ADDENDUM TO THE MITIGATED NEGATIVE DECLARATION

Newark Gateway Mixed-Use Development Project

Prepared for:

City of Newark
Community Development Department
37101 Newark Boulevard
Newark, CA 94560

Prepared by:

HELIX Environmental Planning, Inc.
11 Natoma Street, Suite 155
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July 2017

ADDENDUM TO THE
MITIGATED NEGATIVE DECLARATION FOR THE
NEWARK GATEWAY MIXED-USE DEVELOPMENT PROJECT IN THE CITY OF NEWARK

A. INTRODUCTION

The City of Newark (City) certified a Program Environmental Impact Report (PEIR) for the Dumbarton Transit Oriented Development (TOD) Specific Plan (State Clearinghouse No. 2010042012, July 2011). Subsequently, the City also adopted a project-specific Mitigated Negative Declaration (MND) for the SHH/FMC project in 2014. Villa Developers (the current project applicant) proposed changes to the former FMC project which have been evaluated in an Initial Study (IS), that is included with this Addendum, to determine whether those changes would result in any new or more substantial impacts from those identified in the prior adopted 2014 IS/MND.

This Addendum has been prepared to provide information regarding: (1) the history of the project; (2) the proposed project modification; (3) standards for adequacy under the California Environmental Quality Act (CEQA) and State CEQA Guidelines; (4) a description of the format and content of this Addendum; and (5) the applicable CEQA processing requirements for the proposed modified project.

B. BACKGROUND

The site for the Newark Gateway Mixed-Use Development Project (proposed modified project) is a 1.38-acre lot within the Dumbarton TOD Specific Plan area in the City of Newark. The site is bound by Enterprise Drive to the north, Willow Street to the east, the planned Senior Affordable Housing project to the south, and undeveloped land within the Specific Plan area to the west.

The Dumbarton TOD Specific Plan analyzed in the 2011 PEIR included the development of a mixed density residential, retail, commercial, park and recreational open space in close proximity to the planned Dumbarton Rail Corridor (DRC).

In 2014, an IS/MND was prepared for the SHH/FMC project site. The proposed SHH/FMC project was an 8.09-acre mixed-use commercial and residential development. A townhome condominium development was proposed for construction on 4.08 acres in the southern portion of the site, and a 0.17-acre park was proposed for construction in the townhome condominium neighborhood. A 2.08-acre lot in the center of the site was proposed for development with affordable housing units, and 0.29 acre of the project site was designated for open space as a buffer to avoid an existing isolated, seasonally inundated depression. The commercial

development in the northern portion of the site was planned for a 15,000 square-foot retail space and 49 parking spaces on 1.22 acres (former FMC project). The remainder of the project site was planned to be dedicated to the City as right-of-way for off-site infrastructure improvements.

C. OVERVIEW OF MODIFICATION TO THE PROJECT

Since the adoption of the 2014 IS/MND, the market demand has changed to a different product type, requiring that changes be made to the FMC portion of the SHH/FMC project site plan. The project applicant is proposing to expand the project vertically by constructing a five-story, mixed-use commercial building. The total height and square footage of the proposed commercial building would be approximately 80 feet and 168,440 square feet. The commercial building would include an 8,300 square-foot retail space on the ground floor, off-street parking on the ground floor and 2nd floor, and a five-story hotel. The 5th floor of the commercial building would also include a restaurant, bar, and rooftop lounge.

The commercial development under the proposed modified project includes a retail space, 118 off-street parking spaces, and a total of 146 hotel rooms. Additional changes under the current entitlement application include a Conditional Use Permit and Planned Unit Development. The commercial retail land use proposed for project site differs from the land use proposed in the Dumbarton TOD Specific Plan and 2013 Updated General Plan. Although the Specific Plan allows for an adjustment of land uses within the Specific Plan area without necessitating a Specific Plan Amendment, a revised Land Use Plan and revised Proposed Land Use Table will be submitted to the City for approval.

D. BASIS FOR AN ADDENDUM

The State CEQA Guidelines environmental review procedures allow for the updating and use of a previously adopted MND for projects that are different from the previous project or the conditions under which the project was analyzed. Section 15164 of the State CEQA Guidelines states the following with respect to an addendum to an adopted MND:

b) An addendum to an adopted negative declaration may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred.

c) An addendum need not be circulated for public review but can be included in or attached to the final EIR or adopted negative declaration.

d) The decision making body shall consider the addendum with the final EIR or adopted negative declaration prior to making a decision on the project.

In accordance with State CEQA Guidelines Section 15164, this Addendum has been prepared to document that the proposed project modifications do not require preparation of a subsequent MND under Section 15162.

The proposed modified project is substantially similar to the project evaluated in the adopted 2014 MND. Like the approved project, the proposed modified project involves constructing a mixed-use commercial development on the project site which is substantially similar to the development area analyzed in the 2014 MND. As supported in the analysis contained in the accompanying Initial Study, there are no substantial changes proposed in the project which would result in any new significant environmental effects or a substantial increase in the severity of previously identified significant effects. There is no new information of substantial importance which was not known for the 2014 MND, and no new mitigation measures are necessitated by new impacts.

None of the circumstances listed in State CEQA Guidelines Section 15162 requiring the preparation of a subsequent MND are present, and only minor technical changes or additions are necessary to update the previously adopted 2014 MND; therefore, an addendum may be prepared.

E. FORMAT, CONTENT, AND CONCLUSIONS OF THIS ADDENDUM

The accompanying CEQA Initial Study (IS) and associated technical studies comprise the Addendum to the SHH/FMC MND. A project-specific Traffic Technical Memorandum and Transportation Demand Management plan were prepared and are included as an appendix to the IS.

As described above, the IS has been prepared to determine whether the proposed amendments to the approved project analyzed in the adopted MND would require major revisions to the MND due to any new or more severe significant environmental impacts as compared to those analyzed in the prior adopted MND. Changes in site design necessitated a reevaluation of the impacts for the proposed modified project.

The 2014 MND found that the approved project could have potentially significant impacts on biological resources, possibly reducing or degrading habitat for a special status species. Mitigation measures were adopted from the 2011 Dumbarton TOD Specific Plan PEIR to reduce the impacts on special status animal and plant species to less than significant. Mitigation measures that were also adopted from the 2011 PEIR would reduce the impacts on cultural resources to less than significant. Other potentially significant impacts identified in the 2014 IS/MND for the approved project were air quality, geology and soils, greenhouse gas emissions,

hazards and hazardous materials, hydrology and water quality, land use and planning, noise, public services, and transportation and traffic.

The proposed modified project, because the project site has now been graded and due to its similarities with the approved SHH/FMC project, would have similar, and in most cases lesser, impacts than the approved project. It will not introduce new or more significant impacts that were not previously disclosed in the Specific Plan PEIR or the project-specific IS/MND. Based on the conclusions of the IS, an Addendum to the approved IS/MND is the appropriate CEQA-compliance document for the revised project.

The following definitions are used in the IS:

Potentially Significant Impact: Any potentially significant impact as a result of the proposed modified project that was not previously analyzed in the PEIR or IS/MND.

Less than Significant with Mitigation Incorporated: Any potential impacts as a result of the proposed modified project not previously analyzed in the certified PEIR or IS/MND, but found to be less than significant with previously prescribed mitigation from the PEIR or IS/MND incorporated.

Less than Significant: Any potential impacts as a result of the proposed modified project not previously analyzed in the IS/MND, but which are found to be less than significant.

No New Impact: The proposed modified project would not result in an impact, or would result in an impact found to be equal to or less than the impact analyzed in the IS/MND.

F. ADDENDUM PROCESSING

The City of Newark Planning Department directed and supervised the preparation of this Addendum, which has been reviewed and determined to be complete and accurate by the Planning Department. The City has concluded, based on the accompanying IS, that an Addendum is the appropriate CEQA compliance document for the proposed Newark Gateway Mixed-Use Development project.

INITIAL STUDY AND ENVIRONMENTAL EVAUATION

Newark Gateway Mixed-Use Development Project

Prepared for:

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July 2017

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INITIAL STUDY AND ENVIRONMENTAL EVALUATION

Project Title:	Newark Gateway Mixed-Use Development Project
Entitlement Requested:	Conditional Use Permit Planned Unit Development
Lead Agency Name and Address:	City of Newark Community Development Department 37101 Newark Boulevard, Newark, CA 94560
Contact Person and Phone Number:	Sarah Bowab (510) 578-4215
Project Sponsor's Name and Address:	Tony Baig, Villa Developers 2850 Stevens Creek Boulevard San Jose, CA 95128
General Plan Designation (December 2013): High-Density Residential	**Existing Zoning:** Commercial Retail/Form Base Code

1. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

This Initial Study addresses the proposed Newark Gateway Mixed-Use Development Project (proposed modified project) and whether it may cause significant effects on the environment. These potential environmental effects are further evaluated to determine whether they were examined in the Dumbarton Transit Oriented Development (TOD) Specific Plan Program Environmental Impact Report (PEIR) (State Clearinghouse No. 2010042012) and in the subsequent Initial Study/Mitigated Negative Declaration (IS/MND) for the SHH/FMC project (State Clearinghouse No. 2014012056). Consistent with Public Resources Code (PRC) §21083.3, this IS focuses on any effects on the environment which are specific to the proposed modified project, or to the parcel on which the project would be located, which were not analyzed as potentially significant effects in the PEIR prepared for the Dumbarton TOD Specific Plan or the IS/MND for the SHH/FMC project, or for which substantial new information shows that identified effects would be more significant than described in the PEIR or IS/MND.

The IS is also intended to assess whether any environmental effects of the project are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or by other means [§15152(b)(2)] of the California Environmental Quality Act (CEQA) Guidelines. If such revisions, conditions, or other means are identified, they will be identified as mitigation measures.

This IS relies on State CEQA Guidelines §§15064 and 15064.4 in its determination of the significance of environmental effects. According to §15064, the finding as to whether a project may have one or more significant effects shall be based on substantial evidence in the record, and that controversy alone, without substantial evidence of a significant effect, does not trigger the need for an EIR.

2. PROJECT BACKGROUND

The 1.38-acre project site is planned for mixed-use commercial development in the City of Newark (City). The proposed modified project is planned for development under the Dumbarton TOD Specific Plan. The project site is within APN 092-0115-011. Refer to **Figure 1** for the project site and vicinity map and **Figure 2** for the aerial map of the project site.

The Dumbarton TOD Specific Plan encompasses approximately 205 acres and is located at the western edge of the City of Newark, and is generally bounded by Union Pacific Railroad tracks (formerly Southern Pacific Railroad) to the north, existing on-going salt production and harvesting facilities to the south and west, an Alameda County Flood Control canal to the south, and Willow Street and industrial and residential uses to the east. A Final PEIR (State Clearinghouse No. 2010042012) has been prepared and certified, and the Specific Plan has been adopted by the City.

The Dumbarton TOD Specific Plan identifies the project site as medium/high density residential, but since adoption of the Specific Plan, the proposed land uses for APN 092-0115-011 has changed. In 2014, an IS/MND was prepared for the SHH/FMC project which proposed the development of a retail space on the project site (formerly known as FMC Parcel E [Lot 16]). This IS further evaluates the impacts from the proposed modified project which includes a five-story hotel and associated parking in conjunction the formerly proposed retail space.

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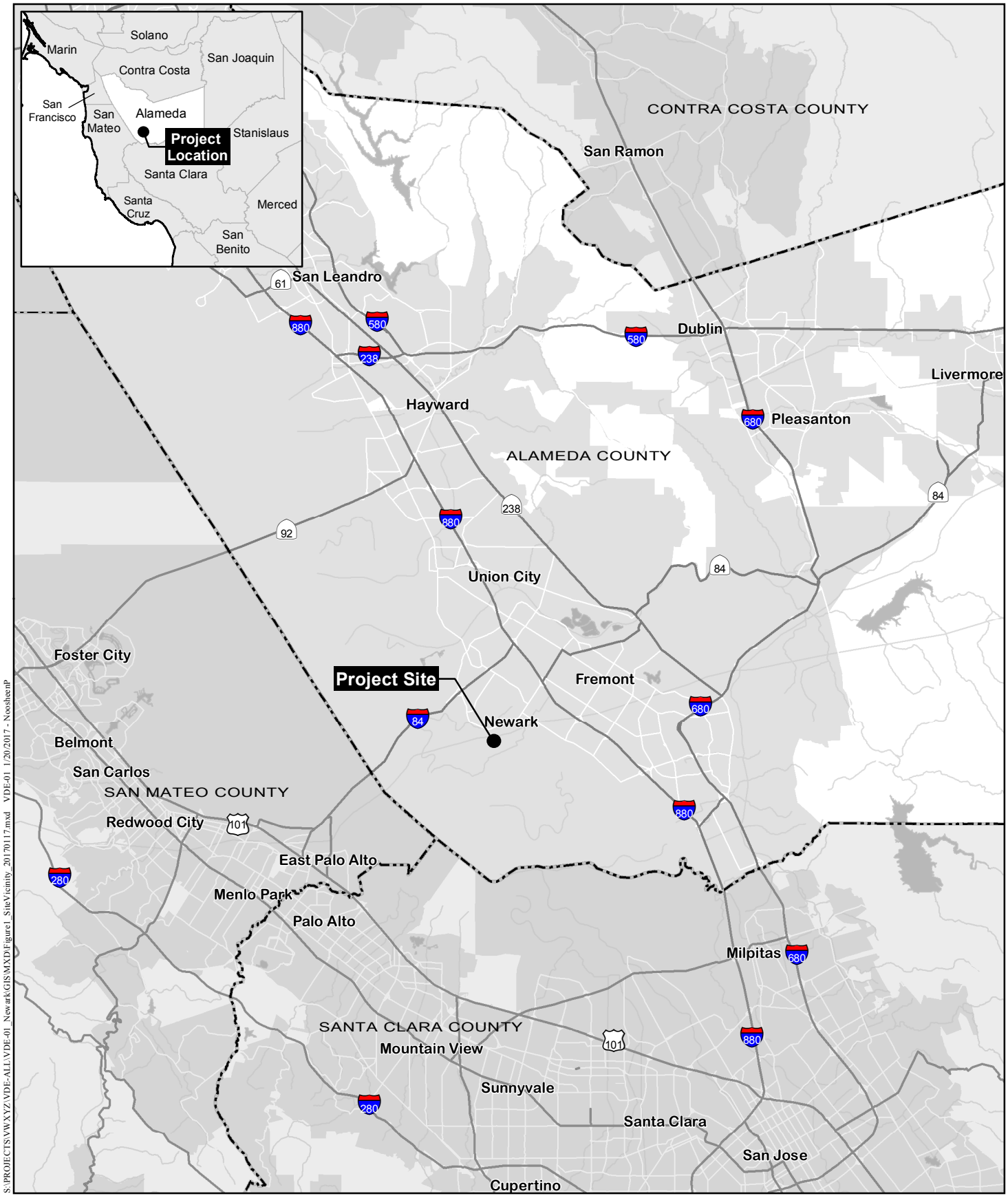

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Project Site and Vicinity

NEWARK GATEWAY MIXED USE DEVELOPMENT PROJECT

HELIX Environmental Planning

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Figure 1

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Aerial Map

NEWARK GATEWAY MIXED USE
DEVELOPMENT PROJECT

Figure 2

HELIX
Environmental Planning

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The proposed modified project would be a five-story, mixed-use commercial building with a retail space, off-street parking, and five-story hotel at the intersection of Willow Street with Enterprise Drive. Refer to **Appendix A** for the overall site design of commercial building.

Several of the associated technical studies used in preparation of the adopted PEIR and approved IS/MND have been incorporated into the analysis set forth in this IS, as applicable, and as described further in Section 5, *Previous Relevant Environmental Analysis*. Additionally, a Traffic Technical Memorandum was prepared for this IS and is included as Appendix D.

