4188104	9.25E-08	5.68E-07	6.61E-07	5.62E-07
564872	4188145	7.99E-08	4.91E-07	5.71E-07	4.85E-07
564884.3	4188157	7.60E-08	4.67E-07	5.43E-07	4.62E-07
564855.6	4188140	7.39E-08	4.54E-07	5.28E-07	4.49E-07
564848.9	4188126	7.84E-08	4.82E-07	5.60E-07	4.76E-07
564842.3	4188112	8.12E-08	4.99E-07	5.80E-07	4.93E-07
564835.7	4188098	8.25E-08	5.07E-07	5.89E-07	5.01E-07
564865	4188153	7.03E-08	4.32E-07	5.02E-07	4.27E-07
564877.3	4188165	6.70E-08	4.12E-07	4.79E-07	4.07E-07
564848.2	4188146	6.57E-08	4.04E-07	4.70E-07	3.99E-07
564841	4188131	6.98E-08	4.29E-07	4.99E-07	4.24E-07
564833.7	4188115	7.24E-08	4.45E-07	5.18E-07	4.40E-07
564826.4	4188100	7.34E-08	4.51E-07	5.25E-07	4.46E-07
564858	4188160	6.24E-08	3.83E-07	4.46E-07	3.79E-07
564870.4	4188172	5.97E-08	3.67E-07	4.26E-07	3.62E-07
564841.3	4188153	5.86E-08	3.60E-07	4.19E-07	3.56E-07
564834.2	4188138	6.22E-08	3.82E-07	4.44E-07	3.78E-07
564827	4188123	6.46E-08	3.97E-07	4.62E-07	3.92E-07
564819.9	4188108	6.57E-08	4.04E-07	4.70E-07	3.99E-07
564851.1	4188167	5.58E-08	3.43E-07	3.99E-07	3.39E-07
564863.4	4188179	5.35E-08	3.29E-07	3.82E-07	3.25E-07
564834.4	4188161	5.27E-08	3.24E-07	3.77E-07	3.20E-07
564827.4	4188146	5.58E-08	3.43E-07	3.99E-07	3.39E-07
564820.3	4188131	5.81E-08	3.57E-07	4.15E-07	3.53E-07
564813.3	4188116	5.92E-08	3.64E-07	4.23E-07	3.60E-07
564806.2	4188101	5.94E-08	3.65E-07	4.25E-07	3.61E-07
564844.1	4188174	5.03E-08	3.09E-07	3.60E-07	3.06E-07
564856.4	4188186	4.83E-08	2.97E-07	3.45E-07	2.93E-07
564827.5	4188168	4.77E-08	2.93E-07	3.41E-07	2.90E-07
564820.5	4188153	5.05E-08	3.10E-07	3.61E-07	3.06E-07
564813.6	4188139	5.25E-08	3.23E-07	3.75E-07	3.19E-07
564806.6	4188124	5.37E-08	3.30E-07	3.84E-07	3.26E-07
564799.7	4188109	5.40E-08	3.32E-07	3.86E-07	3.28E-07
564837.1	4188181	4.56E-08	2.80E-07	3.26E-07	2.77E-07
564849.4	4188193	4.39E-08	2.70E-07	3.14E-07	2.67E-07
564820.5	4188175	4.35E-08	2.67E-07	3.11E-07	2.64E-07
564813.6	4188161	4.59E-08	2.82E-07	3.28E-07	2.79E-07
564806.8	4188146	4.77E-08	2.93E-07	3.41E-07	2.90E-07
564799.9	4188132	4.89E-08	3.00E-07	3.49E-07	2.97E-07
564793	4188117	4.94E-08	3.03E-07	3.53E-07	3.00E-07
564786.1	4188103	4.94E-08	3.03E-07	3.53E-07	3.00E-07
564830.1	4188188	4.16E-08	2.56E-07	2.97E-07	2.53E-07
564842.4	4188200	4.01E-08	2.46E-07	2.86E-07	2.43E-07
564813.3	4188182	3.99E-08	2.45E-07	2.85E-07	2.42E-07
564806	4188166	4.21E-08	2.59E-07	3.01E-07	2.56E-07
564798.6	4188151	4.38E-08	2.69E-07	3.13E-07	2.66E-07
564791.3	4188136	4.49E-08	2.76E-07	3.21E-07	2.73E-07
564784	4188120	4.53E-08	2.79E-07	3.24E-07	2.75E-07
564776.6	4188105	4.53E-08	2.78E-07	3.24E-07	2.75E-07
564823.1	4188196	3.81E-08	2.34E-07	2.72E-07	2.31E-07
564835.4	4188208	3.68E-08	2.26E-07	2.63E-07	2.23E-07
564806.4	4188189	3.66E-08	2.25E-07	2.62E-07	2.23E-07
564799.1	4188174	3.86E-08	2.37E-07	2.76E-07	2.35E-07
564791.9	4188159	4.02E-08	2.47E-07	2.87E-07	2.44E-07

564784.7	4188143	4.12E-08	2.53E-07	2.94E-07	2.50E-07
564777.4	4188128	4.17E-08	2.56E-07	2.98E-07	2.54E-07
564770.2	4188113	4.18E-08	2.57E-07	2.99E-07	2.54E-07
564816.1	4188203	3.51E-08	2.16E-07	2.51E-07	2.13E-07
564828.5	4188215	3.39E-08	2.08E-07	2.42E-07	2.06E-07
564799.4	4188196	3.38E-08	2.08E-07	2.42E-07	2.05E-07
564792.3	4188181	3.56E-08	2.19E-07	2.54E-07	2.16E-07
564785.1	4188166	3.70E-08	2.27E-07	2.64E-07	2.25E-07
564778	4188151	3.80E-08	2.33E-07	2.71E-07	2.31E-07
564770.8	4188136	3.85E-08	2.37E-07	2.75E-07	2.34E-07
564763.7	4188121	3.87E-08	2.38E-07	2.77E-07	2.35E-07
564756.5	4188106	3.85E-08	2.37E-07	2.75E-07	2.34E-07
564809.2	4188210	3.24E-08	1.99E-07	2.32E-07	1.97E-07
564821.5	4188222	3.13E-08	1.93E-07	2.24E-07	1.90E-07
564792.5	4188204	3.13E-08	1.92E-07	2.24E-07	1.90E-07
564785.4	4188189	3.29E-08	2.02E-07	2.35E-07	2.00E-07
564778.3	4188174	3.42E-08	2.10E-07	2.44E-07	2.07E-07
564771.3	4188159	3.51E-08	2.16E-07	2.51E-07	2.13E-07
564764.2	4188144	3.57E-08	2.19E-07	2.55E-07	2.17E-07
564757.1	4188129	3.60E-08	2.21E-07	2.57E-07	2.18E-07
564750	4188114	3.59E-08	2.20E-07	2.56E-07	2.18E-07
564802.2	4188217	3.01E-08	1.85E-07	2.15E-07	1.83E-07
564814.5	4188229	2.91E-08	1.79E-07	2.08E-07	1.77E-07
564785.5	4188211	2.91E-08	1.79E-07	2.08E-07	1.76E-07
564778.5	4188196	3.05E-08	1.87E-07	2.18E-07	1.85E-07
564771.5	4188181	3.17E-08	1.95E-07	2.26E-07	1.92E-07
564764.5	4188167	3.26E-08	2.00E-07	2.33E-07	1.98E-07
564757.5	4188152	3.32E-08	2.04E-07	2.37E-07	2.02E-07
564750.5	4188137	3.35E-08	2.06E-07	2.39E-07	2.03E-07
564743.5	4188122	3.35E-08	2.06E-07	2.39E-07	2.03E-07
564736.5	4188108	3.32E-08	2.04E-07	2.38E-07	2.02E-07
564795.2	4188224	2.80E-08	1.72E-07	2.00E-07	1.70E-07
564807.5	4188236	2.71E-08	1.66E-07	1.93E-07	1.64E-07
564778.4	4188218	2.71E-08	1.67E-07	1.94E-07	1.65E-07
564771	4188202	2.85E-08	1.75E-07	2.03E-07	1.73E-07
564763.7	4188187	2.96E-08	1.82E-07	2.12E-07	1.80E-07
564756.3	4188171	3.05E-08	1.87E-07	2.18E-07	1.85E-07
564748.9	4188156	3.10E-08	1.91E-07	2.22E-07	1.88E-07
564741.6	4188140	3.13E-08	1.92E-07	2.24E-07	1.90E-07
564734.2	4188125	3.13E-08	1.92E-07	2.23E-07	1.90E-07
564726.9	4188109	3.11E-08	1.91E-07	2.22E-07	1.89E-07
564788.2	4188231	2.61E-08	1.60E-07	1.86E-07	1.58E-07
564800.5	4188243	2.53E-08	1.55E-07	1.81E-07	1.54E-07
564771.4	4188225	2.53E-08	1.56E-07	1.81E-07	1.54E-07
564764.2	4188210	2.66E-08	1.63E-07	1.90E-07	1.61E-07
564756.9	4188194	2.76E-08	1.70E-07	1.97E-07	1.68E-07
564749.6	4188179	2.84E-08	1.75E-07	2.03E-07	1.73E-07
564742.3	4188164	2.90E-08	1.78E-07	2.07E-07	1.76E-07
564735	4188148	2.93E-08	1.80E-07	2.09E-07	1.78E-07
564727.8	4188133	2.93E-08	1.80E-07	2.10E-07	1.78E-07
564720.5	4188118	2.92E-08	1.79E-07	2.09E-07	1.77E-07
564781.2	4188239	2.44E-08	1.50E-07	1.74E-07	1.48E-07
564793.6	4188251	2.37E-08	1.46E-07	1.69E-07	1.44E-07
564764.5	4188232	2.38E-08	1.46E-07	1.70E-07	1.44E-07
564757.3	4188217	2.49E-08	1.53E-07	1.78E-07	1.51E-07
564750.1	4188202	2.59E-08	1.59E-07	1.85E-07	1.57E-07
564742.9	4188187	2.66E-08	1.64E-07	1.90E-07	1.62E-07
564735.6	4188171	2.71E-08	1.67E-07	1.94E-07	1.65E-07
564728.4	4188156	2.74E-08	1.69E-07	1.96E-07	1.67E-07
564721.2	4188141	2.75E-08	1.69E-07	1.97E-07	1.67E-07
564714	4188126	2.75E-08	1.69E-07	1.96E-07	1.67E-07
564706.8	4188111	2.73E-08	1.68E-07	1.95E-07	1.66E-07
564774.3	4188246	2.29E-08	1.41E-07	1.64E-07	1.39E-07
564786.6	4188258	2.22E-08	1.37E-07	1.59E-07	1.35E-07
564757.5	4188239	2.23E-08	1.37E-07	1.60E-07	1.36E-07
564750.4	4188224	2.34E-08	1.44E-07	1.67E-07	1.42E-07
564743.2	4188209	2.42E-08	1.49E-07	1.73E-07	1.47E-07
564736.1	4188194	2.49E-08	1.53E-07	1.78E-07	1.51E-07
564728.9	4188179	2.55E-08	1.56E-07	1.82E-07	1.55E-07
564721.8	4188164	2.58E-08	1.58E-07	1.84E-07	1.56E-07
564714.6	4188149	2.59E-08	1.59E-07	1.85E-07	1.57E-07
564707.5	4188134	2.59E-08	1.59E-07	1.85E-07	1.57E-07
564700.3	4188119	2.58E-08	1.58E-07	1.84E-07	1.56E-07
564767.3	4188253	2.15E-08	1.32E-07	1.54E-07	1.31E-07
564779.6	4188265	2.09E-08	1.29E-07	1.49E-07	1.27E-07
564750.6	4188247	2.10E-08	1.29E-07	1.50E-07	1.28E-07
564743.5	4188232	2.20E-08	1.35E-07	1.57E-07	1.33E-07
564736.4	4188217	2.28E-08	1.40E-07	1.63E-07	1.38E-07
564729.3	4188202	2.34E-08	1.44E-07	1.67E-07	1.42E-07
564722.2	4188187	2.39E-08	1.47E-07	1.71E-07	1.45E-07
564715.1	4188172	2.42E-08	1.49E-07	1.73E-07	1.47E-07
564708	4188157	2.44E-08	1.50E-07	1.74E-07	1.48E-07
564700.9	4188142	2.45E-08	1.50E-07	1.75E-07	1.49E-07
564693.8	4188127	2.44E-08	1.50E-07	1.74E-07	1.48E-07
564686.8	4188112	2.42E-08	1.49E-07	1.73E-07	1.47E-07
564760.3	4188260	2.03E-08	1.25E-07	1.45E-07	1.23E-07
564772.6	4188272	1.97E-08	1.21E-07	1.41E-07	1.20E-07
564714	4188191	2.26E-08	1.39E-07	1.62E-07	1.37E-07
564706.6	4188176	2.29E-08	1.41E-07	1.64E-07	1.39E-07
564701.6	4188296	1.45E-08	8.93E-08	1.04E-07	8.82E-08
564694.3	4188281	1.51E-08	9.29E-08	1.08E-07	9.18E-08
564686.9	4188266	1.56E-08	9.62E-08	1.12E-07	9.50E-08
564711.4	4188310	1.41E-08	8.65E-08	1.01E-07	8.55E-08
564694.6	4188304	1.39E-08	8.52E-08	9.90E-08	8.42E-08
564687.4	4188288	1.44E-08	8.85E-08	1.03E-07	8.75E-08
564680.1	4188273	1.49E-08	9.16E-08	1.07E-07	9.05E-08
564672.8	4188258	1.53E-08	9.43E-08	1.10E-07	9.32E-08
564704.4	4188317	1.34E-08	8.26E-08	9.60E-08	8.16E-08
564687.7	4188311	1.32E-08	8.13E-08	9.46E-08	8.04E-08
564680.5	4188296	1.38E-08	8.45E-08	9.83E-08	8.35E-08
564673.2	4188280	1.42E-08	8.74E-08	1.02E-07	8.64E-08
564666	4188265	1.46E-08	9.00E-08	1.05E-07	8.89E-08
564697.5	4188324	1.28E-08	7.89E-08	9.17E-08	7.80E-08
564709.8	4188336	1.25E-08	7.70E-08	8.96E-08	7.61E-08
564680.7	4188318	1.27E-08	7.78E-08	9.04E-08	7.69E-08
564673.5	4188303	1.31E-08	8.08E-08	9.39E-08	7.98E-08
564666.4	4188288	1.36E-08	8.35E-08	9.71E-08	8.25E-08
564659.2	4188273	1.40E-08	8.59E-08	9.99E-08	8.49E-08
564652	4188257	1.43E-08	8.80E-08	1.02E-07	8.69E-08
564630.4	4188212	1.49E-08	9.14E-08	1.06E-07	9.04E-08
564623.2	4188197	1.49E-08	9.18E-08	1.07E-07	9.07E-08
564616	4188182	1.50E-08	9.19E-08	1.07E-07	9.08E-08
564608.8	4188167	1.49E-08	9.17E-08	1.07E-07	9.06E-08
564601.6	4188152	1.49E-08	9.13E-08	1.06E-07	9.02E-08
564594.4	4188136	1.48E-08	9.07E-08	1.05E-07	8.96E-08
564587.2	4188121	1.46E-08	8.98E-08	1.04E-07	8.87E-08

564690.5	4188332	1.23E-08	7.55E-08	8.78E-08	7.46E-08
564702.8	4188344	1.20E-08	7.37E-08	8.57E-08	7.29E-08
564673.8	4188325	1.21E-08	7.45E-08	8.66E-08	7.36E-08
564666.6	4188310	1.26E-08	7.73E-08	8.99E-08	7.64E-08
564659.5	4188295	1.30E-08	7.99E-08	9.29E-08	7.90E-08
564652.3	4188280	1.34E-08	8.22E-08	9.55E-08	8.12E-08
564645.2	4188265	1.37E-08	8.41E-08	9.78E-08	8.31E-08
564638	4188250	1.39E-08	8.56E-08	9.95E-08	8.46E-08
564630.9	4188235	1.41E-08	8.68E-08	1.01E-07	8.57E-08
564623.7	4188220	1.42E-08	8.75E-08	1.02E-07	8.65E-08
564616.6	4188205	1.43E-08	8.80E-08	1.02E-07	8.70E-08
564609.4	4188190	1.43E-08	8.82E-08	1.03E-07	8.71E-08
564602.3	4188175	1.43E-08	8.80E-08	1.02E-07	8.70E-08
564595.1	4188160	1.43E-08	8.77E-08	1.02E-07	8.67E-08
564588	4188145	1.42E-08	8.71E-08	1.01E-07	8.61E-08
564580.8	4188130	1.41E-08	8.64E-08	1.00E-07	8.54E-08
564683.5	4188339	1.18E-08	7.23E-08	8.41E-08	7.15E-08
564695.8	4188351	1.15E-08	7.07E-08	8.22E-08	6.98E-08
564666.7	4188332	1.16E-08	7.15E-08	8.31E-08	7.06E-08
564659.3	4188317	1.21E-08	7.42E-08	8.63E-08	7.33E-08
564652	4188301	1.25E-08	7.67E-08	8.92E-08	7.58E-08
564644.6	4188286	1.28E-08	7.89E-08	9.17E-08	7.79E-08
564637.3	4188270	1.31E-08	8.07E-08	9.38E-08	7.97E-08
564629.9	4188255	1.34E-08	8.22E-08	9.55E-08	8.12E-08
564622.6	4188239	1.36E-08	8.33E-08	9.68E-08	8.23E-08
564615.3	4188224	1.37E-08	8.41E-08	9.77E-08	8.31E-08
564607.9	4188208	1.38E-08	8.45E-08	9.83E-08	8.35E-08
564600.6	4188193	1.38E-08	8.47E-08	9.84E-08	8.37E-08
564593.2	4188177	1.38E-08	8.45E-08	9.83E-08	8.35E-08
564585.9	4188162	1.37E-08	8.41E-08	9.78E-08	8.31E-08
564578.5	4188147	1.36E-08	8.35E-08	9.71E-08	8.26E-08
564571.2	4188131	1.35E-08	8.28E-08	9.63E-08	8.19E-08
564676.5	4188346	1.13E-08	6.94E-08	8.06E-08	6.85E-08
564688.8	4188358	1.10E-08	6.78E-08	7.88E-08	6.70E-08
564659.7	4188339	1.12E-08	6.86E-08	7.98E-08	6.78E-08
564652.4	4188324	1.16E-08	7.12E-08	8.27E-08	7.03E-08
564645.1	4188309	1.20E-08	7.35E-08	8.54E-08	7.26E-08
564637.8	4188293	1.23E-08	7.55E-08	8.78E-08	7.46E-08
564630.5	4188278	1.26E-08	7.73E-08	8.99E-08	7.64E-08
564623.2	4188263	1.28E-08	7.87E-08	9.15E-08	7.78E-08
564615.9	4188247	1.30E-08	7.99E-08	9.29E-08	7.89E-08
564608.6	4188232	1.31E-08	8.07E-08	9.38E-08	7.97E-08
564601.3	4188216	1.32E-08	8.12E-08	9.44E-08	8.02E-08
564594	4188201	1.32E-08	8.14E-08	9.46E-08	8.04E-08
564586.7	4188186	1.32E-08	8.12E-08	9.45E-08	8.03E-08
564579.4	4188170	1.32E-08	8.09E-08	9.41E-08	8.00E-08
564572.1	4188155	1.31E-08	8.04E-08	9.35E-08	7.95E-08
564564.8	4188140	1.30E-08	7.98E-08	9.28E-08	7.89E-08
564557.5	4188124	1.29E-08	7.91E-08	9.20E-08	7.82E-08
564669.5	4188353	1.08E-08	6.66E-08	7.74E-08	6.58E-08
564681.9	4188365	1.06E-08	6.51E-08	7.57E-08	6.43E-08
564652.8	4188347	1.07E-08	6.59E-08	7.66E-08	6.51E-08
564645.5	4188331	1.11E-08	6.83E-08	7.94E-08	6.75E-08
564638.2	4188316	1.15E-08	7.05E-08	8.19E-08	6.96E-08
564631	4188301	1.18E-08	7.24E-08	8.42E-08	7.16E-08
564623.7	4188285	1.21E-08	7.41E-08	8.62E-08	7.32E-08
564616.5	4188270	1.23E-08	7.55E-08	8.78E-08	7.46E-08
564609.2	4188255	1.25E-08	7.67E-08	8.91E-08	7.58E-08
564601.9	4188240	1.26E-08	7.75E-08	9.01E-08	7.66E-08
564594.7	4188224	1.27E-08	7.80E-08	9.07E-08	7.71E-08
564587.4	4188209	1.27E-08	7.82E-08	9.09E-08	7.73E-08
564580.2	4188194	1.27E-08	7.81E-08	9.09E-08	7.72E-08
564572.9	4188178	1.27E-08	7.79E-08	9.06E-08	7.70E-08
564565.6	4188163	1.26E-08	7.75E-08	9.01E-08	7.65E-08
564558.4	4188148	1.25E-08	7.69E-08	8.95E-08	7.60E-08
564551.1	4188133	1.24E-08	7.64E-08	8.88E-08	7.55E-08
564662.6	4188360	1.04E-08	6.40E-08	7.44E-08	6.33E-08
564674.9	4188372	1.02E-08	6.26E-08	7.28E-08	6.18E-08
564645.8	4188354	1.03E-08	6.33E-08	7.36E-08	6.26E-08
564638.6	4188339	1.07E-08	6.56E-08	7.63E-08	6.48E-08
564631.4	4188323	1.10E-08	6.77E-08	7.87E-08	6.69E-08
564624.1	4188308	1.13E-08	6.95E-08	8.08E-08	6.87E-08
564616.9	4188293	1.16E-08	7.11E-08	8.27E-08	7.03E-08
564609.7	4188278	1.18E-08	7.25E-08	8.43E-08	7.17E-08
564602.5	4188263	1.20E-08	7.36E-08	8.56E-08	7.28E-08
564595.3	4188247	1.21E-08	7.45E-08	8.66E-08	7.36E-08
564588	4188232	1.22E-08	7.50E-08	8.72E-08	7.41E-08
564580.8	4188217	1.22E-08	7.52E-08	8.75E-08	7.43E-08
564573.6	4188202	1.22E-08	7.52E-08	8.75E-08	7.43E-08
564566.4	4188187	1.22E-08	7.50E-08	8.72E-08	7.41E-08
564559.1	4188171	1.22E-08	7.47E-08	8.68E-08	7.38E-08
564551.9	4188156	1.21E-08	7.43E-08	8.63E-08	7.34E-08
564544.7	4188141	1.20E-08	7.37E-08	8.57E-08	7.29E-08
564537.5	4188126	1.19E-08	7.32E-08	8.51E-08	7.23E-08
564655.6	4188367	1.00E-08	6.16E-08	7.16E-08	6.09E-08
564667.9	4188379	9.80E-09	6.02E-08	7.00E-08	5.95E-08
564956.2	4188102	5.17E-07	3.18E-06	3.69E-06	3.14E-06
564972.8	4188101	6.54E-07	4.02E-06	4.67E-06	3.97E-06
564973.5	4188111	4.23E-07	2.60E-06	3.02E-06	2.57E-06
564974.2	4188121	2.89E-07	1.78E-06	2.07E-06	1.76E-06
564943.6	4188150	1.19E-07	7.29E-07	8.48E-07	7.21E-07
564959.6	4188152	1.21E-07	7.42E-07	8.63E-07	7.33E-07
564944.3	4188160	9.89E-08	6.08E-07	7.07E-07	6.01E-07
564913.6	4188149	1.03E-07	6.36E-07	7.39E-07	6.28E-07
564960.3	4188162	9.98E-08	6.13E-07	7.13E-07	6.06E-07
564976.9	4188161	1.06E-07	6.51E-07	7.57E-07	6.43E-07
564945	4188170	8.37E-08	5.14E-07	5.98E-07	5.08E-07
564914.3	4188159	8.89E-08	5.46E-07	6.35E-07	5.40E-07
564961	4188172	8.39E-08	5.16E-07	6.00E-07	5.10E-07
564977.6	4188171	8.84E-08	5.43E-07	6.31E-07	5.37E-07
564945.7	4188180	7.17E-08	4.41E-07	5.12E-07	4.35E-07
564915	4188169	7.70E-08	4.73E-07	5.50E-07	4.68E-07
564899.7	4188163	7.75E-08	4.76E-07	5.54E-07	4.71E-07
564961.7	4188182	7.16E-08	4.40E-07	5.12E-07	4.35E-07
564978.3	4188181	7.50E-08	4.61E-07	5.36E-07	4.55E-07
564946.4	4188190	6.21E-08	3.82E-07	4.44E-07	3.77E-07
564915.7	4188179	6.72E-08	4.13E-07	4.80E-07	4.08E-07
564900.4	4188173	6.82E-08	4.19E-07	4.88E-07	4.14E-07
564962.4	4188192	6.19E-08	3.80E-07	4.42E-07	3.76E-07
564979	4188191	6.45E-08	3.96E-07	4.61E-07	3.92E-07
564947.1	4188200	5.44E-08	3.34E-07	3.89E-07	3.30E-07
564916.4	4188189	5.90E-08	3.63E-07	4.22E-07	3.59E-07
564901	4188183	6.04E-08	3.71E-07	4.32E-07	3.67E-07
564885.7	4188177	6.06E-08	3.72E-07	4.33E-07	3.68E-07
564963.1	4188202	5.41E-08	3.32E-07	3.86E-07	3.28E-07
564979.7	4188201	5.60E-08	3.44E-07	4.00E-07	3.40E-07

564947.8	4188210	4.80E-08	2.95E-07	3.43E-07	2.91E-07
564901.7	4188193	5.37E-08	3.30E-07	3.84E-07	3.26E-07
564886.4	4188187	5.43E-08	3.34E-07	3.88E-07	3.30E-07
564963.8	4188212	4.76E-08	2.93E-07	3.40E-07	2.89E-07
564980.4	4188211	4.91E-08	3.02E-07	3.51E-07	2.98E-07
564948.5	4188220	4.27E-08	2.62E-07	3.05E-07	2.59E-07
564902.4	4188203	4.80E-08	2.95E-07	3.43E-07	2.91E-07
564887.1	4188197	4.88E-08	3.00E-07	3.49E-07	2.97E-07
564871.7	4188192	4.90E-08	3.01E-07	3.50E-07	2.97E-07
564964.5	4188222	4.23E-08	2.60E-07	3.02E-07	2.57E-07
564981.1	4188221	4.35E-08	2.67E-07	3.10E-07	2.64E-07
564949.2	4188230	3.82E-08	2.35E-07	2.73E-07	2.32E-07
564903.1	4188213	4.30E-08	2.64E-07	3.07E-07	2.61E-07
564887.8	4188207	4.40E-08	2.71E-07	3.15E-07	2.67E-07
564872.4	4188202	4.45E-08	2.73E-07	3.18E-07	2.70E-07
564965.2	4188232	3.78E-08	2.32E-07	2.70E-07	2.30E-07
564981.8	4188231	3.88E-08	2.38E-07	2.77E-07	2.35E-07
564949.9	4188240	3.44E-08	2.11E-07	2.45E-07	2.09E-07
564903.8	4188223	3.88E-08	2.38E-07	2.77E-07	2.35E-07
564888.5	4188217	3.98E-08	2.45E-07	2.85E-07	2.42E-07
564873.1	4188212	4.05E-08	2.49E-07	2.89E-07	2.46E-07
564857.8	4188206	4.05E-08	2.49E-07	2.90E-07	2.46E-07
564965.9	4188242	3.40E-08	2.09E-07	2.43E-07	2.07E-07
564982.5	4188241	3.49E-08	2.14E-07	2.49E-07	2.12E-07
564950.6	4188250	3.11E-08	1.91E-07	2.22E-07	1.89E-07
564904.5	4188233	3.51E-08	2.16E-07	2.51E-07	2.13E-07
564889.2	4188227	3.62E-08	2.22E-07	2.58E-07	2.20E-07
564873.8	4188222	3.69E-08	2.27E-07	2.64E-07	2.24E-07
564858.5	4188216	3.72E-08	2.29E-07	2.66E-07	2.26E-07
564966.5	4188252	3.08E-08	1.89E-07	2.20E-07	1.87E-07
564983.2	4188251	3.15E-08	1.94E-07	2.25E-07	1.92E-07
564951.3	4188260	2.83E-08	1.74E-07	2.02E-07	1.72E-07
564905.2	4188243	3.19E-08	1.96E-07	2.28E-07	1.94E-07
564889.9	4188237	3.29E-08	2.02E-07	2.35E-07	2.00E-07
564874.5	4188232	3.37E-08	2.07E-07	2.41E-07	2.05E-07
564859.2	4188226	3.42E-08	2.10E-07	2.44E-07	2.07E-07
564843.8	4188220	3.42E-08	2.10E-07	2.45E-07	2.08E-07
564967.2	4188262	2.80E-08	1.72E-07	2.00E-07	1.70E-07
564983.9	4188261	2.87E-08	1.76E-07	2.05E-07	1.74E-07
564951.9	4188270	2.58E-08	1.59E-07	1.85E-07	1.57E-07
564905.9	4188253	2.91E-08	1.79E-07	2.08E-07	1.77E-07
564890.6	4188247	3.01E-08	1.85E-07	2.15E-07	1.83E-07
564875.2	4188242	3.09E-08	1.90E-07	2.21E-07	1.88E-07
564859.9	4188236	3.14E-08	1.93E-07	2.25E-07	1.91E-07
564844.5	4188230	3.17E-08	1.95E-07	2.26E-07	1.92E-07
564967.9	4188272	2.56E-08	1.57E-07	1.83E-07	1.56E-07
564984.6	4188271	2.62E-08	1.61E-07	1.87E-07	1.59E-07
564952.6	4188280	2.37E-08	1.46E-07	1.70E-07	1.44E-07
564906.6	4188263	2.67E-08	1.64E-07	1.91E-07	1.62E-07
564891.2	4188257	2.76E-08	1.69E-07	1.97E-07	1.68E-07
564875.9	4188252	2.84E-08	1.74E-07	2.03E-07	1.72E-07
564860.5	4188246	2.90E-08	1.78E-07	2.07E-07	1.76E-07
564845.2	4188240	2.93E-08	1.80E-07	2.09E-07	1.78E-07
564829.8	4188235	2.93E-08	1.80E-07	2.10E-07	1.78E-07
564968.6	4188282	2.35E-08	1.45E-07	1.68E-07	1.43E-07
564985.3	4188281	2.41E-08	1.48E-07	1.72E-07	1.46E-07
564907.3	4188273	2.45E-08	1.51E-07	1.75E-07	1.49E-07
564891.9	4188267	2.54E-08	1.56E-07	1.81E-07	1.54E-07
564876.6	4188262	2.61E-08	1.61E-07	1.87E-07	1.59E-07
564861.2	4188256	2.68E-08	1.64E-07	1.91E-07	1.63E-07
564845.9	4188250	2.72E-08	1.67E-07	1.94E-07	1.65E-07
564830.5	4188245	2.73E-08	1.68E-07	1.95E-07	1.66E-07
564969.3	4188292	2.17E-08	1.33E-07	1.55E-07	1.32E-07
564985.9	4188291	2.22E-08	1.36E-07	1.58E-07	1.35E-07
564908	4188283	2.26E-08	1.39E-07	1.61E-07	1.37E-07
564892.6	4188277	2.34E-08	1.44E-07	1.67E-07	1.42E-07
564877.3	4188272	2.41E-08	1.48E-07	1.72E-07	1.47E-07
564861.9	4188266	2.48E-08	1.52E-07	1.77E-07	1.50E-07
564846.6	4188260	2.52E-08	1.55E-07	1.80E-07	1.53E-07
564831.2	4188255	2.55E-08	1.57E-07	1.82E-07	1.55E-07
564815.9	4188249	2.55E-08	1.57E-07	1.82E-07	1.55E-07
564970	4188302	2.01E-08	1.23E-07	1.43E-07	1.22E-07
564986.6	4188301	2.05E-08	1.26E-07	1.46E-07	1.24E-07
564924	4188298	2.02E-08	1.24E-07	1.44E-07	1.23E-07
564908.7	4188293	2.09E-08	1.28E-07	1.49E-07	1.27E-07
564893.3	4188287	2.16E-08	1.33E-07	1.55E-07	1.31E-07
564878	4188282	2.23E-08	1.37E-07	1.60E-07	1.36E-07
564862.6	4188276	2.30E-08	1.41E-07	1.64E-07	1.39E-07
564847.3	4188270	2.34E-08	1.44E-07	1.67E-07	1.42E-07
564831.9	4188265	2.38E-08	1.46E-07	1.70E-07	1.44E-07
564816.6	4188259	2.39E-08	1.47E-07	1.71E-07	1.45E-07
564970.7	4188312	1.86E-08	1.15E-07	1.33E-07	1.13E-07
564987.3	4188311	1.90E-08	1.17E-07	1.36E-07	1.15E-07
564924.7	4188308	1.87E-08	1.15E-07	1.34E-07	1.14E-07
564909.4	4188303	1.94E-08	1.19E-07	1.39E-07	1.18E-07
564894	4188297	2.01E-08	1.23E-07	1.43E-07	1.22E-07
564878.7	4188291	2.07E-08	1.27E-07	1.48E-07	1.26E-07
564863.3	4188286	2.13E-08	1.31E-07	1.52E-07	1.30E-07
564848	4188280	2.18E-08	1.34E-07	1.56E-07	1.32E-07
564832.6	4188275	2.22E-08	1.36E-07	1.58E-07	1.35E-07
564817.3	4188269	2.24E-08	1.37E-07	1.60E-07	1.36E-07
564801.9	4188263	2.24E-08	1.38E-07	1.60E-07	1.36E-07
564971.4	4188322	1.73E-08	1.07E-07	1.24E-07	1.05E-07
564988	4188321	1.77E-08	1.09E-07	1.26E-07	1.07E-07
564925.4	4188318	1.74E-08	1.07E-07	1.25E-07	1.06E-07
564910.1	4188313	1.80E-08	1.11E-07	1.29E-07	1.10E-07
564894.7	4188307	1.86E-08	1.15E-07	1.33E-07	1.13E-07
564879.4	4188301	1.93E-08	1.18E-07	1.38E-07	1.17E-07
564864	4188296	1.98E-08	1.22E-07	1.42E-07	1.21E-07
564848.7	4188290	2.03E-08	1.25E-07	1.45E-07	1.24E-07
564833.3	4188285	2.07E-08	1.27E-07	1.48E-07	1.26E-07
564818	4188279	2.10E-08	1.29E-07	1.50E-07	1.27E-07
564802.6	4188273	2.11E-08	1.29E-07	1.50E-07	1.28E-07
564972.1	4188332	1.62E-08	9.95E-08	1.16E-07	9.83E-08
564988.7	4188331	1.65E-08	1.01E-07	1.18E-07	1.00E-07
564926.1	4188328	1.63E-08	1.00E-07	1.16E-07	9.88E-08
564910.8	4188323	1.68E-08	1.03E-07	1.20E-07	1.02E-07
564895.4	4188317	1.74E-08	1.07E-07	1.24E-07	1.06E-07
564880.1	4188311	1.80E-08	1.10E-07	1.28E-07	1.09E-07
564864.7	4188306	1.85E-08	1.14E-07	1.32E-07	1.12E-07
564849.4	4188300	1.90E-08	1.17E-07	1.36E-07	1.15E-07
564834	4188295	1.94E-08	1.19E-07	1.39E-07	1.18E-07
564818.7	4188289	1.97E-08	1.21E-07	1.41E-07	1.20E-07
564803.3	4188283	1.98E-08	1.22E-07	1.42E-07	1.20E-07
564788	4188278	1.98E-08	1.22E-07	1.42E-07	1.21E-07
564972.8	4188342	1.52E-08	9.31E-08	1.08E-07	9.20E-08

564989.4	4188341	1.54E-08	9.48E-08	1.10E-07	9.37E-08
564926.8	4188338	1.52E-08	9.35E-08	1.09E-07	9.25E-08
564911.4	4188333	1.57E-08	9.66E-08	1.12E-07	9.55E-08
564896.1	4188327	1.62E-08	9.98E-08	1.16E-07	9.86E-08
564880.7	4188321	1.68E-08	1.03E-07	1.20E-07	1.02E-07
564865.4	4188316	1.73E-08	1.06E-07	1.24E-07	1.05E-07
564850	4188310	1.78E-08	1.09E-07	1.27E-07	1.08E-07
564834.7	4188305	1.82E-08	1.12E-07	1.30E-07	1.10E-07
564819.4	4188299	1.85E-08	1.14E-07	1.32E-07	1.12E-07
564804	4188293	1.87E-08	1.15E-07	1.33E-07	1.13E-07
564788.7	4188288	1.88E-08	1.15E-07	1.34E-07	1.14E-07
564973.5	4188352	1.42E-08	8.73E-08	1.02E-07	8.63E-08
564990.1	4188351	1.45E-08	8.88E-08	1.03E-07	8.78E-08
564896.8	4188337	1.52E-08	9.34E-08	1.09E-07	9.23E-08
564881.4	4188331	1.57E-08	9.65E-08	1.12E-07	9.54E-08
564866.1	4188326	1.62E-08	9.95E-08	1.16E-07	9.84E-08
564850.7	4188320	1.66E-08	1.02E-07	1.19E-07	1.01E-07
564835.4	4188314	1.70E-08	1.05E-07	1.22E-07	1.04E-07
564820	4188309	1.74E-08	1.07E-07	1.24E-07	1.06E-07
564804.7	4188303	1.76E-08	1.08E-07	1.26E-07	1.07E-07
564974.2	4188362	1.34E-08	8.21E-08	9.55E-08	8.11E-08
564990.8	4188361	1.36E-08	8.35E-08	9.71E-08	8.25E-08
564882.1	4188341	1.47E-08	9.05E-08	1.05E-07	8.94E-08
564866.8	4188336	1.52E-08	9.33E-08	1.09E-07	9.23E-08
564851.4	4188330	1.56E-08	9.60E-08	1.12E-07	9.49E-08
564836.1	4188324	1.60E-08	9.84E-08	1.14E-07	9.73E-08
564820.7	4188319	1.63E-08	1.00E-07	1.17E-07	9.93E-08
564974.9	4188372	1.26E-08	7.73E-08	8.99E-08	7.64E-08
564991.5	4188371	1.28E-08	7.86E-08	9.14E-08	7.77E-08
564867.5	4188346	1.43E-08	8.77E-08	1.02E-07	8.67E-08
564852.1	4188340	1.47E-08	9.02E-08	1.05E-07	8.92E-08
564836.8	4188334	1.51E-08	9.26E-08	1.08E-07	9.15E-08
564975.6	4188382	1.19E-08	7.30E-08	8.49E-08	7.21E-08
564992.2	4188381	1.21E-08	7.41E-08	8.62E-08	7.33E-08
564976.2	4188392	1.12E-08	6.90E-08	8.02E-08	6.82E-08
564992.9	4188391	1.14E-08	7.00E-08	8.14E-08	6.92E-08
564976.9	4188402	1.06E-08	6.53E-08	7.60E-08	6.46E-08
564993.6	4188401	1.08E-08	6.63E-08	7.71E-08	6.55E-08
564764.9	4188376	1.13E-08	6.95E-08	8.09E-08	6.87E-08
564765.6	4188386	1.08E-08	6.63E-08	7.71E-08	6.55E-08
564750.2	4188380	1.09E-08	6.71E-08	7.80E-08	6.63E-08
564704.2	4188364	1.11E-08	6.80E-08	7.91E-08	6.72E-08
564781.6	4188402	1.01E-08	6.22E-08	7.23E-08	6.15E-08
564766.3	4188396	1.03E-08	6.33E-08	7.36E-08	6.25E-08
564750.9	4188390	1.04E-08	6.41E-08	7.46E-08	6.34E-08
564735.6	4188385	1.05E-08	6.48E-08	7.53E-08	6.40E-08
564720.2	4188379	1.06E-08	6.52E-08	7.58E-08	6.44E-08
564704.9	4188374	1.06E-08	6.53E-08	7.60E-08	6.46E-08
564797.7	4188417	9.46E-09	5.81E-08	6.76E-08	5.74E-08
564782.3	4188412	9.66E-09	5.93E-08	6.90E-08	5.86E-08
564767	4188406	9.83E-09	6.04E-08	7.02E-08	5.97E-08
564751.6	4188400	9.97E-09	6.13E-08	7.13E-08	6.06E-08
564736.3	4188395	1.01E-08	6.20E-08	7.21E-08	6.13E-08
564720.9	4188389	1.02E-08	6.25E-08	7.27E-08	6.18E-08
564705.6	4188384	1.02E-08	6.28E-08	7.30E-08	6.20E-08
564690.2	4188378	1.02E-08	6.28E-08	7.30E-08	6.20E-08
564859.8	4188450	8.15E-09	5.01E-08	5.82E-08	4.95E-08
564813.7	4188433	8.81E-09	5.41E-08	6.30E-08	5.35E-08
564798.4	4188427	9.02E-09	5.54E-08	6.45E-08	5.48E-08
564783	4188422	9.22E-09	5.66E-08	6.59E-08	5.60E-08
564767.7	4188416	9.39E-09	5.77E-08	6.71E-08	5.70E-08
564752.3	4188410	9.54E-09	5.86E-08	6.81E-08	5.79E-08
564737	4188405	9.66E-09	5.94E-08	6.90E-08	5.87E-08
564721.6	4188399	9.75E-09	5.99E-08	6.97E-08	5.92E-08
564706.3	4188393	9.81E-09	6.03E-08	7.01E-08	5.96E-08
564690.9	4188388	9.83E-09	6.04E-08	7.02E-08	5.97E-08
564983.5	4188104	6.10E-07	3.75E-06	4.36E-06	3.71E-06
564965.5	4188117	3.22E-07	1.98E-06	2.30E-06	1.96E-06
564803	4188439	8.57E-09	5.27E-08	6.12E-08	5.21E-08
564781.8	4188438	8.55E-09	5.25E-08	6.11E-08	5.19E-08
564789.9	4188443	8.39E-09	5.16E-08	6.00E-08	5.10E-08
564798	4188447	8.23E-09	5.06E-08	5.88E-08	5.00E-08
565007.3	4188115	3.90E-07	2.39E-06	2.78E-06	2.37E-06
565018.6	4188103	6.19E-07	3.81E-06	4.43E-06	3.76E-06
565023.9	4188094	8.00E-07	4.92E-06	5.72E-06	4.86E-06
565029.2	4188086	9.65E-07	5.93E-06	6.89E-06	5.86E-06
565034.5	4188078	1.08E-06	6.65E-06	7.73E-06	6.57E-06
565039.8	4188070	1.15E-06	7.06E-06	8.21E-06	6.98E-06
565045	4188062	1.19E-06	7.34E-06	8.54E-06	7.26E-06
565050.3	4188054	1.20E-06	7.35E-06	8.54E-06	7.26E-06
565015.7	4188121	3.12E-07	1.91E-06	2.23E-06	1.89E-06
564996.3	4188128	2.45E-07	1.51E-06	1.75E-06	1.49E-06
565027	4188108	4.56E-07	2.80E-06	3.26E-06	2.77E-06
565037.6	4188092	6.87E-07	4.22E-06	4.91E-06	4.17E-06
565042.9	4188084	7.81E-07	4.80E-06	5.58E-06	4.74E-06
565048.2	4188075	8.48E-07	5.21E-06	6.06E-06	5.15E-06
565053.4	4188067	8.91E-07	5.47E-06	6.36E-06	5.41E-06
565058.7	4188059	9.05E-07	5.56E-06	6.47E-06	5.50E-06
565024.1	4188126	2.55E-07	1.57E-06	1.82E-06	1.55E-06
565012.1	4188135	2.04E-07	1.25E-06	1.45E-06	1.24E-06
564998.7	4188138	1.86E-07	1.14E-06	1.33E-06	1.13E-06
565035.4	4188113	3.53E-07	2.17E-06	2.52E-06	2.14E-06
565051.3	4188089	5.84E-07	3.59E-06	4.18E-06	3.55E-06
565056.6	4188081	6.43E-07	3.95E-06	4.59E-06	3.90E-06
565061.8	4188073	6.83E-07	4.20E-06	4.88E-06	4.15E-06
565067.1	4188064	7.04E-07	4.32E-06	5.03E-06	4.27E-06
565031	4188132	2.08E-07	1.28E-06	1.49E-06	1.27E-06
565023.5	4188138	1.84E-07	1.13E-06	1.32E-06	1.12E-06
565015.9	4188143	1.62E-07	9.98E-07	1.16E-06	9.86E-07
564999.2	4188147	1.47E-07	9.02E-07	1.05E-06	8.91E-07
565038.6	4188127	2.34E-07	1.44E-06	1.67E-06	1.42E-06
565043.8	4188119	2.84E-07	1.74E-06	2.03E-06	1.72E-06
565059.7	4188094	4.53E-07	2.78E-06	3.24E-06	2.75E-06
565065	4188086	5.01E-07	3.08E-06	3.58E-06	3.04E-06
565070.2	4188078	5.38E-07	3.30E-06	3.84E-06	3.26E-06
565075.5	4188070	5.60E-07	3.44E-06	4.00E-06	3.40E-06
565025.2	4188148	1.44E-07	8.87E-07	1.03E-06	8.77E-07
565068.1	4188100	3.61E-07	2.22E-06	2.58E-06	2.19E-06
565073.4	4188092	3.99E-07	2.45E-06	2.85E-06	2.43E-06
565078.6	4188083	4.31E-07	2.65E-06	3.08E-06	2.62E-06
565083.9	4188075	4.52E-07	2.78E-06	3.23E-06	2.75E-06
565034.3	4188153	1.29E-07	7.90E-07	9.19E-07	7.81E-07
565020.2	4188163	1.06E-07	6.50E-07	7.56E-07	6.43E-07
565076.5	4188105	2.95E-07	1.81E-06	2.10E-06	1.79E-06
565081.8	4188097	3.26E-07	2.00E-06	2.33E-06	1.98E-06
565087	4188089	3.52E-07	2.16E-06	2.51E-06	2.14E-06