3. DESCRIPTION OF PROJECT

PROJECT LOCATION

The proposed modified project site is situated within the City of Newark in southwestern Alameda County at the southwest corner of the intersection of Willow Street with Enterprise Drive. The proposed modified project site is located in Sections 2 and 11, of Township 5 South, and Range 2 West of the U.S. Geological Survey (USGS) 7.5-minute "Newark" quadrangle map. Refer to **Figure 1** for the project location in the region.

PROJECT SETTING AND SURROUNDING LAND USES

The project site is vacant, and the surrounding land uses are actively being developed in accordance with the Dumbarton TOD Specific Plan. Residential units planned within the Specific Plan area south of the project site have been constructed and/or are under construction.

Enterprise Drive borders the project site on the north and Willow Street borders the project site on the east. Neighboring land uses are summarized in **Table 1**.

Table 1. Surrounding Land Uses

Direction	Land Use
North	A vacant former industrial lot is across Enterprise Drive
East	A vacant former industrial lot is across Willow Street from the project site
South	Planned Senior Affordable Housing project
West	Vacant former industrial lot

The project site's elevation is generally 12 feet above mean sea level (amsl), and terrain in the immediate vicinity of the site is primarily flat. As a result of nearby construction, mass grading has occurred on and around the project site.

Precipitation and municipal water are the primary sources of water for the project site. No other waterbody (such as ponds, creeks, ditches, or canals) is on or immediately adjacent to the project site; however, a man-made seasonal wetland is approximately 100 feet south of the project site. Refer to **Figure 2** for an aerial photograph of the project site and vicinity.

PROPOSED MODIFIED PROJECT

The project site is approximately 1.38 acres on which the project applicant is proposing to construct a five-story, mixed-use commercial building. The total height and square footage of the

proposed commercial building would be approximately 80 feet and 168,440 square feet. The commercial building would include an 8,300 square-foot retail space on the ground floor, off-street parking on the ground floor and 2nd floor, and a five-story hotel. The 5th floor of the commercial building will also include a restaurant, bar, and rooftop lounge. Additional proposed site improvements would include: on-grade parking, drive aisles, underground utilities, drainage structures, lighting, sidewalks, and landscaping. Refer to Appendix A for the site design of each floor of the commercial building.

Ground Floor

The ground floor of the commercial building would be approximately 15,010 square feet and would include an 8,300-square-foot retail space. Hotel amenities on the ground floor would include a 500-square-foot kitchen, indoor bar and lounge, outdoor seating areas, administrative office space, and an employee lounge. Additional ground floor features would include: the hotel main lobby, a vehicle passage way and ramp to the Second Level parking lot, delivery zone, mechanical/electric underneath ramp, and trash enclosure.

Second Floor

Off-street parking would be provided on the second level of the commercial building. The second floor of the commercial building would be approximately 47,350 square feet and would provide 87 parking spaces. Standard, compact, and handicap parking spaces would be provided. Additional features on the second level would include electric elevators and a laundry unit for hotel guests.

Third Floor

The hotel guest rooms would start on the third floor of the commercial building. The third floor would provide 59 hotel rooms: 33 rooms with a king bed; 22 rooms with two queen beds; one Americans with Disabilities Act (ADA) accessible room with a king bed and roll in features; one ADA accessible room with two queen beds and roll in features; and two ADA accessible rooms with a king bed. Amenities on the third floor include an outdoor pool, spa, fire pit, and roof garden.

Fourth Floor

The fourth level of the commercial building would host 59 hotel rooms: 35 rooms with a King bed; 21 rooms with two queen beds; two ADA accessible rooms with a king bed; one ADA accessible room with two queen beds.

Fifth Floor

The fifth floor would be the top level of the commercial building. The fifth floor would provide 28 hotel rooms: 17 rooms with a king bed and 11 rooms with two queen beds. Additionally, the fifth floor would feature three meetings rooms of variable sizes, a restaurant, outdoor seating with a fire pit, indoor bar and lounge area, and a roof top lounge with a fire pit.

Parking

In addition to the 87 parking spaces proposed on the second level of the commercial building, 31 at-grade parking spaces would be provided for a total of 118 parking spaces. The project site is located within a TOD which promotes a more walkable and bicycle friendly environment, therefore the total parking spaces provided represents a 35 percent reduction in the parking spaces required. A parking analysis and transportation demand management plan have been prepared for the proposed modified project (See Appendix D).

A total of fifteen illuminated bike racks would be provided for the retail space and hotel. The bike racks would be installed along Enterprise Drive in the northwest corner of the project site.

Circulation

Vehicular Access/Street Design

The commercial development would be accessible from both Enterprise Drive and Willow Street.

The commercial development would be able to be directly accessed from the north via one 26-foot-wide driveway at Enterprise Drive, and from a 26-foot-wide driveway in the southeast corner of the project site off Willow Street.

Pedestrian Circulation

The commercial development would include walkways and crosswalks that would connect to off-site sidewalks along Enterprise Drive and Willow Street. Enhanced pedestrian crosswalks would be constructed across the driveways accessing Enterprise Drive and Willow Street and across aisles in the parking lot.

Fire Access

The minimum width available for driving or turning movements around the project site would be 26 feet along Willow Street. An 8-inch fire service line would be installed and tie into the

existing 12-inch water transmission main in Enterprise Drive, north of the project site. Additionally, a fire department connection and post indicator valve would be installed and connect to the planned fire service line in the northwest corner of the project site. The nearest existing fire hydrant is located approximately 105 feet northwest of the project site, across Enterprise Drive.

Infrastructure

Grading and Drainage

A storm drain system consisting of bio-retention areas, curbs and gutters along the roadways, and underground storm drain pipes would be installed on the project site. Two storm drain pipes would be installed in the northwest corner of the proposed building and would tie into the existing 15-inch storm drain pipe in Enterprise Drive. Bio-retention areas would be constructed along the northern and eastern edges of the project site. The roof treatment system would connect to the existing 12-inch storm drain in the southwest corner of the project site and to the field inlet in the southeast corner of the project site.

Water Supply

The Alameda County Water District would supply water to the project site. Two water lines would be installed to provide water to the project site. An 8-inch water line would tie into the existing 12-inch water transmission main in Enterprise Drive to the north, and an 8-inch water line would tie into the existing 16-inch water transmission main in Willow Street in the southeast corner of the project site.

Sanitary Sewer

The Union Sanitary District would provide sanitary sewer for the project site.

An 8-inch sanitary sewer lateral would be extended to the commercial development to service the project site. The sanitary sewer lateral would connect with the existing 14-inch sanitary sewer main in Enterprise Drive, north of the commercial development.

Landscaping

The project's proposed landscaping plan includes ornamental trees, shrubs, and groundcover. The conceptual landscaping design concentrates plantings along the perimeter of the project site and on both the third and fifth floors of the commercial building.

Ground Floor

Landscape easements will be established along the northern and eastern boundaries of the project site at Enterprise Drive and Willow Street. Trees to be planted along the perimeter include: Evergreen pear trees (*Pyrus calleryana 'Chanticleer'*), Carolina cherry trees (*Prunus caroliniana 'Compacta'*), Mediterranean fan palm (*Chamaerops humilis*), multi trunk strawberry trees (*Arbutus marina multi*), and Eastern redbuds (*Cercis canadensis*). All landscaping would be appropriately irrigated and maintained.

Third Floor

The landscaping on the third floor would surround the proposed pool, fire pit, and garden roof area. Potted Mediterranean fan palms are proposed around the perimeter of the outdoor pool area. The fire pit and garden roof area would feature a raised planter with bio-filtration planting, an open lawn with large, medium, and small soma stone seating, adirondack chairs, and specimen trees in large pots with concrete bases.

Fifth Floor

The landscaping on the fifth floor would be focused in the outdoor seating area near the restaurant and roof top lounge area. The outdoor seating area in the northwest corner of the fifth floor would feature a round fire pit and potted Mediterranean fan palms. The roof lounge area overlooking the intersection of Enterprise Drive and Willow Street would feature raised concrete planters with bio-filtration and glass rail and an arced concrete fire pit with glass rail.

Grading and Impervious Surfaces

Fill has been placed and compacted on the proposed project site in conjunction with grading for the previously approved SHH/FMC project.

The project site is undeveloped and does not have impervious surfaces. After construction, approximately 47,845 square feet of the project site would have impervious surfaces, consisting of building foundations and paved areas.

Construction Schedule

Project construction is anticipated to begin in January 2018, with development activities expected to be completed by April 2019. With no delays to the construction schedule, the retail space and hotel would open in July 2019.

4. REQUIRED APPROVALS

A listing and brief description of the regulatory permits and approvals required to implement the proposed modified project is provided below. This environmental document is intended to address the environmental impacts associated with the following discretionary actions and approvals:

- Conditional Use Permit
- Planned Unit Development

CITY OF NEWARK

The City has the following discretionary powers related to the proposed project:

- **Certification of the environmental document:** The Newark City Council will act as the lead agency as defined by CEQA, and will have authority to determine if the project has been adequately addressed under CEQA and the State CEQA Guidelines.
- **Approve Project:** The Newark City Council will consider approval of the project and the entitlements as described above.

AGENCIES

Because the proposed modified project will not impact wetlands or other waters of the U.S./state, the project will not need to obtain discretionary approval by federal or state resources agencies.

5. PREVIOUS RELEVANT ENVIRONMENTAL ANALYSIS

A PEIR was prepared for the Dumbarton TOD Specific Plan, pursuant to the 1992 City of Newark General Plan. The Specific Plan required that the General Plan be amended to incorporate the proposed Specific Plan and its allowable land uses, development regulations, design guidelines, and infrastructure improvements. The City adopted an updated General Plan in December 2013 and the Final PEIR (State Clearinghouse No. 2013012052) addressing the General Plan was published in October 2013. These documents have incorporated the Dumbarton TOD Specific Plan, of which the proposed modified project is included. The Dumbarton TOD Specific Plan PEIR evaluated impacts as a result of the entire Dumbarton TOD, including the proposed modified project.

As previously mentioned, a site-specific IS/MND was prepared in 2014 for the SHH/FMC project which included the development of a retail space on the project site (formerly known as FMC Parcel E [Lot 16]). This environmental document is being prepared to reassess project impacts for the revised development plan for the project site, previously analyzed in the 2014 IS/MND for the SHH/FMC project.

TIERING

"Tiering" refers to the relationship between a PEIR (where long-range programmatic cumulative impacts are the focus of the environmental analysis) and subsequent environmental analyses such as the subject document, which focus primarily on issues unique to a smaller project within the larger program or plan. Through tiering a subsequent environmental analysis can incorporate, by reference, discussion that summarizes general environmental data found in the program EIR that establishes cumulative impacts and mitigation measures, the planning context, and/or the regulatory background. These broad-based issues need not be reevaluated subsequently, having been previously identified and evaluated at the program stage.

Tiering focuses the environmental review on the project-specific significant effects that were not examined in the prior environmental review, or that are susceptible to substantial reduction or avoidance by specific revisions in the project, by the imposition of conditions or by other means. Section 21093(b) of the Public Resources Code requires the tiering of environmental review whenever feasible, as determined by the Lead Agency.

This Initial Study is tiered from the 2014 IS/MND for the SHH/FMC project which was prepared at a site-specific level. The SHH/FMC IS/MND tiered from the program-level Specific Plan PEIR, which serves as the primary environmental document for the proposed land use

designations, zoning district, and future development that would be undertaken in the Dumbarton TOD Specific Plan area.

The SHH/FMC Project, 2013 Draft Updated General Plan and the Dumbarton TOD are projects that are related to the proposed Newark Gateway Mixed-Use Development project and, pursuant to §15152(a) of the State CEQA Guidelines, tiering of environmental documents is appropriate. State CEQA Guidelines §15152(e) specifically provides that,

> "[w]hen tiering is used, the later EIRs or Negative Declarations shall refer to the prior EIR and state where a copy of the prior EIR may be examined. The later [environmental document] should state that the Lead Agency is using the tiering concept and that the [environmental document] is being tiered with the earlier EIR."

INCORPORATION OF THE PREVIOUS RELEVANT ENVIRONMENTAL ANALYSIS

The IS/MND for the SHH/FMC project and EIRs for the City of Newark 2013 Updated General Plan and the Dumbarton TOD Specific Plan are comprehensive documents. Due to various references to these documents in this proposed project, and to their importance relative to understanding the environmental analysis that has occurred to date with respect to development in the City of Newark area, both documents are hereby incorporated by reference pursuant to State CEQA Guidelines §15150.

INCORPORATION OF THE SHH/FMC PROJECT

This IS evaluates whether the environmental effects of the currently proposed Newark Gateway Mixed-Use Development project were adequately addressed in the IS/MND for the SHH/FMC Project. For impacts that were adequately addressed, this IS provides a cross-reference to the relevant discussion in the IS/MND. Impacts specific to the proposed modified project that were not addressed in the IS/MND for the SHH/FMC Project are evaluated in detail in this document. This document also identifies changes to the project or circumstances since the IS/MND was certified that require additional analysis in this document. Mitigation measures contained in the SHH/FMC Project Mitigation, Monitoring, and Reporting Program (MMRP) relevant to the project have been identified and summarized in this Initial Study. and are included in the MMRP prepared for the proposed modified project in Appendix B.

6. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐	Aesthetics	□	Agriculture Resources	□	Air Quality/Greenhouse Gases
☐	Biological Resources	□	Cultural Resources	□	Geology/Soils
☐	Hazards & Hazardous Materials	□	Hydrology/Water Quality	□	Land Use/Planning
☐	Mineral Resources	□	Noise	□	Population/Housing
☐	Public Services	□	Recreation	□	Transportation/Traffic
☐	Utilities/Service Systems	□	Mandatory Findings of Significance		

7. DETERMINATION

On the basis of the initial evaluation that follows:

■ I find that the proposed project WOULD NOT have a significant effect on the environment. An ADDENDUM will be prepared. (See Addendum above).

☐ I find that the proposed project WOULD NOT have a significant effect on the environment. A NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, the project impacts were adequately addressed in an earlier document or there will not be a significant effect in this case because revisions in the project have been made that will avoid or reduce any potential significant effects to a less than significant level. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment. An ENVIRONMENTAL IMPACT REPORT will be prepared.

Signature	Date
Printed Name	Date

8. EVALUATION OF ENVIRONMENTAL IMPACTS

Responses to the following questions and related discussion indicate if the proposed project will have, or will potentially have a significant adverse impact on the environment, either individually or cumulatively with other projects. All phases of project planning, implementation, and operation are considered. Mandatory Findings of Significance are located in Section XVIII below.

I. AESTHETICS

Would the project:	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	■
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	■
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	■
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	■

The project site is a vacant lot situated on the corner of Enterprise Drive and Willow Street. The area is flat, has recently been graded and it lacks natural habitat and vegetation.

The site is primarily surrounded by vacant, former industrial lots, some of which are actively undergoing construction. The adjacent lot to the west is primarily flat and contains remnant building foundations and fencing, and the adjacent lot to the south is being graded for a planned Senior Affordable Housing project. The more expansive surrounding area contains residential

development approximately 0.2 mile to the northeast, commercial/business development approximately 0.2 mile to the east and southeast, salt production basins approximately 0.5 mile to the south, Wildland's Plummer Creek Mitigation Bank approximately 0.5 mile to the southwest, vacant former industrial facilities and salt production basins approximately 0.4 mile to the west, and industrial facilities approximately 0.2 mile to the northwest.

Due to the relatively flat terrain and few trees, residents of the nearby residential areas and employees or patrons of the commercial/business development have a medium view range and would likely be able to see the project site. Vacant lots between the project site and existing residential and commercial/business development are within the Specific Plan area and are planned for development. As the Specific Plan area is developed, the views will become shortened and development on the project site would likely be viewed from the more immediate surroundings.

IMPACTS AND MITIGATION MEASURES FROM PREVIOUS RELEVANT ENVIRONMENTAL DOCUMENTATION

Visual resources (i.e., aesthetics) are discussed in Section 4.1 of the PEIR prepared for the Dumbarton TOD Specific Plan and Section 8.I of the IS/MND for the SHH/FMC Project (RBF 2011; HELIX 2014). The PEIR concluded that construction of the project would alter the existing views by replacing primarily vacant, disturbed land with urban development, but the development would be consistent with the character of the surrounding development. Further, the Specific Plan contains Site and Architecture Design Guidelines intended to achieve a mixed-use community with a consistent quality and distinct sense of space. Development in the Specific Plan area would be required to comply with the development regulations and design guidelines contained in the Specific Plan to ensure that the development is of quality design and is consistent with the City of Newark 2013 General Plan. No significant impacts relating to visual resources/aesthetics were identified in the EIR, and therefore no mitigation measures were required.

Consistent with the findings in the Dumbarton TOD Specific Plan PEIR, the IS/MND for the SHH/FMC project concluded the project would not result in significant impacts relating to aesthetics, and no mitigation measures were required.

EVALUATION OF AESTHETICS

Question a: No new impact

Scenic vistas within the City range from short-range to long-range, depending upon topography and the presence of mature vegetation. Prior to buildout of vacant lots in the Specific Plan area surrounding the project site, views to or from the project site would be medium-range from the developed areas in the vicinity. Following buildout of the vacant lots surrounding the project site, the views would be short-range and limited to neighboring residents and travelers on adjacent streets. Neither the project site, nor views to or from the project site, have been designated an important scenic resource by the City of Newark or any other public agency. The SHH/FMC IS/MND concluded that construction of the proposed development would not interfere with or degrade a scenic vista. The proposed modified project would have no new impact, and no mitigation would be necessary.

Question b: No new impact

There are no state or locally designated scenic highways in the vicinity of the proposed project (Caltrans 2017). The SHH/FMC IS/MND concluded that implementation of the project would not adversely affect scenic resources within a designated scenic highway. The proposed modified project would have no new impact, and no mitigation would be necessary.

Question c: No new impact

The existing visual character of the area surrounding the project site is defined by vacant lots of former industrial land uses and ongoing construction and development. The project site is a vacant lot that lacks any natural habitat or vegetation. Implementation of the project would result in the construction of a multistory commercial building with a community market, parking level, and five-story hotel, altering the existing visual character to a more urban development visual character than is currently experienced by viewers. The SHH/FMC IS/MND concluded that while the proposed project would result in a change in visual character on site, the project has been designed to be consistent with the Site and Architecture Design Guidelines contained in the Specific Plan, and is expected to integrate with the planned area for the Dumbarton TOD Specific Plan area, and the surrounding land uses. Therefore, the proposed modified project would have no new impact to visual character, and no mitigation would be necessary.

Question d: No new impact

Any new lighting associated with development within the project area would be subject to the lighting standards in the Site and Architecture Design Guidelines contained in the Specific Plan. These guidelines contain lighting standards for 1) exterior illumination for streetlights and fixtures; 2) path and stair lighting; 3) building mounted lights; 4) accent lighting; and 5) special event lighting. These guidelines are developed to minimize light spillover and glare to adjacent areas. The SHH/FMC IS/MND concluded that compliance with those guidelines would ensure that the proposed project does not introduce substantial light and glare that may pose a hazard or nuisance or result in night sky illumination. Because the proposed modified project design would limit light spillover and intensity, there would be no new impacts, and no mitigation would be necessary.

II. AGRICULTURE AND FORESTRY RESOURCES

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	■
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526 (g)), or timberland zoned Timberland Production (as defined by Government Code Section 51104 (g))?	☐	☐	☐	■
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	■

As discussed in Section 1.2 of the PEIR prepared for the Dumbarton TOD Specific Plan, agriculture/forestry resources issues were not addressed in the PEIR because it was determined

based on substantial evidence that the project would have no impacts to agriculture/forestry resources (RBF 2011).

No agricultural activities or timber management occur on the project site or in adjacent areas, and the site is not designated for agricultural or timberland uses. The California Important Farmland Finder Interactive Map prepared pursuant to the Farmland Mapping and Monitoring Program of the California Department of Conservation classifies the project site as urban and built-up land, and immediately adjacent areas are urban and built-up land and other land (CDC 2017). Urban and built-up land is defined by the California Department of Conservation as land occupied by structures with a building density of at least one unit to one and one-half acres, or approximately six structures to a 10-acre parcel. Other land is defined by land that is not included in any other category, which includes areas not suitable for agricultural uses (CDC 2017).

EVALUATION OF AGRICULTURE AND FORESTRY SERVICES

Questions a, b: No new impact

The SHH/FMC IS/MND determined that no important agricultural resources or activities exist on the project site, no impact would occur, and no mitigation would be necessary. The proposed modified project would have no new impact.

Questions c, d, e: No new impact

The SHH/FMC IS/MND concluded that because no portion of the City or the project site are zoned for forest land, timberland, or zoned Timberland Production, no impact would occur, and no mitigation would be necessary. The proposed modified project would have no new impact.

III. AIR QUALITY

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	■
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	■
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	■
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	■
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	■

The climate of the project site, and all of the San Francisco Bay Area, is dominated by a semi-permanent, subtropical high-pressure cell over the Pacific Ocean. This cell influences prevailing winds and results in condensation and the presence of fog and stratus clouds during the summer, and stormy conditions with moderate to strong winds, as well as periods of stagnation with very light winds during the winter. The high-pressure cell also creates two types of temperature inversions that may act to degrade local air quality.

Elevation inversions occur during the warmer months as ascending air associated with the Pacific high pressure cell comes into contact with warmer air up the coastal hills. The boundary between the two layers of air creates a temperature inversion that traps pollutants. The other type of inversion, a radiation inversion, develops on winter nights when air near the ground cools by

heat radiation and air aloft remains warm. The shallow inversion layer formed between these two air masses can also trap pollutants. As the pollutants become more concentrated in the atmosphere, photochemical reactions produce ozone, commonly known as smog.

AMBIENT AIR QUALITY STANDARDS

The Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. The City of Newark lies within the San Francisco Bay Area Air Basin (SFBAAB). The Bay Area Quality Management District (BAAQMD) is responsible for implementing emissions standards and other requirements of federal and state laws in the project area. As required by the California Clean Air Act (CCAA), BAAQMD has published Clean Air Plans and adopted rules and regulations to limit the emissions that can be generated by various uses and/or activities to bring the Bay Area into compliance with the federal and state ambient air quality standards.

Ambient air quality is described in terms of compliance with state and national standards, and the levels of air pollutant concentrations considered safe, to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. The EPA has established national ambient air quality standards (NAAQS) for seven air pollution constituents. As permitted by the Clean Air Act, California has adopted more stringent air emissions standards (SAAQS) and expanded the number of regulated air constituents.

The CARB is required to designate areas of the state as attainment, nonattainment, or unclassified for any state standard. An "attainment" designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A "nonattainment" designation indicates that a pollutant concentration violated the standard at least once.

The EPA designates areas for ozone (O_3), carbon monoxide (CO), and nitrogen dioxide (NO_2) as either "Does not meet the primary standards," "Cannot be classified," or "Better than national standards." For sulfur dioxide (SO_2), areas are designated as "Does not meet the primary standards," "Does not meet the secondary standards," "Cannot be classified," or "Better than national standards." The area air quality attainment status of the SFBAAB, including the City of Newark, is shown on **Table 2**.

Table 2. San Francisco Bay Area Air Basin Attainment Status

Pollutant	State of California Attainment Status	Federal Attainment Status
Ozone (1-hour)	Nonattainment	Nonattainment (marginal)
Ozone (8-hour)	Nonattainment (serious)	Classification revoked 2005
Suspended Particulate Matter (PM_{10})	Nonattainment	Attainment/Unclassified
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment	Nonattainment
Carbon Monoxide	Attainment	Attainment/Unclassified
Nitrogen Dioxide	Attainment	Attainment/Unclassified
Lead	Attainment	Attainment/Unclassified
Sulfur Dioxide	Attainment	Attainment/Unclassified
Sulfates	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard
Visibility Reducing Particles	Unclassified	No Federal Standard

Sources: BAAQMD Air Quality Standards and Attainment Status. Accessed at http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status on March 27, 2017.

The City of Newark is currently in nonattainment for federal and state O_3 and $PM_{2.5}$ standards. The City is in nonattainment for state PM_{10} standards. Concentrations of all other pollutants meet state and federal standards.

AIR QUALITY MONITORING

The BAAQMD operates a network of ambient air monitoring stations throughout the Bay Area. The air quality monitoring station closest to the City of Newark is the Hayward Monitoring Station. However, this station only monitors ozone, so data was obtained from the San Jose Monitoring Station for the other criteria air pollutants. The ambient pollutant concentrations collected at the stations during the last three available years (2013 through 2015) were reviewed for exceedances and violations of state and federal standards. The data show occasional violations of the state and federal ozone standards, state PM_{10} standards, and federal $PM_{2.5}$ standards. The state and federal CO, SO_2, and NO_2 standards have not been exceeded in the past three years.

As shown in Table 3, the 1-hour O_3 concentration exceeded the state standard once in 2014 and twice in 2015. The federal standard for 8-hour ozone was exceeded once in 2013, four times in 2014, and twice in 2015. The state 24-hour PM_{10} standard was violated twice in 2013, once in

2014 and once in 2015. The federal 24-hour $PM_{2.5}$ standard was violated six days in 2013, twice in 2014, and twice in 2015.

Table 3. Summary of Annual Air Quality Data for Hayward and San Jose Air Quality Monitoring Stations

Pollutant	2013	2014	2015
Ozone (O3) Hayward Monitoring Station			
Maximum 1-hour concentration (ppm)	0.085	0.096	0.103
Days above 1-hour state standard (>0.09 ppm)	0	1	2
Maximum 8-hour concentration (ppm)	0.075	0.075	0.084
Days above 8-hour federal standard (>0.070 ppm)	1	4	2
Respirable Particulate Matter (PM_{10}) San Jose Monitoring Station			
Maximum 24-hour concentration ($\mu g/m^3$)	58.1	54.7	58.0
Days above state standard (>50 $\mu g/m^3$)	5	1	1
Days above federal standard (>150 $\mu g/m^3$)	0	0	0
Fine Particulate Matter (PM2.5) San Jose Monitoring Station			
Maximum 24-hour concentration ($\mu g/m^3$)	57.7	60.4	49.4
Days above federal standard (>35 $\mu g/m^3$)	6	2	2
Nitrogen Dioxide (NO_2) San Jose Monitoring Station			
Maximum 1-hour concentration (ppm)	0.058	0.058	0.049
Days above state 1-hour standard (0.18 ppm)	0	0	0

Notes: Underlined values in excess of applicable standard / ppm = parts per million / µg/m3 = micrograms per cubic meter
*Insufficient data to determine the value.
Source: California Air Resources Board, Air Quality Trend Summaries for Sacramento County. Accessed at https://www.arb.ca.gov/adam/index.html on March 27, 2017.
Ozone data was obtained from the Hayward Monitoring Station.
NO_2, PM_{10} and $PM_{2.5}$ data was obtained from the San Jose Jackson Street Monitoring Station.

METHODS

To determine whether construction or operation of the Project would result in violations of emission standards, contribute to a cumulative impact on air quality, or expose receivers to pollutants, construction and operation emissions were estimated using the CalEEMod Version 2016.3.1. The construction analysis included modeling of the projected construction equipment that would be used during each construction activity. The analysis assessed maximum daily emissions from individual construction activities, including grading, backbone infrastructure, building construction, paving, and architectural coating. The model estimates daily regional emissions from vehicle and stationary sources of pollutants during existing conditions. Project

impacts for operational emissions were assessed by calculating the net increase in emissions from the proposed modified project compared with emissions from the existing use on the site (the baseline emissions).

LEVELS OF SIGNIFICANCE

The BAAQMD has published thresholds of significance for new projects. In May 2010, the BAAQMD published new and more stringent draft CEQA guidelines to assist local agencies in evaluating air quality impacts of development proposals and other regulatory plans proposed in the SFBAAB. In early 2012, an Alameda County Superior Court ruled that the BAAQMD's updated guidelines be set aside on the ground that the District did not attempt to evaluate the potential environmental effects of the updated guidelines before their adoption. In California Building Industry Association v. BAAQMD (August 13, 2013, Case No. A136212) Cal. App. 4th, the First District Court of Appeal reversed a trial court's decision striking down BAAQMD's 2012 CEQA thresholds of significance for greenhouse gas (GHG) emissions. Although the Court of Appeal's decision does provide the means by which BAAQMD may ultimately reinstate the GHG emissions thresholds, any such action by the District is still uncertain; BAAQMD will revisit the issue and reinstate the thresholds or adopt other standards altogether (Morrison & Foerster, LLP 2013). For this analysis, the BAAQMD's 2010 thresholds of significance were employed to determine the proposed modified project's contribution to air quality and GHG emissions, and the local community risk and hazard impacts associated with toxic air contaminants (TACs) and $PM_{2.5}$. Refer to Section 8.VII, *Greenhouse Gas Emissions* for a discussion of impacts to GHG emissions.

IMPACTS AND MITIGATION MEASURES FROM PREVIOUS RELEVANT ENVIRONMENTAL DOCUMENTATION

Air Quality is discussed in Section 4.2 of the PEIR prepared for the Dumbarton TOD Specific Plan and Section 8.III of the IS/MND for the SHH/FMC Project. The PEIR concludes that construction of the project would result in fugitive dust emissions and includes measures to reduce impacts to less than significant. The overall Specific Plan is considered consistent with regional plans, and would not result in a significant cumulative impact to air quality impacts.

EVALUATION OF AIR QUALITY

Question a: No new impact

BAAQMD has attainment plans in place that identify strategies to bring regional emissions into compliance with federal and state air quality standards. Although the proposed modified project

would replace existing undeveloped areas with a commercial development, the proposed modified project is part of a larger project included in the City of Newark 2013 Updated General Plan, and the project is consistent with the net development envisioned in the Dumbarton TOD Specific Plan.

Buildout of the proposed modified project would be consistent with the 2010 Bay Area Clean Air Plan (BAAQMD 2010) because the projected average daily traffic (ADT) with the internal capture rate at 33 percent would be lower than what was predicted under the Dumbarton TOD Specific Plan.

Although land uses and densities are not consistent with parcel-specific land uses identified in the Dumbarton TOD Specific Plan and the 2013 Updated General Plan (see Section 8.X, *Land Use and Planning*), the project is consistent with the City of Newark's Zoning Ordinance. The commercial retail land use proposed for project site differs from the land use proposed in the Dumbarton TOD Specific Plan and 2013 Updated General Plan. The Specific Plan allows for an adjustment of land uses within the Specific Plan area without necessitating a Specific Plan Amendment. A revised Land Use Plan and revised Proposed Land Use Table will be submitted to the City for approval. Further, the proposed modified project would not generate significant amounts of air pollutant emissions during construction or operation. The proposed modified project would not exceed screening criteria thresholds set by BAAQMD, and no feature of the proposed modified project would conflict with or obstruct implementation of the 2010 Bay Area Clean Air Plan. Although impacts, as a result of emission, would be less than significant, fugitive dust generated by construction activities could result in a potentially significant impact. The following measures contained in the PEIR prepared for the Dumbarton TOD Specific Plan will be implemented to reduce impacts from fugitive dust to less than significant.