565092.3	4188081	3.71E-07	2.28E-06	2.65E-06	2.25E-06
565043.1	4188158	1.15E-07	7.08E-07	8.23E-07	7.00E-07
565029.3	4188168	9.67E-08	5.94E-07	6.91E-07	5.87E-07
565084.9	4188111	2.46E-07	1.51E-06	1.76E-06	1.49E-06
565090.2	4188102	2.71E-07	1.66E-06	1.93E-06	1.64E-06
565095.4	4188094	2.92E-07	1.80E-06	2.09E-06	1.78E-06
565100.7	4188086	3.10E-07	1.90E-06	2.21E-06	1.88E-06
565048.9	4188165	1.00E-07	6.17E-07	7.17E-07	6.09E-07
565041.1	4188171	9.16E-08	5.63E-07	6.55E-07	5.56E-07
565033.4	4188176	8.36E-08	5.14E-07	5.97E-07	5.08E-07
565025.6	4188182	7.64E-08	4.69E-07	5.46E-07	4.64E-07
564989.6	4188183	7.32E-08	4.50E-07	5.23E-07	4.44E-07
565093.3	4188116	2.09E-07	1.28E-06	1.49E-06	1.27E-06
565098.6	4188108	2.29E-07	1.41E-06	1.64E-06	1.39E-06
565103.8	4188100	2.47E-07	1.52E-06	1.77E-06	1.50E-06
565109.1	4188091	2.62E-07	1.61E-06	1.87E-06	1.59E-06
565058	4188170	9.15E-08	5.62E-07	6.54E-07	5.56E-07
565050.4	4188176	8.42E-08	5.18E-07	6.02E-07	5.12E-07
565042.9	4188181	7.76E-08	4.77E-07	5.54E-07	4.71E-07
565035.3	4188186	7.14E-08	4.39E-07	5.10E-07	4.34E-07
565001.9	4188195	6.25E-08	3.84E-07	4.46E-07	3.79E-07
564992.7	4188193	6.33E-08	3.89E-07	4.52E-07	3.84E-07
565101.7	4188121	1.80E-07	1.11E-06	1.29E-06	1.09E-06
565107	4188113	1.96E-07	1.21E-06	1.40E-06	1.19E-06
565112.3	4188105	2.12E-07	1.30E-06	1.51E-06	1.29E-06
565117.5	4188097	2.25E-07	1.38E-06	1.61E-06	1.37E-06
565066.9	4188175	8.36E-08	5.14E-07	5.97E-07	5.08E-07
565059.5	4188181	7.75E-08	4.77E-07	5.54E-07	4.71E-07
565052.1	4188186	7.19E-08	4.42E-07	5.14E-07	4.37E-07
565044.7	4188191	6.67E-08	4.10E-07	4.76E-07	4.05E-07
565037.4	4188196	6.19E-08	3.80E-07	4.42E-07	3.76E-07
565013.7	4188206	5.40E-08	3.32E-07	3.86E-07	3.28E-07
565004.7	4188204	5.47E-08	3.36E-07	3.91E-07	3.32E-07
564995.7	4188203	5.53E-08	3.40E-07	3.95E-07	3.36E-07
565089	4188160	1.03E-07	6.33E-07	7.36E-07	6.26E-07
565110.1	4188127	1.57E-07	9.64E-07	1.12E-06	9.53E-07
565115.4	4188119	1.71E-07	1.05E-06	1.22E-06	1.04E-06
565120.7	4188111	1.83E-07	1.13E-06	1.31E-06	1.11E-06
565125.9	4188102	1.95E-07	1.20E-06	1.39E-06	1.18E-06
565090.1	4188170	8.73E-08	5.36E-07	6.24E-07	5.30E-07
565075.7	4188180	7.66E-08	4.71E-07	5.47E-07	4.65E-07
565061.2	4188191	6.67E-08	4.10E-07	4.77E-07	4.05E-07
565046.7	4188201	5.80E-08	3.57E-07	4.15E-07	3.52E-07
565016.2	4188215	4.78E-08	2.94E-07	3.42E-07	2.91E-07
564998.6	4188213	4.87E-08	3.00E-07	3.48E-07	2.96E-07
565102.7	4188157	1.03E-07	6.35E-07	7.38E-07	6.27E-07
565118.5	4188132	1.38E-07	8.48E-07	9.86E-07	8.38E-07
565123.8	4188124	1.50E-07	9.19E-07	1.07E-06	9.08E-07
565129.1	4188116	1.60E-07	9.86E-07	1.15E-06	9.74E-07
565134.3	4188108	1.70E-07	1.05E-06	1.22E-06	1.03E-06
565097.9	4188176	7.88E-08	4.85E-07	5.63E-07	4.79E-07
565090.1	4188182	7.38E-08	4.54E-07	5.27E-07	4.48E-07
565082.3	4188187	6.90E-08	4.24E-07	4.93E-07	4.19E-07
565074.4	4188193	6.44E-08	3.96E-07	4.60E-07	3.91E-07
565066.6	4188198	6.00E-08	3.69E-07	4.29E-07	3.64E-07
565058.7	4188204	5.59E-08	3.43E-07	3.99E-07	3.39E-07
565050.9	4188210	5.20E-08	3.20E-07	3.72E-07	3.16E-07
565017.8	4188225	4.27E-08	2.63E-07	3.05E-07	2.59E-07
565008.3	4188224	4.31E-08	2.65E-07	3.08E-07	2.62E-07
564998.8	4188222	4.35E-08	2.67E-07	3.11E-07	2.64E-07
565105.8	4188170	8.39E-08	5.16E-07	6.00E-07	5.10E-07
565111.1	4188162	9.28E-08	5.70E-07	6.63E-07	5.64E-07
565121.6	4188146	1.12E-07	6.89E-07	8.01E-07	6.81E-07
565126.9	4188138	1.22E-07	7.52E-07	8.74E-07	7.43E-07
565132.2	4188130	1.32E-07	8.12E-07	9.44E-07	8.03E-07
565137.5	4188121	1.41E-07	8.69E-07	1.01E-06	8.59E-07
565142.7	4188113	1.50E-07	9.22E-07	1.07E-06	9.11E-07
565106.5	4188181	7.20E-08	4.42E-07	5.14E-07	4.37E-07
565098.8	4188187	6.77E-08	4.16E-07	4.84E-07	4.11E-07
565091.2	4188192	6.36E-08	3.91E-07	4.55E-07	3.86E-07
565083.5	4188198	5.97E-08	3.67E-07	4.27E-07	3.63E-07
565075.8	4188203	5.60E-08	3.44E-07	4.00E-07	3.40E-07
565068.1	4188209	5.25E-08	3.23E-07	3.75E-07	3.19E-07
565060.4	4188214	4.92E-08	3.02E-07	3.51E-07	2.99E-07
565020.4	4188235	3.84E-08	2.36E-07	2.74E-07	2.33E-07
565011.1	4188233	3.87E-08	2.38E-07	2.76E-07	2.35E-07
565001.7	4188232	3.90E-08	2.40E-07	2.78E-07	2.37E-07
564992.4	4188231	3.92E-08	2.41E-07	2.80E-07	2.38E-07
565114.2	4188176	7.62E-08	4.68E-07	5.44E-07	4.63E-07
565130	4188151	1.00E-07	6.17E-07	7.17E-07	6.10E-07
565135.3	4188143	1.09E-07	6.70E-07	7.79E-07	6.62E-07
565140.6	4188135	1.18E-07	7.22E-07	8.40E-07	7.14E-07
565145.9	4188127	1.26E-07	7.71E-07	8.97E-07	7.62E-07
565151.1	4188119	1.33E-07	8.18E-07	9.51E-07	8.08E-07
565115	4188187	6.60E-08	4.06E-07	4.72E-07	4.01E-07
565107.5	4188192	6.24E-08	3.83E-07	4.46E-07	3.79E-07
565100	4188197	5.88E-08	3.61E-07	4.20E-07	3.57E-07
565092.4	4188203	5.55E-08	3.41E-07	3.96E-07	3.37E-07
565084.9	4188208	5.23E-08	3.21E-07	3.74E-07	3.18E-07
565077.3	4188213	4.93E-08	3.03E-07	3.52E-07	2.99E-07
565069.8	4188219	4.64E-08	2.85E-07	3.32E-07	2.82E-07
565062.3	4188224	4.37E-08	2.68E-07	3.12E-07	2.65E-07
565039.6	4188240	3.65E-08	2.24E-07	2.61E-07	2.22E-07
565022.9	4188244	3.47E-08	2.13E-07	2.48E-07	2.11E-07
565013.8	4188243	3.50E-08	2.15E-07	2.50E-07	2.12E-07
565004.6	4188242	3.52E-08	2.16E-07	2.51E-07	2.14E-07
564995.4	4188241	3.54E-08	2.18E-07	2.53E-07	2.15E-07
565122.6	4188181	6.96E-08	4.28E-07	4.97E-07	4.23E-07
565138.4	4188157	9.04E-08	5.56E-07	6.46E-07	5.49E-07
565143.7	4188149	9.78E-08	6.01E-07	6.99E-07	5.94E-07
565149	4188140	1.05E-07	6.46E-07	7.51E-07	6.38E-07
565154.3	4188132	1.12E-07	6.89E-07	8.01E-07	6.81E-07
565159.5	4188124	1.19E-07	7.30E-07	8.48E-07	7.21E-07
565123.6	4188192	6.08E-08	3.74E-07	4.34E-07	3.69E-07
565116.1	4188197	5.77E-08	3.54E-07	4.12E-07	3.50E-07
565108.7	4188203	5.46E-08	3.36E-07	3.90E-07	3.32E-07
565101.3	4188208	5.17E-08	3.17E-07	3.69E-07	3.14E-07
565093.9	4188213	4.89E-08	3.00E-07	3.49E-07	2.97E-07
565086.4	4188218	4.62E-08	2.84E-07	3.30E-07	2.81E-07
565079	4188224	4.37E-08	2.69E-07	3.13E-07	2.66E-07
565071.6	4188229	4.13E-08	2.54E-07	2.95E-07	2.51E-07
565041.9	4188250	3.30E-08	2.03E-07	2.36E-07	2.01E-07
565025.4	4188254	3.15E-08	1.94E-07	2.25E-07	1.91E-07
565016.4	4188253	3.17E-08	1.95E-07	2.27E-07	1.93E-07
565007.4	4188252	3.19E-08	1.96E-07	2.28E-07	1.94E-07
564998.4	4188250	3.21E-08	1.97E-07	2.30E-07	1.95E-07

565141.6	4188170	7.57E-08	4.65E-07	5.41E-07	4.59E-07
565146.8	4188162	8.20E-08	5.04E-07	5.86E-07	4.98E-07
565152.1	4188154	8.84E-08	5.43E-07	6.31E-07	5.37E-07
565157.4	4188146	9.47E-08	5.82E-07	6.76E-07	5.75E-07
565162.7	4188138	1.01E-07	6.19E-07	7.19E-07	6.11E-07
565167.9	4188129	1.07E-07	6.55E-07	7.61E-07	6.47E-07
565131.5	4188198	5.60E-08	3.44E-07	4.00E-07	3.40E-07
565123.6	4188203	5.31E-08	3.27E-07	3.80E-07	3.23E-07
565115.7	4188209	5.03E-08	3.09E-07	3.59E-07	3.05E-07
565107.8	4188215	4.75E-08	2.92E-07	3.39E-07	2.88E-07
565099.9	4188220	4.48E-08	2.76E-07	3.20E-07	2.72E-07
565092.1	4188226	4.24E-08	2.61E-07	3.03E-07	2.57E-07
565084.2	4188231	4.00E-08	2.46E-07	2.86E-07	2.43E-07
565076.3	4188237	3.78E-08	2.32E-07	2.70E-07	2.30E-07
565052.6	4188254	3.19E-08	1.96E-07	2.28E-07	1.94E-07
565044.7	4188260	3.02E-08	1.85E-07	2.16E-07	1.83E-07
565027.2	4188264	2.88E-08	1.77E-07	2.06E-07	1.75E-07
565017.6	4188262	2.90E-08	1.78E-07	2.07E-07	1.76E-07
565008.1	4188261	2.92E-08	1.79E-07	2.08E-07	1.77E-07
564998.5	4188260	2.93E-08	1.80E-07	2.10E-07	1.78E-07
565150	4188176	6.93E-08	4.26E-07	4.95E-07	4.21E-07
565155.2	4188168	7.47E-08	4.59E-07	5.34E-07	4.54E-07
565160.5	4188159	8.03E-08	4.93E-07	5.74E-07	4.88E-07
565165.8	4188151	8.58E-08	5.27E-07	6.13E-07	5.21E-07
565171.1	4188143	9.12E-08	5.60E-07	6.51E-07	5.54E-07
565176.3	4188135	9.63E-08	5.92E-07	6.88E-07	5.85E-07
565140	4188203	5.20E-08	3.20E-07	3.72E-07	3.16E-07
565132.3	4188209	4.95E-08	3.04E-07	3.54E-07	3.01E-07
565124.5	4188214	4.70E-08	2.89E-07	3.36E-07	2.86E-07
565116.8	4188220	4.46E-08	2.74E-07	3.18E-07	2.71E-07
565109	4188225	4.22E-08	2.59E-07	3.02E-07	2.56E-07
565101.3	4188231	4.00E-08	2.46E-07	2.86E-07	2.43E-07
565093.5	4188236	3.79E-08	2.33E-07	2.71E-07	2.30E-07
565085.7	4188242	3.59E-08	2.21E-07	2.56E-07	2.18E-07
565054.7	4188264	2.90E-08	1.78E-07	2.07E-07	1.76E-07
565047	4188269	2.75E-08	1.69E-07	1.97E-07	1.67E-07
565029.8	4188274	2.64E-08	1.62E-07	1.88E-07	1.60E-07
565020.3	4188272	2.66E-08	1.63E-07	1.90E-07	1.61E-07
565010.9	4188271	2.67E-08	1.64E-07	1.91E-07	1.62E-07
565001.5	4188270	2.69E-08	1.65E-07	1.92E-07	1.63E-07
565153.1	4188189	5.90E-08	3.63E-07	4.22E-07	3.58E-07
565158.4	4188181	6.37E-08	3.91E-07	4.55E-07	3.87E-07
565163.6	4188173	6.85E-08	4.21E-07	4.89E-07	4.16E-07
565168.9	4188165	7.34E-08	4.51E-07	5.24E-07	4.46E-07
565174.2	4188157	7.82E-08	4.81E-07	5.59E-07	4.75E-07
565179.5	4188148	8.30E-08	5.10E-07	5.93E-07	5.04E-07
565184.7	4188140	8.75E-08	5.38E-07	6.25E-07	5.31E-07
565140.9	4188214	4.62E-08	2.84E-07	3.30E-07	2.81E-07
565133.3	4188219	4.40E-08	2.71E-07	3.15E-07	2.68E-07
565125.6	4188225	4.19E-08	2.57E-07	2.99E-07	2.54E-07
565118	4188230	3.98E-08	2.45E-07	2.84E-07	2.42E-07
565110.3	4188236	3.78E-08	2.32E-07	2.70E-07	2.30E-07
565102.7	4188241	3.59E-08	2.21E-07	2.57E-07	2.18E-07
565095.1	4188246	3.41E-08	2.10E-07	2.44E-07	2.07E-07
565087.4	4188252	3.24E-08	1.99E-07	2.32E-07	1.97E-07
565064.5	4188268	2.79E-08	1.71E-07	1.99E-07	1.69E-07
565056.8	4188274	2.65E-08	1.63E-07	1.89E-07	1.61E-07
565049.2	4188279	2.52E-08	1.55E-07	1.80E-07	1.53E-07
565032.3	4188283	2.42E-08	1.49E-07	1.73E-07	1.47E-07
565023	4188282	2.44E-08	1.50E-07	1.74E-07	1.48E-07
565013.7	4188281	2.46E-08	1.51E-07	1.76E-07	1.49E-07
565004.4	4188279	2.47E-08	1.52E-07	1.77E-07	1.50E-07
564995.1	4188278	2.48E-08	1.53E-07	1.77E-07	1.51E-07
564976.5	4188275	2.50E-08	1.54E-07	1.79E-07	1.52E-07
565161.5	4188195	5.46E-08	3.36E-07	3.90E-07	3.32E-07
565166.8	4188187	5.88E-08	3.61E-07	4.20E-07	3.57E-07
565172	4188178	6.30E-08	3.87E-07	4.50E-07	3.83E-07
565177.3	4188170	6.73E-08	4.14E-07	4.81E-07	4.09E-07
565182.6	4188162	7.16E-08	4.40E-07	5.12E-07	4.35E-07
565187.9	4188154	7.58E-08	4.66E-07	5.42E-07	4.61E-07
565193.2	4188146	7.99E-08	4.91E-07	5.71E-07	4.85E-07
565149.5	4188219	4.33E-08	2.66E-07	3.09E-07	2.63E-07
565142	4188224	4.13E-08	2.54E-07	2.95E-07	2.51E-07
565134.4	4188230	3.94E-08	2.42E-07	2.82E-07	2.40E-07
565126.9	4188235	3.76E-08	2.31E-07	2.68E-07	2.28E-07
565119.4	4188241	3.58E-08	2.20E-07	2.56E-07	2.17E-07
565111.8	4188246	3.41E-08	2.09E-07	2.44E-07	2.07E-07
565104.3	4188251	3.25E-08	1.99E-07	2.32E-07	1.97E-07
565096.7	4188257	3.09E-08	1.90E-07	2.21E-07	1.88E-07
565066.6	4188278	2.55E-08	1.57E-07	1.82E-07	1.55E-07
565059	4188284	2.44E-08	1.50E-07	1.74E-07	1.48E-07
565051.5	4188289	2.32E-08	1.43E-07	1.66E-07	1.41E-07
565034.8	4188293	2.24E-08	1.38E-07	1.60E-07	1.36E-07
565025.6	4188292	2.25E-08	1.39E-07	1.61E-07	1.37E-07
565016.4	4188290	2.27E-08	1.39E-07	1.62E-07	1.38E-07
565007.3	4188289	2.28E-08	1.40E-07	1.63E-07	1.39E-07
564998.1	4188288	2.29E-08	1.41E-07	1.64E-07	1.39E-07
565175.2	4188192	5.44E-08	3.34E-07	3.89E-07	3.30E-07
565180.4	4188184	5.82E-08	3.58E-07	4.16E-07	3.53E-07
565185.7	4188176	6.20E-08	3.81E-07	4.43E-07	3.77E-07
565191	4188167	6.59E-08	4.05E-07	4.71E-07	4.00E-07
565196.3	4188159	6.96E-08	4.28E-07	4.97E-07	4.23E-07
565149.2	4188231	3.86E-08	2.37E-07	2.75E-07	2.34E-07
565141.3	4188236	3.68E-08	2.26E-07	2.63E-07	2.23E-07
565133.4	4188242	3.50E-08	2.15E-07	2.50E-07	2.13E-07
565125.5	4188248	3.33E-08	2.05E-07	2.38E-07	2.02E-07
565117.6	4188253	3.17E-08	1.95E-07	2.27E-07	1.93E-07
565109.7	4188259	3.02E-08	1.86E-07	2.16E-07	1.83E-07
565101.7	4188265	2.87E-08	1.77E-07	2.05E-07	1.75E-07
565070.1	4188287	2.37E-08	1.46E-07	1.69E-07	1.44E-07
565062.1	4188293	2.26E-08	1.39E-07	1.62E-07	1.37E-07
565054.2	4188298	2.16E-08	1.33E-07	1.54E-07	1.31E-07
565036.7	4188303	2.07E-08	1.27E-07	1.48E-07	1.26E-07
565027.1	4188301	2.09E-08	1.28E-07	1.49E-07	1.27E-07
565017.4	4188300	2.10E-08	1.29E-07	1.50E-07	1.28E-07
565007.8	4188299	2.12E-08	1.30E-07	1.51E-07	1.28E-07
564998.2	4188297	2.12E-08	1.31E-07	1.52E-07	1.29E-07
565194.1	4188181	5.73E-08	3.52E-07	4.10E-07	3.48E-07
565199.4	4188173	6.08E-08	3.73E-07	4.34E-07	3.69E-07
565204.7	4188165	6.41E-08	3.94E-07	4.58E-07	3.89E-07
565165.8	4188230	3.80E-08	2.33E-07	2.71E-07	2.31E-07
565158	4188236	3.64E-08	2.23E-07	2.60E-07	2.21E-07
565150.2	4188241	3.47E-08	2.14E-07	2.48E-07	2.11E-07
565142.4	4188247	3.32E-08	2.04E-07	2.37E-07	2.02E-07
565134.6	4188253	3.17E-08	1.95E-07	2.26E-07	1.92E-07
565126.8	4188258	3.02E-08	1.86E-07	2.16E-07	1.84E-07

565118.9	4188264	2.88E-08	1.77E-07	2.06E-07	1.75E-07
565111.1	4188269	2.75E-08	1.69E-07	1.97E-07	1.67E-07
565103.3	4188275	2.63E-08	1.61E-07	1.88E-07	1.60E-07
565079.9	4188291	2.29E-08	1.41E-07	1.64E-07	1.39E-07
565072.1	4188297	2.19E-08	1.35E-07	1.56E-07	1.33E-07
565064.3	4188303	2.09E-08	1.29E-07	1.50E-07	1.27E-07
565056.5	4188308	2.00E-08	1.23E-07	1.43E-07	1.22E-07
565039.2	4188312	1.93E-08	1.19E-07	1.38E-07	1.17E-07
565029.7	4188311	1.94E-08	1.19E-07	1.39E-07	1.18E-07
565020.2	4188310	1.95E-08	1.20E-07	1.40E-07	1.19E-07
565010.7	4188308	1.97E-08	1.21E-07	1.40E-07	1.19E-07
565001.2	4188307	1.97E-08	1.21E-07	1.41E-07	1.20E-07
565166.7	4188241	3.43E-08	2.11E-07	2.45E-07	2.08E-07
565159	4188247	3.29E-08	2.02E-07	2.35E-07	2.00E-07
565151.3	4188252	3.15E-08	1.93E-07	2.25E-07	1.91E-07
565143.6	4188258	3.01E-08	1.85E-07	2.15E-07	1.83E-07
565135.8	4188263	2.88E-08	1.77E-07	2.06E-07	1.75E-07
565128.1	4188269	2.75E-08	1.69E-07	1.97E-07	1.67E-07
565120.4	4188274	2.63E-08	1.62E-07	1.88E-07	1.60E-07
565112.7	4188280	2.52E-08	1.55E-07	1.80E-07	1.53E-07
565081.9	4188301	2.12E-08	1.30E-07	1.51E-07	1.29E-07
565074.2	4188307	2.03E-08	1.25E-07	1.45E-07	1.23E-07
565066.5	4188312	1.94E-08	1.20E-07	1.39E-07	1.18E-07
565058.7	4188318	1.86E-08	1.15E-07	1.33E-07	1.13E-07
565041.7	4188322	1.80E-08	1.10E-07	1.28E-07	1.09E-07
565032.3	4188321	1.81E-08	1.11E-07	1.29E-07	1.10E-07
565022.9	4188319	1.82E-08	1.12E-07	1.30E-07	1.11E-07
565013.6	4188318	1.83E-08	1.13E-07	1.31E-07	1.11E-07
565004.2	4188317	1.84E-08	1.13E-07	1.31E-07	1.12E-07
565175.3	4188246	3.24E-08	1.99E-07	2.31E-07	1.97E-07
565167.7	4188252	3.11E-08	1.91E-07	2.23E-07	1.89E-07
565160.1	4188257	2.99E-08	1.84E-07	2.14E-07	1.82E-07
565152.5	4188263	2.86E-08	1.76E-07	2.05E-07	1.74E-07
565144.9	4188268	2.74E-08	1.69E-07	1.96E-07	1.67E-07
565137.2	4188273	2.63E-08	1.62E-07	1.88E-07	1.60E-07
565129.6	4188279	2.52E-08	1.55E-07	1.80E-07	1.53E-07
565122	4188284	2.42E-08	1.49E-07	1.73E-07	1.47E-07
565114.4	4188290	2.32E-08	1.42E-07	1.66E-07	1.41E-07
565091.5	4188306	2.05E-08	1.26E-07	1.46E-07	1.24E-07
565083.9	4188311	1.96E-08	1.21E-07	1.40E-07	1.19E-07
565076.3	4188317	1.89E-08	1.16E-07	1.35E-07	1.15E-07
565068.7	4188322	1.81E-08	1.11E-07	1.29E-07	1.10E-07
565061	4188328	1.74E-08	1.07E-07	1.24E-07	1.06E-07
565044.1	4188332	1.68E-08	1.03E-07	1.20E-07	1.02E-07
565034.9	4188331	1.69E-08	1.04E-07	1.21E-07	1.03E-07
565025.6	4188329	1.70E-08	1.05E-07	1.22E-07	1.03E-07
565016.4	4188328	1.71E-08	1.05E-07	1.22E-07	1.04E-07
565007.1	4188327	1.72E-08	1.05E-07	1.23E-07	1.04E-07
564997.8	4188325	1.72E-08	1.06E-07	1.23E-07	1.05E-07
565176.4	4188257	2.95E-08	1.81E-07	2.11E-07	1.79E-07
565168.9	4188262	2.84E-08	1.74E-07	2.03E-07	1.72E-07
565161.4	4188268	2.73E-08	1.68E-07	1.95E-07	1.66E-07
565153.8	4188273	2.62E-08	1.61E-07	1.87E-07	1.59E-07
565146.3	4188278	2.51E-08	1.54E-07	1.80E-07	1.53E-07
565138.7	4188284	2.41E-08	1.48E-07	1.73E-07	1.47E-07
565131.2	4188289	2.32E-08	1.43E-07	1.66E-07	1.41E-07
565123.7	4188295	2.23E-08	1.37E-07	1.59E-07	1.35E-07
565101	4188311	1.98E-08	1.22E-07	1.41E-07	1.20E-07
565093.5	4188316	1.90E-08	1.17E-07	1.36E-07	1.16E-07
565085.9	4188321	1.83E-08	1.12E-07	1.31E-07	1.11E-07
565078.4	4188327	1.76E-08	1.08E-07	1.26E-07	1.07E-07
565070.9	4188332	1.69E-08	1.04E-07	1.21E-07	1.03E-07
565063.3	4188337	1.63E-08	1.00E-07	1.16E-07	9.89E-08
565046.6	4188342	1.58E-08	9.68E-08	1.13E-07	9.57E-08
565037.4	4188340	1.58E-08	9.73E-08	1.13E-07	9.62E-08
565028.3	4188339	1.59E-08	9.79E-08	1.14E-07	9.67E-08
565019.1	4188338	1.60E-08	9.84E-08	1.14E-07	9.72E-08
565009.9	4188336	1.61E-08	9.88E-08	1.15E-07	9.76E-08
565000.8	4188335	1.61E-08	9.91E-08	1.15E-07	9.79E-08
565243.6	4188178	4.97E-08	3.05E-07	3.55E-07	3.02E-07
565183.6	4188263	2.78E-08	1.71E-07	1.99E-07	1.69E-07
565175.8	4188269	2.67E-08	1.64E-07	1.91E-07	1.62E-07
565168	4188274	2.57E-08	1.58E-07	1.83E-07	1.56E-07
565160.1	4188280	2.46E-08	1.51E-07	1.76E-07	1.50E-07
565152.3	4188286	2.36E-08	1.45E-07	1.69E-07	1.44E-07
565144.4	4188291	2.27E-08	1.40E-07	1.62E-07	1.38E-07
565136.6	4188297	2.18E-08	1.34E-07	1.56E-07	1.32E-07
565128.7	4188302	2.09E-08	1.29E-07	1.50E-07	1.27E-07
565105.2	4188319	1.86E-08	1.14E-07	1.33E-07	1.13E-07
565097.4	4188325	1.79E-08	1.10E-07	1.28E-07	1.09E-07
565089.5	4188330	1.72E-08	1.06E-07	1.23E-07	1.04E-07
565081.7	4188336	1.65E-08	1.02E-07	1.18E-07	1.00E-07
565073.8	4188341	1.59E-08	9.78E-08	1.14E-07	9.66E-08
565066	4188347	1.53E-08	9.41E-08	1.09E-07	9.30E-08
565048.6	4188351	1.48E-08	9.09E-08	1.06E-07	8.99E-08
565039.1	4188350	1.49E-08	9.14E-08	1.06E-07	9.04E-08
565029.5	4188349	1.50E-08	9.19E-08	1.07E-07	9.09E-08
565020	4188347	1.50E-08	9.24E-08	1.07E-07	9.13E-08
565010.5	4188346	1.51E-08	9.28E-08	1.08E-07	9.17E-08
565001	4188344	1.51E-08	9.31E-08	1.08E-07	9.20E-08
565246.7	4188192	4.44E-08	2.73E-07	3.17E-07	2.69E-07
565252	4188184	4.64E-08	2.85E-07	3.31E-07	2.82E-07
565184.6	4188274	2.54E-08	1.56E-07	1.82E-07	1.55E-07
565176.9	4188279	2.45E-08	1.50E-07	1.75E-07	1.49E-07
565169.1	4188285	2.35E-08	1.45E-07	1.68E-07	1.43E-07
565107.1	4188329	1.73E-08	1.06E-07	1.24E-07	1.05E-07
565099.3	4188335	1.67E-08	1.02E-07	1.19E-07	1.01E-07
565091.5	4188340	1.61E-08	9.86E-08	1.15E-07	9.75E-08
565083.8	4188346	1.55E-08	9.51E-08	1.11E-07	9.40E-08
565076	4188351	1.49E-08	9.17E-08	1.07E-07	9.06E-08
565068.3	4188357	1.44E-08	8.83E-08	1.03E-07	8.73E-08
565051.1	4188361	1.39E-08	8.56E-08	9.95E-08	8.46E-08
565041.7	4188360	1.40E-08	8.60E-08	1.00E-07	8.50E-08
565032.2	4188358	1.41E-08	8.65E-08	1.01E-07	8.55E-08
565022.8	4188357	1.41E-08	8.69E-08	1.01E-07	8.59E-08
565013.4	4188356	1.42E-08	8.73E-08	1.01E-07	8.63E-08
565003.9	4188354	1.42E-08	8.75E-08	1.02E-07	8.65E-08
565255.1	4188197	4.16E-08	2.55E-07	2.97E-07	2.53E-07
565260.4	4188189	4.34E-08	2.67E-07	3.10E-07	2.64E-07
565193.4	4188279	2.43E-08	1.49E-07	1.73E-07	1.47E-07
565185.7	4188285	2.34E-08	1.44E-07	1.67E-07	1.42E-07
565178.1	4188290	2.25E-08	1.38E-07	1.61E-07	1.37E-07
565116.6	4188334	1.68E-08	1.03E-07	1.20E-07	1.02E-07
565109	4188339	1.62E-08	9.92E-08	1.15E-07	9.81E-08
565101.3	4188345	1.56E-08	9.57E-08	1.11E-07	9.46E-08
565093.6	4188350	1.50E-08	9.24E-08	1.07E-07	9.13E-08

565085.9	4188356	1.45E-08	8.92E-08	1.04E-07	8.82E-08
565078.2	4188361	1.40E-08	8.61E-08	1.00E-07	8.51E-08
565070.6	4188367	1.35E-08	8.31E-08	9.66E-08	8.21E-08
565053.6	4188371	1.31E-08	8.07E-08	9.38E-08	7.97E-08
565044.2	4188369	1.32E-08	8.11E-08	9.43E-08	8.01E-08
565034.9	4188368	1.33E-08	8.15E-08	9.48E-08	8.05E-08
565025.6	4188367	1.33E-08	8.19E-08	9.52E-08	8.09E-08
565016.2	4188365	1.34E-08	8.22E-08	9.56E-08	8.13E-08
565006.9	4188364	1.34E-08	8.25E-08	9.59E-08	8.15E-08
565263.5	4188203	3.91E-08	2.40E-07	2.79E-07	2.37E-07
565268.8	4188195	4.07E-08	2.50E-07	2.91E-07	2.47E-07
565232.6	4188263	2.65E-08	1.63E-07	1.90E-07	1.61E-07
565225	4188268	2.57E-08	1.58E-07	1.83E-07	1.56E-07
565217.4	4188273	2.48E-08	1.52E-07	1.77E-07	1.51E-07
565209.8	4188279	2.40E-08	1.47E-07	1.71E-07	1.46E-07
565202.2	4188284	2.32E-08	1.42E-07	1.66E-07	1.41E-07
565194.6	4188290	2.24E-08	1.38E-07	1.60E-07	1.36E-07
565187	4188295	2.16E-08	1.33E-07	1.54E-07	1.31E-07
565118.5	4188344	1.57E-08	9.62E-08	1.12E-07	9.51E-08
565110.9	4188349	1.51E-08	9.29E-08	1.08E-07	9.18E-08
565103.3	4188355	1.46E-08	8.98E-08	1.04E-07	8.87E-08
565095.7	4188360	1.41E-08	8.68E-08	1.01E-07	8.58E-08
565088.1	4188365	1.36E-08	8.39E-08	9.75E-08	8.29E-08
565080.5	4188371	1.32E-08	8.10E-08	9.42E-08	8.01E-08
565072.9	4188376	1.27E-08	7.83E-08	9.10E-08	7.74E-08
565056	4188380	1.24E-08	7.62E-08	8.86E-08	7.53E-08
565046.8	4188379	1.25E-08	7.66E-08	8.90E-08	7.57E-08
565037.5	4188378	1.25E-08	7.70E-08	8.95E-08	7.61E-08
565028.3	4188376	1.26E-08	7.73E-08	8.99E-08	7.64E-08
565019	4188375	1.26E-08	7.76E-08	9.03E-08	7.67E-08
565009.8	4188374	1.27E-08	7.79E-08	9.06E-08	7.70E-08
565000.5	4188373	1.27E-08	7.81E-08	9.08E-08	7.72E-08
565240.2	4188257	2.74E-08	1.68E-07	1.96E-07	1.66E-07
565266.6	4188216	3.52E-08	2.16E-07	2.51E-07	2.14E-07
565271.9	4188208	3.68E-08	2.26E-07	2.63E-07	2.23E-07
565277.2	4188200	3.83E-08	2.35E-07	2.74E-07	2.33E-07
565240.8	4188268	2.52E-08	1.55E-07	1.80E-07	1.53E-07
565232.9	4188274	2.34E-08	1.44E-07	1.67E-07	1.42E-07
565225	4188279	2.25E-08	1.38E-07	1.61E-07	1.37E-07
565217.1	4188285	2.17E-08	1.34E-07	1.55E-07	1.32E-07
565209.3	4188291	2.10E-08	1.29E-07	1.50E-07	1.28E-07
565201.4	4188296	2.12E-08	1.30E-07	1.52E-07	1.29E-07
565122.7	4188352	1.48E-08	9.12E-08	1.06E-07	9.01E-08
565114.8	4188358	1.43E-08	8.81E-08	1.02E-07	8.70E-08
565107	4188363	1.38E-08	8.51E-08	9.89E-08	8.41E-08
565099.1	4188369	1.34E-08	8.22E-08	9.56E-08	8.12E-08
565091.2	4188375	1.29E-08	7.94E-08	9.23E-08	7.85E-08
565083.4	4188380	1.25E-08	7.67E-08	8.92E-08	7.58E-08
565075.5	4188386	1.21E-08	7.41E-08	8.62E-08	7.33E-08
565058.1	4188390	1.17E-08	7.21E-08	8.39E-08	7.13E-08
565048.5	4188389	1.18E-08	7.25E-08	8.43E-08	7.16E-08
565038.9	4188387	1.19E-08	7.28E-08	8.47E-08	7.20E-08
565029.4	4188386	1.19E-08	7.31E-08	8.50E-08	7.23E-08
565019.8	4188385	1.19E-08	7.34E-08	8.53E-08	7.25E-08
565010.2	4188383	1.20E-08	7.37E-08	8.56E-08	7.28E-08
565248.6	4188263	2.60E-08	1.60E-07	1.86E-07	1.58E-07
565253.9	4188254	2.74E-08	1.68E-07	1.96E-07	1.66E-07
565275	4188222	3.32E-08	2.04E-07	2.37E-07	2.02E-07
565280.3	4188214	3.47E-08	2.13E-07	2.48E-07	2.11E-07
565285.6	4188205	3.61E-08	2.22E-07	2.58E-07	2.19E-07
565249.2	4188274	2.31E-08	1.42E-07	1.65E-07	1.40E-07
565241.4	4188279	2.23E-08	1.37E-07	1.59E-07	1.35E-07
565233.7	4188285	2.15E-08	1.32E-07	1.53E-07	1.30E-07
565225.9	4188290	2.07E-08	1.27E-07	1.48E-07	1.26E-07
565218.1	4188296	2.01E-08	1.23E-07	1.44E-07	1.22E-07
565210.3	4188301	1.95E-08	1.20E-07	1.39E-07	1.18E-07
565179.1	4188323	1.77E-08	1.09E-07	1.27E-07	1.08E-07
565171.3	4188329	1.71E-08	1.05E-07	1.22E-07	1.04E-07
565163.5	4188335	1.65E-08	1.02E-07	1.18E-07	1.00E-07
565155.7	4188340	1.60E-08	9.82E-08	1.14E-07	9.70E-08
565132.3	4188357	1.44E-08	8.86E-08	1.03E-07	8.76E-08
565124.5	4188362	1.39E-08	8.57E-08	9.96E-08	8.47E-08
565116.7	4188368	1.35E-08	8.29E-08	9.63E-08	8.19E-08
565109	4188373	1.30E-08	8.01E-08	9.32E-08	7.92E-08
565101.2	4188379	1.26E-08	7.75E-08	9.01E-08	7.66E-08
565093.4	4188384	1.22E-08	7.50E-08	8.72E-08	7.41E-08
565085.6	4188390	1.18E-08	7.26E-08	8.44E-08	7.17E-08
565077.8	4188396	1.14E-08	7.02E-08	8.16E-08	6.94E-08
565060.5	4188400	1.11E-08	6.84E-08	7.95E-08	6.76E-08
565051	4188398	1.12E-08	6.87E-08	7.99E-08	6.79E-08
565041.6	4188397	1.12E-08	6.90E-08	8.02E-08	6.82E-08
565032.1	4188396	1.13E-08	6.92E-08	8.05E-08	6.84E-08
565022.6	4188394	1.13E-08	6.95E-08	8.08E-08	6.87E-08
565013.2	4188393	1.13E-08	6.97E-08	8.10E-08	6.89E-08
565003.7	4188392	1.14E-08	6.99E-08	8.13E-08	6.91E-08
565257	4188268	2.47E-08	1.52E-07	1.77E-07	1.50E-07
565262.3	4188260	2.60E-08	1.60E-07	1.86E-07	1.58E-07
565278.1	4188235	3.00E-08	1.84E-07	2.14E-07	1.82E-07
565283.4	4188227	3.14E-08	1.93E-07	2.24E-07	1.91E-07
565288.7	4188219	3.27E-08	2.01E-07	2.34E-07	1.99E-07
565294	4188211	3.41E-08	2.09E-07	2.43E-07	2.07E-07
565257.7	4188279	2.20E-08	1.35E-07	1.57E-07	1.33E-07
565250	4188284	2.12E-08	1.30E-07	1.52E-07	1.29E-07
565242.3	4188290	2.05E-08	1.26E-07	1.47E-07	1.25E-07
565234.5	4188295	1.99E-08	1.22E-07	1.42E-07	1.21E-07
565226.8	4188301	1.92E-08	1.18E-07	1.37E-07	1.17E-07
565219.1	4188306	1.86E-08	1.14E-07	1.33E-07	1.13E-07
565211.4	4188312	1.81E-08	1.11E-07	1.29E-07	1.10E-07
565203.6	4188317	1.83E-08	1.12E-07	1.31E-07	1.11E-07
565195.9	4188323	1.77E-08	1.09E-07	1.26E-07	1.07E-07
565188.2	4188328	1.71E-08	1.05E-07	1.22E-07	1.04E-07
565180.5	4188334	1.65E-08	1.02E-07	1.18E-07	1.00E-07
565172.8	4188339	1.60E-08	9.83E-08	1.14E-07	9.71E-08
565165	4188345	1.55E-08	9.50E-08	1.11E-07	9.39E-08
565157.3	4188350	1.50E-08	9.19E-08	1.07E-07	9.09E-08
565134.1	4188367	1.36E-08	8.33E-08	9.69E-08	8.24E-08
565126.4	4188372	1.31E-08	8.07E-08	9.38E-08	7.97E-08
565118.7	4188378	1.27E-08	7.81E-08	9.08E-08	7.72E-08
565111	4188383	1.23E-08	7.56E-08	8.79E-08	7.47E-08
565103.3	4188389	1.19E-08	7.33E-08	8.52E-08	7.24E-08
565095.5	4188394	1.15E-08	7.10E-08	8.25E-08	7.01E-08
565087.8	4188400	1.12E-08	6.88E-08	7.99E-08	6.80E-08
565080.1	4188405	1.08E-08	6.66E-08	7.75E-08	6.58E-08
565063	4188410	1.06E-08	6.49E-08	7.55E-08	6.41E-08
565053.6	4188408	1.06E-08	6.52E-08	7.58E-08	6.44E-08
565044.2	4188407	1.07E-08	6.55E-08	7.62E-08	6.47E-08