Dumbarton Mitigation Monitoring and Reporting Program Measures 4.2-1a and 4.2-1b (Fugitive Dust)

The Specific Plan MMRP measures 4.2-1a and 4.2-1b require that dust control measures are implemented during construction activities prior to issuance of any grading permits.

Consistent with the IS/MND for the SHH/FMC project, these measures would be implemented and impacts as a result of fugitive dust will be less than significant.

Question b: No new impact

Construction of the proposed project could impact air quality as a result of heavy equipment emissions and architectural coatings. The results of the CalEEMod analysis performed (Appendix C) indicated that emissions of all criteria pollutants related to project construction activities would be below the BAAQMD's significance thresholds. Table 4 presents the modeled construction emissions for each calendar year of construction. During construction activities, the project proponent would implement applicable and feasible elements of the dust abatement program as identified in the PEIR (MMRP measures 4.2-1a and 4.2-1b). Direct impacts from criteria pollutants generated during construction would not be significant and no mitigation would be required.

Table 4. Maximum Daily Construction Emissions

Year	Pollutant Emissions (pounds per day)					
	ROG	NO_x	CO	SO_x	Exhaust PM_{10}	Exhaust $PM_{2.5}$
2018	2.91	20.16	16.10	0.03	1.08	1.04
2019	44.48	18.56	15.48	0.03	0.93	0.90
Significance Thresholds	54	54	-	-	82	54
Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***

Notes: (1) Emissions were calculated for both summer and winter months. On average winter emissions were higher and therefore were used for this analysis. (2) Low VOC coatings were used to reduce ROG emissions for architectural coatings.

The proposed modified project could result in minor emissions associated with electricity consumption, natural gas usage, and vehicle trips associated with project operations. Potential impacts as a result of operational emissions were evaluated based on the net increase of emissions from the proposed project (Appendix C). As illustrated in Table 5, the net increase of daily maximum operational emissions as a result of project operations would be below the BAAQMD's significance criteria for all criteria pollutants and would not result in a significant direct impact as a result of operational emissions. No mitigation would be required.

Table 5. Maximum Daily Operational Emissions

Emission Source	Pollutant Emissions (pounds/day)					
	VOC	NO_x	CO	SO_x	Exhaust PM_{10}	Exhaust $PM_{2.5}$
Proposed Project						
Area	2.78	<0.01	0.02	0.00	<0.01	<0.01

Energy	0.09	0.78	0.66	<0.01	0.06	0.06
Mobile	1.85	10.67	16.68	0.04	0.05	0.05
Proposed Project Total	**4.72**	**11.45**	**17.35**	**0.05**	**0.11**	**0.11**
Significance Threshold	54	54	-	-	82	54
Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***

Note: (1) Emissions were calculated for both summer and winter months. On average winter emissions were higher and therefore were used for this analysis. (2) Emissions from the proposed project include applicable design features.

Question c: No new impact

The San Francisco Bay Area region is in non-attainment for ozone (NO_x and ROG) and particulate matter ($PM_{2.5, 10}$). As discussed above, no exceedance of the District's emission thresholds for criteria pollutants would be expected for the proposed modified project. The project would not result in a cumulatively considerable net increase in any criteria pollutant. Impacts from the proposed modified project would be consistent with the SHH/FMC Project.

Questions d and e: No new impact

The CARB describes sensitive receptors as residences, schools, day-care centers, playgrounds, medical facilities, or other facilities that may house individuals with health conditions (medical patients or elderly persons/athletes/students/children) that may be adversely affected by changes in air quality. The two primary pollutants of concern regarding health effects for land development are CO and diesel particulate matter.

Construction Diesel Particulates

Construction activities are short-term and temporary, as are the resulting emissions. Diesel particulate matter is not included as a criteria pollutant; however, it recognized by the State of California as containing carcinogenic compounds. Diesel particulate matter would be emitted from heavy equipment used for construction activities. It is estimated that construction activities for the project would occur over approximately 78 weeks which is substantially less than the 70-year/40-year period used for health risk determination. Further, as identified in Table 4, construction emissions would not exceed significant thresholds. The proposed modified project would have no new impact and no mitigation is required.

Carbon Monoxide Hot Spots

The SFBAAB is designated as attainment for CO. BAAQMD's 2010 CEQA guidelines notes that CO impacts may be determined to be less than significant if a project is consistent with the

applicable congestion management plan or would not increase traffic volumes at intersections to more than 44,000 vehicles per hour for regular intersections, or would not increase traffic volumes at intersections to more than 24,000 vehicles per hour for intersections with limited mixing zones (e.g., tunnels, garages, overpasses, etc.).

The PEIR prepared for the Dumbarton TOD Specific Plan specifies that the projects included in the Specific Plan would not cause traffic volumes at local intersections to increase beyond 6,000 vehicles per hour. The proposed modified project is anticipated to account for less than two percent of the total generated trip identified in the Dumbarton TOD Specific Plan. As a result, the proposed modified project would not increase traffic volumes to an extent that would result in a significant impact. The proposed modified project would have no new impact and no mitigation is required.

Operational Diesel Particulates

The proposed project is anticipated to generate minor emissions associated with delivery trucks for the retail store. Trucks entering and leaving the proposed project would include deliveries associated with the retail space. Trucks would idle in the shipping and receiving delivery dock areas. Trucks would be limited to an idle time of five minutes for entering or exiting the truck delivery well, in accordance with California state law. The loading delivery docks are the only locations where routine truck idling associated with operation of the Project would be expected. It is possible that the operation of the retail space would require use of trucks equipped with transportation refrigeration storage units (TRUs) to deliver cold-stored food items. Trucks equipped with TRUs typically result in higher TAC emissions, because they are equipped with diesel generator sets to keep perishable food cold, in addition to diesel engine exhaust from the truck. However, it is not anticipated that the proposed retail space would experience high truck volumes (i.e., warehouses with distribution centers that have greater than 100 commercial trucks per day or 40 TRU-equipped trucks per day as defined by the CARB as the screening level) delivering materials on a frequent basis.

Retail spaces with on-site food services emit minor amounts of TACs from the cooking of animal fats and oils. TAC emissions would be controlled through an exhaust hood to a roof-top vent. Therefore, on-site or off-site sensitive receptors would not be exposed to substantial TAC concentrations from these sources.

Odors

The project involves construction of a hotel and retail space. These uses are not identified as major sources of odor emissions according to the CARB Air Quality and Land Use Handbook. The proposed modified project would not be a source of nuisance odors associated with operations.

Additionally, the occupants of the proposed modified project would not be subjected to facilities associated with odor complaints. The proposed land uses in the Dumbarton TOD Specific Plan surrounding the project site are primarily residential. Union Sanitary District sewerage treatment plant is the closest potential source of odors, and this facility is located approximately 4,600 feet to the northwest of the project site. There are also reports of odors that occur due to algae in the salt ponds. However, these odors are regarded as an annoyance rather than a health hazard. Based on the nature of the odor source and the low frequency of odor events generated by the salt ponds, impacts are not considered a significant odor source. Additionally, salt ponds are not identified by the BAAQMD as a significant odor source.

IV. BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	■
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	■
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	■
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	■
e) Conflict with any applicable policies protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	■
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	■

The project site has been fully disturbed in conjunction with the development of the adjacent SHH site's grading activities. Previously, the site evaluated by biologists Stephen Stringer and Catherine Silvester, of HELIX Environmental Planning, Inc. (HELIX), on August 5, 2013 and September 19, 2013 for the SHH/FMC IS/MND. The biological reconnaissance surveys were conducted to determine the existing conditions, identify biological habitats/vegetation communities on the project site, conduct botanical and wildlife inventories, conduct a tree inventory, and identify the habitats present on the project site that have the potential to support special-status species. The methods and results of the evaluation were presented in a biological resources evaluation (BRE) prepared for the SHH/FMC Project, and the information relevant to the proposed modified project are summarized below.

HABITAT TYPE PRESENT

The project site contains fill/construction materials and is used as a construction staging area for nearby construction activities. This area has been cleared and graded, and is largely maintained free of vegetation. The project site is characterized as developed/distured habitat.

PROTECTED TREES

The biological reconnaissance survey on September 19, 2013 included a certified arborist tree inventory. One native Monterey pine tree was located on the project site (former FMC Parcel). The Monterey pine tree met the criteria for protection under the City of Newark, and a tree removal permit was obtained from the City of Newark in May 2016. The Monterey pine tree has since been removed, and there are currently no trees on the project site.

JURISDICTIONAL WATERS

A delineation of potential jurisdictional waters on the project site was prepared by WRA, Inc. in 2013.

Although there are no jurisdictional waters present on the project site, one man-made, 0.03-acre seasonally inundated depression is located approximately 100 feet south of the project site, on the SHH Property. The seasonally inundated depression will be completely avoided by the proposed modified project.

IMPACTS AND MITIGATION MEASURES FROM PREVIOUS RELEVANT ENVIRONMENTAL DOCUMENTATION

Biological Resources are discussed in Section 4.3 of the PEIR for the Dumbarton TOD Specific Plan and Section 8.IV of the IS/MND for the SHH/FMC Project (RBF 2011; HELIX 2014). The

PEIR concludes that construction of the project could have potentially significant adverse impacts on special-status animal and plant species, wetlands and Waters of the State/U.S., and protected tree. The IS/MND for the SHH/FMC project concluded that there was no suitable habitat on site for the Salt Marsh Harvest Mouse (SMHM) and the Western Burrowing Owl (BO).

EVALUATION OF BIOLOGICAL RESOURCES

Question a: No new impact

Special Status Wildlife (*Salt Marsh Harvest Mouse*)

A habitat assessment for SMHM and BO was prepared for the, SMHM is presumed absent from the site as a result of the existing level of disturbance, industrial land uses, and lack of suitable natural habitat such as saline emergent wetlands and nearby uplands. The SHH/FMC IS/MND concluded that as a result, no impacts to salt marsh harvest mouse are anticipated. The proposed modified project would be consistent with the SHH/FMC IS/MND and have no new impact.

Nesting Raptors

Migratory birds (including raptors) have the potential to use the trees adjacent to the study area for nesting and the adjacent area for foraging. There are no trees or structures present on the project site, but birds nesting on trees within 300 feet of the project site could be indirectly impacted by construction activities and noise.

The project site is currently being graded as part of the SHH/FMC Project. Preconstruction nesting bird surveys were conducted in April 2016, and burrowing owl monitoring surveys were conducted in October 2016 in compliance with the Specific Plan MMRP. Consistent with the SHH/FMC IS/MND, the Specific Plan MMRP measure 4.3-2 would be implemented to avoid, minimize, and mitigate impacts to nesting raptors. The proposed modified project would have no new impact.

Western Burrowing Owls

No suitable habitat for BO is present in the study area, and none were observed in or adjacent to the study area during the biological reconnaissance survey. The proposed modified project would be consistent with the SHH/FMC IS/MND and have no new impact.

Nesting Passerines

Migratory birds (including passerines) have the potential to use the trees adjacent to the study area for nesting and the adjacent area for foraging. There are no trees or structures present on the project site, but birds nesting on trees within 300 feet of the project site could be indirectly impacted by construction activities and noise. The Specific Plan MMRP measure 4.3-4 would be implemented to avoid, minimize, and mitigate impacts to nesting passerines.

Special Status Plants

A Rare Plant Survey Report was prepared for the SHH/FMC Project in April 2016 by HELIX. The report concluded that no special-status species were observed on the project site and special-status plants were determined to be absent. Therefore, the proposed modified project would have no new impact on special status plants.

Question b, c: No new impact

The SHH/FMC IS/MND determined that no riparian habitat or other sensitive community, waters of the State, or waters of the U.S. would be impacted by the project. The proposed modified project would have no new impact.

Question d: No new impact

The project area and vicinity feature previous industrial land uses and development with residential and commercial uses. The SHH/FMC IS/MND determined that the project site does not provide a migratory wildlife corridor nor would development of the project impede the use of native wildlife nursery sites. Therefore, the proposed modified project would have no new impact.

Question e: No new impact

Per the SHH/FMC IS/MND, a tree removal permit was obtained from the City of Newark to remove the native Monterey pine tree identified along the western boundary of the project site. The tree has been removed, and the proposed modified project would have no new impact.

Question f: No new impact

The SHH/FMC IS/MND determined that no Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan has been

approved for the City of Newark, and no impact would occur. The proposed modified project would have no new impact.

V. CULTURAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☐	■
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☐	■
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	■
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	■

State and federal legislation requires the protection of historical and cultural resources. In 1971, President's Executive Order No. 11593 required that all federal agencies initiate procedures to preserve and maintain cultural resources by their nomination and inclusion on the National Register of Historic Places (NRHP). In 1980, the Governor's Executive Order No B-64-80 required that state agencies inventory all "significant historic and cultural sites, structures, and objects under their jurisdiction which are over 50 years of age and which may qualify for listing on the (NRHP)." Section 15064.5(b)(1) of the State CEQA Guidelines specifies that projects that cause "…physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historic resource would be materially impaired" shall be found to have a significant impact on the environment.

Cultural resource issues relevant to the proposed project are summarized here.

The Specific Plan area lies within the ethnographic territory of the Ohlone. Coastal Native American habitation sites in Alameda County, such as the Ohlone, are often marked by the presence of midden soil deposits, which are a buildup of organic debris and contain marine shells

and animal bones. Other types of features that identify Native American activity areas are scatters of “flakes” or chipped material that resulted from the manufacturing of chipped stone tools and bedrock milling features (mortar depressions). Native American cultural resources in western Alameda County are typically found near the bayshore and adjacent to other seasonal and perennial watercourses. No recorded, reported, or known Native American sites, villages, trails, traditional use areas, or contemporary use areas have been identified in, adjacent to, or near the Specific Plan area.

The South Pacific Coast Railroad opened for service in March 1878 and is the present-day location of Union Pacific Railroad corridor (formerly Southern Pacific Railroad) and the future Dumbarton Rail Corridor project, approximately 700 feet north of the project site. A portion of the railroad corridor between Wells and Thornton Avenues has been evaluated as eligible for inclusion on the National Register of Historic Places under criteria A, B, and C.

The Specific Plan area remained primarily undeveloped until industrial uses moved in during the 1920s. Several parcels, including the project site, were never developed or actively used.

The entire Specific Plan area is underlain by Holocene floodbasin deposits (Qhb) and Holocene estuary deposits (bay mud). Many paleontologists consider Holocene biologic remains too young to qualify as fossils. Although the soils may contain Holocene aged mulluscan fossils, such fossils are not considered significant. Consequently, the paleontological sensitivity of these units is considered low.

No NRHP or California Register of Historical Resources (CRHR) listed, determined, or potential archaeological sites, significant local, State, or Federal historic properties, landmarks, etc. have been identified in or adjacent to the Specific Plan area. The Specific Plan area contains no recorded archaeological resources, including prehistoric sites.

IMPACTS AND MITIGATION MEASURES FROM PREVIOUS RELEVANT ENVIRONMENTAL DOCUMENTATION

The Dumbarton TOD Specific Plan PEIR concludes there are no NRHP or CRHR listed, determined, or potential archaeological sites, significant local, State or Federal historic properties, landmarks, etc., in or adjacent to the Specific Plan area. Additionally, there are no recorded archaeological resources, including prehistoric sites and no recorded, reported, or known Native American sites, villages, trails, traditional use areas, or contemporary use areas in, adjacent, or near the Specific Plan area. No historic resources have been formally recorded or

reported in or near the Specific Plan area. The Specific Plan area has a low sensitivity for paleontological resources.

There is a possibility that potentially significant unrecorded archaeological resources, including prehistoric resources and human remains, as well as historic resources, and are present beneath the ground surface and could be exposed during construction activities. Unknown paleontological resources may be damaged or destroyed during ground disturbing activities. Mitigation measures are recommended to reduce impacts to cultural resources to a less-than-significant level.

EVALUATION OF CULTURAL RESOURCES

Questions a - d: No new impact

Previous record searches have resulted in negative findings for historic or archaeological resources. Consistent with the SHH/FMC IS/MND, mitigation measures contained in the Specific Plan MMRP (measures 4.4-1a and 4.4-1b) would be implemented for the proposed modified project to minimize impacts to cultural resources to less than significant. The proposed modified project would have no new impact.

VI. GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	■
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	■
ii) Strong seismic ground shaking?	☐	☐	☐	■
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	■
iv) Landslides?	☐	☐	☐	■
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	■
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	■
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	■
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	■

Geology and soils are discussed in Section 4.5 of the PEIR prepared for the Dumbarton TOD Specific Plan and Section 8.VI in the IS/MND for the SHH/FMC Project (RBF 2011; HELIX 2014). Information pertinent to the proposed modified project is summarized below.

Geology

The project site is located in the San Francisco Bay Area. This region is known to be one of the most seismically active places in the United States. There are three major active faults located in the San Francisco Bay Area: the Hayward Fault, which is located approximately 6 miles east of the project site, the San Andreas Fault, which is located approximately 13 miles west of the project site, and the Calaveras Fault, which is located approximately 11 miles east of the project site.

The project site is not located within an Alquist-Priolo Study Zone (i.e., active faults). Because there are no identified active earthquake faults on the project site, there is no risk of ground rupture on the project site from known earthquake faults; however, there is a potential for moderate earthquake-induced ground shaking due to other identified earthquake off-site faults in the San Francisco Bay Area. The project site may be underlain by potentially liquefiable soils, and contains backfill that could result in seismically-induced ground failure from an adequately substantial earthquake from off-site faults. A significant seismic event that could damage and destroy buildings and other structures could occur on the project site.

Soils

The project site is underlain by Marvin silt loam, saline-alkali (NRCS 2017). However, the soil profile throughout the project area did not match the description of Marvin silt loam, indicating that imported fill material is present on the project site (WRA 2013). It is unknown whether the project site contains liquefiable soils; however, geotechnical investigations conducted on other properties in preparation of the PEIR (RBF 2011) identified liquefiable soils in other areas of the Specific Plan. Therefore, the project site has a potential to contain liquefiable soils. Backfilled areas or areas with liquefiable soils could experience differential ground settlement, which could result in structural damage to buildings, pipelines, and other structures.

Because of the nearly level topography on the project site the potential for landslides is low. Similarly, due to the relatively flat topography, runoff rates are low, and therefore, the erosion hazard is low. However, erosion can be accelerated by the removal of vegetation, excavation, and grading, which could increase the chances of erosion from wind or stormwater runoff on the project site.

The high clay content of the soil that underlies the project site is considered an expansive soil and has high shrink-swell potential. Expansion and contraction of soils could cause damage to structures, which, in turn, could result in damage to life and property.

City Regulation of Geology and Soils

The City of Newark's 2013 Updated General Plan contains conditions, actions, and programs that help minimize the effects of seismic and geologic hazards, primarily through enforcement of the California Building Code, which requires the implementation of engineering solutions for constraints to urban development posed by slopes, soils, and geology.

IMPACTS AND MITIGATION MEASURES FROM PREVIOUS RELEVANT ENVIRONMENTAL DOCUMENTATION

Impacts to people or structures as a result of seismic-related activity could be potentially significant. The impact of seismic-related ground shaking on the project site can be reduced if the project is constructed in compliance with the geotechnical engineering investigations and the California Building Code requirements. Mitigation measures 4.5-1 and 4.5-2 contained in the Specific Plan MMRP would be implemented to reduce impacts to a less-than-significant level.

EVALUATION OF GEOLOGY AND SOILS

Question a: No new impact

Because there are no identified active earthquake faults on the project site, there is no risk of ground rupture on the project site from known earthquake faults; however, there is a potential for moderate earthquake-induced ground shaking due to other identified earthquake off-site faults in the San Francisco Bay Area. The project site may be underlain by potentially liquefiable soils, and contains backfill that could result in seismically-induced ground failure from an adequately substantial earthquake from off-site faults. Consistent with the SHH/FMC Project, the proposed modified project would implement mitigation measure 4.5-1 from the Specific Plan MMRP to reduce impacts to a less-than-significant level. Therefore, the proposed modified project would have no new impact. Due to the relatively flat topography of the project site, it is not susceptible to landslides as a result of seismic activity.

Question b: No new impact

The SHH/FMC IS/MND concluded that construction activities on the project site, such as removal of vegetation, grading, and excavation could potentially result in increased erosion or loss of topsoil from wind or stormwater. Consistent with the SHH/FMC IS/MND, the proposed

modified project would implement mitigation measure 4.5-2 to reduce potential impacts from soil erosion to a less-than-significant level. The proposed modified project would have no new impact.

Question c, d: No new impact

The specific soil conditions on the project site are not known; however, the project site likely has a low potential for subsidence. The site may contain soils that are subject to liquefaction, which could lead to differential settlement. Because the project site was previously remediated, it could experience differential ground settlement from areas that were backfilled. Also, the soil that underlies the project site has high shrink-swell potential, which could result in structural damage. While the project could be exposed to impacts caused by unstable soils, implementation of Specific Plan MMRP measure 4.5-1 which requires that developers have design-level geotechnical engineering investigations prepared would be implemented to reduce these impacts to a less-than-significant level, consistent with the SHH/FMC IS/MND. Therefore, the proposed modified project would have no new impact.

Question e: No new impact

The SHH/FMC IS/MND determined that the proposed project would be connected to a municipal wastewater treatment system provided by the City of Newark and would not require septic systems or an alternative waste disposal system. No impact would occur and no mitigation would be required. The proposed modified project would have no new impact.

VII. GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	☐	☐	☐	■
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	■

Climate change has been observed to contribute to poor air quality, rising sea levels, melting glaciers, stronger storms, more intense and longer droughts, more frequent heat waves, wildfires, and other threats to human health (ALA California 2011; IPCC 2007). From 1994 through 2006, eleven of those twelve years rank among the 12 warmest years on record (since 1850), with the warmest two years being 1998 and 2005 (IPCC 2007). Hotter days facilitate the formation of ozone, increases in smog emissions, and increases in public health impacts (e.g., premature deaths, hospital admissions, asthma attacks, respiratory conditions, and acute bronchitis) (ALA California 2011). Global temperatures have risen by 1.3ºF over the past century, and if greenhouse gas emissions continue to increase, climate models predict that the average temperature at the Earth's surface could increase by 2 to 11.5ºF by the year 2100 (IPCC 2007).

Because reducing GHG emissions would help to reduce the potential impacts of climate change, California has adopted AB 32, the Global Warming Solutions Act of 2006. The California Air Resources Board (CARB) is in the process of implementing a comprehensive, multi-year strategy to reduce GHG emissions. The state Attorney General's Office has identified various measures for all development types that may reduce the global warming impacts at the individual project level. The various measures include the following list categories:

- Energy Efficiency
- Renewable Energy and Energy Storage

- Water Conservation and Efficiency
- Solid Waste Measures
- Land Use Measures
- Transportation and Motor Vehicles
- Agriculture and Forestry

The Attorney General's Office also suggests that if, after analyzing and requiring all reasonable and feasible on-site mitigation measures for avoiding or reducing greenhouse gas-related impacts, the lead agency determines that additional mitigation is required, the agency may consider additional off-site mitigation (California AGO 2010).

Table 6 lists 2009 California GHG emissions estimated by CARB based on carbon dioxide equivalent emission rates.

Table 6. California Greenhouse Gas Emissions based on Carbon Dioxide Equivalent Emission Rates

Category	CO_2 Equivalent (million tonnes)	Percent Total (of gross)
Transportation	172.92	38.2
Electric Power	103.58	22.9
Agriculture	32.13	7.1
Commercial and Residential	42.95	9.5
Industrial	81.36	17.1
Recycling and Waste	7.32	1.6
High GWP[1]	16.32	3.6
Forestry	0.19	0.0
Total (gross)	*456.77*	*100*
Sinks and Sequestrations	-3.80	
Total (net)	**452.97**	

[1] Includes Ozone Depleting Substance (ODS) Substitutes, Electricity Grid SF6 Losses, and Semiconductor Manufacturing.

Source: California Air Resources Board, 2011. Greenhouse Gas Inventory for 2000-2009 – by Category as Defined in the Scoping Plan. Retrieved March 14, 2013, from California Air Resources Board: http://www.arb.ca.gov/cc/inventory/data/data.htm.

California carbon dioxide equivalent emissions were approximately 452.97million tonnes in 2009. As shown in the table, over 38 percent of GHG emissions from within California occur from transportation, and 23 percent occur from electric power.

Naturally occurring greenhouse gases include water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and ozone (O_3). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but they are, for the most part, emitted solely by human activities. There are also several gases that, although they do not have a direct radiative forcing effect, do influence the formation and destruction of ozone, which does have such a terrestrial radiation absorbing effect. These gases, referred to here as ozone precursors, include carbon monoxide (CO), oxides of nitrogen (NO_x), and non-methane volatile organic compounds (NMVOC). Aerosols (extremely small particles or liquid droplets emitted directly or produced as a result of atmospheric reactions) can also affect the absorptive characteristics of the atmosphere (EPA 2010).

REGULATORY FRAMEWORK RELATING TO GREENHOUSE GAS EMISSIONS

Federal and State Regulations

The United States Environmental Protection Agency (EPA) is the federal agency responsible for implementing the Clean Air Act (CAA). The U.S. Supreme Court ruled on April 2, 2007 that CO_2 is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of GHGs.

CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California, and for implementing the California Clean Air Act (CCAA). Various statewide and local initiatives to reduce the state's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way, and there is a real potential for severe adverse environmental, social, and economic effects in the long-term. Because every nation emits GHGs, and therefore makes an incremental cumulative contribution to global climate change, cooperation on a global scale will be required to reduce the rate of GHG emissions to a level that can help to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

There are numerous laws that have been signed in California to reduce greenhouse gas emissions. Assembly Bill (AB) 1493 (signed in 2002) requires that CARB develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the state." To meet the requirements of AB 1493, in 2004 CARB approved amendments to the California Code of

Regulations (CCR) adding GHG emissions standards to California's existing standards for motor vehicle emissions.

Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

In 2006, Governor Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. AB 32 established regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. California needs to reduce GHG emissions by approximately 28.3 percent below the "business as usual" predictions to achieve this goal. The bill requires the CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions. In 2011, specific GHG emission limits and reduction measures in line with AB 32 were adopted; these became enforceable in 2012.

As of 2011, 18 of 30 CARB regulations had been approved, including nine discrete early actions, as required by AB 32. The current estimate for the necessary GHG emissions reductions to attain the goals of AB 32 (i.e., 1990 levels by 2020) is 174 million metric tons of CO_2 equivalent ($MMTCO_2e$). It is estimated that nine proposed discrete early actions identified by CARB will provide approximately 16 $MMTCO_2e$ of GHG reductions while the other early actions will provide approximately 26 $MMTCO_2e$ of GHG reductions. It also is anticipated that an additional 30 $MMTCO_2e$ in reductions will be achieved from the passage of anti-idling measures and AB 1493 (described below). The remaining 102 $MMTCO_2e$ are expected to be achieved through CARB's Scoping Plan and other emission reduction efforts by members of the CCAT. By January 1, 2014, and every five years thereafter, the CARB will update its Scoping Plan.

Senate Bill (SB) 375 was signed and passed into law in 2008. SB 375 enhances the CARB's ability to reach AB 32 goals. Specifically, SB 375 requires CARB to set regional targets for the purpose of reducing GHG emissions from passenger vehicles for the years 2020 and 2035. If regions develop integrated land use, housing, and transportation plans that meet the SB 375 targets, new projects in these regions can be relieved of certain review requirements of CEQA.

The targets apply to the 17 regions in the state managed by metropolitan planning organizations (MPO). CARB adopted its final targets in 2010.

The metropolitan transportation commission (MTC) is the MPO for the nine-county San Francisco Bay Area region. MTC's targets are a 7 percent per capita reduction from 2005 by 2020, and 15 percent per capita reduction from 2005 by 2035. MTC's *Plan Bay Area* is the San Francisco Bay Area's Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS). The *Plan Bay Area* was released in 2013 and was adopted in July of that year. The SCS sets a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce GHG emissions from transportation (excluding goods movement) beyond the per capita reduction targets identified by CARB. According to *Plan Bay Area*, the Plan meets a 16 percent per capita reduction of GHG emissions by 2035 and a 10 percent per capita reduction by 2020 from 2005 conditions.

In 2008, the CARB adopted the Scoping Plan (CARB 2008) as directed by AB 32. The Scoping Plan proposes a set of actions designed to reduce overall GHG emissions in California to the levels required by AB 32. The measures in the Scoping Plan approved by the CARB will be in place by the year 2012, with further implementation details and regulations to be developed, followed by the rulemaking process to meet the year 2012 deadline. Measures applicable to development projects include those related to the following: energy-efficiency building and appliance standards; the use of renewable sources for electricity generation; regional transportation targets; and green building strategy.

Relative to transportation, the Scoping Plan includes nine measures or recommended actions. One of these is measure T-3, Regional Transportation-related Greenhouse Gas Targets, which relies on SB 375 implementation to reduce GHG emissions from passenger vehicles through reducing vehicle miles traveled. The other measures are related to vehicle GHGs, fuel, and efficiency measures, and those measures would be implemented statewide rather than on a project-by-project basis.

City of Newark Climate Action Plan

The City of Newark has adopted a Climate Action Plan to identify and evaluate feasible and effective policies to reduce GHG emissions in order to reduce energy costs, protect air quality, and improve the economy and the environment. The plan identifies a 5 percent GHG reduction target from 2005 municipal emissions by July 2012, a 5 percent reduction in city and community emissions by July 2015, and a 15 percent decrease in communitywide emissions levels by 2020.

Data collected by the City thorough the GHG monitoring process shows that the City has already achieved the first two of these goals.

METHODS

As described under methods in Section 8.III, *Air Quality*, construction and operation emissions were estimated using the CalEEMod Version 2016.3.1. The construction analysis included modeling of the projected construction equipment that would be used during each construction activity. The analysis assessed maximum daily emissions from individual construction activities, including grading, backbone infrastructure, building construction, paving, and architectural coating. The model estimates daily regional emissions from vehicle and stationary sources of pollutants during existing conditions. Project impacts for operational emissions were assessed by calculating the net increase in emissions from the proposed modified project.

LEVELS OF SIGNIFICANCE

Given the relatively small levels of emissions generated by a typical development in relationship to the total amount of GHG emissions generated on a national or global basis, individual development projects are not expected to result in significant, direct impacts with respect to climate change. However, given the magnitude of the impact of GHG emissions on the global climate, GHG emissions from new development could result in significant, cumulative impacts with respect to climate change. Thus, the potential for a significant GHG impact is limited to cumulative impacts.

As discussed in Section 15064.4 of the State CEQA Guidelines, the determination of the significance of GHG emissions calls for a careful judgment by the lead agency, consistent with the provisions in Section 15064. Section 15064.4 further provides that a lead agency should make a good faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project.

As shown in Table 7, the BAAQMD 2010 CEQA Guidelines do not have thresholds for construction GHG emissions, but do include operational related thresholds. For a land use development project to meet the operational thresholds, it must show compliance with a qualified GHG reduction strategy, or be below a screening-level emission rate of 1,100 MT CO_2e per year. This emission level is based on the amount of vehicle trips, the typical energy and water use, and other factors associated with projects.