565034.8	4188406	1.07E-08	6.57E-08	7.64E-08	6.49E-08
565025.4	4188404	1.07E-08	6.59E-08	7.66E-08	6.51E-08
565016	4188403	1.07E-08	6.61E-08	7.68E-08	6.53E-08
565006.7	4188402	1.08E-08	6.63E-08	7.71E-08	6.55E-08
565265.4	4188273	2.27E-08	1.39E-07	1.62E-07	1.38E-07
565270.7	4188265	2.39E-08	1.47E-07	1.70E-07	1.45E-07
565286.5	4188241	2.77E-08	1.70E-07	1.98E-07	1.68E-07
565291.8	4188233	2.97E-08	1.82E-07	2.12E-07	1.80E-07
565297.1	4188224	3.09E-08	1.90E-07	2.21E-07	1.88E-07
565302.4	4188216	3.22E-08	1.98E-07	2.30E-07	1.95E-07
565266.2	4188284	2.09E-08	1.29E-07	1.50E-07	1.27E-07
565258.5	4188290	2.03E-08	1.25E-07	1.45E-07	1.23E-07
565250.9	4188295	1.97E-08	1.21E-07	1.41E-07	1.19E-07
565243.2	4188301	1.91E-08	1.17E-07	1.36E-07	1.16E-07
565235.5	4188306	1.85E-08	1.13E-07	1.32E-07	1.12E-07
565227.9	4188312	1.79E-08	1.10E-07	1.28E-07	1.09E-07
565220.2	4188317	1.73E-08	1.06E-07	1.24E-07	1.05E-07
565212.6	4188322	1.68E-08	1.03E-07	1.20E-07	1.02E-07
565204.9	4188328	1.70E-08	1.05E-07	1.22E-07	1.03E-07
565197.3	4188333	1.65E-08	1.01E-07	1.18E-07	1.00E-07
565189.6	4188339	1.60E-08	9.82E-08	1.14E-07	9.70E-08
565181.9	4188344	1.55E-08	9.50E-08	1.11E-07	9.39E-08
565174.3	4188350	1.50E-08	9.20E-08	1.07E-07	9.09E-08
565166.6	4188355	1.45E-08	8.91E-08	1.04E-07	8.81E-08
565136	4188377	1.28E-08	7.85E-08	9.13E-08	7.76E-08
565128.3	4188382	1.24E-08	7.61E-08	8.85E-08	7.52E-08
565120.7	4188388	1.20E-08	7.37E-08	8.57E-08	7.29E-08
565113	4188393	1.16E-08	7.15E-08	8.31E-08	7.07E-08
565105.4	4188399	1.13E-08	6.94E-08	8.07E-08	6.86E-08
565097.7	4188404	1.09E-08	6.73E-08	7.82E-08	6.65E-08
565090	4188410	1.06E-08	6.53E-08	7.59E-08	6.45E-08
565082.4	4188415	1.03E-08	6.33E-08	7.36E-08	6.26E-08
565065.4	4188419	1.00E-08	6.17E-08	7.17E-08	6.10E-08
565056.1	4188418	1.01E-08	6.20E-08	7.21E-08	6.13E-08
565046.8	4188417	1.01E-08	6.23E-08	7.24E-08	6.15E-08
565037.5	4188415	1.02E-08	6.25E-08	7.26E-08	6.17E-08
565028.2	4188414	1.02E-08	6.26E-08	7.28E-08	6.19E-08
565018.9	4188413	1.02E-08	6.28E-08	7.30E-08	6.20E-08
565009.6	4188411	1.02E-08	6.29E-08	7.32E-08	6.22E-08
565273.8	4188279	2.16E-08	1.33E-07	1.54E-07	1.31E-07
565289.7	4188254	2.50E-08	1.54E-07	1.79E-07	1.52E-07
565294.9	4188246	2.62E-08	1.61E-07	1.87E-07	1.59E-07
565300.2	4188238	2.75E-08	1.69E-07	1.96E-07	1.67E-07
565305.5	4188230	2.86E-08	1.76E-07	2.05E-07	1.74E-07
565310.8	4188222	2.98E-08	1.83E-07	2.13E-07	1.81E-07
565274.3	4188290	2.00E-08	1.23E-07	1.43E-07	1.21E-07
565266.5	4188296	1.94E-08	1.19E-07	1.39E-07	1.18E-07
565258.6	4188301	1.88E-08	1.15E-07	1.34E-07	1.14E-07
565250.7	4188307	1.82E-08	1.12E-07	1.30E-07	1.11E-07
565242.8	4188312	1.76E-08	1.08E-07	1.26E-07	1.07E-07
565234.9	4188318	1.71E-08	1.05E-07	1.22E-07	1.04E-07
565227	4188324	1.65E-08	1.02E-07	1.18E-07	1.00E-07
565219.1	4188329	1.60E-08	9.85E-08	1.15E-07	9.73E-08
565211.2	4188335	1.56E-08	9.57E-08	1.11E-07	9.45E-08
565203.3	4188340	1.57E-08	9.66E-08	1.12E-07	9.55E-08
565195.4	4188346	1.52E-08	9.36E-08	1.09E-07	9.25E-08
565187.6	4188352	1.47E-08	9.06E-08	1.05E-07	8.95E-08
565179.7	4188357	1.43E-08	8.77E-08	1.02E-07	8.67E-08
565171.8	4188363	1.38E-08	8.49E-08	9.88E-08	8.39E-08
565148.1	4188380	1.26E-08	7.72E-08	8.98E-08	7.63E-08
565140.2	4188385	1.22E-08	7.48E-08	8.69E-08	7.39E-08
565132.3	4188391	1.13E-08	6.95E-08	8.08E-08	6.87E-08
565124.4	4188397	1.10E-08	6.73E-08	7.83E-08	6.65E-08
565116.5	4188402	1.11E-08	6.81E-08	7.92E-08	6.73E-08
565108.7	4188408	1.07E-08	6.61E-08	7.68E-08	6.53E-08
565100.8	4188413	1.04E-08	6.41E-08	7.45E-08	6.34E-08
565092.9	4188419	1.01E-08	6.22E-08	7.23E-08	6.14E-08
565085	4188425	9.81E-09	6.03E-08	7.01E-08	5.96E-08
565282.2	4188284	2.06E-08	1.27E-07	1.47E-07	1.25E-07
565298.1	4188260	2.38E-08	1.46E-07	1.70E-07	1.45E-07
565303.4	4188252	2.49E-08	1.53E-07	1.78E-07	1.51E-07
565308.6	4188243	2.60E-08	1.60E-07	1.86E-07	1.58E-07
565313.9	4188235	2.71E-08	1.67E-07	1.94E-07	1.65E-07
565319.2	4188227	2.82E-08	1.74E-07	2.02E-07	1.71E-07
565282.8	4188295	1.92E-08	1.18E-07	1.37E-07	1.16E-07
565275	4188301	1.86E-08	1.14E-07	1.33E-07	1.13E-07
565267.2	4188306	1.80E-08	1.11E-07	1.29E-07	1.10E-07
565259.4	4188312	1.75E-08	1.07E-07	1.25E-07	1.06E-07
565251.5	4188318	1.70E-08	1.04E-07	1.21E-07	1.03E-07
565243.7	4188323	1.64E-08	1.01E-07	1.17E-07	9.98E-08
565235.9	4188329	1.59E-08	9.79E-08	1.14E-07	9.67E-08
565228.1	4188334	1.54E-08	9.49E-08	1.10E-07	9.38E-08
565220.2	4188340	1.50E-08	9.21E-08	1.07E-07	9.10E-08
565212.4	4188345	1.46E-08	8.95E-08	1.04E-07	8.85E-08
565204.6	4188351	1.42E-08	8.70E-08	1.01E-07	8.59E-08
565196.8	4188357	1.43E-08	8.77E-08	1.02E-07	8.67E-08
565189	4188362	1.38E-08	8.50E-08	9.88E-08	8.40E-08
565181.1	4188368	1.34E-08	8.24E-08	9.58E-08	8.14E-08
565173.3	4188373	1.30E-08	7.99E-08	9.29E-08	7.90E-08
565149.9	4188390	1.19E-08	7.28E-08	8.47E-08	7.20E-08
565142	4188395	1.10E-08	6.77E-08	7.87E-08	6.69E-08
565134.2	4188401	1.07E-08	6.55E-08	7.61E-08	6.47E-08
565126.4	4188407	1.03E-08	6.35E-08	7.39E-08	6.28E-08
565118.6	4188412	1.01E-08	6.18E-08	7.19E-08	6.11E-08
565110.8	4188418	1.02E-08	6.27E-08	7.29E-08	6.20E-08
565102.9	4188423	9.92E-09	6.09E-08	7.09E-08	6.02E-08
565095.1	4188429	9.63E-09	5.92E-08	6.88E-08	5.85E-08
565301.2	4188273	2.17E-08	1.33E-07	1.55E-07	1.32E-07
565306.5	4188265	2.27E-08	1.39E-07	1.62E-07	1.38E-07
565311.8	4188257	2.37E-08	1.46E-07	1.70E-07	1.44E-07
565317	4188249	2.48E-08	1.52E-07	1.77E-07	1.50E-07
565322.3	4188241	2.58E-08	1.59E-07	1.84E-07	1.57E-07
565327.6	4188232	2.68E-08	1.65E-07	1.92E-07	1.63E-07
565291.3	4188301	1.83E-08	1.13E-07	1.31E-07	1.11E-07
565283.5	4188306	1.78E-08	1.10E-07	1.27E-07	1.08E-07
565275.8	4188312	1.73E-08	1.06E-07	1.24E-07	1.05E-07
565268	4188317	1.68E-08	1.03E-07	1.20E-07	1.02E-07
565260.3	4188323	1.63E-08	1.00E-07	1.17E-07	9.91E-08
565252.5	4188328	1.58E-08	9.73E-08	1.13E-07	9.62E-08
565244.7	4188334	1.54E-08	9.44E-08	1.10E-07	9.33E-08
565237	4188339	1.49E-08	9.16E-08	1.07E-07	9.05E-08
565229.2	4188345	1.45E-08	8.89E-08	1.03E-07	8.78E-08
565221.5	4188350	1.40E-08	8.63E-08	1.00E-07	8.53E-08
565213.7	4188356	1.37E-08	8.39E-08	9.76E-08	8.29E-08
565206	4188361	1.33E-08	8.15E-08	9.48E-08	8.05E-08
565198.2	4188367	1.29E-08	7.91E-08	9.19E-08	7.81E-08

565190.4	4188372	1.25E-08	7.67E-08	8.92E-08	7.58E-08
565182.7	4188378	1.21E-08	7.45E-08	8.66E-08	7.37E-08
565151.7	4188400	1.07E-08	6.60E-08	7.67E-08	6.52E-08
565143.9	4188406	1.04E-08	6.39E-08	7.43E-08	6.31E-08
565136.1	4188411	1.01E-08	6.20E-08	7.20E-08	6.12E-08
565128.4	4188417	9.81E-09	6.03E-08	7.01E-08	5.96E-08
565120.6	4188422	9.56E-09	5.87E-08	6.83E-08	5.80E-08
565112.9	4188428	9.70E-09	5.96E-08	6.93E-08	5.89E-08
565105.1	4188433	9.44E-09	5.80E-08	6.74E-08	5.73E-08
565309.6	4188279	2.07E-08	1.27E-07	1.48E-07	1.26E-07
565314.9	4188271	2.17E-08	1.33E-07	1.55E-07	1.32E-07
565320.2	4188262	2.26E-08	1.39E-07	1.62E-07	1.37E-07
565325.4	4188254	2.36E-08	1.45E-07	1.69E-07	1.43E-07
565330.7	4188246	2.46E-08	1.51E-07	1.76E-07	1.49E-07
565336	4188238	2.55E-08	1.57E-07	1.82E-07	1.55E-07
565292	4188312	1.71E-08	1.05E-07	1.22E-07	1.04E-07
565284.4	4188317	1.66E-08	1.02E-07	1.19E-07	1.01E-07
565276.7	4188322	1.62E-08	9.93E-08	1.15E-07	9.81E-08
565269	4188328	1.57E-08	9.64E-08	1.12E-07	9.52E-08
565261.3	4188333	1.52E-08	9.37E-08	1.09E-07	9.26E-08
565253.6	4188339	1.48E-08	9.11E-08	1.06E-07	9.01E-08
565245.9	4188344	1.44E-08	8.85E-08	1.03E-07	8.75E-08
565238.2	4188350	1.40E-08	8.59E-08	9.99E-08	8.49E-08
565230.5	4188355	1.36E-08	8.34E-08	9.70E-08	8.24E-08
565222.8	4188361	1.32E-08	8.11E-08	9.43E-08	8.01E-08
565215.1	4188366	1.28E-08	7.88E-08	9.17E-08	7.79E-08
565207.4	4188372	1.25E-08	7.66E-08	8.90E-08	7.57E-08
565199.7	4188377	1.21E-08	7.43E-08	8.64E-08	7.35E-08
565192	4188383	1.18E-08	7.22E-08	8.40E-08	7.14E-08
565184.3	4188388	1.14E-08	7.03E-08	8.17E-08	6.94E-08
565161.2	4188405	1.05E-08	6.43E-08	7.47E-08	6.35E-08
565153.5	4188410	1.02E-08	6.24E-08	7.25E-08	6.17E-08
565145.8	4188416	9.86E-09	6.06E-08	7.04E-08	5.99E-08
565138.1	4188421	9.58E-09	5.89E-08	6.84E-08	5.82E-08
565130.4	4188427	9.32E-09	5.73E-08	6.66E-08	5.66E-08
565122.7	4188432	9.08E-09	5.58E-08	6.49E-08	5.52E-08
565115	4188438	9.24E-09	5.68E-08	6.60E-08	5.61E-08
565312.7	4188292	1.89E-08	1.16E-07	1.35E-07	1.15E-07
565318	4188284	1.98E-08	1.22E-07	1.41E-07	1.20E-07
565323.3	4188276	2.07E-08	1.27E-07	1.48E-07	1.25E-07
565328.6	4188268	2.16E-08	1.33E-07	1.54E-07	1.31E-07
565333.8	4188260	2.25E-08	1.38E-07	1.61E-07	1.37E-07
565339.1	4188251	2.34E-08	1.44E-07	1.67E-07	1.42E-07
565344.4	4188243	2.43E-08	1.49E-07	1.74E-07	1.48E-07
565300	4188317	1.63E-08	1.00E-07	1.17E-07	9.92E-08
565292.1	4188323	1.59E-08	9.77E-08	1.14E-07	9.66E-08
565284.2	4188328	1.54E-08	9.49E-08	1.10E-07	9.38E-08
565276.3	4188334	1.50E-08	9.22E-08	1.07E-07	9.11E-08
565268.4	4188340	1.46E-08	8.96E-08	1.04E-07	8.85E-08
565260.5	4188345	1.42E-08	8.71E-08	1.01E-07	8.61E-08
565252.6	4188351	1.38E-08	8.47E-08	9.85E-08	8.37E-08
565244.7	4188357	1.34E-08	8.22E-08	9.56E-08	8.12E-08
565236.8	4188362	1.30E-08	7.98E-08	9.28E-08	7.89E-08
565228.9	4188368	1.26E-08	7.76E-08	9.03E-08	7.67E-08
565221	4188374	1.23E-08	7.55E-08	8.78E-08	7.46E-08
565213.1	4188379	1.19E-08	7.33E-08	8.53E-08	7.25E-08
565205.2	4188385	1.16E-08	7.12E-08	8.28E-08	7.04E-08
565197.3	4188390	1.13E-08	6.92E-08	8.05E-08	6.84E-08
565189.4	4188396	1.09E-08	6.72E-08	7.82E-08	6.65E-08
565165.6	4188413	1.00E-08	6.15E-08	7.15E-08	6.08E-08
565157.7	4188419	9.73E-09	5.98E-08	6.95E-08	5.91E-08
565149.8	4188424	9.44E-09	5.80E-08	6.75E-08	5.74E-08
565141.9	4188430	9.17E-09	5.64E-08	6.55E-08	5.57E-08
565134	4188435	8.91E-09	5.48E-08	6.37E-08	5.41E-08
565321.1	4188298	1.81E-08	1.11E-07	1.29E-07	1.10E-07
565326.4	4188290	1.89E-08	1.16E-07	1.35E-07	1.15E-07
565331.7	4188281	1.97E-08	1.21E-07	1.41E-07	1.20E-07
565337	4188273	2.06E-08	1.26E-07	1.47E-07	1.25E-07
565342.2	4188265	2.15E-08	1.32E-07	1.53E-07	1.30E-07
565347.5	4188257	2.23E-08	1.37E-07	1.60E-07	1.36E-07
565352.8	4188249	2.32E-08	1.42E-07	1.65E-07	1.41E-07
565300.7	4188328	1.53E-08	9.38E-08	1.09E-07	9.27E-08
565292.9	4188334	1.48E-08	9.12E-08	1.06E-07	9.01E-08
565285	4188339	1.44E-08	8.86E-08	1.03E-07	8.75E-08
565277.2	4188345	1.40E-08	8.61E-08	1.00E-07	8.51E-08
565269.3	4188350	1.36E-08	8.39E-08	9.75E-08	8.29E-08
565261.5	4188356	1.33E-08	8.16E-08	9.49E-08	8.07E-08
565253.7	4188362	1.29E-08	7.93E-08	9.22E-08	7.84E-08
565245.8	4188367	1.25E-08	7.71E-08	8.97E-08	7.62E-08
565238	4188373	1.22E-08	7.51E-08	8.73E-08	7.42E-08
565230.1	4188378	1.19E-08	7.31E-08	8.50E-08	7.23E-08
565222.3	4188384	1.16E-08	7.13E-08	8.29E-08	7.04E-08
565214.4	4188390	1.13E-08	6.93E-08	8.06E-08	6.85E-08
565206.6	4188395	1.10E-08	6.74E-08	7.83E-08	6.66E-08
565198.8	4188401	1.07E-08	6.55E-08	7.61E-08	6.47E-08
565167.4	4188423	9.50E-09	5.84E-08	6.79E-08	5.77E-08
565159.5	4188429	9.24E-09	5.68E-08	6.60E-08	5.61E-08
565151.7	4188434	8.98E-09	5.52E-08	6.42E-08	5.46E-08
565143.8	4188440	8.73E-09	5.37E-08	6.24E-08	5.30E-08
565324.2	4188311	1.65E-08	1.02E-07	1.18E-07	1.00E-07
565329.5	4188303	1.73E-08	1.06E-07	1.23E-07	1.05E-07
565334.8	4188295	1.80E-08	1.11E-07	1.29E-07	1.10E-07
565340.1	4188287	1.88E-08	1.16E-07	1.34E-07	1.14E-07
565345.4	4188279	1.96E-08	1.21E-07	1.40E-07	1.19E-07
565350.6	4188271	2.05E-08	1.26E-07	1.46E-07	1.24E-07
565355.9	4188262	2.13E-08	1.31E-07	1.52E-07	1.29E-07
565361.2	4188254	2.21E-08	1.36E-07	1.58E-07	1.34E-07
565309.3	4188333	1.47E-08	9.02E-08	1.05E-07	8.91E-08
565301.5	4188339	1.43E-08	8.78E-08	1.02E-07	8.68E-08
565293.7	4188345	1.39E-08	8.53E-08	9.92E-08	8.43E-08
565285.9	4188350	1.35E-08	8.30E-08	9.65E-08	8.20E-08
565278.2	4188356	1.32E-08	8.08E-08	9.40E-08	7.99E-08
565270.4	4188361	1.28E-08	7.87E-08	9.16E-08	7.78E-08
565262.6	4188367	1.25E-08	7.66E-08	8.91E-08	7.57E-08
565254.8	4188372	1.21E-08	7.45E-08	8.66E-08	7.36E-08
565247	4188378	1.18E-08	7.25E-08	8.43E-08	7.17E-08
565239.2	4188383	1.15E-08	7.08E-08	8.23E-08	7.00E-08
565231.4	4188389	1.12E-08	6.91E-08	8.03E-08	6.83E-08
565223.7	4188394	1.10E-08	6.74E-08	7.84E-08	6.66E-08
565215.9	4188400	1.07E-08	6.56E-08	7.63E-08	6.48E-08
565208.1	4188405	1.04E-08	6.38E-08	7.42E-08	6.31E-08
565200.3	4188411	1.01E-08	6.20E-08	7.21E-08	6.13E-08
565176.9	4188428	9.27E-09	5.69E-08	6.62E-08	5.63E-08
565169.2	4188433	9.03E-09	5.55E-08	6.45E-08	5.48E-08
565161.4	4188439	8.79E-09	5.40E-08	6.28E-08	5.34E-08
564845.3	4188454	8.00E-09	4.92E-08	5.72E-08	4.86E-08

564835.9	4188453	8.05E-09	4.95E-08	5.75E-08	4.89E-08
564826.4	4188451	8.10E-09	4.98E-08	5.79E-08	4.92E-08
564816.9	4188450	8.15E-09	5.01E-08	5.82E-08	4.95E-08
564807.5	4188449	8.19E-09	5.03E-08	5.85E-08	4.97E-08
565332.7	4188317	1.59E-08	9.75E-08	1.13E-07	9.64E-08
565337.9	4188309	1.66E-08	1.02E-07	1.18E-07	1.01E-07
565343.2	4188300	1.73E-08	1.06E-07	1.24E-07	1.05E-07
565348.5	4188292	1.80E-08	1.11E-07	1.29E-07	1.09E-07
565353.8	4188284	1.88E-08	1.15E-07	1.34E-07	1.14E-07
565359	4188276	1.95E-08	1.20E-07	1.40E-07	1.19E-07
565364.3	4188268	2.03E-08	1.25E-07	1.45E-07	1.23E-07
565369.6	4188260	2.10E-08	1.29E-07	1.50E-07	1.28E-07
565053.5	4188043	1.24E-06	7.61E-06	8.85E-06	7.52E-06
565062.3	4188047	9.58E-07	5.89E-06	6.85E-06	5.82E-06
565063.5	4188037	9.84E-07	6.05E-06	7.03E-06	5.98E-06
565072.2	4188047	7.66E-07	4.71E-06	5.47E-06	4.65E-06
565069.7	4188056	7.46E-07	4.59E-06	5.33E-06	4.53E-06
565073.5	4188037	7.82E-07	4.80E-06	5.59E-06	4.75E-06
565082.2	4188047	6.28E-07	3.86E-06	4.48E-06	3.81E-06
565079.5	4188056	6.13E-07	3.77E-06	4.38E-06	3.72E-06
565083.5	4188037	6.38E-07	3.92E-06	4.56E-06	3.88E-06
565092.1	4188047	5.25E-07	3.22E-06	3.75E-06	3.19E-06
565089.4	4188057	5.14E-07	3.16E-06	3.67E-06	3.12E-06
565086.7	4188066	4.89E-07	3.00E-06	3.49E-06	2.97E-06
565093.5	4188037	5.33E-07	3.27E-06	3.81E-06	3.23E-06
565102.1	4188047	4.45E-07	2.74E-06	3.18E-06	2.71E-06
565099.3	4188057	4.37E-07	2.68E-06	3.12E-06	2.65E-06
565096.5	4188066	4.17E-07	2.56E-06	2.98E-06	2.53E-06
565103.5	4188037	4.52E-07	2.78E-06	3.23E-06	2.74E-06
565112.1	4188048	3.83E-07	2.35E-06	2.74E-06	2.33E-06
565109.2	4188057	3.76E-07	2.31E-06	2.69E-06	2.29E-06
565106.4	4188067	3.61E-07	2.22E-06	2.58E-06	2.19E-06
565103.6	4188076	3.37E-07	2.07E-06	2.41E-06	2.05E-06
565113.5	4188037	3.88E-07	2.39E-06	2.78E-06	2.36E-06
565122.1	4188048	3.33E-07	2.05E-06	2.38E-06	2.02E-06
565119.2	4188057	3.28E-07	2.01E-06	2.34E-06	1.99E-06
565116.3	4188067	3.15E-07	1.94E-06	2.25E-06	1.92E-06
565113.4	4188077	2.97E-07	1.83E-06	2.12E-06	1.80E-06
565123.5	4188037	3.38E-07	2.08E-06	2.41E-06	2.05E-06
565132.1	4188048	2.92E-07	1.80E-06	2.09E-06	1.78E-06
565129.1	4188057	2.88E-07	1.77E-06	2.06E-06	1.75E-06
565126.2	4188067	2.78E-07	1.71E-06	1.99E-06	1.69E-06
565123.3	4188077	2.64E-07	1.62E-06	1.89E-06	1.60E-06
565120.4	4188087	2.46E-07	1.51E-06	1.75E-06	1.49E-06
565136.2	4188068	2.48E-07	1.52E-06	1.77E-06	1.51E-06
565133.3	4188077	2.36E-07	1.45E-06	1.69E-06	1.43E-06
565130.3	4188087	2.21E-07	1.36E-06	1.58E-06	1.34E-06
565143.2	4188078	2.13E-07	1.31E-06	1.52E-06	1.29E-06
565140.2	4188088	2.00E-07	1.23E-06	1.43E-06	1.22E-06
565137.3	4188098	1.86E-07	1.14E-06	1.33E-06	1.13E-06
565153.5	4188037	2.35E-07	1.45E-06	1.68E-06	1.43E-06
565162	4188048	2.09E-07	1.28E-06	1.49E-06	1.27E-06
565150.2	4188088	1.82E-07	1.12E-06	1.30E-06	1.11E-06
565147.2	4188098	1.70E-07	1.05E-06	1.22E-06	1.03E-06
565163.5	4188037	2.12E-07	1.30E-06	1.51E-06	1.29E-06
565172	4188048	1.89E-07	1.16E-06	1.35E-06	1.15E-06
565169	4188058	1.87E-07	1.15E-06	1.33E-06	1.13E-06
565166	4188068	1.82E-07	1.12E-06	1.30E-06	1.11E-06
565157.1	4188098	1.56E-07	9.61E-07	1.12E-06	9.50E-07
565154.1	4188108	1.45E-07	8.91E-07	1.04E-06	8.81E-07
565173.5	4188037	1.92E-07	1.18E-06	1.37E-06	1.16E-06
565182	4188048	1.72E-07	1.06E-06	1.23E-06	1.04E-06
565179	4188058	1.70E-07	1.04E-06	1.21E-06	1.03E-06
565176	4188068	1.66E-07	1.02E-06	1.18E-06	1.01E-06
565173	4188078	1.60E-07	9.83E-07	1.14E-06	9.71E-07
565164	4188109	1.34E-07	8.26E-07	9.61E-07	8.17E-07
565183.5	4188037	1.74E-07	1.07E-06	1.25E-06	1.06E-06
565192	4188048	1.57E-07	9.65E-07	1.12E-06	9.54E-07
565189	4188058	1.55E-07	9.53E-07	1.11E-06	9.42E-07
565186	4188068	1.52E-07	9.31E-07	1.08E-06	9.21E-07
565183	4188078	1.47E-07	9.01E-07	1.05E-06	8.90E-07
565171	4188119	1.16E-07	7.12E-07	8.27E-07	7.03E-07
565193.5	4188037	1.59E-07	9.79E-07	1.14E-06	9.68E-07
565202	4188048	1.44E-07	8.86E-07	1.03E-06	8.75E-07
565199	4188058	1.42E-07	8.75E-07	1.02E-06	8.65E-07
565196	4188068	1.39E-07	8.56E-07	9.95E-07	8.46E-07
565189.9	4188089	1.30E-07	7.96E-07	9.25E-07	7.87E-07
565203.5	4188037	1.46E-07	8.99E-07	1.04E-06	8.88E-07
565212	4188048	1.33E-07	8.16E-07	9.49E-07	8.07E-07
565209	4188058	1.31E-07	8.07E-07	9.38E-07	7.97E-07
565199.9	4188089	1.20E-07	7.38E-07	8.58E-07	7.29E-07
565196.9	4188099	1.15E-07	7.04E-07	8.18E-07	6.95E-07
565193.8	4188109	1.08E-07	6.65E-07	7.74E-07	6.58E-07
565213.5	4188037	1.35E-07	8.28E-07	9.63E-07	8.18E-07
565222	4188048	1.23E-07	7.55E-07	8.78E-07	7.46E-07
565212.9	4188079	1.16E-07	7.11E-07	8.27E-07	7.03E-07
565209.8	4188089	1.12E-07	6.86E-07	7.98E-07	6.78E-07
565206.8	4188099	1.07E-07	6.56E-07	7.63E-07	6.49E-07
565203.8	4188110	1.01E-07	6.23E-07	7.25E-07	6.16E-07
565200.7	4188120	9.55E-08	5.87E-07	6.83E-07	5.80E-07
565223.5	4188037	1.25E-07	7.66E-07	8.90E-07	7.57E-07
565232	4188048	1.14E-07	7.00E-07	8.13E-07	6.91E-07
565225.9	4188069	1.11E-07	6.80E-07	7.90E-07	6.72E-07
565222.9	4188079	1.08E-07	6.62E-07	7.69E-07	6.54E-07
565219.8	4188089	1.04E-07	6.40E-07	7.44E-07	6.32E-07
565216.8	4188099	9.99E-08	6.14E-07	7.14E-07	6.07E-07
565213.7	4188110	9.52E-08	5.85E-07	6.80E-07	5.78E-07
565210.7	4188120	9.00E-08	5.53E-07	6.43E-07	5.46E-07
565207.6	4188130	8.45E-08	5.19E-07	6.04E-07	5.13E-07
565233.5	4188037	1.15E-07	7.10E-07	8.25E-07	7.01E-07
565238.9	4188058	1.05E-07	6.44E-07	7.49E-07	6.36E-07
565235.9	4188069	1.03E-07	6.33E-07	7.36E-07	6.25E-07
565232.8	4188079	1.00E-07	6.17E-07	7.18E-07	6.10E-07
565229.8	4188089	9.73E-08	5.98E-07	6.96E-07	5.91E-07
565226.7	4188100	9.36E-08	5.75E-07	6.69E-07	5.69E-07
565223.7	4188110	8.95E-08	5.50E-07	6.39E-07	5.43E-07
565220.6	4188120	8.49E-08	5.22E-07	6.06E-07	5.15E-07
565217.6	4188131	8.00E-08	4.92E-07	5.72E-07	4.86E-07
565214.5	4188141	7.50E-08	4.61E-07	5.36E-07	4.55E-07
565243.5	4188037	1.07E-07	6.60E-07	7.67E-07	6.52E-07
565248.9	4188058	9.77E-08	6.01E-07	6.98E-07	5.94E-07
565245.9	4188069	9.62E-08	5.91E-07	6.87E-07	5.84E-07
565242.8	4188079	9.40E-08	5.78E-07	6.71E-07	5.71E-07
565239.8	4188089	9.12E-08	5.61E-07	6.52E-07	5.54E-07
565236.7	4188100	8.80E-08	5.41E-07	6.28E-07	5.34E-07
565233.6	4188110	8.43E-08	5.18E-07	6.02E-07	5.12E-07

565230.6	4188120	8.02E-08	4.93E-07	5.73E-07	4.87E-07
565227.5	4188131	7.59E-08	4.66E-07	5.42E-07	4.61E-07
565224.5	4188141	7.14E-08	4.38E-07	5.10E-07	4.33E-07
565221.4	4188152	6.68E-08	4.10E-07	4.77E-07	4.06E-07
565262	4188048	9.23E-08	5.67E-07	6.59E-07	5.60E-07
565258.9	4188058	9.14E-08	5.62E-07	6.53E-07	5.55E-07
565255.8	4188069	9.00E-08	5.53E-07	6.43E-07	5.47E-07
565252.8	4188079	8.81E-08	5.41E-07	6.30E-07	5.35E-07
565249.7	4188089	8.57E-08	5.26E-07	6.12E-07	5.20E-07
565246.7	4188100	8.28E-08	5.09E-07	5.91E-07	5.03E-07
565243.6	4188110	7.95E-08	4.88E-07	5.68E-07	4.83E-07
565240.5	4188121	7.59E-08	4.66E-07	5.42E-07	4.61E-07
565237.5	4188131	7.20E-08	4.42E-07	5.14E-07	4.37E-07
565234.4	4188141	6.79E-08	4.18E-07	4.85E-07	4.13E-07
565231.4	4188152	6.38E-08	3.92E-07	4.56E-07	3.87E-07
565272	4188048	8.65E-08	5.32E-07	6.18E-07	5.26E-07
565268.9	4188058	8.58E-08	5.27E-07	6.13E-07	5.21E-07
565265.8	4188069	8.45E-08	5.19E-07	6.04E-07	5.13E-07
565262.8	4188079	8.28E-08	5.09E-07	5.92E-07	5.03E-07
565259.7	4188090	8.06E-08	4.95E-07	5.76E-07	4.90E-07
565256.6	4188100	7.80E-08	4.80E-07	5.58E-07	4.74E-07
565253.6	4188110	7.51E-08	4.62E-07	5.37E-07	4.56E-07
565250.5	4188121	7.19E-08	4.42E-07	5.14E-07	4.37E-07
565247.4	4188131	6.84E-08	4.20E-07	4.89E-07	4.16E-07
565244.4	4188142	6.47E-08	3.98E-07	4.63E-07	3.93E-07
565241.3	4188152	6.10E-08	3.75E-07	4.36E-07	3.70E-07
565273.5	4188037	8.78E-08	5.40E-07	6.27E-07	5.33E-07
565282	4188048	8.13E-08	5.00E-07	5.81E-07	4.94E-07
565278.9	4188058	8.06E-08	4.96E-07	5.76E-07	4.90E-07
565275.8	4188069	7.95E-08	4.89E-07	5.68E-07	4.83E-07
565272.8	4188079	7.80E-08	4.79E-07	5.57E-07	4.73E-07
565269.7	4188090	7.60E-08	4.67E-07	5.43E-07	4.62E-07
565266.6	4188100	7.37E-08	4.53E-07	5.27E-07	4.48E-07
565263.5	4188110	7.11E-08	4.37E-07	5.08E-07	4.32E-07
565260.5	4188121	6.82E-08	4.19E-07	4.87E-07	4.14E-07
565257.4	4188131	6.51E-08	4.00E-07	4.65E-07	3.95E-07
565254.3	4188142	6.18E-08	3.80E-07	4.41E-07	3.75E-07
565283.5	4188037	8.25E-08	5.07E-07	5.90E-07	5.01E-07
565292	4188048	7.66E-08	4.71E-07	5.47E-07	4.65E-07
565288.9	4188058	7.60E-08	4.67E-07	5.43E-07	4.61E-07
565285.8	4188069	7.49E-08	4.60E-07	5.35E-07	4.55E-07
565282.7	4188079	7.35E-08	4.52E-07	5.25E-07	4.47E-07
565279.7	4188090	7.18E-08	4.41E-07	5.13E-07	4.36E-07
565276.6	4188100	6.97E-08	4.29E-07	4.98E-07	4.24E-07
565273.5	4188111	6.74E-08	4.14E-07	4.81E-07	4.09E-07
565270.4	4188121	6.48E-08	3.98E-07	4.63E-07	3.93E-07
565267.4	4188131	6.20E-08	3.81E-07	4.43E-07	3.76E-07
565258.1	4188163	5.26E-08	3.23E-07	3.76E-07	3.20E-07
565255	4188173	4.95E-08	3.04E-07	3.53E-07	3.00E-07
565293.5	4188037	7.77E-08	4.78E-07	5.55E-07	4.72E-07
565302	4188048	7.23E-08	4.44E-07	5.17E-07	4.39E-07
565298.9	4188058	7.17E-08	4.41E-07	5.12E-07	4.35E-07
565295.8	4188069	7.08E-08	4.35E-07	5.06E-07	4.30E-07
565292.7	4188079	6.95E-08	4.27E-07	4.97E-07	4.22E-07
565289.6	4188090	6.79E-08	4.17E-07	4.85E-07	4.13E-07
565286.6	4188100	6.61E-08	4.06E-07	4.72E-07	4.01E-07
565283.5	4188111	6.40E-08	3.93E-07	4.57E-07	3.88E-07
565280.4	4188121	6.16E-08	3.79E-07	4.40E-07	3.74E-07
565271.2	4188152	5.35E-08	3.29E-07	3.82E-07	3.25E-07
565268.1	4188163	5.06E-08	3.11E-07	3.61E-07	3.07E-07
565265	4188173	4.77E-08	2.93E-07	3.41E-07	2.90E-07
565303.5	4188037	7.33E-08	4.51E-07	5.24E-07	4.45E-07
565312	4188048	6.83E-08	4.20E-07	4.88E-07	4.15E-07
565308.9	4188058	6.78E-08	4.17E-07	4.84E-07	4.12E-07
565305.8	4188069	6.69E-08	4.11E-07	4.78E-07	4.07E-07
565302.7	4188079	6.58E-08	4.04E-07	4.70E-07	4.00E-07
565299.6	4188090	6.44E-08	3.96E-07	4.60E-07	3.91E-07
565296.5	4188100	6.27E-08	3.85E-07	4.48E-07	3.81E-07
565293.5	4188111	6.08E-08	3.73E-07	4.34E-07	3.69E-07
565290.4	4188121	5.86E-08	3.60E-07	4.19E-07	3.56E-07
565281.1	4188153	5.13E-08	3.15E-07	3.67E-07	3.12E-07
565278	4188163	4.86E-08	2.99E-07	3.47E-07	2.95E-07
565274.9	4188174	4.60E-08	2.83E-07	3.28E-07	2.79E-07
565271.9	4188184	4.33E-08	2.66E-07	3.10E-07	2.63E-07
565313.5	4188037	6.93E-08	4.26E-07	4.95E-07	4.21E-07
565322	4188048	6.47E-08	3.98E-07	4.62E-07	3.93E-07
565318.9	4188058	6.42E-08	3.95E-07	4.59E-07	3.90E-07
565315.8	4188069	6.34E-08	3.90E-07	4.53E-07	3.85E-07
565312.7	4188079	6.24E-08	3.83E-07	4.46E-07	3.79E-07
565309.6	4188090	6.11E-08	3.75E-07	4.37E-07	3.71E-07
565306.5	4188100	5.96E-08	3.66E-07	4.26E-07	3.62E-07
565303.4	4188111	5.78E-08	3.55E-07	4.13E-07	3.51E-07
565294.2	4188142	5.15E-08	3.17E-07	3.68E-07	3.13E-07
565291.1	4188153	4.92E-08	3.02E-07	3.52E-07	2.99E-07
565288	4188163	4.68E-08	2.87E-07	3.34E-07	2.84E-07
565284.9	4188174	4.43E-08	2.72E-07	3.17E-07	2.69E-07
565281.8	4188184	4.19E-08	2.58E-07	2.99E-07	2.55E-07
565323.5	4188037	6.56E-08	4.03E-07	4.69E-07	3.98E-07
565332	4188048	6.14E-08	3.77E-07	4.39E-07	3.73E-07
565328.9	4188058	6.09E-08	3.74E-07	4.35E-07	3.70E-07
565325.8	4188069	6.02E-08	3.70E-07	4.30E-07	3.66E-07
565322.7	4188079	5.92E-08	3.64E-07	4.23E-07	3.60E-07
565319.6	4188090	5.81E-08	3.57E-07	4.15E-07	3.53E-07
565316.5	4188100	5.67E-08	3.48E-07	4.05E-07	3.44E-07
565307.2	4188132	5.14E-08	3.16E-07	3.67E-07	3.12E-07
565304.1	4188142	4.93E-08	3.03E-07	3.53E-07	3.00E-07
565301	4188153	4.72E-08	2.90E-07	3.37E-07	2.87E-07
565297.9	4188163	4.50E-08	2.77E-07	3.22E-07	2.73E-07
565294.9	4188174	4.28E-08	2.63E-07	3.06E-07	2.60E-07
565291.8	4188184	4.05E-08	2.49E-07	2.90E-07	2.46E-07
565288.7	4188195	3.83E-08	2.35E-07	2.74E-07	2.33E-07
565333.5	4188037	6.22E-08	3.82E-07	4.44E-07	3.78E-07
565342	4188048	5.83E-08	3.58E-07	4.17E-07	3.54E-07
565338.9	4188058	5.79E-08	3.56E-07	4.13E-07	3.51E-07
565335.8	4188069	5.72E-08	3.52E-07	4.09E-07	3.47E-07
565332.7	4188079	5.63E-08	3.46E-07	4.02E-07	3.42E-07
565329.6	4188090	5.52E-08	3.39E-07	3.95E-07	3.35E-07
565320.3	4188121	5.09E-08	3.13E-07	3.64E-07	3.09E-07
565317.2	4188132	4.91E-08	3.02E-07	3.51E-07	2.98E-07
565314.1	4188142	4.73E-08	2.90E-07	3.38E-07	2.87E-07
565311	4188153	4.53E-08	2.79E-07	3.24E-07	2.75E-07
565307.9	4188164	4.33E-08	2.66E-07	3.10E-07	2.63E-07
565304.8	4188174	4.13E-08	2.54E-07	2.95E-07	2.51E-07
565301.7	4188185	3.92E-08	2.41E-07	2.80E-07	2.38E-07
565298.6	4188195	3.71E-08	2.28E-07	2.65E-07	2.26E-07
565343.5	4188037	5.91E-08	3.63E-07	4.22E-07	3.59E-07