Table 7. BAAQMD Greenhouse Gas Emissions Thresholds

Pollutant	Construction-Related	Operational-Related
	Average Daily Emissions (pounds/day)	Maximum Annual Emissions (tons/year)
GHGs – Projects other than Stationary Sources	No threshold	Compliance with Qualified GHG Reduction Strategy OR 1,100 MT CO_2e/yr

Source: BAAQMD CEQA Guidelines Updated May 2010.

IMPACTS AND MITIGATION MEASURES FROM PREVIOUS RELEVANT ENVIROMENTAL DOCUMENTATION

Greenhouse Gas Emissions is discussed in Section 4.6 of the PEIR prepared for the Dumbarton TOD Specific Plan and Section 8.VII of the IS/MND for the SHH/FMC Project (RBF 2011; HELIX 2014). The PEIR concludes that the project would not conflict with an applicable GHG reduction plan, policy or regulation, and includes measures (MMRP measure 4.6-1) describing potential design features to be incorporated into the project design to ensure that GHG emission associated with project operation would be below the business as usual scenario. With implementation of the proposed design features, GHG emissions would be less than significant. The Dumbarton TOD could result in potentially significant cumulative impacts resulting from GHG emissions, but these would be reduced to less than significant with implementation of MMRP 4.6-1.

EVALUATION OF GREENHOUSE GAS EMISSIONS

Question a: No new impact

Greenhouse gas emissions would be generated from the proposed commercial development during construction and operation.

Construction Emissions

GHG emissions during construction would be associated with the use of heavy equipment and by construction worker commute trips. GHG emissions, as a result of construction activities, would be temporary. As shown in Table 8, total GHG emissions associated with construction are estimated at 352 MT of CO_2e.

Table 8. Estimated Construction Related GHG Emissions (metric tons/year) for the Proposed Project

Calendar Year	CO_2	CH_4	N_2O	CO_2e
2018	302.99	0.05	0.00	304.29
2019	47.12	0.01	0.00	47.34
TOTAL (metric tons)	**350.12**	**0.06**	**0.00**	**351.63**

The BAAQMD 2010 CEQA Guidelines do not have significance thresholds for construction GHG emissions; however, the project-related emissions are included here for informational purposes. Impacts would be less than significant and no mitigation measures are required.

Operational Emissions

Operational emissions would result from transportation sources (primarily automobile trips) and from area sources such as electricity generation, water treatment and transmission, solid waste collection, and space heating. As shown in Table 9, total GHG emissions associated with operation are estimated at 1,093 MT of CO_2e.

Table 9. Estimated Annual Operation Greenhouse Gas Emissions for the Proposed Project

Emission Source	Annual Emissions (metric tons/year)			
	CO_2	CH_4	N_2O	CO_2 Equivalents
Area Source	<0.01	<0.01	<0.01	<0.01
Energy Use	356.17	<0.01	<0.01	357.09
Mobile	709.36	0.05	0.00	710.50
Solid Waste Management	6.43	0.38	0.00	15.94
Water Consumption	5.19	0.12	<0.01	9.13
Operational Total (metric tons)	1,077.16	0.55	0.01	1,092.67
Significance Threshold	1,100			
Significant Impact?	***No***			

Question b: No new impact

The PEIR prepared for the Dumbarton TOD Specific Plan concludes that the entire Dumbarton TOD project (which includes the Project) is consistent with all applicable GHG plans and policies. The project design features were compared against the policies included in the 2013

Updated General Plan that is incorporated the City of Newark's Clean Air Plan. The project's design features would support these policies. They include:

Action CS-3.E Water Efficient Landscaping. Continue to implement the City's Bay Friendly Landscaping Guidelines for water-efficient landscaping, including low water use plants and more efficient irrigation systems. Adopt more stringent outdoor water use policies for individual development proposals where feasible.

Policy CS-5.1 Linking Land Use and Transportation. Encourage land use and transportation patterns that reduce dependence on automobiles. This includes siting well-designed higher-density, mixed-use development near the proposed Dumbarton Rail station and in other areas with frequent transit service.

Policy CS-5.2 Pedestrian and Bicycle Friendly Design. Ensure that new development is planned and designed to facilitate walking and bicycling as well as driving. This can potentially reduce the number of vehicle trips and related GHG emissions.

Policy CS-6.2 Encouraging Greener Construction. Encourage greener construction methods and greater use of recycled-content materials in new residential, commercial, and industrial construction projects in accordance to the latest CalGreen building standards.

Policy CS-7.1 Reducing Energy Use. Support measures to reduce energy consumption and increase energy efficiency in residential, commercial, industrial, and public buildings.

Policy CS-7.2 Renewable Energy Sources. Support the expanded use of renewable energy sources such as wind and solar by Newark residents and businesses, the City of Newark, and other government agencies.

Policy CS-7.3 Designing for Energy Efficiency. Support building design, site planning, and subdivision design methods that reduce heating and cooling costs and achieve greater energy efficiency.

Policy CS-7.5 Solar Access. Preserve solar access rights in a way that is consistent with state law, encourages the use of photovoltaic energy systems in new construction and rehabilitation projects, and balances parallel objectives to expand the urban forest and protect local trees.

The proposed modified project would also be consistent with several Action Items listed in the Clean Air Plan, namely the proposed modified project's green principles and regional smart growth planning efforts it will achieve (i.e., higher density, and mix of uses). The project would

include the installation of energy- and water-efficient systems. Furthermore, the project would be consistent with the Action Items within the CAP and would also reduce its GHG emissions in the region. The project is consistent with the goals and strategies of local and state plans, policies, and regulations aimed at reducing GHG emissions from land use and development.

Consistent with the requirements of the PEIR prepared for the Dumbarton TOD Specific Plan and the IS/MND prepared for the SHH/FMC project, the following measure will be incorporated to ensure consistency with adopted statewide plans and programs.

Dumbarton Mitigation Monitoring and Reporting Program Measure 4.6-1 (GHG Emissions)

The Specific Plan PEIR MMRP measure 4.6-1 contains specific project design features that the project applicant shall incorporate into the project design and demonstrate their inclusion prior to the issuance of building permits.

VIII. HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	■
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	■
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	■
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	■
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	■
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	■
h) Expose people or structures to a significant risk of loss, injury or death involving wildland	☐	☐	☐	■

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				

Hazards and hazardous materials are discussed in Section 4.7 of the PEIR for the Dumbarton TOD Specific Plan and Section 8.VIII of the IS/MND for the SHH/FMC project (RBF 2011; HELIX 2014). The project site has a history of soil and groundwater hazardous materials contamination associated with previous land uses. No naturally occurring asbestos is present on the site (RBF 2011). The land uses causing the contamination have since ceased, and ongoing remediation and groundwater monitoring have been conducted pursuant to administrative orders adopted by the San Francisco RWQCB (RBF 2011). Subsequent investigations on the site are summarized below.

A Phase I Environmental Site Assessment (ESA) was conducted on the project site (formerly FMC Parcel E) (ERM 2013). The parcel is historically undeveloped with no structures or improvements present on the site. The results of the Phase I ESA identified recognized environmental conditions (RECs) associated with semi-volatile organic compounds (SVOC) detected in a shallow soil sample (0.5 foot below ground surface), and VOCs impacting groundwater from off-site sources.

As a result of the findings from the Phase I ESA, a Phase II Soil and Groundwater Investigation was conducted to further assess the potential impacts to soil and groundwater beneath the project site due to off-site historical facility operations. The results of the Phase II Soil and Groundwater Investigation confirm that former adjacent chemical facilities on nearby properties have impacted groundwater beneath the project site (ERM 2013). The investigation identified VOCs present in the groundwater and metals in the soil. The concentrations of the VOCs present in the groundwater are in line with levels detected in regional shallow groundwater, and concentrations of metal present in the soil of the project site are consistent with background levels for the San Francisco Bay Area.

In December 2014, the San Francisco Bay Regional Water Quality Control Board issued a letter confirming the previous landowners (FMC) had fulfilled its investigation and cleanup obligations related to the project site (formerly Parcel E).

IMPACTS AND MITIGATION MEASURES FROM PREVIOUS RELEVANT ENVIRONMENTAL DOCUMENTATION

Impacts associated with hazardous materials identified in the certified PEIR include risks to the public or the environment as a result of developing the sites included on lists of hazardous materials sites, routine transport, use, or disposal of hazardous materials, or foreseeable or accidental conditions involving the release of hazardous materials into the environment. Measures include requiring regulatory oversight of the contaminated property to determine that the remediation and mitigation measures, and the proposed land uses are sufficient to ensure the property, proposed development and design do not pose an unacceptable risk to human health.

EVALUATION OF HAZARDS AND HAZARDOUS MATERIALS

Questions a, b, c: No new impact

During construction, oil gasoline, diesel fuel, paints, solvents, and other hazardous materials would be used. If spilled, these substances could pose a risk to the environment and human health. Both federal and state laws include provisions for the safe handling of hazardous substances. Following construction, no hazardous materials use or storage would be expected other than minor amounts of cleaning and landscaping chemicals. No existing or proposed schools are within 0.25 acre of the project site; however, the routine transport, use, and disposal of hazardous materials are subject to local, state, and federal regulations to minimize risk and exposure. The SHH/FMC IS/MND concluded that this impact is considered less than significant, and no mitigation is necessary. The proposed modified project would have no new impact.

Question d: No new impact

Elevated concentrations of 1,2-Dichloroethane (1,2-DCA) were detected in shallow groundwater beneath the project site. Metals were also detected in groundwater beneath project site. However, the San Francisco Bay Regional Water Board staff found that the previous property owner had fulfilled its investigation and cleanup obligations related to the project site. Therefore, there would be no new impact, and no mitigation is necessary.

Questions e, f: No new impact

The SHH/FMC IS/MND determined that the project site is not located in an Airport Land Use Plan area, and no public or private airfields are within two miles of the project site; therefore, the project would not result in a safety hazard for people residing or working in the project area. No

impact will occur, and no mitigation is necessary. The proposed modified project would have no new impact.

Question g: No new impact

The City has adopted two emergency response plans. The "Emergency Operations Plan" provides operational procedures for responding to a variety of emergency conditions, including natural, hazardous materials, and civil defense conditions. The "Chemical Emergency Preparedness Supporting Plan" establishes operating procedures for responding to a chemical spill or other hazardous materials incident within the City. These plans are considered adequate and would not be affected by the proposed project. The SHH/FMC IS/MND concluded that no significant impact would occur, and no mitigation would be necessary. The proposed modified project would have no new impact.

Question h: No new impact

The project site is provided urban levels of fire protection by the City. The SHH/FMC IS/MND concluded that the proposed project would not increase the risk of wildland fires, and no mitigation is necessary. The proposed modified project would have no new impact.

IX. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	■
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	■
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	■
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	■
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	■
f) Otherwise substantially degrade water quality?	☐	☐	☐	■
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	■

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	■
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	■
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	■

Hydrology and water quality are discussed in Section 4.8 of the PEIR prepared for the Dumbarton TOD Specific Plan and Section 8.IX of the IS/MND for the SHH/FMC Project (RBF 2011; HELIX 2014). Information pertinent to the proposed modified project is summarized below.

The project site is graded and altered, and reflects the history of past hydrologic manipulation. Precipitation and municipal water are the only sources of water for the study area. A depression along the abandoned railroad corridor, approximately 100 feet south of the project site, collects precipitation during the rainy season before slowly drying in the late spring. Precipitation collected on the site may pond in low areas or flow off site to adjacent parcels where it may percolate into the ground or evaporate.

City-owned storm drains located within Willow Street and Enterprise Drive convey surface runoff from parcels fronting these streets to the Alameda County Flood Control and Water Conservation District Line south of the Specific Plan area. The County storm drain flows into the San Francisco Bay. Implementation of the proposed project will increase impervious areas, subsequently reducing absorption rates in some areas and would alter the site's existing drainage pattern. By increasing the impervious area and channelizing the stormwater runoff, the rates and volumes of runoff will increase.

Federal Emergency Management Agency (FEMA) flood insurance rate maps were reviewed for the project's proximity to a 100-year floodplain. The proposed project is on FEMA panel

06001C0443G effective 8/3/2009. The project site is located within an area classified as Zone X unshaded areas to be determined to be outside the 0.2% annual chance floodplain (FEMA 2017).

The project site is not located in the 100-year tidal flood zone of other floodplain, but it is located in the inundation areas for three dams: Del Valle, James H. Turner, and Calaveras, all of which are classified as high hazard dams because their failure could result in a significant loss of life and property damage. The California Division of Safety of Dams inspects each dam on an annual basis to ensure the dam is safe, performing as intended, and is not developing problems.

The Dumbarton TOD is within the coverage area for the Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) General Permit administered by the San Francisco Bay RWQCB. The permit applies to projects disturbing one acre or more of land. The terms of the permit usually provide requirements and standards for categories such as municipal maintenance, public outreach, illicit discharge controls, industrial and commercial discharge controls, and new development discharge controls.

The Alameda County Flood Control and Water Conservation District (ACFC) works specifically to protect County citizens from flooding and enforces pollution control regulations governing County waterways. The ACFC has a Hydrology and Hydraulics Manual that outlines the District's requirements for new development and modifications of existing flood control systems.

The City of Newark Municipal Code (Section 15.40.51 Newark Municipal Code) has flood elevation standards for lands within special flood hazard areas as defined by FEMA. These standards include requirements such as minimum elevations for finished floors above building pads and top of curb grades above sea level.

IMPACTS AND MITIGATION MEASURES FROM PREVIOUS RELEVANT ENVIRONMENTAL DOCUMENTATION

Hydrology, Drainage, and Water Quality are discussed in Section 4.8 of the PEIR prepared for the Dumbarton TOD Specific Plan and Section 8.IX of the IS/MND for the SHH/FMC Project. The PEIR concluded that the Dumbarton TOD would not violate water quality standards or waste discharge requirements, as all elements of the project would be required to comply with the requirements of the NPDES General Permit which includes implementation of best management practices to prevent or minimize environmental impacts and ensure that discharges during the construction phase of the project would not cause or contribute to the degradation of water quality in receiving waters, reducing construction-related water quality impacts to less than significant. The PEIR contains measures to minimize impacts to water quality as a result of

altered drainage patterns that may cause flooding and may also result in cumulatively considerable hydrology and water quality impacts.

Future storm drainage lines may not have sufficient room to cross over the Hetch Hetchy Aqueduct; however, the proposed modified project would tie into existing storm drain lines in Enterprise Drive and would not require that new storm drain lines be constructed.

EVALUATION OF HYDROLOGY AND WATER QUALITY

Questions a, c, e, f: No new impact

Implementation of the proposed project would have the potential to generate stormwater and contaminated runoff from the project site. Pollution and sediments may be washed into receiving waters from the project site; however, following construction and during the life of the project, areas would be paved or landscaped which would stabilize soils. The project may result in an increase of pollutants associated with the development; however, the project would be required to comply with applicable policies and regulations. The site is within the existing urban area of the City served by urban stormwater facilities, and construction on the site would be subject to NPDES General Permit conditions (including the implementation of BMPs) and all of the conditions of the City's Municipal Code, and the AFAC's requirements for new development and modifications of existing flood control systems. Operation of these requirements, which would be unchanged with approval of the project, would ensure that no adverse effects due to stormwater generation or contamination would take place. The SHH/FMC IS/MND concluded that no significant impact would result, and no mitigation would be necessary. The proposed modified project would have no new impact.

Question b: No new impact

Implementation of the proposed project would obtain water from the ACWD which utilizes treated groundwater as a source of its local supply along with other sources. The Dumbarton TOD Specific Plan is included in ACWD's forecast and water supply planning, and it would not increase water shortages from what was already factored into ACWD's planning. While the proposed project would result in additional impervious surfaces on the site that can interfere with the natural groundwater recharge process, the Alameda Creek Watershed is the primary source of recharge for the San Francisco Bay Area Basin, and rainfall and applied water provide a local recharge to a lesser extent. Therefore, the SHH/FMC IS/MND concluded that the proposed development would not substantially reduce groundwater recharge, and no significant impacts would occur. The proposed modified project would have no new impact.

Question d: No new impact

Implementation of the proposed project would increase impervious areas, subsequently reducing absorption rates in some areas and altering the site's existing drainage pattern and percolation rates. By increasing the impervious area and channelizing stormwater runoff, the rates and volumes of runoff would increase. The project site has been previously graded and otherwise altered. Existing storm drains in the area provide flood control. To ensure the storm water system can adequately accommodate the proposed modified project, Specific Plan MMRP measure 4.8-4a would be implemented, consistent with the SHH/FMC IS/MND. Therefore, no new impact would occur.

Questions g, h: No new impact

The SHH/FMC IS/MND concluded that because the project site is located outside of the 100-year tidal flood zone and other floodplains, development of the proposed project would not place persons or structures at risk from flood hazards, nor would it interfere with existing floodway capacity. Thus, no impacts would occur, and no mitigation would be necessary. The proposed modified project would have no new impact.

Question i: No new impact

The proposed project would expose new development to inundation in the event of the failure of Del Valle, James H. Turner, and Calaveras Dams. Dam failure would most likely occur with adequate warning to evacuate residents. A failure would be preceded by increased seepage to the drain, initiation of seepages on the side slopes, and very high lake levels, however, permanent structures would likely be extensively damaged or destroyed. Calaveras Dam is the only dam of the three that has documented a higher than normal risk of failure. The San Francisco Public Utilities Commission has taken steps to mitigate the risk including reducing the capacity and rebuilding the dam. Construction that would allow the dam to be filled to capacity started in August 2011, and as of January 2017, the project is 80 percent complete (SFPUC 2017). With these measures, the risk of failure is low. With the annual inspections of the other dams, and the construction efforts to improve Calaveras Dam, the risk of dam failure is low and is not considered a significant hazard to the proposed modified project. The SHH/FMC IS/MND concluded that impacts are less than significant and no mitigation is necessary. The proposed modified project would have no new impact.

Question j: No new impact

Risks of inundation by tsunami, seiche, and mudflow were evaluated in the Dumbarton TOD Specific Plan PEIR. The PEIR concluded that the risk of flooding due to a tsunami event is considered low due to the location of the Specific Plan area in the San Francisco Bay Area. Further, the portion of the Bay area near the Specific Plan area is not subject to potential flooding by seiches, since the several levees and stretches of shallow water would minimize waves generated by a seiche. No areas of potential mud flow hazard, such as a volcano or hillside are located near the Specific Plan area. In summary, there would be no potentially significant impact from inundation by seiche, tsunami, or mudflow, and no mitigation would be necessary. The proposed modified project would have no new impact.

X. LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Physically divide an established community?	☐	☐	☐	■
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	■
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	■

Land use in the project area is regulated by the City of Newark through various plans and ordinances adopted by the City, including the City of Newark 2013 Updated General Plan and the City of Newark Zoning Ordinance. Further, the proposed modified project is included in the Dumbarton TOD Specific Plan.

The Dumbarton TOD Specific Plan identifies the project site as medium/high density residential. The land use designation for the project site in the 2013 Updated General Plan is high-density residential (HDR). Since adoption of the Specific Plan and 2013 Updated General Plan, the proposed land use for the proposed modified project has changed and is reflected in the City of Newark's Zoning Ordinance. The City of Newark zoning designation for the project site is Commercial Retail (R)/Form Base Code (FBC).

The land use proposed by the project for APN 092-0115-011 is not consistent with the Specific Plan or 2013 Updated General Plan, but is consistent with the City of Newark's Zoning Ordinance.

IMPACTS AND MITIGATION MEASURES FROM PREVIOUS RELEVANT ENVIRONMENTAL DOCUMENTATION

Land Use is discussed in Section 4.9 of the PEIR certified for the Dumbarton TOD Specific Plan and Section 8.X of the IS/MND for the SHH/FMC project (RBF 2011; HELIX 2014). The PEIR concluded that although the project would result in a change in the project area, the development would be required to comply with the Design Guidelines in the Specific Plan that would complement the surrounding land uses and would be an extension of existing commercial development in the vicinity. Therefore, the project would not disrupt or divide an established community. Further, the Dumbarton TOD would not result in a conflict with the City's General Plan land use strategy, the Bay Area Regional Smart Growth Strategy/Regional Livability Footprint Project, the San Francisco Bay Trail Plan, or the San Francisco Bay Plan.

The Dumbarton TOD Specific Plan includes adjustment and transfer policies that allow adjustments to the boundaries and acreages of the land uses and zoning designations identified in the plan (RBF 2011). The Adjustment Policy specifies that project applications may incorporate adjustments to the boundaries and acreages on file with the City of Newark for land use/zoning designations without necessitating a Specific Plan Amendment provided the total gross acreage of area land use/zoning does not change by more than 20 percent from the original gross acreage approved under the Specific Plan. A revised Land Use Plan and revised Proposed Land Use Table must be submitted to the City for each proposed revision or set of revisions to the land use/zoning boundaries.

EVALUATION OF LAND USE AND PLANNING

Question a: No new impact

The surrounding lots are currently vacant or under construction as part of the Specific Plan development area through the Dumbarton TOD, of which the proposed modified project is a part. The SHH/FMC IS/MND concluded that the proposed project would not physically divide an established community, and there would be no impact. The proposed modified project would have no new impact.

Question b: No new impact

The City of Newark zoning designation is Commercial Retail (R)/Form Based Code (FBC), which is consistent with the proposed land uses for the proposed modified project.

The commercial retail land use proposed for project site differs from the land use proposed in the Dumbarton TOD Specific Plan and 2013 Updated General Plan. Although the 2013 Updated General Plan designates the parcel as HDR, City approval of the project would resolve the designation inconsistency. The Specific Plan allows for an adjustment of land uses within the Specific Plan area without necessitating a Specific Plan Amendment. A revised Land Use Plan and revised Proposed Land Use Table will be submitted to the City for approval.

Consistent with the SHH/FMC IS/MND, the following project-specific measure will be implemented to reduce impacts to less than significant:

SHH/FMC Project-Specific Mitigation Measure LUP-01

The project applicant shall submit to the City of Newark for approval a revised Land Use Plan and revised Proposed Land Use Table supporting the adjustment to land uses on APN 092-0115-011.

Question c: No impact

No Habitat Conservation Plan or Natural Community Conservation Plan has been approved for the project area. Therefore, implementation of the proposed modified project would not conflict with any conservation plans, consistent with the SHH/FMC IS/MND. Therefore, no new impact would occur.

XI. MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	■
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	■

As discussed in Section 1.2 of the PEIR prepared for the Dumbarton TOD Specific Plan and Section 8.XI of the IS/MND for the SHH/FMC Project, mineral resources issues were not addressed in the PEIR because it was determined based on substantial evidence that the project would have no impacts to mineral resources (RBF 2011; HELIX 2014).

EVALUATION OF MINERAL RESOURCES

Questions a, b: No new impact

The proposed modified project is not located in a zone of known mineral or aggregate resources. No active mining operations are present on or near the site. Implementation of the project would not interfere with the extraction of any known mineral resources. Thus, no new impacts would result, and no mitigation would be necessary.

XII. NOISE

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	■
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	■
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	■
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (including construction)?	☐	☐	☐	■
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	■
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	■

The predominant existing noise source in the vicinity of the proposed modified project is vehicular traffic on Willow Street. No commercial airports are located within two miles of the project site, though there are occasional overflights from aircrafts travelling to and from nearby airports. The nearest public airfields are San Carlos Airport located approximately 15 miles west of the project site, Mineta San Jose International Airport located approximately 20 miles southeast of the project site and Oakland International Airport located approximately 21 miles northwest of the project site. Potential noise impacts as a result of the proposed modified project

are those resulting from project construction and those from operational activities. Construction noise would have a short-term effect; operational noise would continue throughout the lifetime of the project. Development of the project would increase noise levels temporarily during construction and intermittently during operations of the residential uses.

CITY REGULATION OF THE NOISE ENVIRONMENT

The City of Newark General Plan Noise Element identifies noise and land use compatibility standards for various land uses. These standards are intended to provide compatible land uses throughout the community as related to environmental noise. Transient lodging, motels, and hotel land uses are considered "normally acceptable" in exterior noise environments of up to 65 dBA L_{DN}. Commercial land uses are considered "normally acceptable" in exterior noise environment of up to 70 dBA L_{DN}. The analysis conducted for this project evaluated the hotel.

The City of Newark General Plan Noise Element identifies interior noise standards of 45 dBA L_{DN} for hotel uses and 50 dBA L_{DN} for commercial land uses. Further, the noise criteria for hotel rooms should comply with the Noise Insulation Standards of the California Code of Regulations, Part 2, Title 24, which require a noise analysis for multi-family housing whenever exterior noise sources exceed 60 dBA (L_{DN}) or greater, to demonstrate that the interior noise level has been designed to limit interior noise to 45 dB (L_{DN}).

The City of Newark Municipal Code prohibits noisy or otherwise objectionable machinery or equipment used in the conduct of the home occupation, that no radio or television interference is created, and that the conduct of the home occupation shall not create any noise audible beyond the boundaries of the site (excluding parcels with MP, ML and MG [industrial] zoning).

There are no construction-specific restrictions within the Municipal Code.

NOISE SENSITIVE LAND USES

There are no existing residential or other noise-sensitive land uses adjacent to the project site. The nearest residential developments are located approximately 800 feet north and northeast of the project site. A noise receptor is a specific location for an individual within a noise-sensitive land use development. The guest rooms and recreational areas within the planned hotel are considered noise-sensitive receptors. Future noise-sensitive land uses include a planned affordable housing project for seniors and multi-family housing to the south.

METHODS

Modeling of the outdoor noise environment for this report was accomplished using two computer noise models: Computer Aided Noise Abatement version 2017 (CadnaA) and Traffic Noise Model version 2.5 (TNM 2.5). CadnaA is a model-based computer program developed by *DataKustik* for predicting noise impacts in a wide variety of conditions. CadnaA assists in the calculation, presentation, assessment, and mitigation of noise exposure. It allows for the input of project information, such as noise source data, barriers, structures, and topography to create a detailed CadnaA model and uses the most up-to-date calculation standards to predict outdoor noise impacts. CadnaA traffic noise prediction is based on the data and methodology used in the TNM 2.5.

The TNM 2.5 was released in February 2004 by the U.S. Department of Transportation. The TNM 2.5 calculates the daytime average hourly noise level (HNL) from 3-dimensional model inputs and traffic data. The TNM 2.5 model used in this analysis was developed from Computer Aided Design (CAD) plans provided by the Project applicant. Input variables included road alignment, elevation, lane configuration, area topography, existing and planned noise control features, projected traffic volumes, estimated truck composition percentages, and vehicle speeds.

The model-calculated one-hour L_{EQ} noise output, which uses 8 to 10 percent of the average daily traffic (ADT) occurring during a peak hour, is the equivalent of the L_{DN} (Caltrans Technical Noise Supplement November 2009). If the peak-hour traffic is lower than 6 to 8 percent of the ADT, the 1-hour L_{EQ} may be converted to L_{DN} by adding 2 for the equivalent L_{DN}.

LEVELS OF SIGNIFICANCE

Construction Noise

The City of Newark Municipal Code is silent regarding construction noise standards or limitations. Therefore, consistent with the Dumbarton TOD Specific Plan PEIR, the Alameda County Code (Chapter 6.60, Noise) was utilized in this analysis. Section 6.60.070 (Special Provisions) and Section 6.60.120 (Construction) would apply to the proposed Project. Section 6.60.070(E) of the Alameda County Code prohibits construction activity between 7:00 p.m. and 7:00 a.m. Monday through Friday, and between 5:00 p.m. and 8:00 a.m. on Saturday or Sunday.

Regarding construction noise limits, in the absence of other standards it is assumed that a significant construction noise impact would occur if the use of any tools, power machinery or equipment causes noise in excess of 75 dBA (8-hour average) between the hours of 7 a.m. and

7:00 p.m. and that disturbs the comfort and repose of any person residing or working in the vicinity.

Construction Vibration

With respect to ground-borne vibration from construction activities, the Federal Transit Administration (FTA) has adopted guidelines/recommendations to limit ground-borne vibration based on the age and/or condition of the structures that are located in close proximity to construction activity. A technical discussion of vibration related to construction activity is provided in the FTA publication titled Transit Noise and Vibration Impacts Assessment (May 2006). As described therein, a ground-borne vibration level of 0.2-inch-per-second PPV should be considered as damage threshold criterion for structures deemed "fragile," and a ground-borne vibration level of 0.12-inch-per-second PPV should be considered as damage criterion for structures deemed "extremely fragile," such as historic buildings. With respect to structures that are considered "well engineered," a ground-borne vibration damage threshold criterion of 2.0-inch-per-second PPV is used. Therefore, consistent with the Dumbarton TOD Specific Plan PEIR, this analysis has assumed a conservative threshold of 0.2-inch-per-second PPV.

Operational Noise

Stationary Source Noise

A significant operational noise impact would occur if the maximum operational exterior noise limit for residential uses exceeds 50 dBA L_{EQ} during the daytime hours of 7:00 a.m. to 10:00 p.m., and 45 dBA L_{EQ} during the nighttime hours of 10:00 p.m. to 7:00 a.m.

Transportation Noise

If the ambient noise environment is quiet and the new noise source greatly increases the noise exposure, an impact may occur even though a criterion level might not be exceeded. The Project would create a potentially significant impact for traffic noise levels when the following occurs:

- An increase of the existing ambient noise levels by 5 dB or more, where the ambient level is less than 60 dB L_{DN};
- An increase of the existing ambient noise level by 3 dB or more, where the ambient level is 60 to 65 dB L_{DN}; or

- An increase of the existing ambient noise level by 1.5 dB or more, where the ambient level is greater than 65 dB L_{DN}.

The Project would result in a significant noise impact when a permanent increase in ambient noise levels exceeds the criteria above and the resulting noise level exceeds the applicable exterior standard at a noise sensitive use.

The Project's contribution to a cumulative traffic noise increase would be considered significant when the combined effect exceeds perception level (i.e., auditory level increase) threshold. The combined effect compares the "Cumulative With Project" condition to "Existing" conditions. This comparison accounts for the traffic noise increase from the Project generated in combination with traffic generated by Projects in the cumulative projects list.

The following criteria have been utilized to evaluate the combined effect of the cumulative noise increase.

Combined Effects: The cumulative "with project" noise level ("Cumulative plus Project") causes the following:

- An increase of the existing noise level by 5 dB or more, where the existing level is less than 60 dB L_{DN};
- An increase of the existing noise level by 3 dB or more, where the existing level is 60 to 65 L_{DN}; or
- An increase of the existing noise level by 1.5 dB or more, where the existing level is greater than 65 dB L_{DN}.

Although there may be a significant noise increase due to the proposed Project, in combination with other related projects (combined effects), it must also be demonstrated that the project has an incremental effect. In other words, a significant portion of the noise increase must be due to the proposed Project. The following criterion has been utilized to evaluate the incremental effect of the cumulative noise increase.

Incremental Effects: The "Cumulative plus Project" causes a 1 dBA increase in noise over the "Cumulative No Project" noise level. A significant impact would result only if both the combined and incremental effects criteria have been exceeded and the resulting noise level exceeds the applicable exterior standard at a noise sensitive use.