565352	4188048	5.55E-08	3.41E-07	3.96E-07	3.37E-07
565348.9	4188058	5.50E-08	3.38E-07	3.93E-07	3.34E-07
565345.8	4188069	5.44E-08	3.35E-07	3.89E-07	3.31E-07
565342.7	4188079	5.36E-08	3.30E-07	3.83E-07	3.26E-07
565339.6	4188090	5.26E-08	3.23E-07	3.76E-07	3.20E-07
565330.3	4188122	4.87E-08	2.99E-07	3.48E-07	2.95E-07
565327.2	4188132	4.71E-08	2.89E-07	3.36E-07	2.86E-07
565324.1	4188143	4.54E-08	2.79E-07	3.24E-07	2.75E-07
565321	4188153	4.36E-08	2.68E-07	3.11E-07	2.65E-07
565317.9	4188164	4.17E-08	2.57E-07	2.98E-07	2.54E-07
565314.8	4188174	3.99E-08	2.45E-07	2.85E-07	2.42E-07
565311.7	4188185	3.79E-08	2.33E-07	2.71E-07	2.30E-07
565308.6	4188195	3.60E-08	2.21E-07	2.57E-07	2.19E-07
565305.5	4188206	3.41E-08	2.09E-07	2.44E-07	2.07E-07
565353.5	4188037	5.62E-08	3.45E-07	4.01E-07	3.41E-07
565362	4188048	5.28E-08	3.25E-07	3.78E-07	3.21E-07
565358.9	4188058	5.24E-08	3.22E-07	3.75E-07	3.18E-07
565355.8	4188069	5.18E-08	3.19E-07	3.70E-07	3.15E-07
565352.7	4188080	5.11E-08	3.14E-07	3.65E-07	3.10E-07
565343.3	4188111	4.79E-08	2.94E-07	3.42E-07	2.91E-07
565340.2	4188122	4.66E-08	2.86E-07	3.33E-07	2.83E-07
565337.1	4188132	4.51E-08	2.77E-07	3.22E-07	2.74E-07
565334	4188143	4.36E-08	2.68E-07	3.11E-07	2.65E-07
565330.9	4188153	4.19E-08	2.58E-07	3.00E-07	2.55E-07
565327.8	4188164	4.02E-08	2.47E-07	2.88E-07	2.44E-07
565324.7	4188174	3.85E-08	2.36E-07	2.75E-07	2.34E-07
565321.6	4188185	3.67E-08	2.26E-07	2.62E-07	2.23E-07
565318.5	4188195	3.49E-08	2.15E-07	2.50E-07	2.12E-07
565315.4	4188206	3.31E-08	2.03E-07	2.37E-07	2.01E-07
565363.5	4188037	5.35E-08	3.29E-07	3.82E-07	3.25E-07
565372	4188048	5.04E-08	3.10E-07	3.60E-07	3.06E-07
565368.8	4188058	5.00E-08	3.07E-07	3.57E-07	3.04E-07
565365.7	4188069	4.94E-08	3.04E-07	3.53E-07	3.00E-07
565356.4	4188101	4.69E-08	2.88E-07	3.35E-07	2.85E-07
565353.3	4188111	4.58E-08	2.82E-07	3.27E-07	2.78E-07
565350.2	4188122	4.46E-08	2.74E-07	3.19E-07	2.71E-07
565347.1	4188132	4.33E-08	2.66E-07	3.09E-07	2.63E-07
565344	4188143	4.19E-08	2.57E-07	2.99E-07	2.54E-07
565340.9	4188153	4.04E-08	2.48E-07	2.88E-07	2.45E-07
565337.8	4188164	3.88E-08	2.38E-07	2.77E-07	2.36E-07
565334.7	4188174	3.72E-08	2.28E-07	2.66E-07	2.26E-07
565331.6	4188185	3.55E-08	2.18E-07	2.54E-07	2.16E-07
565328.5	4188195	3.34E-08	2.05E-07	2.38E-07	2.03E-07
565325.4	4188206	3.17E-08	1.95E-07	2.26E-07	1.92E-07
565322.3	4188217	2.99E-08	1.84E-07	2.14E-07	1.82E-07
565373.5	4188037	5.10E-08	3.14E-07	3.65E-07	3.10E-07
565382	4188048	4.81E-08	2.96E-07	3.44E-07	2.92E-07
565378.8	4188059	4.77E-08	2.93E-07	3.41E-07	2.90E-07
565366.4	4188101	4.49E-08	2.76E-07	3.21E-07	2.73E-07
565363.3	4188111	4.39E-08	2.70E-07	3.14E-07	2.67E-07
565360.2	4188122	4.28E-08	2.63E-07	3.06E-07	2.60E-07
565357.1	4188132	4.16E-08	2.55E-07	2.97E-07	2.52E-07
565354	4188143	4.03E-08	2.47E-07	2.88E-07	2.44E-07
565350.9	4188153	3.89E-08	2.39E-07	2.78E-07	2.36E-07
565347.8	4188164	3.74E-08	2.30E-07	2.67E-07	2.27E-07
565344.7	4188174	3.59E-08	2.21E-07	2.57E-07	2.18E-07
565341.6	4188185	3.39E-08	2.08E-07	2.42E-07	2.06E-07
565338.5	4188196	3.23E-08	1.99E-07	2.31E-07	1.96E-07
565335.4	4188206	3.07E-08	1.89E-07	2.20E-07	1.87E-07
565332.2	4188217	2.92E-08	1.79E-07	2.08E-07	1.77E-07
565383.5	4188037	4.87E-08	2.99E-07	3.48E-07	2.96E-07
565392	4188048	4.59E-08	2.82E-07	3.28E-07	2.79E-07
565388.8	4188059	4.56E-08	2.80E-07	3.26E-07	2.77E-07
565379.5	4188090	4.38E-08	2.69E-07	3.13E-07	2.66E-07
565376.4	4188101	4.30E-08	2.64E-07	3.07E-07	2.61E-07
565373.3	4188111	4.21E-08	2.59E-07	3.01E-07	2.56E-07
565370.2	4188122	4.11E-08	2.52E-07	2.94E-07	2.49E-07
565367.1	4188132	4.00E-08	2.46E-07	2.85E-07	2.43E-07
565364	4188143	3.87E-08	2.38E-07	2.77E-07	2.35E-07
565360.9	4188153	3.74E-08	2.30E-07	2.67E-07	2.27E-07
565357.8	4188164	3.61E-08	2.22E-07	2.58E-07	2.19E-07
565354.6	4188175	3.43E-08	2.11E-07	2.45E-07	2.08E-07
565351.5	4188185	3.28E-08	2.02E-07	2.35E-07	1.99E-07
565348.4	4188196	3.13E-08	1.93E-07	2.24E-07	1.90E-07
565345.3	4188206	2.99E-08	1.84E-07	2.13E-07	1.81E-07
565342.2	4188217	2.84E-08	1.75E-07	2.03E-07	1.73E-07
565339.1	4188227	2.70E-08	1.66E-07	1.93E-07	1.64E-07
565393.5	4188037	4.65E-08	2.86E-07	3.32E-07	2.82E-07
565401.9	4188048	4.39E-08	2.70E-07	3.14E-07	2.67E-07
565392.6	4188080	4.27E-08	2.62E-07	3.05E-07	2.59E-07
565389.5	4188090	4.20E-08	2.58E-07	3.00E-07	2.55E-07
565386.4	4188101	4.13E-08	2.54E-07	2.95E-07	2.51E-07
565383.3	4188111	4.04E-08	2.48E-07	2.89E-07	2.45E-07
565380.2	4188122	3.95E-08	2.42E-07	2.82E-07	2.40E-07
565377.1	4188132	3.84E-08	2.36E-07	2.75E-07	2.33E-07
565373.9	4188143	3.73E-08	2.29E-07	2.66E-07	2.27E-07
565370.8	4188154	3.56E-08	2.19E-07	2.54E-07	2.16E-07
565367.7	4188164	3.43E-08	2.11E-07	2.45E-07	2.09E-07
565364.6	4188175	3.31E-08	2.03E-07	2.36E-07	2.01E-07
565361.5	4188185	3.18E-08	1.95E-07	2.27E-07	1.93E-07
565358.4	4188196	3.04E-08	1.87E-07	2.17E-07	1.85E-07
565355.3	4188206	2.91E-08	1.79E-07	2.08E-07	1.77E-07
565352.2	4188217	2.77E-08	1.70E-07	1.98E-07	1.68E-07
565349.1	4188227	2.63E-08	1.62E-07	1.88E-07	1.60E-07
565403.5	4188037	4.45E-08	2.73E-07	3.18E-07	2.70E-07
565405.7	4188069	4.14E-08	2.54E-07	2.96E-07	2.52E-07
565402.6	4188080	4.09E-08	2.51E-07	2.92E-07	2.49E-07
565399.5	4188090	4.03E-08	2.48E-07	2.88E-07	2.45E-07
565396.4	4188101	3.96E-08	2.43E-07	2.83E-07	2.41E-07
565393.3	4188111	3.88E-08	2.39E-07	2.77E-07	2.36E-07
565390.2	4188122	3.79E-08	2.33E-07	2.71E-07	2.30E-07
565387	4188133	3.70E-08	2.27E-07	2.64E-07	2.24E-07
565383.9	4188143	3.54E-08	2.17E-07	2.53E-07	2.15E-07
565380.8	4188154	3.43E-08	2.11E-07	2.45E-07	2.08E-07
565377.7	4188164	3.32E-08	2.04E-07	2.37E-07	2.01E-07
565374.6	4188175	3.20E-08	1.97E-07	2.29E-07	1.94E-07
565371.5	4188185	3.08E-08	1.89E-07	2.20E-07	1.87E-07
565368.4	4188196	2.96E-08	1.82E-07	2.11E-07	1.80E-07
565365.3	4188206	2.83E-08	1.74E-07	2.02E-07	1.72E-07
565362.1	4188217	2.70E-08	1.66E-07	1.93E-07	1.64E-07
565359	4188228	2.57E-08	1.58E-07	1.84E-07	1.56E-07
565355.9	4188238	2.44E-08	1.50E-07	1.75E-07	1.48E-07
565413.5	4188037	4.26E-08	2.62E-07	3.05E-07	2.59E-07
565415.7	4188069	3.97E-08	2.44E-07	2.84E-07	2.41E-07
565412.6	4188080	3.93E-08	2.41E-07	2.81E-07	2.39E-07
565409.5	4188090	3.87E-08	2.38E-07	2.77E-07	2.35E-07

565406.4	4188101	3.81E-08	2.34E-07	2.72E-07	2.31E-07
565403.3	4188111	3.73E-08	2.29E-07	2.67E-07	2.27E-07
565400.1	4188122	3.65E-08	2.24E-07	2.61E-07	2.22E-07
565397	4188133	3.50E-08	2.15E-07	2.50E-07	2.12E-07
565393.9	4188143	3.41E-08	2.09E-07	2.44E-07	2.07E-07
565390.8	4188154	3.31E-08	2.03E-07	2.37E-07	2.01E-07
565387.7	4188164	3.21E-08	1.97E-07	2.29E-07	1.95E-07
565384.6	4188175	3.10E-08	1.90E-07	2.21E-07	1.88E-07
565381.4	4188185	2.99E-08	1.84E-07	2.13E-07	1.81E-07
565378.3	4188196	2.87E-08	1.77E-07	2.05E-07	1.74E-07
565375.2	4188207	2.75E-08	1.69E-07	1.97E-07	1.67E-07
565372.1	4188217	2.63E-08	1.62E-07	1.88E-07	1.60E-07
565369	4188228	2.51E-08	1.54E-07	1.80E-07	1.53E-07
565365.9	4188238	2.39E-08	1.47E-07	1.71E-07	1.45E-07
565423.5	4188037	4.09E-08	2.51E-07	2.92E-07	2.48E-07
565428.8	4188059	3.85E-08	2.37E-07	2.75E-07	2.34E-07
565425.7	4188069	3.82E-08	2.34E-07	2.73E-07	2.32E-07
565422.6	4188080	3.77E-08	2.32E-07	2.70E-07	2.29E-07
565419.5	4188090	3.72E-08	2.29E-07	2.66E-07	2.26E-07
565416.4	4188101	3.66E-08	2.25E-07	2.62E-07	2.22E-07
565413.2	4188111	3.59E-08	2.21E-07	2.57E-07	2.18E-07
565410.1	4188122	3.45E-08	2.12E-07	2.47E-07	2.10E-07
565407	4188133	3.37E-08	2.07E-07	2.41E-07	2.05E-07
565403.9	4188143	3.28E-08	2.02E-07	2.35E-07	1.99E-07
565400.8	4188154	3.20E-08	1.96E-07	2.28E-07	1.94E-07
565397.7	4188164	3.10E-08	1.91E-07	2.22E-07	1.88E-07
565394.5	4188175	3.00E-08	1.85E-07	2.15E-07	1.82E-07
565391.4	4188186	2.90E-08	1.78E-07	2.07E-07	1.76E-07
565388.3	4188196	2.79E-08	1.72E-07	1.99E-07	1.70E-07
565385.2	4188207	2.68E-08	1.65E-07	1.92E-07	1.63E-07
565382.1	4188217	2.57E-08	1.58E-07	1.84E-07	1.56E-07
565379	4188228	2.46E-08	1.51E-07	1.75E-07	1.49E-07
565375.8	4188238	2.34E-08	1.44E-07	1.67E-07	1.42E-07
565372.7	4188249	2.22E-08	1.36E-07	1.58E-07	1.35E-07
564963.8	4188098	7.04E-07	4.32E-06	5.03E-06	4.27E-06
564961	4188109	4.14E-07	2.54E-06	2.95E-06	2.51E-06
564965.8	4188107	4.74E-07	2.91E-06	3.39E-06	2.88E-06
564976.9	4188100	7.23E-07	4.45E-06	5.17E-06	4.39E-06
564951.9	4188099	5.76E-07	3.54E-06	4.12E-06	3.50E-06
564969.8	4188114	3.67E-07	2.25E-06	2.62E-06	2.23E-06
564967.8	4188104	5.57E-07	3.42E-06	3.98E-06	3.38E-06

		2016	2017	
		5	5	4
		0.076	0.277	0.277
X	Y	CONSTR	CONSTR	Max
565052.9	4188027	0.08	0.28	2.77E-01
565049.5	4188013	0.07	0.25	2.52E-01
565063.1	4188028	0.06	0.21	2.13E-01
565061	4188018	0.06	0.21	2.07E-01
565072.9	4188027	0.05	0.17	1.69E-01
565070.7	4188015	0.05	0.16	1.64E-01
565082.8	4188026	0.04	0.14	1.38E-01
565080.4	4188013	0.04	0.13	1.34E-01
565092.4	4188022	0.03	0.12	1.15E-01
565090.1	4188010	0.03	0.11	1.12E-01
565102.2	4188021	0.03	0.10	9.81E-02
565099.8	4188008	0.03	0.10	9.52E-02
565112	4188019	0.02	0.08	8.46E-02
565129	4188001	0.02	0.06	6.36E-02
565141.1	4188012	0.02	0.06	5.79E-02
565142.7	4188025	0.02	0.06	5.78E-02
565138.7	4187999	0.02	0.06	5.67E-02
565150.8	4188009	0.01	0.05	5.19E-02
565152.1	4188020	0.01	0.05	5.20E-02
565148.4	4187996	0.01	0.05	5.10E-02
565160.5	4188007	0.01	0.05	4.68E-02
565162	4188019	0.01	0.05	4.69E-02
565158.1	4187994	0.01	0.05	4.61E-02
565170.3	4188005	0.01	0.04	4.25E-02
565171.9	4188018	0.01	0.04	4.25E-02
565167.8	4187991	0.01	0.04	4.19E-02
565179.9	4188002	0.01	0.04	3.88E-02
565181.4	4188014	0.01	0.04	3.89E-02
565182.8	4188026	0.01	0.04	3.83E-02
565177.5	4187989	0.01	0.04	3.83E-02
565189.7	4188000	0.01	0.04	3.56E-02
565191.2	4188013	0.01	0.04	3.56E-02
565192.7	4188025	0.01	0.04	3.51E-02
565187.2	4187987	0.01	0.04	3.51E-02
565199.5	4187998	0.01	0.03	3.28E-02
565201.1	4188011	0.01	0.03	3.28E-02
565202.7	4188025	0.01	0.03	3.22E-02
565196.9	4187984	0.01	0.03	3.24E-02
565209.1	4187995	0.01	0.03	3.03E-02
565210.6	4188007	0.01	0.03	3.03E-02
565212	4188019	0.01	0.03	3.00E-02
565206.7	4187982	0.01	0.03	3.00E-02
565218.8	4187993	0.01	0.03	2.81E-02
565220.4	4188006	0.01	0.03	2.81E-02
565222	4188019	0.01	0.03	2.77E-02
565216.4	4187980	0.01	0.03	2.78E-02
565228.6	4187991	0.01	0.03	2.61E-02
565230.2	4188004	0.01	0.03	2.61E-02
565231.9	4188018	0.01	0.03	2.58E-02
565226.1	4187977	0.01	0.03	2.59E-02
565238.2	4187988	0.01	0.02	2.44E-02
565239.8	4188000	0.01	0.02	2.44E-02
565241.3	4188013	0.01	0.02	2.41E-02
565242.8	4188025	0.01	0.02	2.36E-02
565235.8	4187975	0.01	0.02	2.42E-02
565248	4187986	0.01	0.02	2.28E-02
565249.6	4187999	0.01	0.02	2.28E-02
565251.1	4188012	0.01	0.02	2.26E-02
565252.7	4188025	0.01	0.02	2.21E-02
565245.5	4187972	0.01	0.02	2.27E-02
565257.7	4187984	0.01	0.02	2.14E-02
565259.4	4187997	0.01	0.02	2.14E-02
565261	4188011	0.01	0.02	2.11E-02
565262.7	4188025	0.01	0.02	2.07E-02
565267.4	4187981	0.01	0.02	2.01E-02
565268.9	4187994	0.01	0.02	2.01E-02
565270.5	4188006	0.01	0.02	1.99E-02
565272	4188019	0.01	0.02	1.96E-02
565280.3	4188005	0.01	0.02	1.88E-02
565296.6	4187974	0.00	0.02	1.69E-02
565298.1	4187987	0.00	0.02	1.69E-02
565302.7	4188025	0.00	0.02	1.61E-02
565306.3	4187972	0.00	0.02	1.60E-02
565307.9	4187985	0.00	0.02	1.60E-02
565309.5	4187998	0.00	0.02	1.59E-02
565311.1	4188012	0.00	0.02	1.56E-02
565312.7	4188025	0.00	0.02	1.53E-02
565316	4187970	0.00	0.02	1.52E-02
565317.7	4187983	0.00	0.02	1.52E-02
565319.4	4187997	0.00	0.02	1.50E-02
565321	4188011	0.00	0.01	1.48E-02
565322.7	4188025	0.00	0.01	1.44E-02
565325.7	4187967	0.00	0.01	1.44E-02
565327.3	4187980	0.00	0.01	1.44E-02
565328.8	4187993	0.00	0.01	1.43E-02
565330.4	4188006	0.00	0.01	1.41E-02
565331.9	4188019	0.00	0.01	1.38E-02
565335.4	4187965	0.00	0.01	1.37E-02
565337.1	4187978	0.00	0.01	1.37E-02
565338.7	4187991	0.00	0.01	1.36E-02
565340.3	4188005	0.00	0.01	1.34E-02
565341.9	4188018	0.00	0.01	1.31E-02
565345.2	4187963	0.00	0.01	1.31E-02
565346.8	4187976	0.00	0.01	1.31E-02
565348.5	4187990	0.00	0.01	1.30E-02
565350.2	4188004	0.00	0.01	1.28E-02
565351.8	4188018	0.00	0.01	1.25E-02
565354.9	4187960	0.00	0.01	1.25E-02
565356.4	4187973	0.00	0.01	1.25E-02
565358	4187986	0.00	0.01	1.24E-02
565359.6	4187999	0.00	0.01	1.22E-02
565361.1	4188012	0.00	0.01	1.20E-02
565362.7	4188025	0.00	0.01	1.17E-02
565364.6	4187958	0.00	0.01	1.19E-02
565366.2	4187971	0.00	0.01	1.19E-02
565367.8	4187985	0.00	0.01	1.18E-02
565369.5	4187998	0.00	0.01	1.17E-02
565371.1	4188011	0.00	0.01	1.15E-02
565372.7	4188025	0.00	0.01	1.12E-02

565374.3	4187955	0.00	0.01	1.14E-02
565376	4187969	0.00	0.01	1.14E-02
565377.7	4187983	0.00	0.01	1.13E-02
565379.3	4187997	0.00	0.01	1.12E-02
565381	4188011	0.00	0.01	1.10E-02
565382.7	4188025	0.00	0.01	1.07E-02
565384	4187953	0.00	0.01	1.09E-02
565385.6	4187966	0.00	0.01	1.09E-02
565387.2	4187979	0.00	0.01	1.08E-02
565388.8	4187992	0.00	0.01	1.07E-02
565390.3	4188005	0.00	0.01	1.06E-02
565391.9	4188018	0.00	0.01	1.03E-02
565393.7	4187950	0.00	0.01	1.05E-02
565395.4	4187964	0.00	0.01	1.05E-02
565397	4187978	0.00	0.01	1.04E-02
565398.6	4187991	0.00	0.01	1.03E-02
565400.2	4188005	0.00	0.01	1.01E-02
565401.9	4188018	0.00	0.01	9.89E-03
565403.5	4187948	0.00	0.01	1.00E-02
565405.1	4187962	0.00	0.01	1.00E-02
565406.8	4187976	0.00	0.01	9.97E-03
565408.5	4187990	0.00	0.01	9.85E-03
565410.2	4188004	0.00	0.01	9.68E-03
565411.8	4188018	0.00	0.01	9.48E-03
565400.9	4187934	0.00	0.01	1.01E-02
565413.1	4187946	0.00	0.01	9.65E-03
565414.7	4187959	0.00	0.01	9.64E-03
565416.3	4187972	0.00	0.01	9.58E-03
565417.9	4187985	0.00	0.01	9.49E-03
565419.5	4187999	0.00	0.01	9.35E-03
565421.1	4188012	0.00	0.01	9.17E-03
565422.7	4188025	0.00	0.01	8.97E-03
565410.7	4187932	0.00	0.01	9.66E-03
565422.9	4187943	0.00	0.01	9.28E-03
565424.5	4187957	0.00	0.01	9.26E-03
565426.1	4187971	0.00	0.01	9.21E-03
565427.8	4187984	0.00	0.01	9.11E-03
565429.4	4187998	0.00	0.01	8.98E-03
565431.1	4188011	0.00	0.01	8.81E-03
565432.7	4188025	0.00	0.01	8.61E-03
565420.4	4187930	0.00	0.01	9.28E-03
565017.1	4187982	0.03	0.12	1.24E-01
565008.1	4187982	0.03	0.13	1.26E-01
564999.1	4187983	0.03	0.12	1.25E-01
564990.1	4187984	0.03	0.12	1.22E-01
565045.3	4187977	0.03	0.10	1.01E-01
565016.4	4187972	0.03	0.09	9.43E-02
565007.3	4187972	0.03	0.09	9.47E-02
564998.3	4187973	0.03	0.09	9.38E-02
564989.3	4187974	0.03	0.09	9.18E-02
565049.5	4187968	0.02	0.08	8.20E-02
565062.6	4187977	0.03	0.09	9.38E-02
565015.6	4187962	0.02	0.07	7.42E-02
565006.6	4187962	0.02	0.07	7.41E-02
564997.6	4187963	0.02	0.07	7.33E-02
564988.6	4187964	0.02	0.07	7.19E-02
565047.7	4187958	0.02	0.07	6.70E-02
565068.2	4187969	0.02	0.08	7.71E-02
565014.8	4187952	0.02	0.06	6.01E-02
565005.8	4187952	0.02	0.06	5.98E-02
564996.8	4187953	0.02	0.06	5.91E-02
564987.8	4187954	0.02	0.06	5.80E-02
565046.3	4187948	0.02	0.06	5.57E-02
565061.8	4187952	0.02	0.06	5.83E-02
565074	4187961	0.02	0.06	6.48E-02
565083	4187974	0.02	0.08	7.63E-02
565014.1	4187942	0.01	0.05	4.97E-02
565005	4187942	0.01	0.05	4.93E-02
564996	4187943	0.01	0.05	4.87E-02
564987	4187944	0.01	0.05	4.79E-02
565045	4187937	0.01	0.05	4.71E-02
565060.2	4187942	0.01	0.05	4.95E-02
565079.8	4187953	0.02	0.06	5.55E-02
565088.6	4187966	0.02	0.06	6.46E-02
565013.3	4187932	0.01	0.04	4.19E-02
565004.3	4187932	0.01	0.04	4.15E-02
564995.3	4187933	0.01	0.04	4.09E-02
564986.3	4187934	0.01	0.04	4.02E-02
565047.1	4187928	0.01	0.04	4.09E-02
565064.2	4187933	0.01	0.04	4.31E-02
565086.2	4187945	0.01	0.05	4.87E-02
565096.1	4187960	0.02	0.06	5.70E-02
565012.5	4187922	0.01	0.04	3.58E-02
565003.5	4187922	0.01	0.04	3.54E-02
564994.5	4187923	0.01	0.03	3.48E-02
564985.5	4187924	0.01	0.03	3.42E-02
565029.1	4187913	0.01	0.03	3.27E-02
565062.2	4187923	0.01	0.04	3.73E-02
565078.8	4187928	0.01	0.04	3.88E-02
565091.9	4187937	0.01	0.04	4.26E-02
565101.5	4187951	0.01	0.05	4.94E-02
565111.1	4187966	0.02	0.06	5.55E-02
565011.8	4187912	0.01	0.03	3.09E-02
565002.7	4187913	0.01	0.03	3.05E-02
564993.7	4187913	0.01	0.03	3.01E-02
564984.7	4187914	0.01	0.03	2.95E-02
565028.1	4187903	0.01	0.03	2.85E-02
565044.3	4187908	0.01	0.03	3.08E-02
565097.7	4187929	0.01	0.04	3.77E-02
565107.1	4187943	0.01	0.04	4.33E-02
565116.5	4187957	0.01	0.05	4.85E-02
565011	4187902	0.01	0.03	2.70E-02
565002	4187903	0.01	0.03	2.66E-02
564993	4187903	0.01	0.03	2.62E-02
564984	4187904	0.01	0.03	2.58E-02
565027.2	4187893	0.01	0.03	2.51E-02
565043.1	4187898	0.01	0.03	2.71E-02
565059	4187902	0.01	0.03	2.88E-02
565103.5	4187921	0.01	0.03	3.37E-02
565112.7	4187934	0.01	0.04	3.83E-02
565121.9	4187948	0.01	0.04	4.28E-02
565131.1	4187962	0.01	0.05	4.64E-02
565001.2	4187893	0.01	0.02	2.34E-02

564992.2	4187893	0.01	0.02	2.31E-02
564983.2	4187894	0.01	0.02	2.27E-02
565027.1	4187884	0.01	0.02	2.24E-02
565044.3	4187889	0.01	0.02	2.43E-02
565061.6	4187893	0.01	0.03	2.59E-02
565078.8	4187898	0.01	0.03	2.72E-02
565109.7	4187913	0.01	0.03	3.05E-02
565114.7	4187920	0.01	0.03	3.26E-02
565119.7	4187928	0.01	0.03	3.48E-02
565129.7	4187943	0.01	0.04	3.89E-02
565134.7	4187950	0.01	0.04	4.07E-02
565139.7	4187958	0.01	0.04	4.23E-02
565000.4	4187883	0.01	0.02	2.08E-02
564991.4	4187883	0.01	0.02	2.05E-02
564982.4	4187884	0.01	0.02	2.01E-02
565026.1	4187874	0.01	0.02	2.00E-02
565043	4187878	0.01	0.02	2.16E-02
565059.9	4187883	0.01	0.02	2.31E-02
565076.8	4187888	0.01	0.02	2.43E-02
565093.7	4187893	0.01	0.03	2.53E-02
565125.3	4187919	0.01	0.03	3.12E-02
565135.1	4187934	0.01	0.03	3.48E-02
565144.8	4187948	0.01	0.04	3.78E-02
564999.7	4187873	0.01	0.02	1.86E-02
564990.7	4187873	0.01	0.02	1.83E-02
564981.7	4187874	0.00	0.02	1.80E-02
565025.2	4187864	0.00	0.02	1.80E-02
565041.8	4187868	0.01	0.02	1.94E-02
565058.4	4187873	0.01	0.02	2.07E-02
565075	4187878	0.01	0.02	2.18E-02
565091.6	4187882	0.01	0.02	2.27E-02
565108.2	4187887	0.01	0.02	2.34E-02
565130.9	4187911	0.01	0.03	2.82E-02
565140.5	4187925	0.01	0.03	3.13E-02
564998.9	4187863	0.00	0.02	1.67E-02
564989.9	4187863	0.00	0.02	1.65E-02
564980.9	4187864	0.00	0.02	1.62E-02
565040.7	4187858	0.00	0.02	1.75E-02
565057	4187863	0.01	0.02	1.86E-02
565073.3	4187867	0.01	0.02	1.97E-02
565089.7	4187872	0.01	0.02	2.05E-02
565106	4187877	0.01	0.02	2.12E-02
565127.1	4187888	0.01	0.02	2.30E-02
565058.8	4187854	0.00	0.02	1.71E-02
565067.5	4187856	0.00	0.02	1.76E-02
565076.1	4187858	0.00	0.02	1.81E-02
565084.8	4187861	0.01	0.02	1.85E-02
565102.2	4187866	0.01	0.02	1.92E-02
565110.8	4187868	0.01	0.02	1.95E-02
565119.5	4187871	0.01	0.02	1.98E-02
565133.2	4187881	0.01	0.02	2.12E-02
565163.4	4187926	0.01	0.03	2.85E-02
565168.4	4187933	0.01	0.03	2.95E-02
565173.4	4187941	0.01	0.03	3.04E-02
565178.5	4187948	0.01	0.03	3.10E-02
565183.5	4187955	0.01	0.03	3.15E-02
564997.4	4187843	0.00	0.01	1.38E-02
564988.4	4187843	0.00	0.01	1.36E-02
564979.4	4187844	0.00	0.01	1.34E-02
565023.2	4187834	0.00	0.01	1.35E-02
565074.3	4187848	0.00	0.02	1.64E-02
565091.4	4187853	0.00	0.02	1.72E-02
565108.5	4187858	0.00	0.02	1.78E-02
565125.5	4187863	0.01	0.02	1.83E-02
565158.8	4187902	0.01	0.02	2.39E-02
565168.7	4187917	0.01	0.03	2.60E-02
565178.6	4187931	0.01	0.03	2.77E-02
565188.4	4187946	0.01	0.03	2.89E-02
564996.6	4187833	0.00	0.01	1.26E-02
564987.6	4187833	0.00	0.01	1.24E-02
564978.6	4187834	0.00	0.01	1.22E-02
565022.3	4187824	0.00	0.01	1.24E-02
565039.1	4187829	0.00	0.01	1.33E-02
565089.5	4187843	0.00	0.02	1.57E-02
565106.3	4187847	0.00	0.02	1.63E-02
565123.1	4187852	0.00	0.02	1.68E-02
565154.5	4187879	0.01	0.02	2.00E-02
565164.3	4187893	0.01	0.02	2.19E-02
565174	4187908	0.01	0.02	2.38E-02
565183.8	4187922	0.01	0.03	2.54E-02
565193.5	4187937	0.01	0.03	2.66E-02
565203.2	4187951	0.01	0.03	2.73E-02
564995.8	4187823	0.00	0.01	1.16E-02
564986.8	4187823	0.00	0.01	1.14E-02
564977.8	4187824	0.00	0.01	1.12E-02
565021.4	4187814	0.00	0.01	1.14E-02
565038	4187818	0.00	0.01	1.22E-02
565054.6	4187823	0.00	0.01	1.30E-02
565071.1	4187828	0.00	0.01	1.38E-02
565104.3	4187837	0.00	0.01	1.50E-02
565120.9	4187842	0.00	0.02	1.55E-02
565150.6	4187856	0.00	0.02	1.68E-02
565160.2	4187870	0.01	0.02	1.85E-02
565169.8	4187885	0.01	0.02	2.02E-02
565179.4	4187899	0.01	0.02	2.18E-02
565189.1	4187913	0.01	0.02	2.34E-02
565198.7	4187928	0.01	0.02	2.46E-02
565208.3	4187942	0.01	0.03	2.53E-02
564986.1	4187813	0.00	0.01	1.05E-02
564977.1	4187814	0.00	0.01	1.04E-02
565020.5	4187804	0.00	0.01	1.05E-02
565036.9	4187808	0.00	0.01	1.12E-02
565053.3	4187813	0.00	0.01	1.20E-02
565069.7	4187818	0.00	0.01	1.27E-02
565086.1	4187822	0.00	0.01	1.33E-02
565156.4	4187848	0.00	0.02	1.56E-02
565165.9	4187862	0.00	0.02	1.71E-02
565175.4	4187876	0.01	0.02	1.86E-02
565184.9	4187890	0.01	0.02	2.01E-02
565194.4	4187904	0.01	0.02	2.15E-02
565203.9	4187919	0.01	0.02	2.27E-02
565213.4	4187933	0.01	0.02	2.35E-02
565222.9	4187947	0.01	0.02	2.39E-02

564985.3	4187804	0.00	0.01	9.72E-03
564976.3	4187804	0.00	0.01	9.59E-03
565020.1	4187794	0.00	0.01	9.74E-03
565037.3	4187799	0.00	0.01	1.04E-02
565054.5	4187804	0.00	0.01	1.11E-02
565071.7	4187808	0.00	0.01	1.18E-02
565088.8	4187813	0.00	0.01	1.24E-02
565106	4187818	0.00	0.01	1.29E-02
565162.5	4187840	0.00	0.01	1.46E-02
565167.5	4187847	0.00	0.02	1.53E-02
565177.4	4187862	0.00	0.02	1.68E-02
565182.4	4187870	0.00	0.02	1.75E-02
565192.4	4187885	0.01	0.02	1.89E-02
565202.3	4187899	0.01	0.02	2.02E-02
565207.3	4187907	0.01	0.02	2.08E-02
565217.2	4187922	0.01	0.02	2.18E-02
565222.2	4187929	0.01	0.02	2.21E-02
565232.2	4187944	0.01	0.02	2.24E-02
564984.5	4187794	0.00	0.01	9.02E-03
564975.5	4187794	0.00	0.01	8.91E-03
565019.3	4187784	0.00	0.01	9.04E-03
565036.2	4187789	0.00	0.01	9.66E-03
565053.2	4187793	0.00	0.01	1.03E-02
565070.1	4187798	0.00	0.01	1.09E-02
565087.1	4187803	0.00	0.01	1.15E-02
565104	4187808	0.00	0.01	1.20E-02
565168.3	4187832	0.00	0.01	1.37E-02
565178.1	4187847	0.00	0.01	1.50E-02
565188	4187861	0.00	0.02	1.63E-02
565197.8	4187876	0.00	0.02	1.76E-02
565207.6	4187890	0.01	0.02	1.88E-02
565217.4	4187905	0.01	0.02	1.98E-02
565227.3	4187920	0.01	0.02	2.06E-02
565237.1	4187934	0.01	0.02	2.10E-02
564983.8	4187784	0.00	0.01	8.40E-03
564974.8	4187784	0.00	0.01	8.30E-03
565018.4	4187774	0.00	0.01	8.43E-03
565035.2	4187779	0.00	0.01	8.98E-03
565051.9	4187783	0.00	0.01	9.55E-03
565068.7	4187788	0.00	0.01	1.01E-02
565085.5	4187793	0.00	0.01	1.06E-02
565102.2	4187798	0.00	0.01	1.11E-02
565174.1	4187824	0.00	0.01	1.29E-02
565183.8	4187838	0.00	0.01	1.40E-02
565193.6	4187853	0.00	0.02	1.52E-02
565203.3	4187867	0.00	0.02	1.63E-02
565213	4187882	0.00	0.02	1.75E-02
565222.7	4187896	0.01	0.02	1.84E-02
565232.4	4187910	0.01	0.02	1.92E-02
565242.1	4187925	0.01	0.02	1.97E-02
565251.8	4187939	0.01	0.02	1.99E-02
565001	4187772	0.00	0.01	8.05E-03
564983	4187774	0.00	0.01	7.84E-03
564974	4187774	0.00	0.01	7.75E-03
565017.6	4187764	0.00	0.01	7.87E-03
565034.1	4187769	0.00	0.01	8.37E-03
565050.7	4187773	0.00	0.01	8.89E-03
565067.3	4187778	0.00	0.01	9.40E-03
565083.9	4187783	0.00	0.01	9.89E-03
565100.5	4187787	0.00	0.01	1.03E-02
565150.3	4187801	0.00	0.01	1.13E-02
565166.8	4187806	0.00	0.01	1.15E-02
565189.6	4187830	0.00	0.01	1.31E-02
565199.2	4187844	0.00	0.01	1.42E-02
565208.8	4187858	0.00	0.02	1.52E-02
565218.4	4187873	0.00	0.02	1.63E-02
565228	4187887	0.00	0.02	1.72E-02
565237.6	4187901	0.00	0.02	1.80E-02
565247.2	4187916	0.01	0.02	1.85E-02
565256.9	4187930	0.01	0.02	1.88E-02
565000.3	4187762	0.00	0.01	7.53E-03
564982.2	4187764	0.00	0.01	7.34E-03
564973.2	4187764	0.00	0.01	7.25E-03
565017.1	4187754	0.00	0.01	7.38E-03
565034.4	4187759	0.00	0.01	7.86E-03
565051.6	4187764	0.00	0.01	8.35E-03
565068.9	4187769	0.00	0.01	8.84E-03
565086.1	4187774	0.00	0.01	9.31E-03
565103.4	4187778	0.00	0.01	9.75E-03
565137.9	4187788	0.00	0.01	1.04E-02
565155.1	4187793	0.00	0.01	1.07E-02
565172.4	4187798	0.00	0.01	1.09E-02
565201	4187830	0.00	0.01	1.29E-02
565206	4187837	0.00	0.01	1.34E-02
565211	4187845	0.00	0.01	1.39E-02
565221	4187860	0.00	0.01	1.49E-02
565226	4187867	0.00	0.02	1.54E-02
565231	4187875	0.00	0.02	1.59E-02
565236	4187882	0.00	0.02	1.63E-02
565246	4187897	0.00	0.02	1.70E-02
565251	4187904	0.00	0.02	1.73E-02
565256	4187912	0.00	0.02	1.75E-02
565266	4187927	0.00	0.02	1.78E-02
565271	4187934	0.00	0.02	1.78E-02
564999.5	4187752	0.00	0.01	7.06E-03
564981.5	4187754	0.00	0.01	6.89E-03
564972.5	4187754	0.00	0.01	6.80E-03
565016.3	4187744	0.00	0.01	6.92E-03
565033.3	4187749	0.00	0.01	7.36E-03
565050.4	4187754	0.00	0.01	7.81E-03
565067.4	4187758	0.00	0.01	8.26E-03
565084.5	4187763	0.00	0.01	8.69E-03
565101.6	4187768	0.00	0.01	9.10E-03
565135.7	4187778	0.00	0.01	9.77E-03
565152.7	4187783	0.00	0.01	1.00E-02
565169.8	4187787	0.00	0.01	1.02E-02
565191.8	4187800	0.00	0.01	1.08E-02
565211.6	4187829	0.00	0.01	1.26E-02
565221.5	4187844	0.00	0.01	1.35E-02
565231.4	4187858	0.00	0.01	1.44E-02
565241.3	4187873	0.00	0.02	1.52E-02
565251.1	4187888	0.00	0.02	1.60E-02
565261	4187903	0.00	0.02	1.65E-02

565266	4187910	0.00	0.02	1.67E-02
565275.9	4187925	0.00	0.02	1.69E-02
564998.7	4187742	0.00	0.01	6.63E-03
564971.7	4187744	0.00	0.01	6.40E-03
565015.4	4187734	0.00	0.01	6.50E-03
565032.3	4187739	0.00	0.01	6.91E-03
565049.2	4187744	0.00	0.01	7.32E-03
565066.1	4187748	0.00	0.01	7.73E-03
565083	4187753	0.00	0.01	8.13E-03
565099.8	4187758	0.00	0.01	8.51E-03
565133.6	4187767	0.00	0.01	9.16E-03
565150.5	4187772	0.00	0.01	9.41E-03
565167.4	4187777	0.00	0.01	9.62E-03
565184.3	4187782	0.00	0.01	9.79E-03
565197.6	4187791	0.00	0.01	1.02E-02
565217.2	4187821	0.00	0.01	1.19E-02
565227	4187835	0.00	0.01	1.27E-02
565236.8	4187850	0.00	0.01	1.35E-02
565246.6	4187864	0.00	0.01	1.43E-02
565256.4	4187879	0.00	0.01	1.50E-02
565266.2	4187893	0.00	0.02	1.55E-02
565275.9	4187908	0.00	0.02	1.59E-02
565285.7	4187922	0.00	0.02	1.60E-02
564998	4187732	0.00	0.01	6.24E-03
564970.9	4187734	0.00	0.01	6.02E-03
565014.6	4187724	0.00	0.01	6.12E-03
565031.3	4187729	0.00	0.01	6.49E-03
565048	4187733	0.00	0.01	6.87E-03
565064.8	4187738	0.00	0.01	7.25E-03
565081.5	4187743	0.00	0.01	7.62E-03
565098.2	4187748	0.00	0.01	7.98E-03
565131.7	4187757	0.00	0.01	8.60E-03
565148.4	4187762	0.00	0.01	8.85E-03
565165.1	4187767	0.00	0.01	9.06E-03
565181.9	4187771	0.00	0.01	9.23E-03
565203.5	4187783	0.00	0.01	9.70E-03
565213.2	4187798	0.00	0.01	1.04E-02
565222.9	4187812	0.00	0.01	1.12E-02
565232.5	4187827	0.00	0.01	1.20E-02
565242.2	4187841	0.00	0.01	1.27E-02
565251.9	4187855	0.00	0.01	1.34E-02
565261.6	4187870	0.00	0.01	1.41E-02
565271.3	4187884	0.00	0.01	1.46E-02
565281	4187899	0.00	0.02	1.50E-02
565290.7	4187913	0.00	0.02	1.52E-02
565300.4	4187928	0.00	0.02	1.52E-02
564997.2	4187722	0.00	0.01	5.88E-03
564970.2	4187724	0.00	0.01	5.69E-03
565014.1	4187714	0.00	0.01	5.78E-03
565031.4	4187719	0.00	0.01	6.14E-03
565040	4187721	0.00	0.01	6.32E-03
565057.3	4187726	0.00	0.01	6.69E-03
565074.7	4187731	0.00	0.01	7.05E-03
565083.3	4187734	0.00	0.01	7.23E-03
565100.6	4187739	0.00	0.01	7.57E-03
565135.2	4187748	0.00	0.01	8.18E-03
565152.5	4187753	0.00	0.01	8.42E-03
565169.9	4187758	0.00	0.01	8.61E-03
565187.2	4187763	0.00	0.01	8.78E-03
565209.5	4187775	0.00	0.01	9.23E-03
565214.5	4187783	0.00	0.01	9.57E-03
565219.5	4187790	0.00	0.01	9.92E-03
565234.6	4187813	0.00	0.01	1.10E-02
565239.6	4187820	0.00	0.01	1.14E-02
565249.6	4187835	0.00	0.01	1.21E-02
565254.6	4187843	0.00	0.01	1.25E-02
565259.7	4187850	0.00	0.01	1.28E-02
565264.7	4187857	0.00	0.01	1.31E-02
565269.7	4187865	0.00	0.01	1.34E-02
565274.7	4187872	0.00	0.01	1.37E-02
565284.7	4187887	0.00	0.01	1.41E-02
565289.7	4187895	0.00	0.01	1.43E-02
565294.8	4187902	0.00	0.01	1.44E-02
565299.8	4187910	0.00	0.01	1.45E-02
565304.8	4187917	0.00	0.01	1.45E-02
565309.8	4187925	0.00	0.01	1.45E-02
565030.4	4187709	0.00	0.01	5.79E-03
565047.5	4187714	0.00	0.01	6.13E-03
565064.6	4187719	0.00	0.01	6.47E-03
565081.8	4187724	0.00	0.01	6.80E-03
565098.9	4187728	0.00	0.01	7.12E-03
565133.2	4187738	0.00	0.01	7.70E-03
565150.4	4187743	0.00	0.01	7.93E-03
565167.5	4187748	0.00	0.01	8.13E-03
565184.6	4187753	0.00	0.01	8.30E-03
565201.8	4187757	0.00	0.01	8.43E-03
565215.3	4187767	0.00	0.01	8.78E-03
565225.2	4187782	0.00	0.01	9.41E-03
565245.1	4187812	0.00	0.01	1.07E-02
565255	4187826	0.00	0.01	1.14E-02
565265	4187841	0.00	0.01	1.21E-02
565274.9	4187856	0.00	0.01	1.27E-02
565284.9	4187871	0.00	0.01	1.32E-02
565294.8	4187885	0.00	0.01	1.35E-02
565304.7	4187900	0.00	0.01	1.38E-02
565309.7	4187908	0.00	0.01	1.38E-02
565319.6	4187922	0.00	0.01	1.38E-02
564968.6	4187705	0.00	0.01	5.10E-03
565012.4	4187694	0.00	0.01	5.18E-03
565046.4	4187704	0.00	0.01	5.78E-03
565063.3	4187709	0.00	0.01	6.10E-03
565080.3	4187713	0.00	0.01	6.41E-03
565097.3	4187718	0.00	0.01	6.71E-03
565131.3	4187728	0.00	0.01	7.26E-03
565148.3	4187733	0.00	0.01	7.49E-03
565165.3	4187737	0.00	0.01	7.68E-03
565182.2	4187742	0.00	0.01	7.85E-03
565199.2	4187747	0.00	0.01	7.98E-03
565221.1	4187759	0.00	0.01	8.36E-03
565231	4187774	0.00	0.01	8.94E-03
565240.8	4187788	0.00	0.01	9.55E-03
565260.5	4187818	0.00	0.01	1.08E-02
565270.4	4187832	0.00	0.01	1.14E-02

565280.2	4187847	0.00	0.01	1.20E-02
565290	4187862	0.00	0.01	1.24E-02
565299.9	4187876	0.00	0.01	1.28E-02
565309.7	4187891	0.00	0.01	1.31E-02
565319.6	4187906	0.00	0.01	1.32E-02
565329.4	4187920	0.00	0.01	1.32E-02
564994.9	4187692	0.00	0.00	4.99E-03
564985.9	4187693	0.00	0.00	4.93E-03
564976.9	4187694	0.00	0.00	4.89E-03
564967.9	4187695	0.00	0.00	4.84E-03
565011.5	4187684	0.00	0.00	4.91E-03
565028.4	4187689	0.00	0.01	5.18E-03
565078.9	4187703	0.00	0.01	6.05E-03
565095.8	4187708	0.00	0.01	6.33E-03
565129.4	4187717	0.00	0.01	6.85E-03
565146.3	4187722	0.00	0.01	7.07E-03
565163.1	4187727	0.00	0.01	7.27E-03
565180	4187732	0.00	0.01	7.44E-03
565196.8	4187736	0.00	0.01	7.57E-03
565213.7	4187741	0.00	0.01	7.68E-03
565227	4187751	0.00	0.01	7.98E-03
565236.7	4187765	0.00	0.01	8.51E-03
565246.5	4187780	0.00	0.01	9.06E-03
565266	4187809	0.00	0.01	1.02E-02
565275.8	4187824	0.00	0.01	1.08E-02
565285.5	4187838	0.00	0.01	1.13E-02
565295.3	4187853	0.00	0.01	1.18E-02
565305.1	4187867	0.00	0.01	1.22E-02
565314.8	4187882	0.00	0.01	1.25E-02
565324.6	4187896	0.00	0.01	1.26E-02
565334.3	4187911	0.00	0.01	1.26E-02
564994.1	4187682	0.00	0.00	4.74E-03
564985.1	4187683	0.00	0.00	4.69E-03
564976.1	4187684	0.00	0.00	4.64E-03
564967.1	4187685	0.00	0.00	4.60E-03
565011	4187674	0.00	0.00	4.67E-03
565019.7	4187677	0.00	0.00	4.80E-03
565028.4	4187679	0.00	0.00	4.93E-03
565045.7	4187684	0.00	0.01	5.20E-03
565089.1	4187696	0.00	0.01	5.90E-03
565123.8	4187706	0.00	0.01	6.43E-03
565132.5	4187709	0.00	0.01	6.54E-03
565141.2	4187711	0.00	0.01	6.65E-03
565149.9	4187713	0.00	0.01	6.76E-03
565167.2	4187718	0.00	0.01	6.94E-03
565175.9	4187721	0.00	0.01	7.03E-03
565184.6	4187723	0.00	0.01	7.11E-03
565193.2	4187726	0.00	0.01	7.18E-03
565201.9	4187728	0.00	0.01	7.24E-03
565219.3	4187733	0.00	0.01	7.34E-03
565233	4187743	0.00	0.01	7.63E-03
565238	4187750	0.00	0.01	7.88E-03
565243	4187758	0.00	0.01	8.14E-03
565248.1	4187765	0.00	0.01	8.40E-03
565253.1	4187773	0.00	0.01	8.67E-03
565258.1	4187780	0.00	0.01	8.94E-03
565263.2	4187788	0.00	0.01	9.22E-03
565278.2	4187810	0.00	0.01	1.01E-02
565283.3	4187818	0.00	0.01	1.03E-02
565288.3	4187825	0.00	0.01	1.06E-02
565293.3	4187833	0.00	0.01	1.08E-02
565298.4	4187840	0.00	0.01	1.11E-02
565303.4	4187848	0.00	0.01	1.13E-02
565308.4	4187855	0.00	0.01	1.15E-02
565313.4	4187863	0.00	0.01	1.17E-02
565318.5	4187870	0.00	0.01	1.18E-02
565323.5	4187878	0.00	0.01	1.19E-02
565328.5	4187885	0.00	0.01	1.20E-02
565333.6	4187893	0.00	0.01	1.21E-02
565338.6	4187900	0.00	0.01	1.21E-02
565343.6	4187908	0.00	0.01	1.21E-02
565353.7	4187923	0.00	0.01	1.20E-02
564993.4	4187673	0.00	0.00	4.51E-03
564984.3	4187673	0.00	0.00	4.46E-03
564975.3	4187674	0.00	0.00	4.42E-03
564966.3	4187675	0.00	0.00	4.38E-03
565010.2	4187664	0.00	0.00	4.45E-03
565027.4	4187669	0.00	0.00	4.68E-03
565044.6	4187674	0.00	0.00	4.93E-03
565061.8	4187679	0.00	0.01	5.19E-03
565113.4	4187693	0.00	0.01	5.97E-03
565130.6	4187698	0.00	0.01	6.19E-03
565147.8	4187703	0.00	0.01	6.40E-03
565165	4187708	0.00	0.01	6.58E-03
565182.2	4187713	0.00	0.01	6.75E-03
565199.4	4187718	0.00	0.01	6.88E-03
565216.6	4187723	0.00	0.01	6.99E-03
565238.8	4187735	0.00	0.01	7.30E-03
565243.8	4187742	0.00	0.01	7.53E-03
565253.8	4187757	0.00	0.01	8.01E-03
565258.7	4187765	0.00	0.01	8.26E-03
565263.7	4187772	0.00	0.01	8.51E-03
565288.7	4187809	0.00	0.01	9.79E-03
565293.6	4187816	0.00	0.01	1.00E-02
565303.6	4187831	0.00	0.01	1.05E-02
565313.6	4187846	0.00	0.01	1.09E-02
565318.6	4187854	0.00	0.01	1.11E-02
565323.5	4187861	0.00	0.01	1.12E-02
565333.5	4187876	0.00	0.01	1.15E-02
565338.5	4187883	0.00	0.01	1.15E-02
565348.5	4187898	0.00	0.01	1.16E-02
565353.5	4187905	0.00	0.01	1.16E-02
565363.4	4187920	0.00	0.01	1.15E-02
564992.6	4187663	0.00	0.00	4.29E-03
564983.6	4187663	0.00	0.00	4.25E-03
564974.6	4187664	0.00	0.00	4.21E-03
564965.6	4187665	0.00	0.00	4.18E-03
565009.4	4187654	0.00	0.00	4.24E-03
565026.4	4187659	0.00	0.00	4.45E-03
565043.5	4187664	0.00	0.00	4.68E-03
565060.5	4187669	0.00	0.00	4.92E-03
565077.6	4187674	0.00	0.01	5.17E-03
565162.9	4187698	0.00	0.01	6.25E-03

565180	4187702	0.00	0.01	6.41E-03
565197	4187707	0.00	0.01	6.54E-03
565214.1	4187712	0.00	0.01	6.65E-03
565231.2	4187717	0.00	0.01	6.74E-03
565244.6	4187727	0.00	0.01	6.99E-03
565254.5	4187741	0.00	0.01	7.42E-03
565264.4	4187756	0.00	0.01	7.87E-03
565269.4	4187763	0.00	0.01	8.11E-03
565279.2	4187778	0.00	0.01	8.58E-03
565299	4187808	0.00	0.01	9.53E-03
565308.9	4187822	0.00	0.01	9.97E-03
565313.9	4187830	0.00	0.01	1.02E-02
565323.7	4187844	0.00	0.01	1.05E-02
565333.6	4187859	0.00	0.01	1.08E-02
565343.5	4187874	0.00	0.01	1.10E-02
565353.4	4187889	0.00	0.01	1.11E-02
565358.3	4187896	0.00	0.01	1.11E-02
565368.2	4187911	0.00	0.01	1.11E-02
564991.8	4187653	0.00	0.00	4.09E-03
564982.8	4187653	0.00	0.00	4.06E-03
564973.8	4187654	0.00	0.00	4.02E-03
564964.8	4187655	0.00	0.00	3.99E-03
565008.5	4187644	0.00	0.00	4.04E-03
565025.5	4187649	0.00	0.00	4.24E-03
565042.4	4187654	0.00	0.00	4.45E-03
565059.3	4187659	0.00	0.00	4.68E-03
565076.2	4187663	0.00	0.00	4.90E-03
565093.2	4187668	0.00	0.01	5.13E-03
565127	4187678	0.00	0.01	5.57E-03
565211.7	4187702	0.00	0.01	6.34E-03
565228.6	4187706	0.00	0.01	6.43E-03
565250.5	4187719	0.00	0.01	6.70E-03
565260.3	4187733	0.00	0.01	7.10E-03
565270.1	4187748	0.00	0.01	7.52E-03
565279.9	4187762	0.00	0.01	7.95E-03
565289.7	4187777	0.00	0.01	8.40E-03
565309.3	4187806	0.00	0.01	9.27E-03
565319.2	4187821	0.00	0.01	9.67E-03
565329	4187835	0.00	0.01	1.00E-02
565338.8	4187850	0.00	0.01	1.03E-02
565348.6	4187865	0.00	0.01	1.05E-02
565358.4	4187879	0.00	0.01	1.07E-02
565368.2	4187894	0.00	0.01	1.07E-02
565378	4187908	0.00	0.01	1.06E-02
564991.1	4187643	0.00	0.00	3.91E-03
564982	4187643	0.00	0.00	3.87E-03
564973	4187644	0.00	0.00	3.84E-03
564964	4187645	0.00	0.00	3.81E-03
565007.7	4187634	0.00	0.00	3.86E-03
565024.5	4187639	0.00	0.00	4.05E-03
565041.3	4187644	0.00	0.00	4.24E-03
565058.1	4187649	0.00	0.00	4.45E-03
565074.9	4187653	0.00	0.00	4.66E-03
565091.7	4187658	0.00	0.00	4.88E-03
565125.4	4187668	0.00	0.01	5.29E-03
565142.2	4187672	0.00	0.01	5.48E-03
565159	4187677	0.00	0.01	5.65E-03
565175.8	4187682	0.00	0.01	5.80E-03
565226.2	4187696	0.00	0.01	6.14E-03
565243	4187701	0.00	0.01	6.21E-03
565256.3	4187710	0.00	0.01	6.43E-03
565266	4187725	0.00	0.01	6.80E-03
565275.8	4187739	0.00	0.01	7.19E-03
565285.5	4187754	0.00	0.01	7.59E-03
565295.3	4187768	0.00	0.01	8.00E-03
565314.7	4187797	0.00	0.01	8.82E-03
565324.5	4187812	0.00	0.01	9.20E-03
565334.2	4187826	0.00	0.01	9.55E-03
565344	4187841	0.00	0.01	9.84E-03
565353.7	4187855	0.00	0.01	1.01E-02
565363.5	4187870	0.00	0.01	1.02E-02
565373.2	4187884	0.00	0.01	1.03E-02
565382.9	4187899	0.00	0.01	1.02E-02
564990.3	4187633	0.00	0.00	3.73E-03
564981.3	4187633	0.00	0.00	3.70E-03
564972.3	4187634	0.00	0.00	3.67E-03
564963.3	4187635	0.00	0.00	3.64E-03
565007.1	4187624	0.00	0.00	3.69E-03
565024.4	4187629	0.00	0.00	3.87E-03
565041.6	4187634	0.00	0.00	4.06E-03
565058.9	4187639	0.00	0.00	4.26E-03
565076.2	4187644	0.00	0.00	4.47E-03
565093.4	4187649	0.00	0.00	4.67E-03
565127.9	4187659	0.00	0.01	5.08E-03
565145.2	4187663	0.00	0.01	5.26E-03
565162.4	4187668	0.00	0.01	5.43E-03
565179.7	4187673	0.00	0.01	5.57E-03
565196.9	4187678	0.00	0.01	5.70E-03
565231.4	4187688	0.00	0.01	5.90E-03
565248.7	4187693	0.00	0.01	5.97E-03
565262.3	4187702	0.00	0.01	6.18E-03
565267.3	4187710	0.00	0.01	6.35E-03
565277.3	4187725	0.00	0.01	6.72E-03
565287.3	4187740	0.00	0.01	7.10E-03
565297.3	4187755	0.00	0.01	7.50E-03
565302.3	4187762	0.00	0.01	7.70E-03
565307.3	4187769	0.00	0.01	7.90E-03
565327.3	4187799	0.00	0.01	8.68E-03
565337.3	4187814	0.00	0.01	9.03E-03
565342.3	4187822	0.00	0.01	9.19E-03
565347.3	4187829	0.00	0.01	9.34E-03
565352.3	4187836	0.00	0.01	9.47E-03
565362.3	4187851	0.00	0.01	9.69E-03
565367.3	4187859	0.00	0.01	9.77E-03
565372.3	4187866	0.00	0.01	9.83E-03
565382.3	4187881	0.00	0.01	9.88E-03
565387.3	4187888	0.00	0.01	9.88E-03
565392.3	4187896	0.00	0.01	9.85E-03
564989.5	4187623	0.00	0.00	3.57E-03
564980.5	4187623	0.00	0.00	3.54E-03
564971.5	4187624	0.00	0.00	3.51E-03
564962.5	4187625	0.00	0.00	3.48E-03
565006.3	4187614	0.00	0.00	3.53E-03

565023.4	4187619	0.00	0.00	3.70E-03
565040.6	4187624	0.00	0.00	3.88E-03
565057.7	4187629	0.00	0.00	4.06E-03
565074.8	4187634	0.00	0.00	4.26E-03
565091.9	4187639	0.00	0.00	4.45E-03
565126.2	4187648	0.00	0.00	4.83E-03
565143.3	4187653	0.00	0.01	5.01E-03
565160.4	4187658	0.00	0.01	5.17E-03
565177.5	4187663	0.00	0.01	5.32E-03
565194.7	4187668	0.00	0.01	5.44E-03
565211.8	4187672	0.00	0.01	5.55E-03
565228.9	4187677	0.00	0.01	5.64E-03
565246	4187682	0.00	0.01	5.71E-03
565268.1	4187694	0.00	0.01	5.93E-03
565278	4187709	0.00	0.01	6.27E-03
565288	4187724	0.00	0.01	6.62E-03
565292.9	4187731	0.00	0.01	6.80E-03
565302.9	4187746	0.00	0.01	7.17E-03
565312.8	4187761	0.00	0.01	7.54E-03
565317.7	4187768	0.00	0.01	7.73E-03
565337.6	4187798	0.00	0.01	8.45E-03
565347.5	4187812	0.00	0.01	8.77E-03
565357.4	4187827	0.00	0.01	9.05E-03
565367.4	4187842	0.00	0.01	9.27E-03
565377.3	4187857	0.00	0.01	9.43E-03
565382.2	4187864	0.00	0.01	9.48E-03
565392.2	4187879	0.00	0.01	9.52E-03
565402.1	4187894	0.00	0.01	9.48E-03
564988.7	4187613	0.00	0.00	3.42E-03
564979.7	4187613	0.00	0.00	3.39E-03
564970.7	4187614	0.00	0.00	3.36E-03
564961.7	4187615	0.00	0.00	3.34E-03
564976.3	4187986	0.03	0.12	1.20E-01
564966.6	4187989	0.03	0.12	1.16E-01
564956.9	4187991	0.03	0.11	1.12E-01
564947.2	4187993	0.03	0.11	1.05E-01
564937.5	4187995	0.03	0.10	9.65E-02
564927.8	4187997	0.02	0.09	8.73E-02
564974.2	4187977	0.02	0.09	9.03E-02
564964.5	4187979	0.02	0.09	8.87E-02
564954.8	4187981	0.02	0.09	8.61E-02
564945.1	4187983	0.02	0.08	8.20E-02
564935.4	4187985	0.02	0.08	7.66E-02
564925.7	4187987	0.02	0.07	7.04E-02
564972.1	4187967	0.02	0.07	7.09E-02
564962.4	4187969	0.02	0.07	7.01E-02
564952.7	4187971	0.02	0.07	6.84E-02
564943	4187973	0.02	0.07	6.58E-02
564933.3	4187975	0.02	0.06	6.23E-02
564923.6	4187977	0.02	0.06	5.83E-02
564969.9	4187957	0.02	0.06	5.73E-02
564960.2	4187959	0.02	0.06	5.66E-02
564950.5	4187961	0.02	0.06	5.55E-02
564940.8	4187963	0.01	0.05	5.38E-02
564931.1	4187966	0.01	0.05	5.16E-02
564921.5	4187968	0.01	0.05	4.91E-02
564977.5	4187945	0.01	0.05	4.74E-02
564967.8	4187947	0.01	0.05	4.72E-02
564958.1	4187949	0.01	0.05	4.67E-02
564948.4	4187952	0.01	0.05	4.60E-02
564938.7	4187954	0.01	0.04	4.49E-02
564929	4187956	0.01	0.04	4.35E-02
564919.3	4187958	0.01	0.04	4.19E-02
564975.4	4187935	0.01	0.04	3.97E-02
564965.7	4187938	0.01	0.04	3.96E-02
564956	4187940	0.01	0.04	3.93E-02
564946.3	4187942	0.01	0.04	3.87E-02
564936.6	4187944	0.01	0.04	3.80E-02
564926.9	4187946	0.01	0.04	3.71E-02
564917.2	4187948	0.01	0.04	3.61E-02
564973.3	4187926	0.01	0.03	3.37E-02
564963.6	4187928	0.01	0.03	3.37E-02
564953.9	4187930	0.01	0.03	3.35E-02
564944.2	4187932	0.01	0.03	3.31E-02
564934.5	4187934	0.01	0.03	3.26E-02
564924.8	4187936	0.01	0.03	3.20E-02
564915.1	4187938	0.01	0.03	3.13E-02
564971.1	4187916	0.01	0.03	2.91E-02
564961.4	4187918	0.01	0.03	2.90E-02
564951.7	4187920	0.01	0.03	2.89E-02
564942	4187922	0.01	0.03	2.86E-02
564932.3	4187924	0.01	0.03	2.83E-02
564922.6	4187926	0.01	0.03	2.79E-02
564912.9	4187929	0.01	0.03	2.75E-02
564969	4187906	0.01	0.03	2.54E-02
564959.3	4187908	0.01	0.03	2.53E-02
564949.6	4187910	0.01	0.03	2.52E-02
564939.9	4187912	0.01	0.03	2.50E-02
564930.2	4187915	0.01	0.02	2.48E-02
564920.5	4187917	0.01	0.02	2.46E-02
564910.8	4187919	0.01	0.02	2.43E-02
564966.9	4187896	0.01	0.02	2.23E-02
564957.2	4187898	0.01	0.02	2.23E-02
564947.5	4187901	0.01	0.02	2.22E-02
564937.8	4187903	0.01	0.02	2.21E-02
564928.1	4187905	0.01	0.02	2.20E-02
564918.4	4187907	0.01	0.02	2.18E-02
564908.7	4187909	0.01	0.02	2.17E-02
564964.8	4187887	0.01	0.02	1.98E-02
564955.1	4187889	0.01	0.02	1.98E-02
564945.4	4187891	0.01	0.02	1.97E-02
564935.7	4187893	0.01	0.02	1.97E-02
564926	4187895	0.01	0.02	1.96E-02
564916.3	4187897	0.01	0.02	1.95E-02
564906.6	4187899	0.01	0.02	1.94E-02
564972.1	4187875	0.00	0.02	1.78E-02
564962.6	4187877	0.00	0.02	1.77E-02
564952.9	4187879	0.00	0.02	1.76E-02
564943.2	4187881	0.00	0.02	1.76E-02
564933.5	4187883	0.00	0.02	1.76E-02
564923.8	4187885	0.00	0.02	1.76E-02
564914.1	4187887	0.00	0.02	1.75E-02
564904.4	4187889	0.00	0.02	1.75E-02

564967.3	4187866	0.00	0.02	1.60E-02
564902.3	4187880	0.00	0.02	1.58E-02
564964	4187846	0.00	0.01	1.32E-02
564946.5	4187850	0.00	0.01	1.31E-02
564936.8	4187852	0.00	0.01	1.31E-02
564927.1	4187854	0.00	0.01	1.31E-02
564917.4	4187856	0.00	0.01	1.31E-02
564907.7	4187858	0.00	0.01	1.32E-02
564898.1	4187860	0.00	0.01	1.32E-02
564962.3	4187837	0.00	0.01	1.20E-02
564944.4	4187840	0.00	0.01	1.20E-02
564934.7	4187842	0.00	0.01	1.20E-02
564925	4187844	0.00	0.01	1.20E-02
564915.3	4187846	0.00	0.01	1.20E-02
564905.6	4187848	0.00	0.01	1.21E-02
564895.9	4187850	0.00	0.01	1.21E-02
564960.6	4187827	0.00	0.01	1.11E-02
564942.3	4187830	0.00	0.01	1.10E-02
564932.6	4187832	0.00	0.01	1.10E-02
564922.9	4187834	0.00	0.01	1.11E-02
564913.2	4187836	0.00	0.01	1.11E-02
564903.5	4187839	0.00	0.01	1.11E-02
564893.8	4187841	0.00	0.01	1.11E-02
564958.9	4187817	0.00	0.01	1.02E-02
564968	4187816	0.00	0.01	1.03E-02
564949.9	4187818	0.00	0.01	1.01E-02
564940.2	4187820	0.00	0.01	1.01E-02
564930.5	4187822	0.00	0.01	1.02E-02
564920.8	4187825	0.00	0.01	1.02E-02
564911.1	4187827	0.00	0.01	1.02E-02
564901.4	4187829	0.00	0.01	1.03E-02
564891.7	4187831	0.00	0.01	1.03E-02
564957.3	4187807	0.00	0.01	9.44E-03
564966.8	4187806	0.00	0.01	9.51E-03
564947.7	4187808	0.00	0.01	9.39E-03
564938	4187811	0.00	0.01	9.40E-03
564928.3	4187813	0.00	0.01	9.42E-03
564918.6	4187815	0.00	0.01	9.45E-03
564908.9	4187817	0.00	0.01	9.48E-03
564899.2	4187819	0.00	0.01	9.51E-03
564889.5	4187821	0.00	0.01	9.55E-03
564953.1	4187798	0.00	0.01	8.76E-03
564935.9	4187801	0.00	0.01	8.73E-03
564926.2	4187803	0.00	0.01	8.75E-03
564916.5	4187805	0.00	0.01	8.78E-03
564906.8	4187807	0.00	0.01	8.81E-03
564897.1	4187809	0.00	0.01	8.84E-03
564887.4	4187811	0.00	0.01	8.89E-03
564951.3	4187788	0.00	0.01	8.16E-03
564933.8	4187791	0.00	0.01	8.12E-03
564924.1	4187793	0.00	0.01	8.14E-03
564914.4	4187795	0.00	0.01	8.17E-03
564904.7	4187797	0.00	0.01	8.21E-03
564895	4187799	0.00	0.01	8.24E-03
564885.3	4187802	0.00	0.01	8.29E-03
564949.5	4187778	0.00	0.01	7.62E-03
564931.7	4187781	0.00	0.01	7.58E-03
564922	4187783	0.00	0.01	7.60E-03
564912.3	4187785	0.00	0.01	7.63E-03
564902.6	4187788	0.00	0.01	7.67E-03
564892.9	4187790	0.00	0.01	7.71E-03
564883.2	4187792	0.00	0.01	7.76E-03
564947.7	4187768	0.00	0.01	7.12E-03
564929.5	4187771	0.00	0.01	7.10E-03
564919.8	4187774	0.00	0.01	7.11E-03
564910.1	4187776	0.00	0.01	7.15E-03
564900.4	4187778	0.00	0.01	7.18E-03
564890.7	4187780	0.00	0.01	7.23E-03
564881	4187782	0.00	0.01	7.27E-03
564945.9	4187758	0.00	0.01	6.68E-03
564927.4	4187762	0.00	0.01	6.66E-03
564917.7	4187764	0.00	0.01	6.68E-03
564908	4187766	0.00	0.01	6.71E-03
564898.3	4187768	0.00	0.01	6.75E-03
564888.6	4187770	0.00	0.01	6.79E-03
564878.9	4187772	0.00	0.01	6.83E-03
564944.2	4187748	0.00	0.01	6.28E-03
564953.3	4187747	0.00	0.01	6.31E-03
564962.5	4187746	0.00	0.01	6.35E-03
564935	4187750	0.00	0.01	6.26E-03
564925.3	4187752	0.00	0.01	6.27E-03
564915.6	4187754	0.00	0.01	6.29E-03
564905.9	4187756	0.00	0.01	6.32E-03
564896.2	4187758	0.00	0.01	6.35E-03
564886.5	4187760	0.00	0.01	6.39E-03
564876.8	4187762	0.00	0.01	6.43E-03
564942.4	4187739	0.00	0.01	5.92E-03
564951.9	4187737	0.00	0.01	5.95E-03
564961.4	4187736	0.00	0.01	5.98E-03
564932.8	4187740	0.00	0.01	5.90E-03
564923.1	4187742	0.00	0.01	5.92E-03
564913.4	4187744	0.00	0.01	5.94E-03
564903.7	4187746	0.00	0.01	5.96E-03
564894	4187748	0.00	0.01	6.00E-03
564884.3	4187751	0.00	0.01	6.03E-03
564874.7	4187753	0.00	0.01	6.07E-03
564938.6	4187729	0.00	0.01	5.59E-03
564954.4	4187727	0.00	0.01	5.63E-03
564921	4187732	0.00	0.01	5.59E-03
564911.3	4187734	0.00	0.01	5.61E-03
564901.6	4187737	0.00	0.01	5.64E-03
564891.9	4187739	0.00	0.01	5.67E-03
564882.2	4187741	0.00	0.01	5.70E-03
564872.5	4187743	0.00	0.01	5.74E-03
564934.9	4187709	0.00	0.01	5.02E-03
564951.8	4187707	0.00	0.01	5.05E-03
564916.8	4187713	0.00	0.01	5.02E-03
564907.1	4187715	0.00	0.01	5.04E-03
564897.4	4187717	0.00	0.01	5.06E-03
564887.7	4187719	0.00	0.01	5.09E-03
564878	4187721	0.00	0.01	5.11E-03
564868.3	4187723	0.00	0.01	5.14E-03
564933	4187700	0.00	0.00	4.76E-03

564950.5	4187697	0.00	0.00	4.79E-03
564914.6	4187703	0.00	0.00	4.77E-03
564904.9	4187705	0.00	0.00	4.78E-03
564895.2	4187707	0.00	0.00	4.80E-03
564885.5	4187709	0.00	0.00	4.83E-03
564875.8	4187711	0.00	0.00	4.85E-03
564866.1	4187714	0.00	0.00	4.88E-03
564931.2	4187690	0.00	0.00	4.53E-03
564940.2	4187689	0.00	0.00	4.54E-03
564949.1	4187687	0.00	0.00	4.56E-03
564958.1	4187686	0.00	0.00	4.58E-03
564922.2	4187691	0.00	0.00	4.52E-03
564912.5	4187693	0.00	0.00	4.53E-03
564902.8	4187695	0.00	0.00	4.55E-03
564893.1	4187697	0.00	0.00	4.56E-03
564883.4	4187700	0.00	0.00	4.59E-03
564873.7	4187702	0.00	0.00	4.61E-03
564864	4187704	0.00	0.00	4.64E-03
564929.3	4187680	0.00	0.00	4.31E-03
564938.6	4187679	0.00	0.00	4.32E-03
564947.8	4187677	0.00	0.00	4.34E-03
564957.1	4187676	0.00	0.00	4.36E-03
564920.1	4187681	0.00	0.00	4.31E-03
564910.4	4187683	0.00	0.00	4.32E-03
564900.7	4187686	0.00	0.00	4.33E-03
564891	4187688	0.00	0.00	4.34E-03
564881.3	4187690	0.00	0.00	4.37E-03
564871.6	4187692	0.00	0.00	4.39E-03
564861.9	4187694	0.00	0.00	4.42E-03
564927.5	4187670	0.00	0.00	4.11E-03
564937	4187669	0.00	0.00	4.12E-03
564946.5	4187667	0.00	0.00	4.14E-03
564956	4187666	0.00	0.00	4.16E-03
564918	4187672	0.00	0.00	4.10E-03
564908.3	4187674	0.00	0.00	4.11E-03
564898.6	4187676	0.00	0.00	4.13E-03
564888.9	4187678	0.00	0.00	4.14E-03
564879.2	4187680	0.00	0.00	4.16E-03
564869.5	4187682	0.00	0.00	4.19E-03
564859.8	4187684	0.00	0.00	4.22E-03
564925.6	4187660	0.00	0.00	3.92E-03
564935.4	4187659	0.00	0.00	3.93E-03
564945.2	4187658	0.00	0.00	3.95E-03
564955	4187656	0.00	0.00	3.97E-03
564915.8	4187662	0.00	0.00	3.92E-03
564906.1	4187664	0.00	0.00	3.93E-03
564896.4	4187666	0.00	0.00	3.94E-03
564886.7	4187668	0.00	0.00	3.96E-03
564877	4187670	0.00	0.00	3.98E-03
564867.3	4187672	0.00	0.00	4.00E-03
564857.6	4187675	0.00	0.00	4.03E-03
564922.1	4187651	0.00	0.00	3.75E-03
564938.9	4187648	0.00	0.00	3.76E-03
564904	4187654	0.00	0.00	3.75E-03
564894.3	4187656	0.00	0.00	3.77E-03
564884.6	4187658	0.00	0.00	3.79E-03
564874.9	4187661	0.00	0.00	3.80E-03
564865.2	4187663	0.00	0.00	3.83E-03
564855.5	4187665	0.00	0.00	3.85E-03
564920.2	4187641	0.00	0.00	3.59E-03
564937.4	4187639	0.00	0.00	3.60E-03
564901.9	4187644	0.00	0.00	3.59E-03
564892.2	4187647	0.00	0.00	3.61E-03
564882.5	4187649	0.00	0.00	3.62E-03
564872.8	4187651	0.00	0.00	3.64E-03
564863.1	4187653	0.00	0.00	3.66E-03
564853.4	4187655	0.00	0.00	3.69E-03
564918.3	4187631	0.00	0.00	3.44E-03
564936	4187629	0.00	0.00	3.45E-03
564944.8	4187627	0.00	0.00	3.46E-03
564899.7	4187635	0.00	0.00	3.45E-03
564890	4187637	0.00	0.00	3.46E-03
564880.3	4187639	0.00	0.00	3.47E-03
564870.6	4187641	0.00	0.00	3.49E-03
564861	4187643	0.00	0.00	3.51E-03
564851.3	4187645	0.00	0.00	3.53E-03
564916.4	4187621	0.00	0.00	3.30E-03
564925.5	4187620	0.00	0.00	3.30E-03
564934.5	4187619	0.00	0.00	3.31E-03
564943.6	4187617	0.00	0.00	3.32E-03
564952.7	4187616	0.00	0.00	3.33E-03
564907.3	4187623	0.00	0.00	3.30E-03
564897.6	4187625	0.00	0.00	3.31E-03
564887.9	4187627	0.00	0.00	3.32E-03
564878.2	4187629	0.00	0.00	3.33E-03
564868.5	4187631	0.00	0.00	3.35E-03
564858.8	4187633	0.00	0.00	3.37E-03
564849.1	4187635	0.00	0.00	3.38E-03
564895.5	4188040	0.02	0.07	6.95E-02
564896.3	4188050	0.02	0.07	6.98E-02
564897.1	4188059	0.02	0.07	6.80E-02
564898	4188068	0.02	0.06	6.39E-02
564898.8	4188078	0.02	0.06	5.85E-02
564885.5	4188041	0.01	0.05	5.42E-02
564886.3	4188051	0.01	0.05	5.39E-02
564887.2	4188060	0.01	0.05	5.24E-02
564888	4188069	0.01	0.05	4.97E-02
564888.8	4188079	0.01	0.05	4.62E-02
564881.8	4188007	0.01	0.05	4.65E-02
564891.6	4187994	0.01	0.05	4.93E-02
564876.4	4188051	0.01	0.04	4.31E-02
564877.2	4188061	0.01	0.04	4.19E-02
564878	4188070	0.01	0.04	4.00E-02
564878.9	4188079	0.01	0.04	3.77E-02
564871.6	4188009	0.01	0.04	3.94E-02
564883.3	4187988	0.01	0.04	4.17E-02
564866.4	4188052	0.01	0.04	3.54E-02
564867.2	4188062	0.01	0.03	3.44E-02
564868.1	4188071	0.01	0.03	3.30E-02
564868.9	4188080	0.01	0.03	3.14E-02
564861.4	4188011	0.01	0.03	3.37E-02
564865.9	4187995	0.01	0.03	3.41E-02
564875	4187982	0.01	0.04	3.58E-02

564888.9	4187973	0.01	0.04	3.89E-02
564857.3	4188063	0.01	0.03	2.89E-02
564858.1	4188072	0.01	0.03	2.79E-02
564859	4188081	0.01	0.03	2.66E-02
564847	4188028	0.01	0.03	2.72E-02
564851.4	4188012	0.01	0.03	2.91E-02
564855.7	4187997	0.01	0.03	3.00E-02
564866.8	4187977	0.01	0.03	3.13E-02
564880.4	4187968	0.01	0.03	3.38E-02
564848.2	4188073	0.01	0.02	2.39E-02
564849	4188082	0.01	0.02	2.30E-02
564837.3	4188028	0.01	0.02	2.37E-02
564839.8	4188019	0.01	0.02	2.48E-02
564842.2	4188010	0.01	0.03	2.56E-02
564844.7	4188001	0.01	0.03	2.62E-02
564847.1	4187993	0.01	0.03	2.66E-02
564849.5	4187984	0.01	0.03	2.66E-02
564859.6	4187970	0.01	0.03	2.78E-02
564867.2	4187965	0.01	0.03	2.91E-02
564874.9	4187960	0.01	0.03	3.01E-02
564882.5	4187955	0.01	0.03	3.07E-02
564827.3	4188029	0.01	0.02	2.08E-02
564832	4188012	0.01	0.02	2.25E-02
564836.8	4187995	0.01	0.02	2.36E-02
564841.6	4187978	0.01	0.02	2.38E-02
564851.3	4187964	0.01	0.02	2.48E-02
564866.2	4187955	0.01	0.03	2.66E-02
564881	4187945	0.01	0.03	2.76E-02
564817.3	4188030	0.01	0.02	1.83E-02
564821.9	4188013	0.01	0.02	1.98E-02
564826.6	4187997	0.01	0.02	2.10E-02
564831.2	4187980	0.01	0.02	2.15E-02
564843.1	4187959	0.01	0.02	2.23E-02
564857.6	4187949	0.01	0.02	2.38E-02
564872.1	4187940	0.01	0.02	2.47E-02
564815.8	4188047	0.00	0.02	1.73E-02
564807.3	4188031	0.00	0.02	1.63E-02
564811.8	4188015	0.00	0.02	1.77E-02
564816.4	4187998	0.01	0.02	1.87E-02
564821	4187982	0.01	0.02	1.93E-02
564825.5	4187965	0.01	0.02	1.95E-02
564834.9	4187953	0.01	0.02	2.02E-02
564849.2	4187943	0.01	0.02	2.15E-02
564863.4	4187934	0.01	0.02	2.23E-02
564877.6	4187925	0.01	0.02	2.24E-02
564805.8	4188048	0.00	0.02	1.54E-02
564797.5	4188031	0.00	0.01	1.47E-02
564800	4188022	0.00	0.02	1.53E-02
564802.4	4188013	0.00	0.02	1.60E-02
564804.9	4188005	0.00	0.02	1.65E-02
564807.4	4187996	0.00	0.02	1.70E-02
564809.9	4187987	0.00	0.02	1.73E-02
564812.3	4187978	0.00	0.02	1.76E-02
564814.8	4187969	0.00	0.02	1.78E-02
564817.3	4187960	0.00	0.02	1.78E-02
564827.5	4187946	0.01	0.02	1.84E-02
564835.2	4187941	0.01	0.02	1.91E-02
564842.9	4187936	0.01	0.02	1.96E-02
564850.6	4187931	0.01	0.02	2.00E-02
564858.3	4187926	0.01	0.02	2.03E-02
564866	4187921	0.01	0.02	2.04E-02
564873.7	4187916	0.01	0.02	2.03E-02
564795	4188040	0.00	0.01	1.40E-02
564795.9	4188049	0.00	0.01	1.38E-02
564796.7	4188059	0.00	0.01	1.36E-02
564787.5	4188032	0.00	0.01	1.32E-02
564789.9	4188023	0.00	0.01	1.38E-02
564792.3	4188015	0.00	0.01	1.43E-02
564797.2	4187997	0.00	0.02	1.53E-02
564799.6	4187989	0.00	0.02	1.56E-02
564804.4	4187971	0.00	0.02	1.62E-02
564806.9	4187963	0.00	0.02	1.63E-02
564819.2	4187941	0.00	0.02	1.68E-02
564834.3	4187931	0.00	0.02	1.79E-02
564841.9	4187926	0.01	0.02	1.82E-02
564857	4187916	0.01	0.02	1.86E-02
564872.1	4187906	0.01	0.02	1.84E-02
564785.9	4188050	0.00	0.01	1.25E-02
564786.7	4188059	0.00	0.01	1.23E-02
564777.5	4188033	0.00	0.01	1.20E-02
564782.2	4188016	0.00	0.01	1.29E-02
564787	4187999	0.00	0.01	1.38E-02
564789.4	4187991	0.00	0.01	1.42E-02
564794.1	4187974	0.00	0.01	1.48E-02
564798.9	4187957	0.00	0.02	1.50E-02
564811.1	4187935	0.00	0.02	1.55E-02
564825.9	4187925	0.00	0.02	1.64E-02
564840.7	4187915	0.00	0.02	1.69E-02
564855.5	4187906	0.00	0.02	1.71E-02
564870.4	4187896	0.00	0.02	1.68E-02
564775.9	4188051	0.00	0.01	1.14E-02
564776.8	4188060	0.00	0.01	1.12E-02
564767.5	4188034	0.00	0.01	1.09E-02
564772.2	4188017	0.00	0.01	1.18E-02
564776.9	4188001	0.00	0.01	1.26E-02
564781.5	4187984	0.00	0.01	1.32E-02
564786.2	4187967	0.00	0.01	1.37E-02
564790.9	4187950	0.00	0.01	1.39E-02
564802.9	4187929	0.00	0.01	1.43E-02
564817.5	4187919	0.00	0.02	1.51E-02
564832.1	4187910	0.00	0.02	1.56E-02
564846.7	4187900	0.00	0.02	1.58E-02
564861.3	4187891	0.00	0.02	1.55E-02
564766	4188052	0.00	0.01	1.04E-02
564766.8	4188061	0.00	0.01	1.02E-02
564762.6	4188017	0.00	0.01	1.08E-02
564765.1	4188008	0.00	0.01	1.12E-02
564767.6	4187999	0.00	0.01	1.16E-02
564770.1	4187990	0.00	0.01	1.19E-02
564772.6	4187981	0.00	0.01	1.23E-02
564775.1	4187972	0.00	0.01	1.25E-02
564777.6	4187963	0.00	0.01	1.27E-02
564780.1	4187954	0.00	0.01	1.29E-02

564782.6	4187946	0.00	0.01	1.29E-02
564785	4187937	0.00	0.01	1.29E-02
564795.3	4187923	0.00	0.01	1.33E-02
564803	4187918	0.00	0.01	1.37E-02
564810.8	4187913	0.00	0.01	1.40E-02
564818.5	4187908	0.00	0.01	1.43E-02
564826.3	4187903	0.00	0.01	1.45E-02
564834.1	4187898	0.00	0.01	1.46E-02
564841.8	4187892	0.00	0.01	1.46E-02
564849.6	4187887	0.00	0.01	1.45E-02
564857.3	4187882	0.00	0.01	1.43E-02
564865.1	4187877	0.00	0.01	1.41E-02
564767.2	4187966	0.00	0.01	1.17E-02
564769.7	4187957	0.00	0.01	1.19E-02
564772.1	4187948	0.00	0.01	1.20E-02
564774.6	4187939	0.00	0.01	1.20E-02
564777	4187931	0.00	0.01	1.20E-02
564787.1	4187917	0.00	0.01	1.23E-02
564802.3	4187907	0.00	0.01	1.30E-02
564810	4187902	0.00	0.01	1.33E-02
564817.6	4187897	0.00	0.01	1.35E-02
564825.2	4187892	0.00	0.01	1.35E-02
564840.5	4187882	0.00	0.01	1.35E-02
564848.1	4187877	0.00	0.01	1.34E-02
564855.7	4187872	0.00	0.01	1.32E-02
564863.3	4187867	0.00	0.01	1.30E-02
564737.7	4188037	0.00	0.01	8.52E-03
564742.5	4188019	0.00	0.01	9.15E-03
564778.9	4187911	0.00	0.01	1.15E-02
564786.4	4187906	0.00	0.01	1.19E-02
564801.5	4187896	0.00	0.01	1.24E-02
564816.5	4187887	0.00	0.01	1.26E-02
564831.5	4187877	0.00	0.01	1.26E-02
564846.5	4187867	0.00	0.01	1.24E-02
564861.6	4187857	0.00	0.01	1.20E-02
564735.3	4188045	0.00	0.01	8.22E-03
564736.1	4188055	0.00	0.01	8.10E-03
564739.4	4188092	0.00	0.01	7.59E-03
564727.7	4188038	0.00	0.01	7.90E-03
564730.1	4188029	0.00	0.01	8.17E-03
564734.8	4188012	0.00	0.01	8.74E-03
564739.6	4187995	0.00	0.01	9.29E-03
564744.3	4187978	0.00	0.01	9.78E-03
564749.1	4187961	0.00	0.01	1.02E-02
564785.6	4187896	0.00	0.01	1.13E-02
564800.4	4187886	0.00	0.01	1.17E-02
564815.2	4187876	0.00	0.01	1.18E-02
564830.1	4187867	0.00	0.01	1.17E-02
564844.9	4187857	0.00	0.01	1.15E-02
564859.7	4187847	0.00	0.01	1.11E-02
564726.1	4188055	0.00	0.01	7.53E-03
564729.5	4188093	0.00	0.01	7.07E-03
564717.8	4188038	0.00	0.01	7.36E-03
564720.3	4188029	0.00	0.01	7.62E-03
564722.8	4188020	0.00	0.01	7.89E-03
564725.3	4188011	0.00	0.01	8.16E-03
564727.8	4188002	0.00	0.01	8.42E-03
564730.3	4187993	0.00	0.01	8.69E-03
564732.8	4187984	0.00	0.01	8.94E-03
564735.3	4187976	0.00	0.01	9.16E-03
564737.8	4187967	0.00	0.01	9.35E-03
564740.3	4187958	0.00	0.01	9.52E-03
564742.8	4187949	0.00	0.01	9.67E-03
564745.3	4187940	0.00	0.01	9.79E-03
564747.8	4187931	0.00	0.01	9.86E-03
564750.3	4187922	0.00	0.01	9.88E-03
564752.8	4187913	0.00	0.01	9.86E-03
564778.6	4187889	0.00	0.01	1.06E-02
564786.4	4187884	0.00	0.01	1.08E-02
564794.2	4187879	0.00	0.01	1.09E-02
564802	4187874	0.00	0.01	1.10E-02
564809.8	4187869	0.00	0.01	1.11E-02
564817.6	4187864	0.00	0.01	1.10E-02
564825.4	4187859	0.00	0.01	1.10E-02
564833.1	4187853	0.00	0.01	1.09E-02
564840.9	4187848	0.00	0.01	1.07E-02
564848.7	4187843	0.00	0.01	1.06E-02
564856.5	4187838	0.00	0.01	1.04E-02
564864.3	4187833	0.00	0.01	1.01E-02
564715.3	4188047	0.00	0.01	7.11E-03
564719.5	4188094	0.00	0.01	6.60E-03
564707.8	4188039	0.00	0.01	6.86E-03
564710.3	4188030	0.00	0.01	7.09E-03
564712.8	4188021	0.00	0.01	7.33E-03
564715.2	4188013	0.00	0.01	7.57E-03
564717.7	4188004	0.00	0.01	7.82E-03
564720.2	4187995	0.00	0.01	8.06E-03
564722.6	4187986	0.00	0.01	8.29E-03
564725.1	4187977	0.00	0.01	8.50E-03
564727.5	4187969	0.00	0.01	8.69E-03
564730	4187960	0.00	0.01	8.86E-03
564732.5	4187951	0.00	0.01	9.01E-03
564734.9	4187942	0.00	0.01	9.13E-03
564737.4	4187933	0.00	0.01	9.23E-03
564739.8	4187925	0.00	0.01	9.29E-03
564742.3	4187916	0.00	0.01	9.30E-03
564744.8	4187907	0.00	0.01	9.27E-03
564754.9	4187893	0.00	0.01	9.50E-03
564777.9	4187878	0.00	0.01	1.01E-02
564785.6	4187873	0.00	0.01	1.02E-02
564793.3	4187868	0.00	0.01	1.03E-02
564801	4187863	0.00	0.01	1.04E-02
564808.6	4187858	0.00	0.01	1.04E-02
564816.3	4187853	0.00	0.01	1.04E-02
564824	4187848	0.00	0.01	1.03E-02
564831.7	4187843	0.00	0.01	1.02E-02
564839.3	4187838	0.00	0.01	1.00E-02
564847	4187833	0.00	0.01	9.84E-03
564854.7	4187828	0.00	0.01	9.63E-03
564862.4	4187823	0.00	0.01	9.41E-03
564705.4	4188048	0.00	0.01	6.64E-03
564709.5	4188095	0.00	0.01	6.18E-03
564697.9	4188040	0.00	0.01	6.41E-03

564702.7	4188023	0.00	0.01	6.83E-03
564705.1	4188014	0.00	0.01	7.05E-03
564707.6	4188005	0.00	0.01	7.27E-03
564710	4187997	0.00	0.01	7.49E-03
564714.9	4187979	0.00	0.01	7.91E-03
564717.3	4187970	0.00	0.01	8.09E-03
564719.7	4187962	0.00	0.01	8.26E-03
564722.2	4187953	0.00	0.01	8.41E-03
564727	4187936	0.00	0.01	8.64E-03
564729.5	4187927	0.00	0.01	8.71E-03
564731.9	4187918	0.00	0.01	8.76E-03
564734.3	4187910	0.00	0.01	8.77E-03
564736.7	4187901	0.00	0.01	8.74E-03
564746.8	4187887	0.00	0.01	8.94E-03
564754.3	4187882	0.00	0.01	9.16E-03
564792.2	4187858	0.00	0.01	9.78E-03
564799.8	4187853	0.00	0.01	9.79E-03
564815	4187843	0.00	0.01	9.72E-03
564822.5	4187838	0.00	0.01	9.63E-03
564837.7	4187828	0.00	0.01	9.36E-03
564845.3	4187823	0.00	0.01	9.18E-03
564860.4	4187813	0.00	0.01	8.77E-03
564695.4	4188049	0.00	0.01	6.21E-03
564699.6	4188095	0.00	0.01	5.80E-03
564692.7	4188024	0.00	0.01	6.38E-03
564695.1	4188015	0.00	0.01	6.57E-03
564699.9	4187998	0.00	0.01	6.97E-03
564704.7	4187981	0.00	0.01	7.36E-03
564709.5	4187964	0.00	0.01	7.71E-03
564711.9	4187955	0.00	0.01	7.86E-03
564716.7	4187938	0.00	0.01	8.09E-03
564721.5	4187921	0.00	0.01	8.24E-03
564723.9	4187912	0.00	0.01	8.28E-03
564728.7	4187895	0.00	0.01	8.27E-03
564738.6	4187881	0.00	0.01	8.44E-03
564746.1	4187877	0.00	0.01	8.64E-03
564761.1	4187867	0.00	0.01	8.95E-03
564791.1	4187847	0.00	0.01	9.25E-03
564806	4187838	0.00	0.01	9.19E-03
564813.5	4187833	0.00	0.01	9.12E-03
564828.5	4187823	0.00	0.01	8.90E-03
564843.5	4187813	0.00	0.01	8.58E-03
564858.5	4187804	0.00	0.01	8.20E-03
564689.6	4188096	0.00	0.01	5.46E-03
564695.5	4187979	0.00	0.01	6.95E-03
564698	4187970	0.00	0.01	7.12E-03
564700.5	4187961	0.00	0.01	7.28E-03
564703	4187952	0.00	0.01	7.43E-03
564705.5	4187943	0.00	0.01	7.55E-03
564708	4187934	0.00	0.01	7.66E-03
564710.5	4187925	0.00	0.01	7.74E-03
564713	4187916	0.00	0.01	7.80E-03
564715.6	4187907	0.00	0.01	7.85E-03
564718.1	4187898	0.00	0.01	7.86E-03
564720.6	4187889	0.00	0.01	7.84E-03
564730.9	4187875	0.00	0.01	8.01E-03
564738.7	4187870	0.00	0.01	8.19E-03
564746.5	4187865	0.00	0.01	8.35E-03
564754.3	4187860	0.00	0.01	8.49E-03
564762.1	4187855	0.00	0.01	8.61E-03
564785.5	4187840	0.00	0.01	8.76E-03
564793.3	4187835	0.00	0.01	8.74E-03
564801.1	4187830	0.00	0.01	8.68E-03
564808.9	4187825	0.00	0.01	8.60E-03
564816.7	4187820	0.00	0.01	8.50E-03
564824.5	4187814	0.00	0.01	8.38E-03
564832.3	4187809	0.00	0.01	8.24E-03
564840.1	4187804	0.00	0.01	8.07E-03
564847.9	4187799	0.00	0.01	7.89E-03
564855.7	4187794	0.00	0.01	7.70E-03
564679.7	4188097	0.00	0.01	5.15E-03
564692.7	4187954	0.00	0.01	6.96E-03
564695.2	4187945	0.00	0.01	7.09E-03
564697.7	4187936	0.00	0.01	7.20E-03
564700.2	4187928	0.00	0.01	7.29E-03
564702.6	4187919	0.00	0.01	7.36E-03
564705.1	4187910	0.00	0.01	7.42E-03
564707.6	4187901	0.00	0.01	7.45E-03
564710.1	4187892	0.00	0.01	7.46E-03
564712.5	4187883	0.00	0.01	7.45E-03
564722.7	4187869	0.00	0.01	7.60E-03
564730.4	4187864	0.00	0.01	7.77E-03
564738.1	4187859	0.00	0.01	7.92E-03
564745.8	4187854	0.00	0.01	8.05E-03
564753.6	4187849	0.00	0.01	8.16E-03
564761.3	4187844	0.00	0.01	8.24E-03
564784.4	4187829	0.00	0.01	8.29E-03
564792.1	4187824	0.00	0.01	8.25E-03
564799.8	4187819	0.00	0.01	8.18E-03
564807.5	4187814	0.00	0.01	8.09E-03
564815.2	4187809	0.00	0.01	7.99E-03
564822.9	4187804	0.00	0.01	7.87E-03
564830.7	4187799	0.00	0.01	7.73E-03
564838.4	4187794	0.00	0.01	7.57E-03
564846.1	4187789	0.00	0.01	7.40E-03
564853.8	4187784	0.00	0.01	7.23E-03
564689.8	4187930	0.00	0.01	6.87E-03
564692.3	4187921	0.00	0.01	6.95E-03
564694.7	4187912	0.00	0.01	7.02E-03
564697.2	4187904	0.00	0.01	7.07E-03
564699.6	4187895	0.00	0.01	7.10E-03
564702.1	4187886	0.00	0.01	7.10E-03
564704.5	4187877	0.00	0.01	7.09E-03
564714.6	4187864	0.00	0.01	7.22E-03
564722.2	4187859	0.00	0.01	7.38E-03
564737.4	4187849	0.00	0.01	7.64E-03
564745.1	4187844	0.00	0.01	7.75E-03
564752.7	4187839	0.00	0.01	7.82E-03
564760.3	4187834	0.00	0.01	7.87E-03
564790.8	4187814	0.00	0.01	7.79E-03
564798.5	4187809	0.00	0.01	7.71E-03
564813.7	4187799	0.00	0.01	7.51E-03
564821.3	4187794	0.00	0.01	7.39E-03

564829	4187789	0.00	0.01	7.26E-03
564836.6	4187784	0.00	0.01	7.11E-03
564851.8	4187774	0.00	0.01	6.80E-03
564684.4	4187915	0.00	0.01	6.64E-03
564689.2	4187897	0.00	0.01	6.74E-03
564691.6	4187889	0.00	0.01	6.76E-03
564696.5	4187871	0.00	0.01	6.75E-03
564706.4	4187858	0.00	0.01	6.87E-03
564714	4187853	0.00	0.01	7.01E-03
564721.5	4187848	0.00	0.01	7.14E-03
564736.6	4187838	0.00	0.01	7.36E-03
564751.7	4187828	0.00	0.01	7.48E-03
564759.3	4187823	0.00	0.01	7.50E-03
564789.5	4187804	0.00	0.01	7.37E-03
564797	4187799	0.00	0.01	7.28E-03
564812.1	4187789	0.00	0.01	7.08E-03
564827.2	4187779	0.00	0.01	6.84E-03
564842.3	4187769	0.00	0.01	6.55E-03
564849.9	4187765	0.00	0.01	6.40E-03
564680.8	4187893	0.00	0.01	6.43E-03
564683.3	4187884	0.00	0.01	6.45E-03
564685.8	4187875	0.00	0.01	6.46E-03
564688.3	4187866	0.00	0.01	6.44E-03
564698.6	4187852	0.00	0.01	6.56E-03
564706.5	4187846	0.00	0.01	6.69E-03
564714.3	4187841	0.00	0.01	6.81E-03
564722.1	4187836	0.00	0.01	6.92E-03
564729.9	4187831	0.00	0.01	7.01E-03
564737.7	4187826	0.00	0.01	7.08E-03
564745.6	4187821	0.00	0.01	7.13E-03
564753.4	4187816	0.00	0.01	7.15E-03
564761.2	4187811	0.00	0.01	7.14E-03
564792.5	4187791	0.00	0.01	6.92E-03
564800.3	4187786	0.00	0.01	6.82E-03
564808.1	4187781	0.00	0.01	6.71E-03
564815.9	4187775	0.00	0.01	6.60E-03
564823.7	4187770	0.00	0.01	6.47E-03
564831.6	4187765	0.00	0.01	6.33E-03
564839.4	4187760	0.00	0.01	6.19E-03
564847.2	4187755	0.00	0.01	6.05E-03
564677.8	4187868	0.00	0.01	6.17E-03
564680.3	4187860	0.00	0.01	6.16E-03
564690.5	4187846	0.00	0.01	6.26E-03
564698.2	4187841	0.00	0.01	6.39E-03
564706	4187836	0.00	0.01	6.49E-03
564713.7	4187831	0.00	0.01	6.59E-03
564721.4	4187826	0.00	0.01	6.67E-03
564729.2	4187821	0.00	0.01	6.74E-03
564736.9	4187816	0.00	0.01	6.79E-03
564744.7	4187811	0.00	0.01	6.81E-03
564752.4	4187806	0.00	0.01	6.81E-03
564760.1	4187801	0.00	0.01	6.80E-03
564767.9	4187795	0.00	0.01	6.76E-03
564791.1	4187780	0.00	0.01	6.55E-03
564798.8	4187775	0.00	0.01	6.45E-03
564806.5	4187770	0.00	0.01	6.34E-03
564814.3	4187765	0.00	0.01	6.23E-03
564822	4187760	0.00	0.01	6.10E-03
564829.8	4187755	0.00	0.01	5.97E-03
564837.5	4187750	0.00	0.01	5.84E-03
564845.2	4187745	0.00	0.01	5.71E-03
564682.4	4187840	0.00	0.01	5.99E-03
564690	4187835	0.00	0.01	6.10E-03
564697.7	4187830	0.00	0.01	6.20E-03
564705.4	4187825	0.00	0.01	6.29E-03
564713	4187820	0.00	0.01	6.36E-03
564720.7	4187815	0.00	0.01	6.42E-03
564728.3	4187810	0.00	0.01	6.47E-03
564736	4187805	0.00	0.01	6.50E-03
564743.7	4187800	0.00	0.01	6.51E-03
564751.3	4187795	0.00	0.01	6.50E-03
564759	4187790	0.00	0.01	6.47E-03
564789.6	4187770	0.00	0.01	6.20E-03
564797.3	4187765	0.00	0.01	6.10E-03
564804.9	4187760	0.00	0.01	6.00E-03
564812.6	4187755	0.00	0.01	5.89E-03
564820.3	4187750	0.00	0.01	5.77E-03
564827.9	4187745	0.00	0.01	5.65E-03
564843.2	4187735	0.00	0.01	5.41E-03
564674.2	4187834	0.00	0.01	5.72E-03
564681.8	4187829	0.00	0.01	5.83E-03
564689.4	4187824	0.00	0.01	5.93E-03
564704.6	4187814	0.00	0.01	6.08E-03
564712.2	4187809	0.00	0.01	6.13E-03
564727.4	4187799	0.00	0.01	6.20E-03
564735	4187795	0.00	0.01	6.22E-03
564742.6	4187790	0.00	0.01	6.22E-03
564757.8	4187780	0.00	0.01	6.16E-03
564765.3	4187775	0.00	0.01	6.10E-03
564795.7	4187755	0.00	0.01	5.78E-03
564810.9	4187745	0.00	0.01	5.58E-03
564818.5	4187740	0.00	0.01	5.46E-03
564833.7	4187730	0.00	0.01	5.24E-03
564841.3	4187726	0.00	0.01	5.13E-03
564674.3	4187823	0.00	0.01	5.59E-03
564682.1	4187818	0.00	0.01	5.68E-03
564689.9	4187813	0.00	0.01	5.76E-03
564697.7	4187808	0.00	0.01	5.82E-03
564705.6	4187802	0.00	0.01	5.87E-03
564713.4	4187797	0.00	0.01	5.91E-03
564721.2	4187792	0.00	0.01	5.94E-03
564729.1	4187787	0.00	0.01	5.95E-03
564736.9	4187782	0.00	0.01	5.94E-03
564744.7	4187777	0.00	0.01	5.93E-03
564752.5	4187772	0.00	0.01	5.89E-03
564760.4	4187767	0.00	0.01	5.83E-03
564768.2	4187762	0.00	0.01	5.77E-03
564799.5	4187741	0.00	0.01	5.42E-03
564807.3	4187736	0.00	0.01	5.31E-03
564815.2	4187731	0.00	0.01	5.21E-03
564823	4187726	0.00	0.01	5.10E-03
564830.8	4187721	0.00	0.00	4.99E-03
564838.7	4187716	0.00	0.00	4.88E-03

564673.8	4187812	0.00	0.01	5.44E-03
564681.6	4187807	0.00	0.01	5.52E-03
564689.3	4187802	0.00	0.01	5.58E-03
564697.1	4187797	0.00	0.01	5.63E-03
564704.8	4187792	0.00	0.01	5.66E-03
564712.6	4187787	0.00	0.01	5.68E-03
564720.3	4187782	0.00	0.01	5.69E-03
564728.1	4187777	0.00	0.01	5.69E-03
564735.9	4187772	0.00	0.01	5.68E-03
564743.6	4187767	0.00	0.01	5.65E-03
564751.4	4187762	0.00	0.01	5.61E-03
564759.1	4187757	0.00	0.01	5.55E-03
564766.9	4187752	0.00	0.01	5.49E-03
564774.6	4187746	0.00	0.01	5.41E-03
564797.9	4187731	0.00	0.01	5.15E-03
564805.7	4187726	0.00	0.01	5.05E-03
564813.4	4187721	0.00	0.00	4.95E-03
564821.2	4187716	0.00	0.00	4.85E-03
564828.9	4187711	0.00	0.00	4.74E-03
564836.7	4187706	0.00	0.00	4.64E-03
564680.9	4187796	0.00	0.01	5.35E-03
564688.6	4187791	0.00	0.01	5.39E-03
564696.3	4187786	0.00	0.01	5.43E-03
564704	4187781	0.00	0.01	5.45E-03
564711.7	4187776	0.00	0.01	5.46E-03
564719.4	4187771	0.00	0.01	5.46E-03
564727	4187766	0.00	0.01	5.45E-03
564734.7	4187761	0.00	0.01	5.43E-03
564742.4	4187756	0.00	0.01	5.40E-03
564750.1	4187751	0.00	0.01	5.35E-03
564757.8	4187746	0.00	0.01	5.29E-03
564765.5	4187741	0.00	0.01	5.22E-03
564773.2	4187736	0.00	0.01	5.15E-03
564796.2	4187721	0.00	0.00	4.89E-03
564803.9	4187716	0.00	0.00	4.80E-03
564811.6	4187711	0.00	0.00	4.71E-03
564819.3	4187706	0.00	0.00	4.61E-03
564827	4187701	0.00	0.00	4.52E-03
564580.1	4188106	0.00	0.00	3.11E-03
564568.4	4188052	0.00	0.00	3.19E-03
564680.2	4187786	0.00	0.01	5.18E-03
564687.8	4187781	0.00	0.01	5.21E-03
564695.4	4187776	0.00	0.01	5.23E-03
564710.7	4187766	0.00	0.01	5.24E-03
564718.3	4187761	0.00	0.01	5.23E-03
564725.9	4187756	0.00	0.01	5.22E-03
564733.6	4187751	0.00	0.01	5.19E-03
564748.8	4187741	0.00	0.01	5.10E-03
564756.4	4187736	0.00	0.01	5.04E-03
564764.1	4187731	0.00	0.00	4.98E-03
564771.7	4187726	0.00	0.00	4.90E-03
564802.2	4187706	0.00	0.00	4.57E-03
564809.8	4187701	0.00	0.00	4.48E-03
564825.1	4187691	0.00	0.00	4.31E-03
564565.9	4188060	0.00	0.00	3.12E-03
564566.8	4188070	0.00	0.00	3.09E-03
564569.3	4188098	0.00	0.00	3.01E-03
564570.1	4188107	0.00	0.00	2.98E-03
564558.5	4188052	0.00	0.00	3.06E-03
564673.4	4187779	0.00	0.00	4.98E-03
564681.2	4187774	0.00	0.01	5.01E-03
564689.1	4187769	0.00	0.01	5.03E-03
564696.9	4187763	0.00	0.01	5.04E-03
564704.7	4187758	0.00	0.01	5.04E-03
564712.6	4187753	0.00	0.01	5.03E-03
564720.4	4187748	0.00	0.01	5.01E-03
564728.2	4187743	0.00	0.00	4.98E-03
564736.1	4187738	0.00	0.00	4.94E-03
564743.9	4187733	0.00	0.00	4.90E-03
564751.8	4187728	0.00	0.00	4.84E-03
564759.6	4187723	0.00	0.00	4.77E-03
564767.4	4187718	0.00	0.00	4.70E-03
564775.3	4187713	0.00	0.00	4.62E-03
564798.8	4187697	0.00	0.00	4.38E-03
564806.6	4187692	0.00	0.00	4.29E-03
564814.5	4187687	0.00	0.00	4.21E-03
564822.3	4187682	0.00	0.00	4.12E-03
564556	4188061	0.00	0.00	2.99E-03
564556.8	4188071	0.00	0.00	2.96E-03
564557.6	4188080	0.00	0.00	2.94E-03
564558.5	4188089	0.00	0.00	2.91E-03
564559.3	4188099	0.00	0.00	2.88E-03
564560.1	4188108	0.00	0.00	2.86E-03
564548.5	4188053	0.00	0.00	2.93E-03
564551	4188044	0.00	0.00	2.99E-03
564672.7	4187768	0.00	0.00	4.82E-03
564680.5	4187763	0.00	0.00	4.84E-03
564688.2	4187758	0.00	0.00	4.85E-03
564696	4187753	0.00	0.00	4.85E-03
564703.8	4187748	0.00	0.00	4.84E-03
564711.6	4187743	0.00	0.00	4.82E-03
564719.3	4187738	0.00	0.00	4.80E-03
564727.1	4187733	0.00	0.00	4.77E-03
564734.9	4187728	0.00	0.00	4.73E-03
564742.6	4187723	0.00	0.00	4.68E-03
564750.4	4187718	0.00	0.00	4.62E-03
564758.2	4187713	0.00	0.00	4.55E-03
564766	4187708	0.00	0.00	4.48E-03
564773.7	4187702	0.00	0.00	4.41E-03
564804.8	4187682	0.00	0.00	4.10E-03
564812.6	4187677	0.00	0.00	4.02E-03
564820.4	4187672	0.00	0.00	3.94E-03
564546	4188062	0.00	0.00	2.87E-03
564546.8	4188071	0.00	0.00	2.84E-03
564547.7	4188081	0.00	0.00	2.82E-03
564548.5	4188090	0.00	0.00	2.79E-03
564549.3	4188099	0.00	0.00	2.77E-03
564550.2	4188109	0.00	0.00	2.74E-03
564538.5	4188054	0.00	0.00	2.81E-03
564541	4188045	0.00	0.00	2.87E-03
564545.9	4188028	0.00	0.00	3.00E-03
564548.4	4188019	0.00	0.00	3.07E-03
564550.9	4188010	0.00	0.00	3.14E-03

564553.4	4188001	0.00	0.00	3.21E-03
564555.8	4187992	0.00	0.00	3.28E-03
564558.3	4187983	0.00	0.00	3.36E-03
564560.8	4187974	0.00	0.00	3.43E-03
564563.3	4187966	0.00	0.00	3.51E-03
564565.7	4187957	0.00	0.00	3.58E-03
564671.9	4187757	0.00	0.00	4.66E-03
564679.6	4187752	0.00	0.00	4.67E-03
564687.3	4187747	0.00	0.00	4.67E-03
564695.1	4187742	0.00	0.00	4.67E-03
564702.8	4187737	0.00	0.00	4.65E-03
564710.5	4187732	0.00	0.00	4.63E-03
564718.2	4187727	0.00	0.00	4.60E-03
564725.9	4187722	0.00	0.00	4.56E-03
564733.6	4187717	0.00	0.00	4.52E-03
564741.3	4187712	0.00	0.00	4.47E-03
564749	4187707	0.00	0.00	4.41E-03
564756.7	4187702	0.00	0.00	4.35E-03
564764.5	4187697	0.00	0.00	4.28E-03
564772.2	4187692	0.00	0.00	4.21E-03
564779.9	4187687	0.00	0.00	4.14E-03
564803	4187672	0.00	0.00	3.92E-03
564810.7	4187667	0.00	0.00	3.84E-03
564818.4	4187662	0.00	0.00	3.77E-03
564536.1	4188063	0.00	0.00	2.75E-03
564536.9	4188072	0.00	0.00	2.73E-03
564537.7	4188082	0.00	0.00	2.71E-03
564538.6	4188091	0.00	0.00	2.68E-03
564539.4	4188100	0.00	0.00	2.66E-03
564540.2	4188110	0.00	0.00	2.64E-03
564528.6	4188055	0.00	0.00	2.70E-03
564531	4188046	0.00	0.00	2.75E-03
564535.9	4188029	0.00	0.00	2.87E-03
564538.4	4188020	0.00	0.00	2.93E-03
564540.8	4188011	0.00	0.00	3.00E-03
564543.3	4188002	0.00	0.00	3.07E-03
564545.7	4187994	0.00	0.00	3.13E-03
564548.2	4187985	0.00	0.00	3.20E-03
564550.6	4187976	0.00	0.00	3.28E-03
564553.1	4187967	0.00	0.00	3.35E-03
564555.6	4187958	0.00	0.00	3.42E-03
564558	4187950	0.00	0.00	3.49E-03
564560.5	4187941	0.00	0.00	3.56E-03
564562.9	4187932	0.00	0.00	3.63E-03
564565.4	4187923	0.00	0.00	3.70E-03
564678.7	4187742	0.00	0.00	4.51E-03
564686.4	4187737	0.00	0.00	4.50E-03
564701.7	4187727	0.00	0.00	4.47E-03
564709.3	4187722	0.00	0.00	4.44E-03
564717	4187717	0.00	0.00	4.41E-03
564724.6	4187712	0.00	0.00	4.37E-03
564732.3	4187707	0.00	0.00	4.32E-03
564739.9	4187702	0.00	0.00	4.27E-03
564755.2	4187692	0.00	0.00	4.15E-03
564762.9	4187687	0.00	0.00	4.09E-03
564770.6	4187682	0.00	0.00	4.02E-03
564778.2	4187677	0.00	0.00	3.96E-03
564801.2	4187662	0.00	0.00	3.75E-03
564816.5	4187652	0.00	0.00	3.61E-03
564526.1	4188064	0.00	0.00	2.64E-03
564526.9	4188073	0.00	0.00	2.62E-03
564527.8	4188083	0.00	0.00	2.60E-03
564528.6	4188092	0.00	0.00	2.58E-03
564529.4	4188101	0.00	0.00	2.56E-03
564530.3	4188111	0.00	0.00	2.54E-03
564904.8	4188090	0.02	0.06	5.58E-02
564897.8	4188097	0.01	0.04	4.32E-02
564906.9	4188110	0.01	0.04	4.10E-02
564890.8	4188105	0.01	0.03	3.48E-02
564884.8	4188092	0.01	0.04	3.69E-02
564899.9	4188117	0.01	0.03	3.29E-02
564883.2	4188110	0.01	0.03	2.89E-02
564876.1	4188095	0.01	0.03	3.08E-02
564892.9	4188124	0.01	0.03	2.72E-02
564905.3	4188136	0.01	0.03	2.56E-02
564876.3	4188118	0.01	0.02	2.43E-02
564869.4	4188103	0.01	0.03	2.59E-02
564886	4188131	0.01	0.02	2.30E-02
564898.3	4188143	0.01	0.02	2.17E-02
564869.4	4188125	0.01	0.02	2.08E-02
564862.6	4188111	0.01	0.02	2.21E-02
564855.8	4188096	0.01	0.02	2.29E-02
564879	4188138	0.01	0.02	1.97E-02
564891.3	4188150	0.01	0.02	1.87E-02
564862.5	4188132	0.00	0.02	1.81E-02
564855.8	4188118	0.01	0.02	1.92E-02
564849.1	4188104	0.01	0.02	1.99E-02
564872	4188145	0.00	0.02	1.72E-02
564884.3	4188157	0.00	0.02	1.63E-02
564855.6	4188140	0.00	0.02	1.59E-02
564848.9	4188126	0.00	0.02	1.68E-02
564842.3	4188112	0.00	0.02	1.74E-02
564835.7	4188098	0.00	0.02	1.77E-02
564865	4188153	0.00	0.02	1.51E-02
564877.3	4188165	0.00	0.01	1.44E-02
564848.2	4188146	0.00	0.01	1.41E-02
564841	4188131	0.00	0.01	1.50E-02
564833.7	4188115	0.00	0.02	1.56E-02
564826.4	4188100	0.00	0.02	1.58E-02
564858	4188160	0.00	0.01	1.34E-02
564870.4	4188172	0.00	0.01	1.28E-02
564841.3	4188153	0.00	0.01	1.26E-02
564834.2	4188138	0.00	0.01	1.34E-02
564827	4188123	0.00	0.01	1.39E-02
564819.9	4188108	0.00	0.01	1.41E-02
564851.1	4188167	0.00	0.01	1.20E-02
564863.4	4188179	0.00	0.01	1.15E-02
564834.4	4188161	0.00	0.01	1.13E-02
564827.4	4188146	0.00	0.01	1.20E-02
564820.3	4188131	0.00	0.01	1.25E-02
564813.3	4188116	0.00	0.01	1.27E-02
564806.2	4188101	0.00	0.01	1.28E-02
564844.1	4188174	0.00	0.01	1.08E-02

564856.4	4188186	0.00	0.01	1.04E-02
564827.5	4188168	0.00	0.01	1.03E-02
564820.5	4188153	0.00	0.01	1.08E-02
564813.6	4188139	0.00	0.01	1.13E-02
564806.6	4188124	0.00	0.01	1.15E-02
564799.7	4188109	0.00	0.01	1.16E-02
564837.1	4188181	0.00	0.01	9.80E-03
564849.4	4188193	0.00	0.01	9.43E-03
564820.5	4188175	0.00	0.01	9.34E-03
564813.6	4188161	0.00	0.01	9.86E-03
564806.8	4188146	0.00	0.01	1.03E-02
564799.9	4188132	0.00	0.01	1.05E-02
564793	4188117	0.00	0.01	1.06E-02
564786.1	4188103	0.00	0.01	1.06E-02
564830.1	4188188	0.00	0.01	8.93E-03
564842.4	4188200	0.00	0.01	8.61E-03
564813.3	4188182	0.00	0.01	8.57E-03
564806	4188166	0.00	0.01	9.05E-03
564798.6	4188151	0.00	0.01	9.42E-03
564791.3	4188136	0.00	0.01	9.65E-03
564784	4188120	0.00	0.01	9.74E-03
564776.6	4188105	0.00	0.01	9.74E-03
564823.1	4188196	0.00	0.01	8.19E-03
564835.4	4188208	0.00	0.01	7.90E-03
564806.4	4188189	0.00	0.01	7.87E-03
564799.1	4188174	0.00	0.01	8.30E-03
564791.9	4188159	0.00	0.01	8.63E-03
564784.7	4188143	0.00	0.01	8.85E-03
564777.4	4188128	0.00	0.01	8.97E-03
564770.2	4188113	0.00	0.01	8.99E-03
564816.1	4188203	0.00	0.01	7.54E-03
564828.5	4188215	0.00	0.01	7.28E-03
564799.4	4188196	0.00	0.01	7.26E-03
564792.3	4188181	0.00	0.01	7.64E-03
564785.1	4188166	0.00	0.01	7.94E-03
564778	4188151	0.00	0.01	8.16E-03
564770.8	4188136	0.00	0.01	8.28E-03
564763.7	4188121	0.00	0.01	8.32E-03
564756.5	4188106	0.00	0.01	8.28E-03
564809.2	4188210	0.00	0.01	6.97E-03
564821.5	4188222	0.00	0.01	6.73E-03
564792.5	4188204	0.00	0.01	6.72E-03
564785.4	4188189	0.00	0.01	7.06E-03
564778.3	4188174	0.00	0.01	7.34E-03
564771.3	4188159	0.00	0.01	7.54E-03
564764.2	4188144	0.00	0.01	7.67E-03
564757.1	4188129	0.00	0.01	7.73E-03
564750	4188114	0.00	0.01	7.70E-03
564802.2	4188217	0.00	0.01	6.46E-03
564814.5	4188229	0.00	0.01	6.25E-03
564785.5	4188211	0.00	0.01	6.24E-03
564778.5	4188196	0.00	0.01	6.55E-03
564771.5	4188181	0.00	0.01	6.80E-03
564764.5	4188167	0.00	0.01	7.00E-03
564757.5	4188152	0.00	0.01	7.13E-03
564750.5	4188137	0.00	0.01	7.20E-03
564743.5	4188122	0.00	0.01	7.19E-03
564736.5	4188108	0.00	0.01	7.14E-03
564795.2	4188224	0.00	0.01	6.01E-03
564807.5	4188236	0.00	0.01	5.82E-03
564778.4	4188218	0.00	0.01	5.83E-03
564771	4188202	0.00	0.01	6.12E-03
564763.7	4188187	0.00	0.01	6.36E-03
564756.3	4188171	0.00	0.01	6.55E-03
564748.9	4188156	0.00	0.01	6.67E-03
564741.6	4188140	0.00	0.01	6.73E-03
564734.2	4188125	0.00	0.01	6.72E-03
564726.9	4188109	0.00	0.01	6.67E-03
564788.2	4188231	0.00	0.01	5.60E-03
564800.5	4188243	0.00	0.01	5.43E-03
564771.4	4188225	0.00	0.01	5.44E-03
564764.2	4188210	0.00	0.01	5.71E-03
564756.9	4188194	0.00	0.01	5.94E-03
564749.6	4188179	0.00	0.01	6.11E-03
564742.3	4188164	0.00	0.01	6.23E-03
564735	4188148	0.00	0.01	6.29E-03
564727.8	4188133	0.00	0.01	6.30E-03
564720.5	4188118	0.00	0.01	6.27E-03
564781.2	4188239	0.00	0.01	5.24E-03
564793.6	4188251	0.00	0.01	5.09E-03
564764.5	4188232	0.00	0.01	5.10E-03
564757.3	4188217	0.00	0.01	5.35E-03
564750.1	4188202	0.00	0.01	5.55E-03
564742.9	4188187	0.00	0.01	5.72E-03
564735.6	4188171	0.00	0.01	5.83E-03
564728.4	4188156	0.00	0.01	5.89E-03
564721.2	4188141	0.00	0.01	5.92E-03
564714	4188126	0.00	0.01	5.90E-03
564706.8	4188111	0.00	0.01	5.86E-03
564774.3	4188246	0.00	0.00	4.92E-03
564786.6	4188258	0.00	0.00	4.78E-03
564757.5	4188239	0.00	0.00	4.80E-03
564750.4	4188224	0.00	0.01	5.02E-03
564743.2	4188209	0.00	0.01	5.21E-03
564736.1	4188194	0.00	0.01	5.36E-03
564728.9	4188179	0.00	0.01	5.47E-03
564721.8	4188164	0.00	0.01	5.54E-03
564714.6	4188149	0.00	0.01	5.56E-03
564707.5	4188134	0.00	0.01	5.56E-03
564700.3	4188119	0.00	0.01	5.54E-03
564767.3	4188253	0.00	0.00	4.63E-03
564779.6	4188265	0.00	0.00	4.49E-03
564750.6	4188247	0.00	0.00	4.52E-03
564743.5	4188232	0.00	0.00	4.72E-03
564736.4	4188217	0.00	0.00	4.89E-03
564729.3	4188202	0.00	0.01	5.03E-03
564722.2	4188187	0.00	0.01	5.14E-03
564715.1	4188172	0.00	0.01	5.21E-03
564708	4188157	0.00	0.01	5.25E-03
564700.9	4188142	0.00	0.01	5.25E-03
564693.8	4188127	0.00	0.01	5.24E-03
564686.8	4188112	0.00	0.01	5.20E-03
564760.3	4188260	0.00	0.00	4.36E-03

564772.6	4188272	0.00	0.00	4.24E-03
564714	4188191	0.00	0.00	4.86E-03
564706.6	4188176	0.00	0.00	4.93E-03
564701.6	4188296	0.00	0.00	3.12E-03
564694.3	4188281	0.00	0.00	3.25E-03
564686.9	4188266	0.00	0.00	3.36E-03
564711.4	4188310	0.00	0.00	3.02E-03
564694.6	4188304	0.00	0.00	2.98E-03
564687.4	4188288	0.00	0.00	3.10E-03
564680.1	4188273	0.00	0.00	3.20E-03
564672.8	4188258	0.00	0.00	3.30E-03
564704.4	4188317	0.00	0.00	2.89E-03
564687.7	4188311	0.00	0.00	2.84E-03
564680.5	4188296	0.00	0.00	2.95E-03
564673.2	4188280	0.00	0.00	3.06E-03
564666	4188265	0.00	0.00	3.14E-03
564697.5	4188324	0.00	0.00	2.76E-03
564709.8	4188336	0.00	0.00	2.69E-03
564680.7	4188318	0.00	0.00	2.72E-03
564673.5	4188303	0.00	0.00	2.82E-03
564666.4	4188288	0.00	0.00	2.92E-03
564659.2	4188273	0.00	0.00	3.00E-03
564652	4188257	0.00	0.00	3.07E-03
564630.4	4188212	0.00	0.00	3.20E-03
564623.2	4188197	0.00	0.00	3.21E-03
564616	4188182	0.00	0.00	3.21E-03
564608.8	4188167	0.00	0.00	3.21E-03
564601.6	4188152	0.00	0.00	3.19E-03
564594.4	4188136	0.00	0.00	3.17E-03
564587.2	4188121	0.00	0.00	3.14E-03
564690.5	4188332	0.00	0.00	2.64E-03
564702.8	4188344	0.00	0.00	2.58E-03
564673.8	4188325	0.00	0.00	2.60E-03
564666.6	4188310	0.00	0.00	2.70E-03
564659.5	4188295	0.00	0.00	2.79E-03
564652.3	4188280	0.00	0.00	2.87E-03
564645.2	4188265	0.00	0.00	2.94E-03
564638	4188250	0.00	0.00	2.99E-03
564630.9	4188235	0.00	0.00	3.03E-03
564623.7	4188220	0.00	0.00	3.06E-03
564616.6	4188205	0.00	0.00	3.08E-03
564609.4	4188190	0.00	0.00	3.08E-03
564602.3	4188175	0.00	0.00	3.08E-03
564595.1	4188160	0.00	0.00	3.07E-03
564588	4188145	0.00	0.00	3.05E-03
564580.8	4188130	0.00	0.00	3.02E-03
564683.5	4188339	0.00	0.00	2.53E-03
564695.8	4188351	0.00	0.00	2.47E-03
564666.7	4188332	0.00	0.00	2.50E-03
564659.3	4188317	0.00	0.00	2.59E-03
564652	4188301	0.00	0.00	2.68E-03
564644.6	4188286	0.00	0.00	2.76E-03
564637.3	4188270	0.00	0.00	2.82E-03
564629.9	4188255	0.00	0.00	2.87E-03
564622.6	4188239	0.00	0.00	2.91E-03
564615.3	4188224	0.00	0.00	2.94E-03
564607.9	4188208	0.00	0.00	2.95E-03
564600.6	4188193	0.00	0.00	2.96E-03
564593.2	4188177	0.00	0.00	2.95E-03
564585.9	4188162	0.00	0.00	2.94E-03
564578.5	4188147	0.00	0.00	2.92E-03
564571.2	4188131	0.00	0.00	2.90E-03
564676.5	4188346	0.00	0.00	2.42E-03
564688.8	4188358	0.00	0.00	2.37E-03
564659.7	4188339	0.00	0.00	2.40E-03
564652.4	4188324	0.00	0.00	2.49E-03
564645.1	4188309	0.00	0.00	2.57E-03
564637.8	4188293	0.00	0.00	2.64E-03
564630.5	4188278	0.00	0.00	2.70E-03
564623.2	4188263	0.00	0.00	2.75E-03
564615.9	4188247	0.00	0.00	2.79E-03
564608.6	4188232	0.00	0.00	2.82E-03
564601.3	4188216	0.00	0.00	2.84E-03
564594	4188201	0.00	0.00	2.84E-03
564586.7	4188186	0.00	0.00	2.84E-03
564579.4	4188170	0.00	0.00	2.83E-03
564572.1	4188155	0.00	0.00	2.81E-03
564564.8	4188140	0.00	0.00	2.79E-03
564557.5	4188124	0.00	0.00	2.77E-03
564669.5	4188353	0.00	0.00	2.33E-03
564681.9	4188365	0.00	0.00	2.28E-03
564652.8	4188347	0.00	0.00	2.30E-03
564645.5	4188331	0.00	0.00	2.39E-03
564638.2	4188316	0.00	0.00	2.46E-03
564631	4188301	0.00	0.00	2.53E-03
564623.7	4188285	0.00	0.00	2.59E-03
564616.5	4188270	0.00	0.00	2.64E-03
564609.2	4188255	0.00	0.00	2.68E-03
564601.9	4188240	0.00	0.00	2.71E-03
564594.7	4188224	0.00	0.00	2.73E-03
564587.4	4188209	0.00	0.00	2.73E-03
564580.2	4188194	0.00	0.00	2.73E-03
564572.9	4188178	0.00	0.00	2.72E-03
564565.6	4188163	0.00	0.00	2.71E-03
564558.4	4188148	0.00	0.00	2.69E-03
564551.1	4188133	0.00	0.00	2.67E-03
564662.6	4188360	0.00	0.00	2.24E-03
564674.9	4188372	0.00	0.00	2.19E-03
564645.8	4188354	0.00	0.00	2.21E-03
564638.6	4188339	0.00	0.00	2.29E-03
564631.4	4188323	0.00	0.00	2.37E-03
564624.1	4188308	0.00	0.00	2.43E-03
564616.9	4188293	0.00	0.00	2.49E-03
564609.7	4188278	0.00	0.00	2.54E-03
564602.5	4188263	0.00	0.00	2.57E-03
564595.3	4188247	0.00	0.00	2.60E-03
564588	4188232	0.00	0.00	2.62E-03
564580.8	4188217	0.00	0.00	2.63E-03
564573.6	4188202	0.00	0.00	2.63E-03
564566.4	4188187	0.00	0.00	2.62E-03
564559.1	4188171	0.00	0.00	2.61E-03
564551.9	4188156	0.00	0.00	2.60E-03
564544.7	4188141	0.00	0.00	2.58E-03

564537.5	4188126	0.00	0.00	2.56E-03
564655.6	4188367	0.00	0.00	2.15E-03
564667.9	4188379	0.00	0.00	2.11E-03
564956.2	4188102	0.03	0.11	1.11E-01
564972.8	4188101	0.04	0.14	1.41E-01
564973.5	4188111	0.03	0.09	9.09E-02
564974.2	4188121	0.02	0.06	6.21E-02
564943.6	4188150	0.01	0.03	2.55E-02
564959.6	4188152	0.01	0.03	2.59E-02
564944.3	4188160	0.01	0.02	2.12E-02
564913.6	4188149	0.01	0.02	2.22E-02
564960.3	4188162	0.01	0.02	2.14E-02
564976.9	4188161	0.01	0.02	2.28E-02
564945	4188170	0.00	0.02	1.80E-02
564914.3	4188159	0.01	0.02	1.91E-02
564961	4188172	0.00	0.02	1.80E-02
564977.6	4188171	0.01	0.02	1.90E-02
564945.7	4188180	0.00	0.02	1.54E-02
564915	4188169	0.00	0.02	1.65E-02
564899.7	4188163	0.00	0.02	1.66E-02
564961.7	4188182	0.00	0.02	1.54E-02
564978.3	4188181	0.00	0.02	1.61E-02
564946.4	4188190	0.00	0.01	1.34E-02
564915.7	4188179	0.00	0.01	1.44E-02
564900.4	4188173	0.00	0.01	1.47E-02
564962.4	4188192	0.00	0.01	1.33E-02
564979	4188191	0.00	0.01	1.38E-02
564947.1	4188200	0.00	0.01	1.17E-02
564916.4	4188189	0.00	0.01	1.27E-02
564901	4188183	0.00	0.01	1.30E-02
564885.7	4188177	0.00	0.01	1.30E-02
564963.1	4188202	0.00	0.01	1.16E-02
564979.7	4188201	0.00	0.01	1.20E-02
564947.8	4188210	0.00	0.01	1.03E-02
564901.7	4188193	0.00	0.01	1.15E-02
564886.4	4188187	0.00	0.01	1.17E-02
564963.8	4188212	0.00	0.01	1.02E-02
564980.4	4188211	0.00	0.01	1.06E-02
564948.5	4188220	0.00	0.01	9.17E-03
564902.4	4188203	0.00	0.01	1.03E-02
564887.1	4188197	0.00	0.01	1.05E-02
564871.7	4188192	0.00	0.01	1.05E-02
564964.5	4188222	0.00	0.01	9.08E-03
564981.1	4188221	0.00	0.01	9.33E-03
564949.2	4188230	0.00	0.01	8.21E-03
564903.1	4188213	0.00	0.01	9.24E-03
564887.8	4188207	0.00	0.01	9.46E-03
564872.4	4188202	0.00	0.01	9.55E-03
564965.2	4188232	0.00	0.01	8.12E-03
564981.8	4188231	0.00	0.01	8.33E-03
564949.9	4188240	0.00	0.01	7.38E-03
564903.8	4188223	0.00	0.01	8.33E-03
564888.5	4188217	0.00	0.01	8.56E-03
564873.1	4188212	0.00	0.01	8.69E-03
564857.8	4188206	0.00	0.01	8.71E-03
564965.9	4188242	0.00	0.01	7.31E-03
564982.5	4188241	0.00	0.01	7.49E-03
564950.6	4188250	0.00	0.01	6.67E-03
564904.5	4188233	0.00	0.01	7.54E-03
564889.2	4188227	0.00	0.01	7.77E-03
564873.8	4188222	0.00	0.01	7.93E-03
564858.5	4188216	0.00	0.01	7.99E-03
564966.5	4188252	0.00	0.01	6.61E-03
564983.2	4188251	0.00	0.01	6.78E-03
564951.3	4188260	0.00	0.01	6.07E-03
564905.2	4188243	0.00	0.01	6.85E-03
564889.9	4188237	0.00	0.01	7.07E-03
564874.5	4188232	0.00	0.01	7.24E-03
564859.2	4188226	0.00	0.01	7.34E-03
564843.8	4188220	0.00	0.01	7.35E-03
564967.2	4188262	0.00	0.01	6.02E-03
564983.9	4188261	0.00	0.01	6.16E-03
564951.9	4188270	0.00	0.01	5.55E-03
564905.9	4188253	0.00	0.01	6.25E-03
564890.6	4188247	0.00	0.01	6.46E-03
564875.2	4188242	0.00	0.01	6.64E-03
564859.9	4188236	0.00	0.01	6.75E-03
564844.5	4188230	0.00	0.01	6.80E-03
564967.9	4188272	0.00	0.01	5.50E-03
564984.6	4188271	0.00	0.01	5.63E-03
564952.6	4188280	0.00	0.01	5.10E-03
564906.6	4188263	0.00	0.01	5.73E-03
564891.2	4188257	0.00	0.01	5.93E-03
564875.9	4188252	0.00	0.01	6.10E-03
564860.5	4188246	0.00	0.01	6.23E-03
564845.2	4188240	0.00	0.01	6.30E-03
564829.8	4188235	0.00	0.01	6.31E-03
564968.6	4188282	0.00	0.01	5.06E-03
564985.3	4188281	0.00	0.01	5.17E-03
564907.3	4188273	0.00	0.01	5.26E-03
564891.9	4188267	0.00	0.01	5.45E-03
564876.6	4188262	0.00	0.01	5.62E-03
564861.2	4188256	0.00	0.01	5.75E-03
564845.9	4188250	0.00	0.01	5.84E-03
564830.5	4188245	0.00	0.01	5.87E-03
564969.3	4188292	0.00	0.00	4.66E-03
564985.9	4188291	0.00	0.00	4.76E-03
564908	4188283	0.00	0.00	4.85E-03
564892.6	4188277	0.00	0.01	5.02E-03
564877.3	4188272	0.00	0.01	5.19E-03
564861.9	4188266	0.00	0.01	5.32E-03
564846.6	4188260	0.00	0.01	5.42E-03
564831.2	4188255	0.00	0.01	5.47E-03
564815.9	4188249	0.00	0.01	5.48E-03
564970	4188302	0.00	0.00	4.31E-03
564986.6	4188301	0.00	0.00	4.40E-03
564924	4188298	0.00	0.00	4.33E-03
564908.7	4188293	0.00	0.00	4.49E-03
564893.3	4188287	0.00	0.00	4.65E-03
564878	4188282	0.00	0.00	4.80E-03
564862.6	4188276	0.00	0.00	4.93E-03
564847.3	4188270	0.00	0.01	5.03E-03
564831.9	4188265	0.00	0.01	5.10E-03

564816.6	4188259	0.00	0.01	5.13E-03
564970.7	4188312	0.00	0.00	4.00E-03
564987.3	4188311	0.00	0.00	4.08E-03
564924.7	4188308	0.00	0.00	4.02E-03
564909.4	4188303	0.00	0.00	4.17E-03
564894	4188297	0.00	0.00	4.31E-03
564878.7	4188291	0.00	0.00	4.45E-03
564863.3	4188286	0.00	0.00	4.58E-03
564848	4188280	0.00	0.00	4.69E-03
564832.6	4188275	0.00	0.00	4.76E-03
564817.3	4188269	0.00	0.00	4.81E-03
564801.9	4188263	0.00	0.00	4.81E-03
564971.4	4188322	0.00	0.00	3.73E-03
564988	4188321	0.00	0.00	3.80E-03
564925.4	4188318	0.00	0.00	3.75E-03
564910.1	4188313	0.00	0.00	3.87E-03
564894.7	4188307	0.00	0.00	4.01E-03
564879.4	4188301	0.00	0.00	4.14E-03
564864	4188296	0.00	0.00	4.26E-03
564848.7	4188290	0.00	0.00	4.37E-03
564833.3	4188285	0.00	0.00	4.45E-03
564818	4188279	0.00	0.00	4.51E-03
564802.6	4188273	0.00	0.00	4.52E-03
564972.1	4188332	0.00	0.00	3.48E-03
564988.7	4188331	0.00	0.00	3.54E-03
564926.1	4188328	0.00	0.00	3.50E-03
564910.8	4188323	0.00	0.00	3.61E-03
564895.4	4188317	0.00	0.00	3.73E-03
564880.1	4188311	0.00	0.00	3.86E-03
564864.7	4188306	0.00	0.00	3.98E-03
564849.4	4188300	0.00	0.00	4.08E-03
564834	4188295	0.00	0.00	4.17E-03
564818.7	4188289	0.00	0.00	4.23E-03
564803.3	4188283	0.00	0.00	4.26E-03
564788	4188278	0.00	0.00	4.26E-03
564972.8	4188342	0.00	0.00	3.26E-03
564989.4	4188341	0.00	0.00	3.31E-03
564926.8	4188338	0.00	0.00	3.27E-03
564911.4	4188333	0.00	0.00	3.38E-03
564896.1	4188327	0.00	0.00	3.49E-03
564880.7	4188321	0.00	0.00	3.60E-03
564865.4	4188316	0.00	0.00	3.72E-03
564850	4188310	0.00	0.00	3.82E-03
564834.7	4188305	0.00	0.00	3.90E-03
564819.4	4188299	0.00	0.00	3.97E-03
564804	4188293	0.00	0.00	4.01E-03
564788.7	4188288	0.00	0.00	4.03E-03
564973.5	4188352	0.00	0.00	3.05E-03
564990.1	4188351	0.00	0.00	3.11E-03
564896.8	4188337	0.00	0.00	3.27E-03
564881.4	4188331	0.00	0.00	3.37E-03
564866.1	4188326	0.00	0.00	3.48E-03
564850.7	4188320	0.00	0.00	3.58E-03
564835.4	4188314	0.00	0.00	3.66E-03
564820	4188309	0.00	0.00	3.73E-03
564804.7	4188303	0.00	0.00	3.78E-03
564974.2	4188362	0.00	0.00	2.87E-03
564990.8	4188361	0.00	0.00	2.92E-03
564882.1	4188341	0.00	0.00	3.16E-03
564866.8	4188336	0.00	0.00	3.26E-03
564851.4	4188330	0.00	0.00	3.36E-03
564836.1	4188324	0.00	0.00	3.44E-03
564820.7	4188319	0.00	0.00	3.51E-03
564974.9	4188372	0.00	0.00	2.70E-03
564991.5	4188371	0.00	0.00	2.75E-03
564867.5	4188346	0.00	0.00	3.07E-03
564852.1	4188340	0.00	0.00	3.15E-03
564836.8	4188334	0.00	0.00	3.24E-03
564975.6	4188382	0.00	0.00	2.55E-03
564992.2	4188381	0.00	0.00	2.59E-03
564976.2	4188392	0.00	0.00	2.41E-03
564992.9	4188391	0.00	0.00	2.45E-03
564976.9	4188402	0.00	0.00	2.28E-03
564993.6	4188401	0.00	0.00	2.32E-03
564764.9	4188376	0.00	0.00	2.43E-03
564765.6	4188386	0.00	0.00	2.32E-03
564750.2	4188380	0.00	0.00	2.35E-03
564704.2	4188364	0.00	0.00	2.38E-03
564781.6	4188402	0.00	0.00	2.17E-03
564766.3	4188396	0.00	0.00	2.21E-03
564750.9	4188390	0.00	0.00	2.24E-03
564735.6	4188385	0.00	0.00	2.26E-03
564720.2	4188379	0.00	0.00	2.28E-03
564704.9	4188374	0.00	0.00	2.28E-03
564797.7	4188417	0.00	0.00	2.03E-03
564782.3	4188412	0.00	0.00	2.07E-03
564767	4188406	0.00	0.00	2.11E-03
564751.6	4188400	0.00	0.00	2.14E-03
564736.3	4188395	0.00	0.00	2.17E-03
564720.9	4188389	0.00	0.00	2.19E-03
564705.6	4188384	0.00	0.00	2.19E-03
564690.2	4188378	0.00	0.00	2.19E-03
564859.8	4188450	0.00	0.00	1.75E-03
564813.7	4188433	0.00	0.00	1.89E-03
564798.4	4188427	0.00	0.00	1.94E-03
564783	4188422	0.00	0.00	1.98E-03
564767.7	4188416	0.00	0.00	2.02E-03
564752.3	4188410	0.00	0.00	2.05E-03
564737	4188405	0.00	0.00	2.07E-03
564721.6	4188399	0.00	0.00	2.10E-03
564706.3	4188393	0.00	0.00	2.11E-03
564690.9	4188388	0.00	0.00	2.11E-03
564983.5	4188104	0.04	0.13	1.31E-01
564965.5	4188117	0.02	0.07	6.92E-02
564803	4188439	0.00	0.00	1.84E-03
564781.8	4188438	0.00	0.00	1.84E-03
564789.9	4188443	0.00	0.00	1.80E-03
564798	4188447	0.00	0.00	1.77E-03
565007.3	4188115	0.02	0.08	8.37E-02
565018.6	4188103	0.04	0.13	1.33E-01
565023.9	4188094	0.05	0.17	1.72E-01
565029.2	4188086	0.06	0.21	2.07E-01
565034.5	4188078	0.06	0.23	2.32E-01

565039.8	4188070	0.07	0.25	2.47E-01
565045	4188062	0.07	0.26	2.57E-01
565050.3	4188054	0.07	0.26	2.57E-01
565015.7	4188121	0.02	0.07	6.69E-02
564996.3	4188128	0.01	0.05	5.27E-02
565027	4188108	0.03	0.10	9.80E-02
565037.6	4188092	0.04	0.15	1.48E-01
565042.9	4188084	0.05	0.17	1.68E-01
565048.2	4188075	0.05	0.18	1.82E-01
565053.4	4188067	0.05	0.19	1.91E-01
565058.7	4188059	0.05	0.19	1.94E-01
565024.1	4188126	0.02	0.05	5.48E-02
565012.1	4188135	0.01	0.04	4.37E-02
564998.7	4188138	0.01	0.04	3.99E-02
565035.4	4188113	0.02	0.08	7.58E-02
565051.3	4188089	0.03	0.13	1.26E-01
565056.6	4188081	0.04	0.14	1.38E-01
565061.8	4188073	0.04	0.15	1.47E-01
565067.1	4188064	0.04	0.15	1.51E-01
565031	4188132	0.01	0.04	4.47E-02
565023.5	4188138	0.01	0.04	3.96E-02
565015.9	4188143	0.01	0.03	3.49E-02
564999.2	4188147	0.01	0.03	3.15E-02
565038.6	4188127	0.01	0.05	5.03E-02
565043.8	4188119	0.02	0.06	6.10E-02
565059.7	4188094	0.03	0.10	9.73E-02
565065	4188086	0.03	0.11	1.08E-01
565070.2	4188078	0.03	0.12	1.15E-01
565075.5	4188070	0.03	0.12	1.20E-01
565025.2	4188148	0.01	0.03	3.10E-02
565068.1	4188100	0.02	0.08	7.75E-02
565073.4	4188092	0.02	0.09	8.58E-02
565078.6	4188083	0.03	0.09	9.25E-02
565083.9	4188075	0.03	0.10	9.72E-02
565034.3	4188153	0.01	0.03	2.76E-02
565020.2	4188163	0.01	0.02	2.27E-02
565076.5	4188105	0.02	0.06	6.33E-02
565081.8	4188097	0.02	0.07	6.99E-02
565087	4188089	0.02	0.08	7.56E-02
565092.3	4188081	0.02	0.08	7.98E-02
565043.1	4188158	0.01	0.02	2.47E-02
565029.3	4188168	0.01	0.02	2.08E-02
565084.9	4188111	0.01	0.05	5.29E-02
565090.2	4188102	0.02	0.06	5.81E-02
565095.4	4188094	0.02	0.06	6.28E-02
565100.7	4188086	0.02	0.07	6.65E-02
565048.9	4188165	0.01	0.02	2.16E-02
565041.1	4188171	0.01	0.02	1.97E-02
565033.4	4188176	0.00	0.02	1.80E-02
565025.6	4188182	0.00	0.02	1.64E-02
564989.6	4188183	0.00	0.02	1.57E-02
565093.3	4188116	0.01	0.04	4.49E-02
565098.6	4188108	0.01	0.05	4.92E-02
565103.8	4188100	0.01	0.05	5.31E-02
565109.1	4188091	0.02	0.06	5.63E-02
565058	4188170	0.01	0.02	1.96E-02
565050.4	4188176	0.00	0.02	1.81E-02
565042.9	4188181	0.00	0.02	1.67E-02
565035.3	4188186	0.00	0.02	1.53E-02
565001.9	4188195	0.00	0.01	1.34E-02
564992.7	4188193	0.00	0.01	1.36E-02
565101.7	4188121	0.01	0.04	3.87E-02
565107	4188113	0.01	0.04	4.22E-02
565112.3	4188105	0.01	0.05	4.55E-02
565117.5	4188097	0.01	0.05	4.83E-02
565066.9	4188175	0.00	0.02	1.80E-02
565059.5	4188181	0.00	0.02	1.67E-02
565052.1	4188186	0.00	0.02	1.54E-02
565044.7	4188191	0.00	0.01	1.43E-02
565037.4	4188196	0.00	0.01	1.33E-02
565013.7	4188206	0.00	0.01	1.16E-02
565004.7	4188204	0.00	0.01	1.17E-02
564995.7	4188203	0.00	0.01	1.19E-02
565089	4188160	0.01	0.02	2.21E-02
565110.1	4188127	0.01	0.03	3.37E-02
565115.4	4188119	0.01	0.04	3.66E-02
565120.7	4188111	0.01	0.04	3.94E-02
565125.9	4188102	0.01	0.04	4.18E-02
565090.1	4188170	0.01	0.02	1.88E-02
565075.7	4188180	0.00	0.02	1.65E-02
565061.2	4188191	0.00	0.01	1.43E-02
565046.7	4188201	0.00	0.01	1.25E-02
565016.2	4188215	0.00	0.01	1.03E-02
564998.6	4188213	0.00	0.01	1.05E-02
565102.7	4188157	0.01	0.02	2.22E-02
565118.5	4188132	0.01	0.03	2.96E-02
565123.8	4188124	0.01	0.03	3.21E-02
565129.1	4188116	0.01	0.03	3.45E-02
565134.3	4188108	0.01	0.04	3.66E-02
565097.9	4188176	0.00	0.02	1.69E-02
565090.1	4188182	0.00	0.02	1.59E-02
565082.3	4188187	0.00	0.01	1.48E-02
565074.4	4188193	0.00	0.01	1.38E-02
565066.6	4188198	0.00	0.01	1.29E-02
565058.7	4188204	0.00	0.01	1.20E-02
565050.9	4188210	0.00	0.01	1.12E-02
565017.8	4188225	0.00	0.01	9.18E-03
565008.3	4188224	0.00	0.01	9.26E-03
564998.8	4188222	0.00	0.01	9.34E-03
565105.8	4188170	0.00	0.02	1.80E-02
565111.1	4188162	0.01	0.02	1.99E-02
565121.6	4188146	0.01	0.02	2.41E-02
565126.9	4188138	0.01	0.03	2.63E-02
565132.2	4188130	0.01	0.03	2.84E-02
565137.5	4188121	0.01	0.03	3.04E-02
565142.7	4188113	0.01	0.03	3.22E-02
565106.5	4188181	0.00	0.02	1.55E-02
565098.8	4188187	0.00	0.01	1.45E-02
565091.2	4188192	0.00	0.01	1.37E-02
565083.5	4188198	0.00	0.01	1.28E-02
565075.8	4188203	0.00	0.01	1.20E-02
565068.1	4188209	0.00	0.01	1.13E-02
565060.4	4188214	0.00	0.01	1.06E-02

565020.4	4188235	0.00	0.01	8.25E-03
565011.1	4188233	0.00	0.01	8.31E-03
565001.7	4188232	0.00	0.01	8.37E-03
564992.4	4188231	0.00	0.01	8.43E-03
565114.2	4188176	0.00	0.02	1.64E-02
565130	4188151	0.01	0.02	2.16E-02
565135.3	4188143	0.01	0.02	2.34E-02
565140.6	4188135	0.01	0.03	2.52E-02
565145.9	4188127	0.01	0.03	2.70E-02
565151.1	4188119	0.01	0.03	2.86E-02
565115	4188187	0.00	0.01	1.42E-02
565107.5	4188192	0.00	0.01	1.34E-02
565100	4188197	0.00	0.01	1.26E-02
565092.4	4188203	0.00	0.01	1.19E-02
565084.9	4188208	0.00	0.01	1.12E-02
565077.3	4188213	0.00	0.01	1.06E-02
565069.8	4188219	0.00	0.01	9.97E-03
565062.3	4188224	0.00	0.01	9.38E-03
565039.6	4188240	0.00	0.01	7.84E-03
565022.9	4188244	0.00	0.01	7.45E-03
565013.8	4188243	0.00	0.01	7.51E-03
565004.6	4188242	0.00	0.01	7.56E-03
564995.4	4188241	0.00	0.01	7.61E-03
565122.6	4188181	0.00	0.01	1.49E-02
565138.4	4188157	0.01	0.02	1.94E-02
565143.7	4188149	0.01	0.02	2.10E-02
565149	4188140	0.01	0.02	2.26E-02
565154.3	4188132	0.01	0.02	2.41E-02
565159.5	4188124	0.01	0.03	2.55E-02
565123.6	4188192	0.00	0.01	1.31E-02
565116.1	4188197	0.00	0.01	1.24E-02
565108.7	4188203	0.00	0.01	1.17E-02
565101.3	4188208	0.00	0.01	1.11E-02
565093.9	4188213	0.00	0.01	1.05E-02
565086.4	4188218	0.00	0.01	9.93E-03
565079	4188224	0.00	0.01	9.40E-03
565071.6	4188229	0.00	0.01	8.88E-03
565041.9	4188250	0.00	0.01	7.10E-03
565025.4	4188254	0.00	0.01	6.77E-03
565016.4	4188253	0.00	0.01	6.82E-03
565007.4	4188252	0.00	0.01	6.86E-03
564998.4	4188250	0.00	0.01	6.90E-03
565141.6	4188170	0.00	0.02	1.63E-02
565146.8	4188162	0.00	0.02	1.76E-02
565152.1	4188154	0.01	0.02	1.90E-02
565157.4	4188146	0.01	0.02	2.03E-02
565162.7	4188138	0.01	0.02	2.16E-02
565167.9	4188129	0.01	0.02	2.29E-02
565131.5	4188198	0.00	0.01	1.20E-02
565123.6	4188203	0.00	0.01	1.14E-02
565115.7	4188209	0.00	0.01	1.08E-02
565107.8	4188215	0.00	0.01	1.02E-02
565099.9	4188220	0.00	0.01	9.64E-03
565092.1	4188226	0.00	0.01	9.11E-03
565084.2	4188231	0.00	0.01	8.60E-03
565076.3	4188237	0.00	0.01	8.12E-03
565052.6	4188254	0.00	0.01	6.85E-03
565044.7	4188260	0.00	0.01	6.48E-03
565027.2	4188264	0.00	0.01	6.18E-03
565017.6	4188262	0.00	0.01	6.23E-03
565008.1	4188261	0.00	0.01	6.27E-03
564998.5	4188260	0.00	0.01	6.30E-03
565150	4188176	0.00	0.01	1.49E-02
565155.2	4188168	0.00	0.02	1.61E-02
565160.5	4188159	0.00	0.02	1.72E-02
565165.8	4188151	0.01	0.02	1.84E-02
565171.1	4188143	0.01	0.02	1.96E-02
565176.3	4188135	0.01	0.02	2.07E-02
565140	4188203	0.00	0.01	1.12E-02
565132.3	4188209	0.00	0.01	1.06E-02
565124.5	4188214	0.00	0.01	1.01E-02
565116.8	4188220	0.00	0.01	9.57E-03
565109	4188225	0.00	0.01	9.07E-03
565101.3	4188231	0.00	0.01	8.59E-03
565093.5	4188236	0.00	0.01	8.14E-03
565085.7	4188242	0.00	0.01	7.71E-03
565054.7	4188264	0.00	0.01	6.23E-03
565047	4188269	0.00	0.01	5.91E-03
565029.8	4188274	0.00	0.01	5.66E-03
565020.3	4188272	0.00	0.01	5.71E-03
565010.9	4188271	0.00	0.01	5.74E-03
565001.5	4188270	0.00	0.01	5.77E-03
565153.1	4188189	0.00	0.01	1.27E-02
565158.4	4188181	0.00	0.01	1.37E-02
565163.6	4188173	0.00	0.01	1.47E-02
565168.9	4188165	0.00	0.02	1.58E-02
565174.2	4188157	0.00	0.02	1.68E-02
565179.5	4188148	0.00	0.02	1.78E-02
565184.7	4188140	0.01	0.02	1.88E-02
565140.9	4188214	0.00	0.01	9.93E-03
565133.3	4188219	0.00	0.01	9.46E-03
565125.6	4188225	0.00	0.01	9.00E-03
565118	4188230	0.00	0.01	8.55E-03
565110.3	4188236	0.00	0.01	8.12E-03
565102.7	4188241	0.00	0.01	7.71E-03
565095.1	4188246	0.00	0.01	7.33E-03
565087.4	4188252	0.00	0.01	6.96E-03
565064.5	4188268	0.00	0.01	5.99E-03
565056.8	4188274	0.00	0.01	5.70E-03
565049.2	4188279	0.00	0.01	5.42E-03
565032.3	4188283	0.00	0.01	5.21E-03
565023	4188282	0.00	0.01	5.25E-03
565013.7	4188281	0.00	0.01	5.28E-03
565004.4	4188279	0.00	0.01	5.31E-03
564995.1	4188278	0.00	0.01	5.33E-03
564976.5	4188275	0.00	0.01	5.38E-03
565161.5	4188195	0.00	0.01	1.17E-02
565166.8	4188187	0.00	0.01	1.26E-02
565172	4188178	0.00	0.01	1.35E-02
565177.3	4188170	0.00	0.01	1.45E-02
565182.6	4188162	0.00	0.02	1.54E-02
565187.9	4188154	0.00	0.02	1.63E-02
565193.2	4188146	0.00	0.02	1.72E-02

565149.5	4188219	0.00	0.01	9.30E-03
565142	4188224	0.00	0.01	8.88E-03
565134.4	4188230	0.00	0.01	8.47E-03
565126.9	4188235	0.00	0.01	8.07E-03
565119.4	4188241	0.00	0.01	7.69E-03
565111.8	4188246	0.00	0.01	7.32E-03
565104.3	4188251	0.00	0.01	6.97E-03
565096.7	4188257	0.00	0.01	6.64E-03
565066.6	4188278	0.00	0.01	5.49E-03
565059	4188284	0.00	0.01	5.23E-03
565051.5	4188289	0.00	0.00	4.99E-03
565034.8	4188293	0.00	0.00	4.81E-03
565025.6	4188292	0.00	0.00	4.84E-03
565016.4	4188290	0.00	0.00	4.88E-03
565007.3	4188289	0.00	0.00	4.90E-03
564998.1	4188288	0.00	0.00	4.92E-03
565175.2	4188192	0.00	0.01	1.17E-02
565180.4	4188184	0.00	0.01	1.25E-02
565185.7	4188176	0.00	0.01	1.33E-02
565191	4188167	0.00	0.01	1.41E-02
565196.3	4188159	0.00	0.01	1.50E-02
565149.2	4188231	0.00	0.01	8.28E-03
565141.3	4188236	0.00	0.01	7.90E-03
565133.4	4188242	0.00	0.01	7.52E-03
565125.5	4188248	0.00	0.01	7.16E-03
565117.6	4188253	0.00	0.01	6.81E-03
565109.7	4188259	0.00	0.01	6.49E-03
565101.7	4188265	0.00	0.01	6.18E-03
565070.1	4188287	0.00	0.01	5.09E-03
565062.1	4188293	0.00	0.00	4.86E-03
565054.2	4188298	0.00	0.00	4.63E-03
565036.7	4188303	0.00	0.00	4.46E-03
565027.1	4188301	0.00	0.00	4.49E-03
565017.4	4188300	0.00	0.00	4.52E-03
565007.8	4188299	0.00	0.00	4.54E-03
564998.2	4188297	0.00	0.00	4.56E-03
565194.1	4188181	0.00	0.01	1.23E-02
565199.4	4188173	0.00	0.01	1.31E-02
565204.7	4188165	0.00	0.01	1.38E-02
565165.8	4188230	0.00	0.01	8.16E-03
565158	4188236	0.00	0.01	7.81E-03
565150.2	4188241	0.00	0.01	7.47E-03
565142.4	4188247	0.00	0.01	7.13E-03
565134.6	4188253	0.00	0.01	6.80E-03
565126.8	4188258	0.00	0.01	6.49E-03
565118.9	4188264	0.00	0.01	6.19E-03
565111.1	4188269	0.00	0.01	5.91E-03
565103.3	4188275	0.00	0.01	5.64E-03
565079.9	4188291	0.00	0.00	4.92E-03
565072.1	4188297	0.00	0.00	4.70E-03
565064.3	4188303	0.00	0.00	4.50E-03
565056.5	4188308	0.00	0.00	4.30E-03
565039.2	4188312	0.00	0.00	4.14E-03
565029.7	4188311	0.00	0.00	4.17E-03
565020.2	4188310	0.00	0.00	4.20E-03
565010.7	4188308	0.00	0.00	4.22E-03
565001.2	4188307	0.00	0.00	4.24E-03
565166.7	4188241	0.00	0.01	7.37E-03
565159	4188247	0.00	0.01	7.07E-03
565151.3	4188252	0.00	0.01	6.76E-03
565143.6	4188258	0.00	0.01	6.47E-03
565135.8	4188263	0.00	0.01	6.19E-03
565128.1	4188269	0.00	0.01	5.92E-03
565120.4	4188274	0.00	0.01	5.66E-03
565112.7	4188280	0.00	0.01	5.41E-03
565081.9	4188301	0.00	0.00	4.55E-03
565074.2	4188307	0.00	0.00	4.36E-03
565066.5	4188312	0.00	0.00	4.18E-03
565058.7	4188318	0.00	0.00	4.00E-03
565041.7	4188322	0.00	0.00	3.86E-03
565032.3	4188321	0.00	0.00	3.89E-03
565022.9	4188319	0.00	0.00	3.91E-03
565013.6	4188318	0.00	0.00	3.93E-03
565004.2	4188317	0.00	0.00	3.95E-03
565175.3	4188246	0.00	0.01	6.96E-03
565167.7	4188252	0.00	0.01	6.69E-03
565160.1	4188257	0.00	0.01	6.42E-03
565152.5	4188263	0.00	0.01	6.15E-03
565144.9	4188268	0.00	0.01	5.90E-03
565137.2	4188273	0.00	0.01	5.65E-03
565129.6	4188279	0.00	0.01	5.42E-03
565122	4188284	0.00	0.01	5.20E-03
565114.4	4188290	0.00	0.00	4.98E-03
565091.5	4188306	0.00	0.00	4.40E-03
565083.9	4188311	0.00	0.00	4.22E-03
565076.3	4188317	0.00	0.00	4.05E-03
565068.7	4188322	0.00	0.00	3.89E-03
565061	4188328	0.00	0.00	3.74E-03
565044.1	4188332	0.00	0.00	3.61E-03
565034.9	4188331	0.00	0.00	3.63E-03
565025.6	4188329	0.00	0.00	3.65E-03
565016.4	4188328	0.00	0.00	3.67E-03
565007.1	4188327	0.00	0.00	3.69E-03
564997.8	4188325	0.00	0.00	3.70E-03
565176.4	4188257	0.00	0.01	6.34E-03
565168.9	4188262	0.00	0.01	6.10E-03
565161.4	4188268	0.00	0.01	5.86E-03
565153.8	4188273	0.00	0.01	5.62E-03
565146.3	4188278	0.00	0.01	5.40E-03
565138.7	4188284	0.00	0.01	5.19E-03
565131.2	4188289	0.00	0.00	4.98E-03
565123.7	4188295	0.00	0.00	4.78E-03
565101	4188311	0.00	0.00	4.25E-03
565093.5	4188316	0.00	0.00	4.09E-03
565085.9	4188321	0.00	0.00	3.93E-03
565078.4	4188327	0.00	0.00	3.78E-03
565070.9	4188332	0.00	0.00	3.64E-03
565063.3	4188337	0.00	0.00	3.50E-03
565046.6	4188342	0.00	0.00	3.38E-03
565037.4	4188340	0.00	0.00	3.40E-03
565028.3	4188339	0.00	0.00	3.42E-03
565019.1	4188338	0.00	0.00	3.44E-03
565009.9	4188336	0.00	0.00	3.45E-03

565000.8	4188335	0.00	0.00	3.46E-03
565243.6	4188178	0.00	0.01	1.07E-02
565183.6	4188263	0.00	0.01	5.97E-03
565175.8	4188269	0.00	0.01	5.74E-03
565168	4188274	0.00	0.01	5.51E-03
565160.1	4188280	0.00	0.01	5.29E-03
565152.3	4188286	0.00	0.01	5.08E-03
565144.4	4188291	0.00	0.00	4.88E-03
565136.6	4188297	0.00	0.00	4.68E-03
565128.7	4188302	0.00	0.00	4.50E-03
565105.2	4188319	0.00	0.00	4.00E-03
565097.4	4188325	0.00	0.00	3.84E-03
565089.5	4188330	0.00	0.00	3.69E-03
565081.7	4188336	0.00	0.00	3.55E-03
565073.8	4188341	0.00	0.00	3.42E-03
565066	4188347	0.00	0.00	3.29E-03
565048.6	4188351	0.00	0.00	3.18E-03
565039.1	4188350	0.00	0.00	3.20E-03
565029.5	4188349	0.00	0.00	3.21E-03
565020	4188347	0.00	0.00	3.23E-03
565010.5	4188346	0.00	0.00	3.24E-03
565001	4188344	0.00	0.00	3.25E-03
565246.7	4188192	0.00	0.01	9.53E-03
565252	4188184	0.00	0.01	9.96E-03
565184.6	4188274	0.00	0.01	5.47E-03
565176.9	4188279	0.00	0.01	5.26E-03
565169.1	4188285	0.00	0.01	5.06E-03
565107.1	4188329	0.00	0.00	3.72E-03
565099.3	4188335	0.00	0.00	3.58E-03
565091.5	4188340	0.00	0.00	3.45E-03
565083.8	4188346	0.00	0.00	3.32E-03
565076	4188351	0.00	0.00	3.20E-03
565068.3	4188357	0.00	0.00	3.09E-03
565051.1	4188361	0.00	0.00	2.99E-03
565041.7	4188360	0.00	0.00	3.01E-03
565032.2	4188358	0.00	0.00	3.02E-03
565022.8	4188357	0.00	0.00	3.04E-03
565013.4	4188356	0.00	0.00	3.05E-03
565003.9	4188354	0.00	0.00	3.06E-03
565255.1	4188197	0.00	0.01	8.93E-03
565260.4	4188189	0.00	0.01	9.33E-03
565193.4	4188279	0.00	0.01	5.22E-03
565185.7	4188285	0.00	0.01	5.03E-03
565178.1	4188290	0.00	0.00	4.84E-03
565116.6	4188334	0.00	0.00	3.60E-03
565109	4188339	0.00	0.00	3.47E-03
565101.3	4188345	0.00	0.00	3.35E-03
565093.6	4188350	0.00	0.00	3.23E-03
565085.9	4188356	0.00	0.00	3.12E-03
565078.2	4188361	0.00	0.00	3.01E-03
565070.6	4188367	0.00	0.00	2.90E-03
565053.6	4188371	0.00	0.00	2.82E-03
565044.2	4188369	0.00	0.00	2.83E-03
565034.9	4188368	0.00	0.00	2.85E-03
565025.6	4188367	0.00	0.00	2.86E-03
565016.2	4188365	0.00	0.00	2.87E-03
565006.9	4188364	0.00	0.00	2.88E-03
565263.5	4188203	0.00	0.01	8.39E-03
565268.8	4188195	0.00	0.01	8.75E-03
565232.6	4188263	0.00	0.01	5.70E-03
565225	4188268	0.00	0.01	5.51E-03
565217.4	4188273	0.00	0.01	5.33E-03
565209.8	4188279	0.00	0.01	5.15E-03
565202.2	4188284	0.00	0.00	4.98E-03
565194.6	4188290	0.00	0.00	4.81E-03
565187	4188295	0.00	0.00	4.64E-03
565118.5	4188344	0.00	0.00	3.36E-03
565110.9	4188349	0.00	0.00	3.25E-03
565103.3	4188355	0.00	0.00	3.14E-03
565095.7	4188360	0.00	0.00	3.03E-03
565088.1	4188365	0.00	0.00	2.93E-03
565080.5	4188371	0.00	0.00	2.83E-03
565072.9	4188376	0.00	0.00	2.74E-03
565056	4188380	0.00	0.00	2.66E-03
565046.8	4188379	0.00	0.00	2.68E-03
565037.5	4188378	0.00	0.00	2.69E-03
565028.3	4188376	0.00	0.00	2.70E-03
565019	4188375	0.00	0.00	2.71E-03
565009.8	4188374	0.00	0.00	2.72E-03
565000.5	4188373	0.00	0.00	2.73E-03
565240.2	4188257	0.00	0.01	5.88E-03
565266.6	4188216	0.00	0.01	7.56E-03
565271.9	4188208	0.00	0.01	7.90E-03
565277.2	4188200	0.00	0.01	8.23E-03
565240.8	4188268	0.00	0.01	5.41E-03
565232.9	4188274	0.00	0.01	5.02E-03
565225	4188279	0.00	0.00	4.84E-03
565217.1	4188285	0.00	0.00	4.67E-03
565209.3	4188291	0.00	0.00	4.52E-03
565201.4	4188296	0.00	0.00	4.56E-03
565122.7	4188352	0.00	0.00	3.19E-03
565114.8	4188358	0.00	0.00	3.08E-03
565107	4188363	0.00	0.00	2.97E-03
565099.1	4188369	0.00	0.00	2.87E-03
565091.2	4188375	0.00	0.00	2.78E-03
565083.4	4188380	0.00	0.00	2.68E-03
565075.5	4188386	0.00	0.00	2.59E-03
565058.1	4188390	0.00	0.00	2.52E-03
565048.5	4188389	0.00	0.00	2.53E-03
565038.9	4188387	0.00	0.00	2.55E-03
565029.4	4188386	0.00	0.00	2.56E-03
565019.8	4188385	0.00	0.00	2.57E-03
565010.2	4188383	0.00	0.00	2.58E-03
565248.6	4188263	0.00	0.01	5.58E-03
565253.9	4188254	0.00	0.01	5.89E-03
565275	4188222	0.00	0.01	7.13E-03
565280.3	4188214	0.00	0.01	7.45E-03
565285.6	4188205	0.00	0.01	7.76E-03
565249.2	4188274	0.00	0.00	4.96E-03
565241.4	4188279	0.00	0.00	4.78E-03
565233.7	4188285	0.00	0.00	4.62E-03
565225.9	4188290	0.00	0.00	4.46E-03
565218.1	4188296	0.00	0.00	4.32E-03

565210.3	4188301	0.00	0.00	4.18E-03
565179.1	4188323	0.00	0.00	3.81E-03
565171.3	4188329	0.00	0.00	3.68E-03
565163.5	4188335	0.00	0.00	3.55E-03
565155.7	4188340	0.00	0.00	3.43E-03
565132.3	4188357	0.00	0.00	3.10E-03
565124.5	4188362	0.00	0.00	3.00E-03
565116.7	4188368	0.00	0.00	2.90E-03
565109	4188373	0.00	0.00	2.80E-03
565101.2	4188379	0.00	0.00	2.71E-03
565093.4	4188384	0.00	0.00	2.62E-03
565085.6	4188390	0.00	0.00	2.54E-03
565077.8	4188396	0.00	0.00	2.45E-03
565060.5	4188400	0.00	0.00	2.39E-03
565051	4188398	0.00	0.00	2.40E-03
565041.6	4188397	0.00	0.00	2.41E-03
565032.1	4188396	0.00	0.00	2.42E-03
565022.6	4188394	0.00	0.00	2.43E-03
565013.2	4188393	0.00	0.00	2.44E-03
565003.7	4188392	0.00	0.00	2.44E-03
565257	4188268	0.00	0.01	5.31E-03
565262.3	4188260	0.00	0.01	5.58E-03
565278.1	4188235	0.00	0.01	6.45E-03
565283.4	4188227	0.00	0.01	6.75E-03
565288.7	4188219	0.00	0.01	7.03E-03
565294	4188211	0.00	0.01	7.32E-03
565257.7	4188279	0.00	0.00	4.72E-03
565250	4188284	0.00	0.00	4.56E-03
565242.3	4188290	0.00	0.00	4.41E-03
565234.5	4188295	0.00	0.00	4.27E-03
565226.8	4188301	0.00	0.00	4.13E-03
565219.1	4188306	0.00	0.00	4.00E-03
565211.4	4188312	0.00	0.00	3.88E-03
565203.6	4188317	0.00	0.00	3.93E-03
565195.9	4188323	0.00	0.00	3.80E-03
565188.2	4188328	0.00	0.00	3.67E-03
565180.5	4188334	0.00	0.00	3.55E-03
565172.8	4188339	0.00	0.00	3.44E-03
565165	4188345	0.00	0.00	3.32E-03
565157.3	4188350	0.00	0.00	3.21E-03
565134.1	4188367	0.00	0.00	2.91E-03
565126.4	4188372	0.00	0.00	2.82E-03
565118.7	4188378	0.00	0.00	2.73E-03
565111	4188383	0.00	0.00	2.64E-03
565103.3	4188389	0.00	0.00	2.56E-03
565095.5	4188394	0.00	0.00	2.48E-03
565087.8	4188400	0.00	0.00	2.40E-03
565080.1	4188405	0.00	0.00	2.33E-03
565063	4188410	0.00	0.00	2.27E-03
565053.6	4188408	0.00	0.00	2.28E-03
565044.2	4188407	0.00	0.00	2.29E-03
565034.8	4188406	0.00	0.00	2.30E-03
565025.4	4188404	0.00	0.00	2.30E-03
565016	4188403	0.00	0.00	2.31E-03
565006.7	4188402	0.00	0.00	2.32E-03
565265.4	4188273	0.00	0.00	4.87E-03
565270.7	4188265	0.00	0.01	5.13E-03
565286.5	4188241	0.00	0.01	5.95E-03
565291.8	4188233	0.00	0.01	6.38E-03
565297.1	4188224	0.00	0.01	6.65E-03
565302.4	4188216	0.00	0.01	6.91E-03
565266.2	4188284	0.00	0.00	4.50E-03
565258.5	4188290	0.00	0.00	4.36E-03
565250.9	4188295	0.00	0.00	4.23E-03
565243.2	4188301	0.00	0.00	4.09E-03
565235.5	4188306	0.00	0.00	3.97E-03
565227.9	4188312	0.00	0.00	3.84E-03
565220.2	4188317	0.00	0.00	3.72E-03
565212.6	4188322	0.00	0.00	3.62E-03
565204.9	4188328	0.00	0.00	3.66E-03
565197.3	4188333	0.00	0.00	3.54E-03
565189.6	4188339	0.00	0.00	3.43E-03
565181.9	4188344	0.00	0.00	3.32E-03
565174.3	4188350	0.00	0.00	3.22E-03
565166.6	4188355	0.00	0.00	3.12E-03
565136	4188377	0.00	0.00	2.75E-03
565128.3	4188382	0.00	0.00	2.66E-03
565120.7	4188388	0.00	0.00	2.58E-03
565113	4188393	0.00	0.00	2.50E-03
565105.4	4188399	0.00	0.00	2.43E-03
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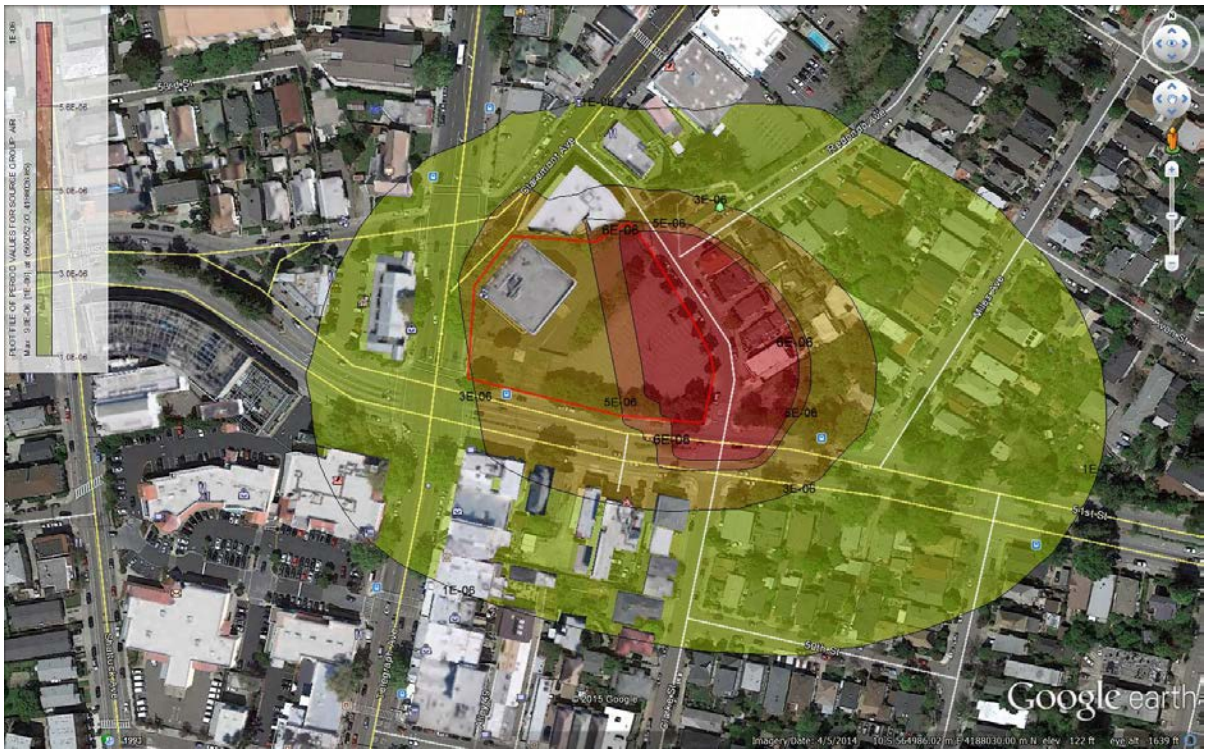
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565258.9	4188058	0.01	0.02	1.96E-02
565255.8	4188069	0.01	0.02	1.93E-02
565252.8	4188079	0.01	0.02	1.89E-02
565249.7	4188089	0.01	0.02	1.84E-02
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565243.6	4188110	0.00	0.02	1.71E-02
565240.5	4188121	0.00	0.02	1.63E-02
565237.5	4188131	0.00	0.02	1.55E-02
565234.4	4188141	0.00	0.01	1.46E-02
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565272	4188048	0.01	0.02	1.86E-02
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565272.8	4188079	0.00	0.02	1.67E-02
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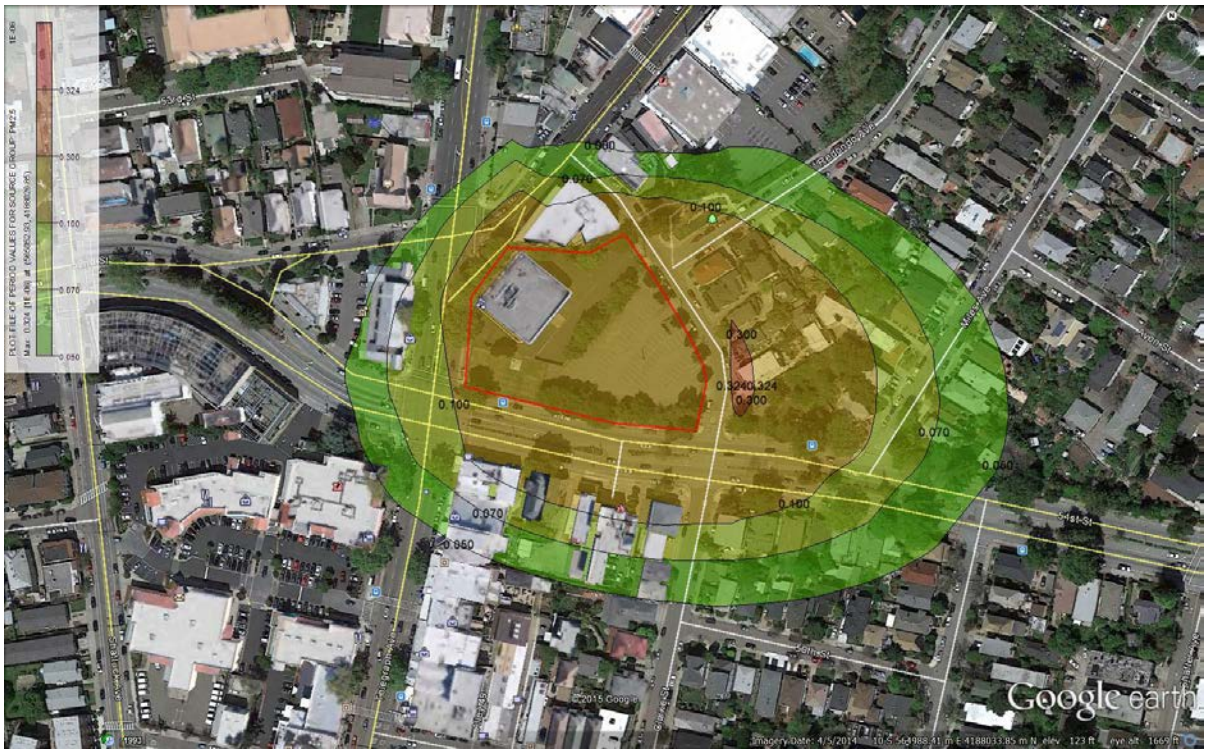
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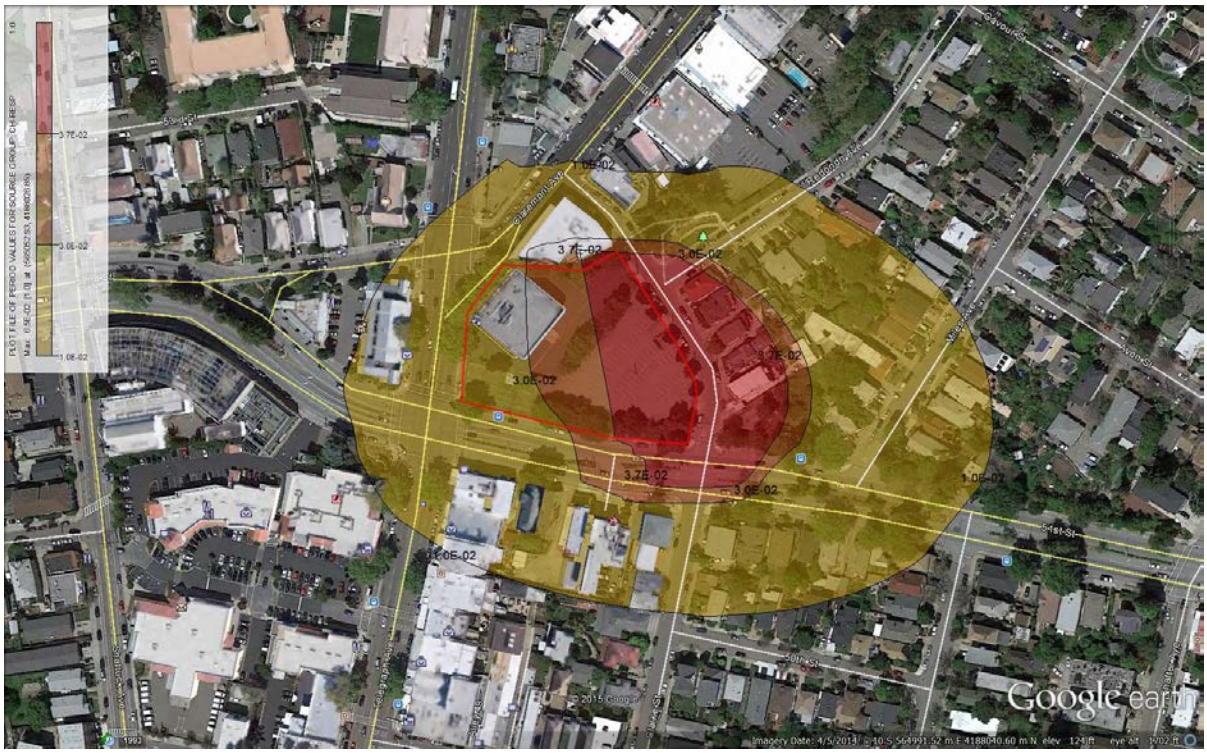
Cancer Risk



$PM_{2.5}$ Concentrations



Hazard Index



APPENDIX D

5110 TELEGRAPH AVENUE
SUN AND SHADOW STUDY

5110 Telegraph Ave – Shadow Study Narrative

Revision #5 – 3/18/16

Summary: The proposed project is located at 5110 Telegraph Ave in the Temescal neighborhood of Oakland. The study area is bound by 51st Street on the South, Clarke Street to the East, Claremont Street to the North and Telegraph Ave to the West. The proposed project would cast new shadows in and around the vicinity of the site, including limited periods of shadow affecting the following properties:

1. An existing four-story apartment building located at 5160 Claremont Ave;
2. Little Frog Park at the Northwest corner of Clarke Street and Redondo Ave, and;
3. Temescal Branch Library located at 5205 Telegraph Ave.

A project-specific shadow study was prepared showing sun and shadow simulations for the following dates and times:

- Autumn Equinox (September 23) at 9:00 AM, 12:00 noon and 3:00 PM (Daylight Savings Time)
- Winter Solstice (December 21) at 9:00 AM, 10:00 AM, 12:00 noon, 1:00 PM, 2:00 PM and 3:00 PM
- Spring Equinox (March 20) at 9:00 AM, 12:00 noon and 3:00 PM (Daylight Savings Time)
- Summer Solstice (June 21) at 9:00 AM, 12:00 noon and 3:00 PM (Daylight Savings Time)

Technical Methodology: The project-specific shadow study consists of a 3D digital project model and this narrative. The 3D digital project model was created by combining City of Oakland GIS parcel data and aerial views together with the site survey, site plan, and 3D architectural model. The 3D digital project model was then used to cast shadows over the study area during the dates and times listed above.

Existing shadows cast by existing buildings are shown in grey. Net new shadows cast by the proposed project are shown in black. Shadows cast by existing trees and foliage are not shown.

Conclusions: Shadow impacts during the study periods are summarized as follows:

- *Autumn Equinox (September 23):* The proposed project would not cast new shadows on any designated public parks, solar collectors, or historic properties during the study periods.

- *Winter Solstice (December 21):* The proposed project would cast a shadow on the Temescal Branch Library at 9:00 AM. The proposed project would also cast a shadow on portions of the South elevation of the four-story apartment building located at 5160 Claremont Ave from 9:00 AM until 3:00 PM. The proposed project would also cast a shadow on Little Frog Park at 1:00 PM, 2:00 PM and 3:00 PM. For further explanation of these shadows see "Public Parks", "Solar Collectors", "Historic Structures" and "Other Existing Structures" below.

- *Spring Equinox (March 20):* The proposed project would not cast new shadows on any designated public parks, solar collectors, or historic properties during the study periods.

- *Summer Solstice (June 21):* The proposed project would not cast new shadows on any designated public parks, solar collectors, or historic properties during the study periods.

Impacts to Public Parks: Little Frog Park is located Northeast of the proposed project site across Clarke Street. Little Frog Park is used by members of the community at a variety of times throughout the day for gathering and use of the playground equipment. Due to the presence of existing large trees in and near the park, Little Frog Park is shaded year-round during the afternoon hours. The proposed project would cast shadows on Little Frog Park beginning at 1:00 PM during the winter. However, because Little Frog Park already experiences shadow during these times due to the existing large trees, new shadows caused by the proposed project would not substantially impair the beneficial use of this area, nor of any other public or quasi-public park, lawn, garden, or open spaces.

Impacts to Solar Collectors: Through the review of detailed satellite imagery of the study area it was determined that there are no solar collectors on the roofs or in yards within the study area. Therefore, the proposed project would not impair the use of any solar collectors within the immediate vicinity of the site. See Figure 1 below.

Impacts to Historic Structures: The Temescal Branch Library is located Northwest of the proposed project site across Telegraph Ave. The proposed project would cast shadows on the Temescal Branch Library at 9:00 AM, but would disappear completely by 10:00 AM during the winter. Shadows cast by the proposed project would not substantially impair the beneficial use of the facility because:

- The operating days of the library are limited to five days per week, and;
- The operating hours of the library are never prior to 10:00 AM.

Impacts to Other Existing Structures: The proposed project would cast shadows on the South elevation of the existing four-story apartment building located at 5160 Claremont. However, due to the presence of six existing large trees along the South property line of this building, portions of the South elevation are shaded year-round. See Figure 1 below. As part of the proposed project these trees are scheduled to be removed. Because the South elevation already experiences significant shadow, new shadows caused by the proposed project would not substantially impair the beneficial use of the rooms on the South elevation of the existing apartment building.

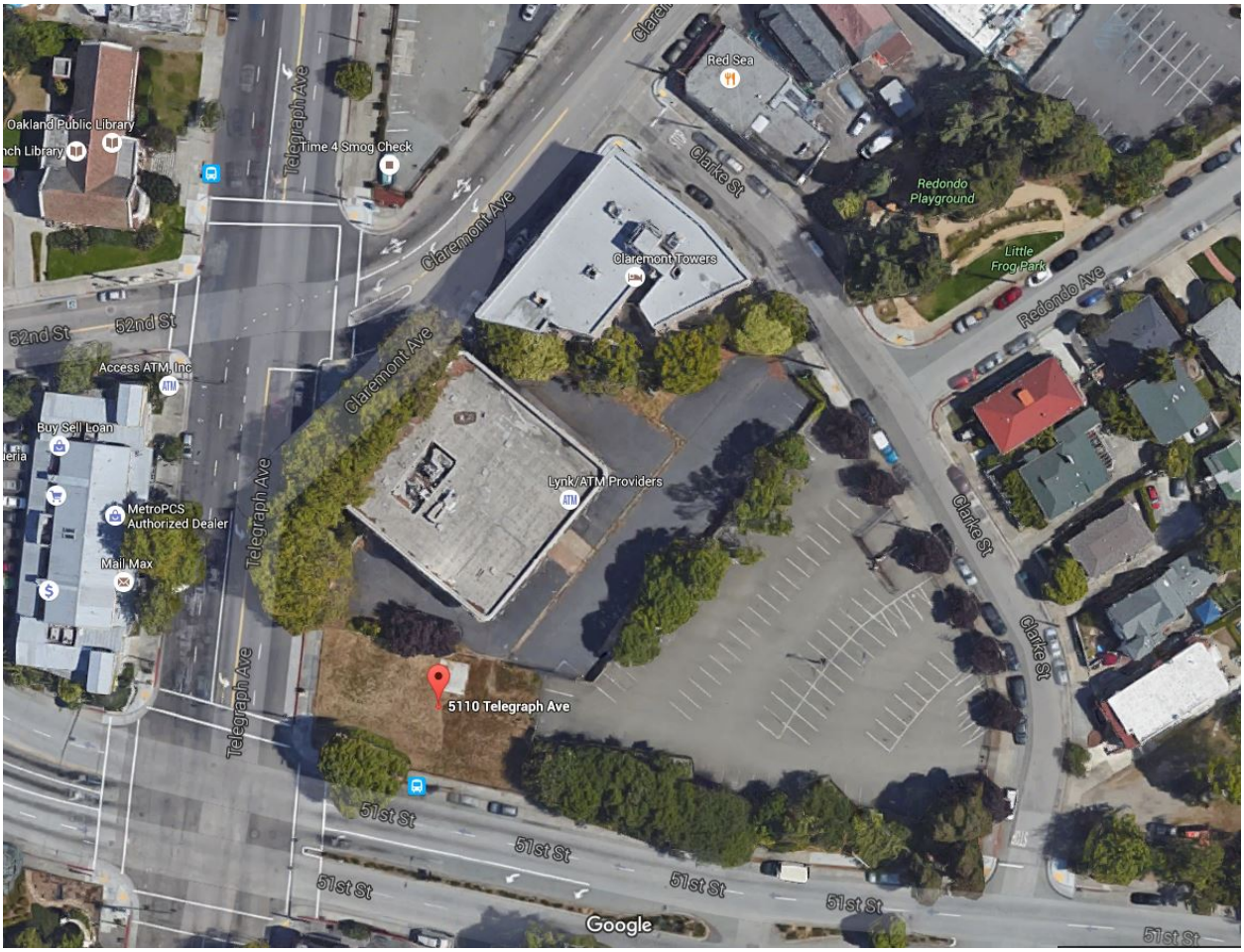

Oakland Public Library
Time 4 Smog Check
Red Sea
Redondo Playground
Little Frog Park
Claremont Towers
Redondo Ave
Claremont Ave
52nd St
Access ATM Inc
Buy Sell Loan
MetroPCS Authorized Dealer
Mail Max
Lynk ATM Providers
Telegraph Ave
Clarke St
5110 Telegraph Ave
51st St
Google

Fig. 1



Legend

- Project Building
- Existing Shadow
- Net New Shadow
- Park Space
- Project Boundary
- Open Space Boundary

1. Temescal Produce Market (5121 Telegraph Ave.)
2. Apartment Building (5160 Claremont Ave.)
3. Little Frog Park
4. Temescal Branch Library (5205 Telegraph Ave.)

Project Shadow Pattern -
September 23, 9:00 a.m., PST

5110 Telegraph Ave
Oakland, CA

Scale 1" = 100'-0"

0 50 100 200

Autumn Equinox - September 23



Legend

- Project Building
- Existing Shadow
- Net New Shadow
- Park Space
- Project Boundary
- Open Space Boundary

1. Temescal Produce Market (5121 Telegraph Ave.)
2. Apartment Building (5160 Claremont Ave.)
3. Little Frog Park
4. Temescal Branch Library (5205 Telegraph Ave.)

Project Shadow Pattern - September 23, 12:00 p.m., PST

5110 Telegraph Ave
Oakland, CA

Scale 1" = 100'-0"

0 50 100 200

Autumn Equinox - September 23



Legend

- Project Building
- Existing Shadow
- Net New Shadow
- Park Space
- Project Boundary
- Open Space Boundary

1. Temescal Produce Market (5121 Telegraph Ave.)
2. Apartment Building (5160 Claremont Ave.)
3. Little Frog Park
4. Temescal Branch Library (5205 Telegraph Ave.)

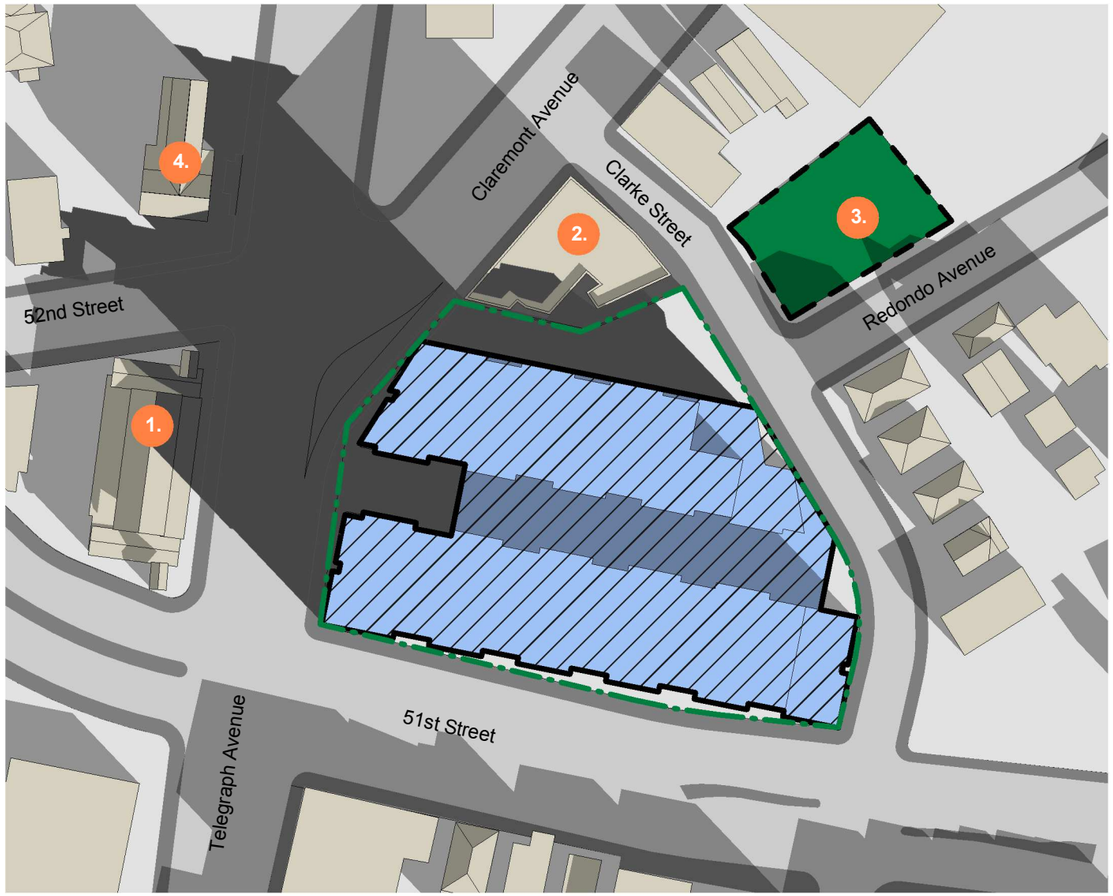
Project Shadow Pattern -
September 23, 3:00 p.m., PST

5110 Telegraph Ave
Oakland, CA

Scale 1" = 100'-0"

0 50 100 200

Autumn Equinox - September 23



Legend

- Project Building
- Existing Shadow
- Net New Shadow
- Park Space
- Project Boundary
- Open Space Boundary

1. Temescal Produce Market (5121 Telegraph Ave.)
2. Apartment Building (5160 Claremont Ave.)
3. Little Frog Park
4. Temescal Branch Library (5205 Telegraph Ave.)

Project Shadow Pattern -
December 21, 9:00 a.m., PST

5110 Telegraph Ave
Oakland, CA

Scale 1" = 100'-0"

0 50 100 200

Winter Solstice - December 21



Legend

- Project Building
- Existing Shadow
- Net New Shadow
- Park Space
- Project Boundary
- Open Space Boundary

1. Temescal Produce Market (5121 Telegraph Ave.)
2. Apartment Building (5160 Claremont Ave.)
3. Little Frog Park
4. Temescal Branch Library (5205 Telegraph Ave.)

Project Shadow Pattern -
December 21, 10:00 a.m., PST

5110 Telegraph Ave
Oakland, CA

Scale 1" = 100'-0"

0 50 100 200

Winter Solstice - December 21



Legend

- Project Building
- Existing Shadow
- Net New Shadow
- Park Space
- Project Boundary
- Open Space Boundary

1. Temescal Produce Market (5121 Telegraph Ave.)
2. Apartment Building (5160 Claremont Ave.)
3. Little Frog Park
4. Temescal Branch Library (5205 Telegraph Ave.)

Project Shadow Pattern -
December 21, 12:00 p.m., PST

5110 Telegraph Ave
Oakland, CA

Scale 1" = 100'-0"

0 50 100 200

Winter Solstice - December 21



Legend

- Project Building
- Existing Shadow
- Net New Shadow
- Park Space
- Project Boundary
- Open Space Boundary

1. Temescal Produce Market (5121 Telegraph Ave.)
2. Apartment Building (5160 Claremont Ave.)
3. Little Frog Park
4. Temescal Branch Library (5205 Telegraph Ave.)

Project Shadow Pattern -
December 21, 1:00 p.m., PST

5110 Telegraph Ave
Oakland, CA

Scale 1" = 100'-0"

0 50 100 200

Winter Solstice - December 21



Legend

- Project Building
- Existing Shadow
- Net New Shadow
- Park Space
- Project Boundary
- Open Space Boundary

1. Temescal Produce Market (5121 Telegraph Ave.)
2. Apartment Building (5160 Claremont Ave.)
3. Little Frog Park
4. Temescal Branch Library (5205 Telegraph Ave.)

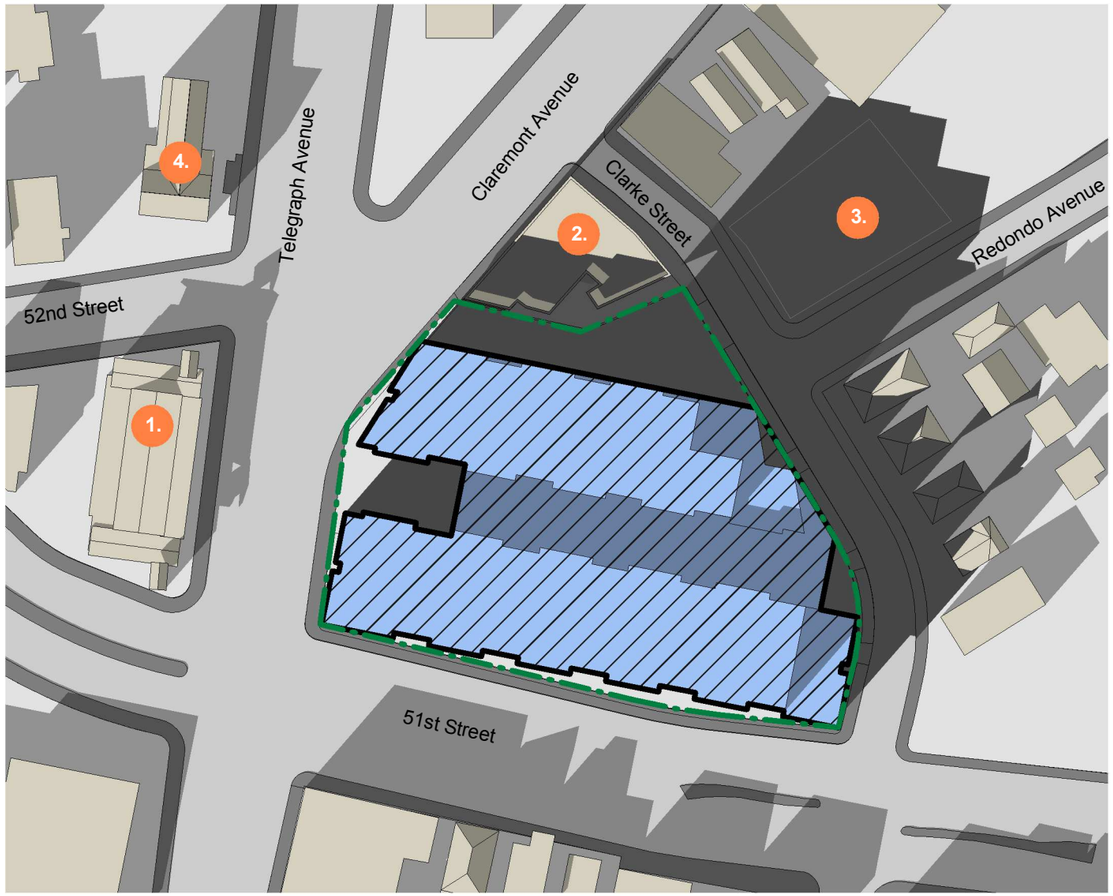
Project Shadow Pattern -
December 21, 2:00 p.m., PST

5110 Telegraph Ave
Oakland, CA

Scale 1" = 100'-0"

0 50 100 200

Winter Solstice - December 21



Legend

- Project Building
- Existing Shadow
- Net New Shadow
- Park Space
- Project Boundary
- Open Space Boundary

1. Temescal Produce Market (5121 Telegraph Ave.)
2. Apartment Building (5160 Claremont Ave.)
3. Little Frog Park
4. Temescal Branch Library (5205 Telegraph Ave.)

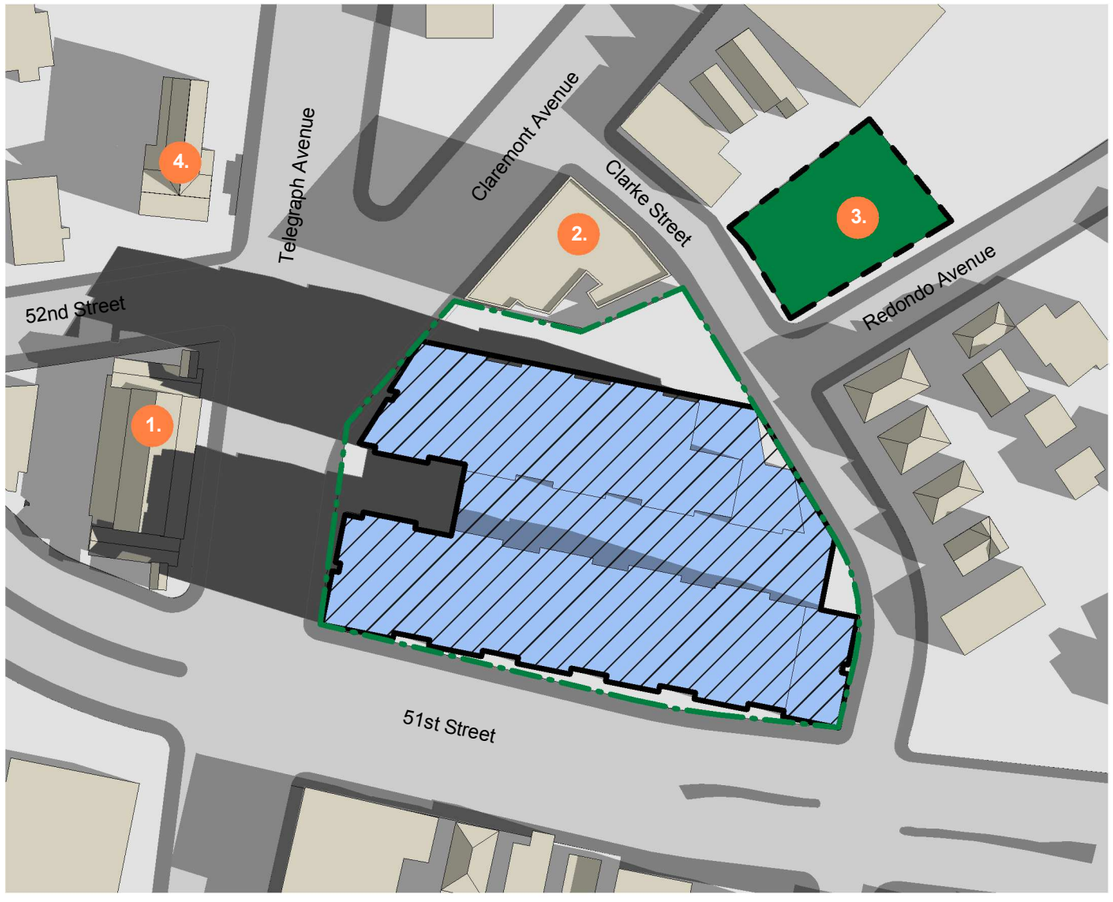
Project Shadow Pattern - December 21, 3:00 p.m., PST

5110 Telegraph Ave
Oakland, CA

Scale 1" = 100'-0"

0 50 100 200

Winter Solstice - December 21



Legend

- Project Building
- Existing Shadow
- Net New Shadow
- Park Space
- Project Boundary
- Open Space Boundary

1. Temescal Produce Market (5121 Telegraph Ave.)
2. Apartment Building (5160 Claremont Ave.)
3. Little Frog Park
4. Temescal Branch Library (5205 Telegraph Ave.)

Project Shadow Pattern -
March 19, 9:00 a.m., PST

5110 Telegraph Ave
Oakland, CA

Scale 1" = 100'-0"

0 50 100 200

Spring Equinox - March 19



Legend

- Project Building
- Existing Shadow
- Net New Shadow
- Park Space
- Project Boundary
- Open Space Boundary

1. Temescal Produce Market (5121 Telegraph Ave.)
2. Apartment Building (5160 Claremont Ave.)
3. Little Frog Park
4. Temescal Branch Library (5205 Telegraph Ave.)

Project Shadow Pattern -
March 19, 12:00 p.m., PST

5110 Telegraph Ave
Oakland, CA

Scale 1" = 100'-0"

0 50 100 200

Spring Equinox - March 19



Legend

- Project Building
- Existing Shadow
- Net New Shadow
- Park Space
- Project Boundary
- Open Space Boundary

1. Temescal Produce Market (5121 Telegraph Ave.)
2. Apartment Building (5160 Claremont Ave.)
3. Little Frog Park
4. Temescal Branch Library (5205 Telegraph Ave.)

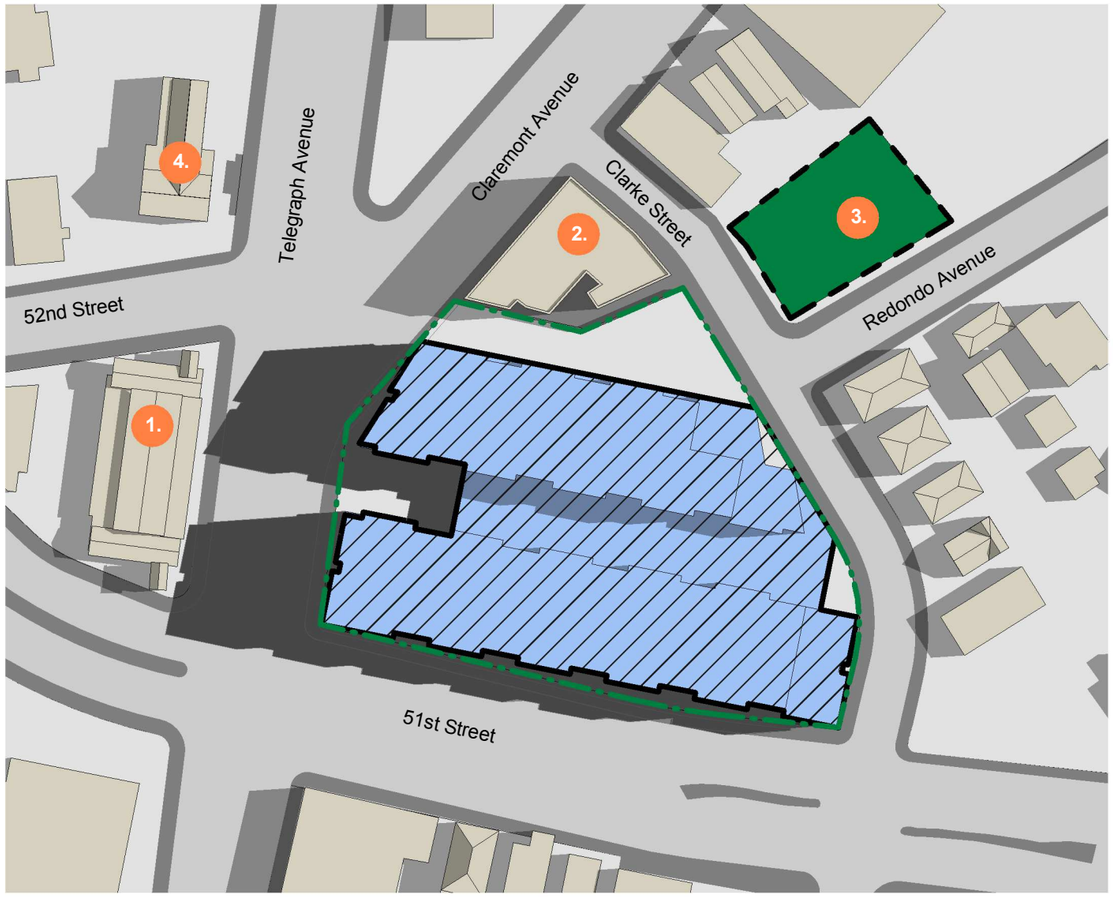
Project Shadow Pattern -
March 19, 3:00 p.m., PST

5110 Telegraph Ave
Oakland, CA

Scale 1" = 100'-0"

0 50 100 200

Spring Equinox - March 19



Legend

- Project Building
- Existing Shadow
- Net New Shadow
- Park Space
- Project Boundary
- Open Space Boundary

1. Temescal Produce Market (5121 Telegraph Ave.)
2. Apartment Building (5160 Claremont Ave.)
3. Little Frog Park
4. Temescal Branch Library (5205 Telegraph Ave.)

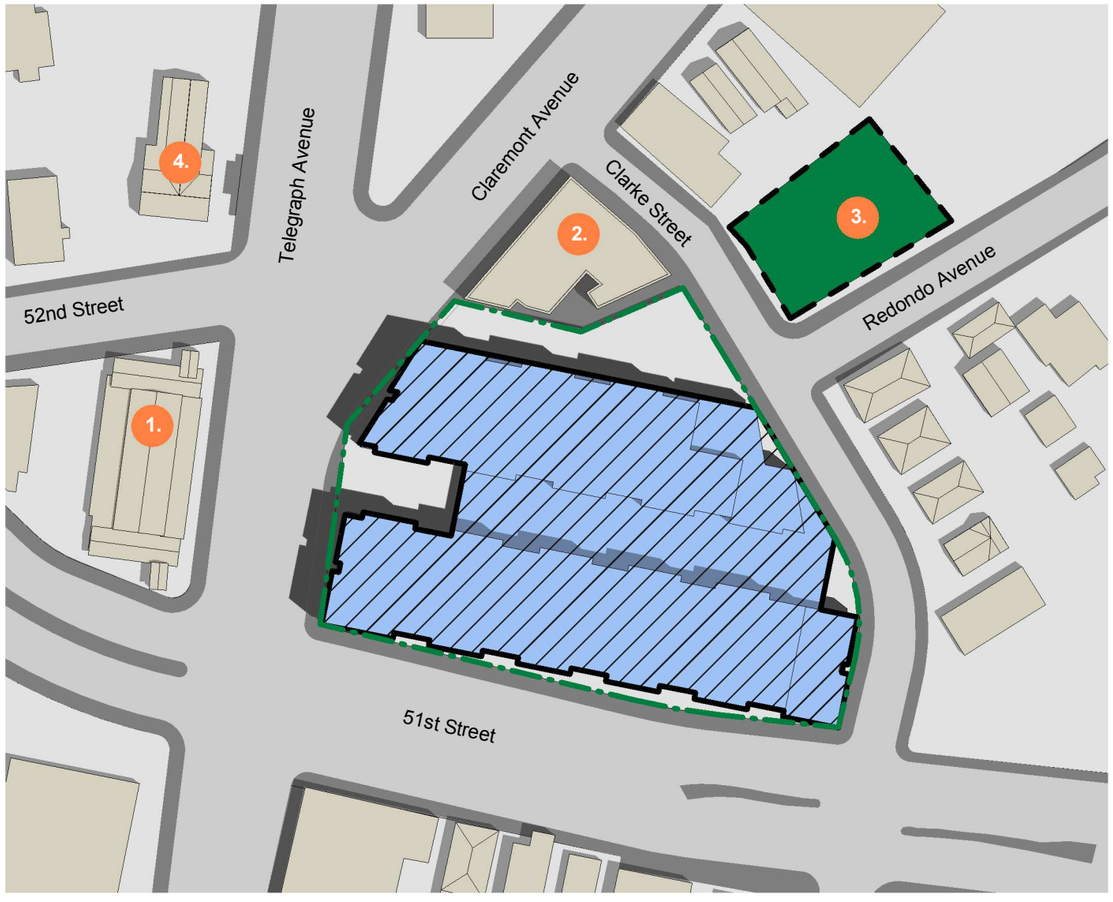
Project Shadow Pattern -
June 21, 9:00 a.m., PST

5110 Telegraph Ave
Oakland, CA

Scale 1" = 100'-0"

0 50 100 200

Summer Solstice - June 21



Legend

- Project Building
- Existing Shadow
- Net New Shadow
- Park Space
- Project Boundary
- Open Space Boundary

1. Temescal Produce Market (5121 Telegraph Ave.)
2. Apartment Building (5160 Claremont Ave.)
3. Little Frog Park
4. Temescal Branch Library (5205 Telegraph Ave.)

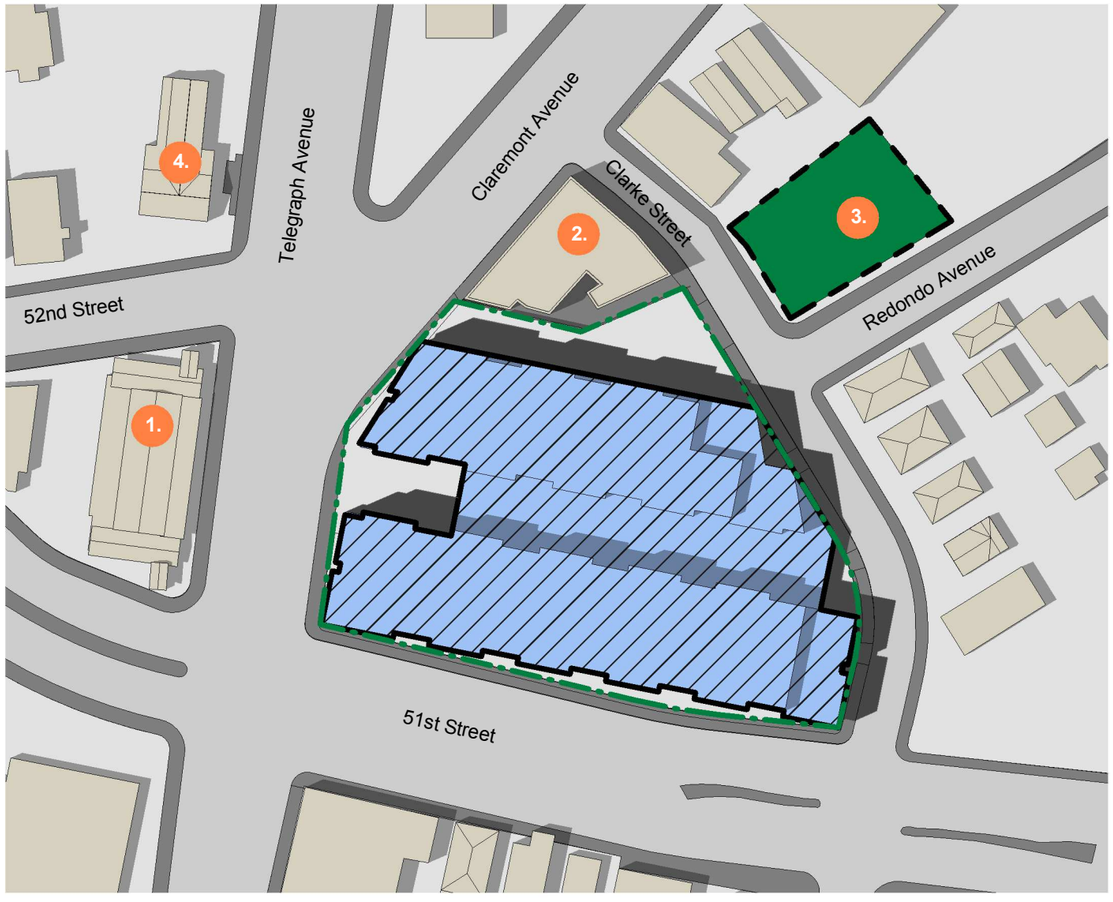
Project Shadow Pattern -
June 21, 12:00 p.m., PST

5110 Telegraph Ave
Oakland, CA

Scale 1" = 100'-0"

0 50 100 200

Summer Solstice - June 21



Legend

- Project Building
- Existing Shadow
- Net New Shadow
- Park Space
- Project Boundary
- Open Space Boundary

1. Temescal Produce Market (5121 Telegraph Ave.)
2. Apartment Building (5160 Claremont Ave.)
3. Little Frog Park
4. Temescal Branch Library (5205 Telegraph Ave.)

Project Shadow Pattern -
June 21, 3:00 p.m., PST

5110 Telegraph Ave
Oakland, CA

Scale 1" = 100'-0"

0 50 100 200

Summer Solstice - June 21