EVALUATION OF NOISE

Questions a, c, d: No new impact

Construction Noise

Construction equipment would not all operate at the same time or location. A dozer and an excavator may be working on the site simultaneously, but would not be working in close proximity to one another at a given time due to the nature of their respective operations. Furthermore, construction equipment would not be in constant use during the eight-hour operating day. The analysis assumes that the grader, loader, and dozer would be in operation for 40 percent of a given hour during typical construction day.

The nearest noise-sensitive land uses to the proposed grading areas are adjacent to the project site to the south. Construction equipment is mobile and would be moving across the site throughout the construction period. For modeling purposes, the construction equipment was assumed to operate at a distance of 115 feet from the southern property line. Over the course of a day, equipment may be closer or farther than 115 feet from the nearest property line.

Based on these assumptions, the highest impact level for a grader, loader, and dozer at the nearest NSLU is 75 dBA L_{EQ}. Construction activity would occur within the specified hours and would not exceed the construction noise planning limits (75 dBA for an eight-hour average time period), and thus, no new impacts would occur.

Although no new noise impacts resulting from construction of the proposed project are anticipated, the Specific Plan measures 4.10-1a and 4.10-1b will be implemented, consistent with the SHH/FMC IS/MND.

Dumbarton TOD PEIR Mitigation Monitoring and Reporting Program Measures 4.10-1a and 4.10-1b (Construction Noise)

The Dumbarton TOD Specific Plan MMRP measures 4.10-1a and 4.10-1b require that the project applicant require construction contractors to implement a site-specific noise reduction program subject to City review and approval. Additionally, prior to issuance of grading permits, the project applicant shall submit to the City Building Inspection Division a list of measures to respond to and track complaints pertaining to construction noise.

Operational Noise

Impacts to off-site receptors from noise generated on-site

The primary operational noise source associated from the proposed project with the potential for noise impacts would be the cooling tower for the heating, ventilation, and air conditioning (HVAC) system.

Specific HVAC planning information for the project, including unit types, is not currently available. Analysis in this report is based on typical size and locations for HVAC used in similar facilities to the project's facilities. This analysis assumes internal HVAC systems with an exterior cooling tower similar to a Tower Tech Model 031975 unit. It was assumed that a single cooling tower would be located along the northeastern corner of the building. All rooftop equipment would be fully screened from public view by the architectural elements. Screening is assumed to be provided by a 5-foot parapet wall at the edge of the building which would provide some noise attenuation.

Acceptable exterior noise levels at nearby residential properties resulting from stationary noise sources are 50 dBA L_{EQ} during the daytime hours of 7:00 a.m. to 10:00 p.m., and 45 dBA L_{EQ} during the nighttime hours of 10:00 p.m. to 7:00 a.m.

The noise generated by the cooling tower in continuous simultaneous operation would be approximately 36.6 dBA L_{EQ} at ground level at the adjacent future senior affordable housing development, and 37.4 dBA L_{EQ} at 20 feet above ground. No new impacts as a result of operational noise from the cooling tower unit would occur.

Off-site Noise

Impacts to off-site receptors from noise generated by project traffic

Transportation noise generated by the project is primarily from vehicular traffic noise. The maximum change in noise levels at off-site receivers between the Existing and Existing plus Project traffic conditions were modeled to be approximately 1 dBA (0.8 L_{DN}). Because the existing noise levels are less than 60 L_{DN}, Project-added traffic noise levels would need to increase existing noise by 5 L_{DN} for impacts to be considered significant. Therefore, no new Project traffic noise impacts would occur. No new cumulative noise increases associated with cumulative growth including the Project would occur.

On-site Noise

Impacts to the project from off-site transportation noise

Exterior-use areas for the hotel consist of a pool area on the third floor. This area would be located in a courtyard surrounded on all sides by the building structure. Therefore, no new impacts from transportation noise impacts to on-site exterior use areas occur due to shielding by the proposed building.

Exterior –to-interior analysis assumes a minimum 15 L_{DN} reduction from the outside to the inside of a structure, assuming standard building construction methods. Therefore, interior noise levels (which are required to be less than 45 L_{DN}) for hotels are assumed to be compatible with an exterior noise level up to 60 L_{DN}. Interior noise levels for commercial uses are required to be less than 50 L_{DN}, and are assumed to be compatible with an exterior noise level up to 65 L_{DN}.

Hotel room receivers adjacent to Willow Street would be exposed to a noise levels greater than 60 L_{DN}. Because exterior to interior planning generally assumes a minimum 15 L_{DN} reduction from the outside to the inside a structure, interior noise levels may exceed the 45 L_{DN} threshold for interior use areas. Thus, hotel rooms facing Willow Street may not be compatible with the future traffic noise levels without the implementation of noise reduction measures. Project implementation would result in a potentially significant traffic noise-related land use-noise compatibility impact. Interior noise levels

To mitigate this significant land use-noise compatibility impact, an interior noise analysis of proposed residences (specifically those fronting Willow Street) shall be completed prior to building permit issuance to determine the appropriate measures to be incorporated into the building design to ensure residential interior noise levels would be below 45 L_{DN}.

Consistent with the SHH/FMC IS/MND, the following project-specific mitigation measure will be implemented (tailored to the currently proposed project) to bring the noise levels to a less than significant level:

SHH/FMC Project Specific Mitigation Measure NOISE-02

- An interior noise analysis of proposed hotel rooms immediately adjacent to Willow Street shall be completed prior to building permit issuance to determine appropriate measures to be incorporated into the building design to ensure hotel room interior noise levels would be below 45 L_{DN}. These land use-noise compatibility measures shall include:

- *Where exterior noise levels are expected to exceed 60 L_{DN}, additional noise analysis per the City standards should be conducted. The information in the noise analysis shall include wall heights and lengths, room volumes, window and door tables typical for a building plan, as well as information on any other openings in the building shell. With this specific building plan information, the analysis shall determine the predicted interior noise levels at the planned on-site hotel rooms. If predicted noise levels are found to be in excess of 45 L_{DN} for hotel rooms, the report shall identify architectural materials or techniques that could be included to reduce noise levels to 45 L_{DN}. Glazing with Sound Transmission Control (STC) ratings from a STC 22 to STC 60 should be considered. In addition, walls with appropriate STC ratings (34 to 60) should be considered.*

- Appropriate means of air circulation and provision of fresh air must be present to allow windows to remain closed for extended intervals of time so that acceptable levels of noise can be maintained on the interior. The mechanical ventilation system shall meet the criteria of the International Building Code (Chapter 12, Section 1203.3 of the 2001 California Building Code).

Furthermore, the Specific Plan PEIR contains a measure (MMRP measure 4.10-4) requiring that the project applicant coordinate with the City's Public Works Director to change the posted speed limit along Willow Street between Thornton Avenue and Central Avenue to 25 miles per hour. This would contribute to a reduction in the traffic noise levels generated by the overall Dumbarton TOD. Willow Street improvements are being implemented under a separate project; therefore, the mitigation measure is not the responsibility of the SHH/FMC Project.

With implementation of the above SHH/FMC IS/MND and Specific Plan PEIR measures, no new impacts would occur.

Although the dominant noise source at the Project site is the vehicular traffic on Willow Street, the project is located approximately 730 feet from a railroad that may be used as a future transit and freight corridor. The railroad noise modeling estimate for the future rail use within the Dumbarton transit corridor assumes six daytime and four nighttime passenger trains and four nighttime freight trains. Under this assumption, the railroad has the potential for noise levels of 54 L_{DN} at the project assuming no rows of intervening structures. No new impacts from railroad noise would occur.

Question b: No new impact

No new construction or operational vibration impacts would occur. Furthermore, no structures deemed “fragile” or “extremely fragile” are located in the vicinity of the project. No new impacts would occur.

Question e, f: No new impact

Since the project site is not located in an area for which an Airport Land Use Plan has been prepared, and no public or private airfields are within two miles of the project area, the project site would not be exposed to adverse levels of noise due to aircraft overflight. Thus, no new impacts would occur, and no mitigation would be necessary.

XIII. POPULATION AND HOUSING

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	■
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

The proposed modified project would construct a mixed-use commercial development in an area planned for residential and commercial development in the City of Newark 2013 Updated General Plan. The proposed modified project would include the construction of an 8,300-square-foot market and 3-story hotel with a total of 146 hotel rooms. The proposed modified project would not include the construction of residential units.

IMPACTS AND MITIGATION MEASURES FROM PREVIOUS RELEVANT ENVIRONMENTAL DOCUMENTATION

Population and Housing is discussed in Section 4.11 of the PEIR prepared for the Dumbarton TOD Specific Plan and Section 4.XIII of the IS/MND for the SHH/FMC project (RBF 2011; HELIX 2014). The PEIR concluded that although the project would directly induce population growth in the City through new housing and businesses, the Specific Plan area is already planned for urban-level development and services, and would be phased so that buildout is achieved gradually over time. Impacts to population and housing were anticipated to be less-than-significant, and therefore no mitigation measures were required.

EVALUATION OF POPULATION AND HOUSING

Question a: No new impact

Implementation of the project would not result in the construction of residential units. The proposed modified project; therefore, would not induce substantial growth in the City of Newark, and no new impact would occur.

Questions b, c: No new impact

There are no existing residences on the project site or the immediate vicinity; therefore, neither housing units nor people would be displaced, and no replacement housing would be required. There would be no new impact, and no mitigation would be necessary.

XIV. PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?	☐	☐	☐	■
b) Police protection?	☐	☐	☐	■
c) Schools?	☐	☐	☐	■
d) Parks?	☐	☐	☐	■
e) Other public facilities?	☐	☐	☐	■

The proposed modified project is in an area currently served by urban levels of all utilities and services. The following public services are provided to the site:

- Fire protection is provided by the Alameda County Fire Department.
- Police protection is provided by the City of Newark Police Department.
- Public education services for residents nearby the project site are provided by the Newark Unified School District (NUSD).

Additional services in the project area include domestic water, wastewater treatment, storm water drainage, solid waste disposal, library, and park services. Private utilities include electric, gas, telephone, and cable television/internet/phone/data services.

The City of Newark has a program of maintaining and upgrading existing utility and public services within the City. Similarly, all private utilities maintain and upgrade their systems as necessary for public convenience and necessity, and as technology changes.

IMPACTS AND MITIGATION MEASURES FROM PREVIOUS RELEVANT ENVIRONMENTAL DOCUMENTATION

Public Services is discussed in Section 4.12 of the PEIR prepared for the Dumbarton TOD Specific Plan and Section 8.XIV of the IS/MND for the SHH/FMC Project (RBF 2011; HELIX 2014). The PEIR concluded that the project would result in a population increase that would affect public services, and identified several required actions to ensure individual projects within the Dumbarton TOD would comply with development standards of public services and address additional costs. With implementation of the following actions, no mitigation measures would be required. Prior to issuance of building permits, the Alameda County Fire Department would be involved in the review of project plans and the project sponsor would be required to incorporate the department's requirements into the final project design as conditions of approval. The project applicant would be required to pay development impact fees for fire protection, police protection, and schools. The fee set by NUSD is $0.47 per square foot for retail, office, and commercial uses.

EVALUATION OF PUBLIC SERVICES

Questions a, b, c, d: No new impact

The project site is within the City of Newark and is part of a larger planned development for which public services have been evaluated for service adequacy. However, the PEIR prepared for the Dumbarton TOD Specific Plan assumed the project site would be developed with medium/high residential land uses. The SHH/FMC IS/MND proposed the project site (former FMC parcel) would be developed with commercial retail land uses. Even with the change in land use, the proposed modified project would not result in a significant increase in service demands or render the current service levels to be inadequate, consistent with the conclusion in the SHH/FMC IS/MND. The project applicant is required to involve the Alameda County Fire Department in reviewing the project plans and incorporate the department's requirements into the final project design. Further, the project applicant is required to pay development impact fees for fire protection, police protection, and schools. By coordinating with the Alameda County Fire Department, and paying the appropriate developer fees, the SHH/FMC IS/MND concluded that impacts to public services would be less than significant and no mitigation is necessary. The proposed modified project would have no new impact.

Question e: No new impact

To ensure that the wastewater services to the project site are adequate, the Specific Plan MMRP measure 4.12-2 will be implemented, consistent with the SHH/FMC IS/MND. Therefore, the proposed modified project would have no new impact.

Dumbarton Mitigation Monitoring and Reporting Program Measure 4.12-2 (Wastewater)

The Specific Plan MMRP measure 4.12-2 specifies that prior to approval of a tentative map within the Dumbarton TOD, any proposed new connections outside of those included in the Union Sanitary District Master Plan shall be identified, and those improvements will be installed prior to issuance of a building permit. The City and Union Sanitary District shall verify that any necessary improvements will be available prior to occupation of those new residential dwelling units for which the improvements are needed.

XV. RECREATION

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	■
b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	■

Recreation is discussed in Section 4.13 of the PEIR prepared for the Dumbarton TOD Specific Plan and Section 8.XV of the IS/MND for the SHH/FMC Project (RBF 2011; HELIX 2014). The project site is surrounded by several regional recreational resources located both within and outside of the City of Newark. The Don Edwards San Francisco Bay National Wildlife Refuge is a span of 30,000 acres that is located to the south and west of the project site. Coyote Hills Regional Park, which is managed by East Bay Regional Park District, is a 978-acre park located north of the project site. Ardenwood Historic Farm is located about 3.7 miles north of the project site. Several trails that connect to the San Francisco Bay Trail can be accessed near the project site, including the Newark Slough Trail, which is located approximately 2 miles northwest of the project site. Additionally, Willow Street and Central Avenue are unimproved connections to the San Francisco Bay Trail.

The City of Newark Parks and Recreation Division provides and maintains 15 recreational facilities located within the city, which includes parks, sports play facilities, and an aquatic and activity center. Several parks are located within the vicinity of the project site. The closest park is Jerry Raber Ash Street Park, which is located approximately 0.9 mile east of the project site. Other parks include Bridgepointe Park, which is approximately 1.1 miles north of the project site and Civic Center Park, which is located approximately 1.9 miles northeast of the project site.

The City of Newark General Plan Recreation Element identifies policies, programs, and goals for recreational resources. In compliance with the Quimby Act (Section 66477 of State Government Code) the City of Newark General Plan goal for park and recreation dedications is 3.5 acres of

parkland per 1,000 residents. The City currently maintains a ratio of 3.47 acres of public parkland per 1,000 residents, which meets the General Plan goal.

IMPACTS AND MITIGATION MEASURES FROM PREVIOUS RELEVANT ENVIRONMENTAL DOCUMENTATION

The Dumbarton TOD Specific Plan PEIR (RBF 2011) concluded that the 16.3 acres of parkland and San Francisco Bay Trail connection that is proposed by the Specific Plan, as well as the regional open space available within the project vicinity, would provide future Specific Plan residents with ample opportunities to enjoy recreational facilities and open space, which would not increase the use or result in the deterioration of existing recreational resources.

EVALUATION OF RECREATION

Question a: No new impact

The Dumbarton TOD Specific Plan includes 16.3 acres of park facilities to offset impacts as a result of the overall project, in which the proposed modified project is included. This is a reduced parkland ratio from goal of the City of Newark General Plan because of the extensive amount of regional open space within the vicinity of the project area that will be available to future Specific Plan residents (Don Edwards National Wildlife Refuge, Coyote Hills Regional Park, and Ardenwood Regional Preserve), as well as the open space and recreational facilities available adjacent to schools, within private development, and facilities not maintained by the City of Newark. In addition, the Specific Plan proposes a wide variety of parkland and recreational open space for future residents, including a 6.5-acre community park near the center of the neighborhood, a 2.3-acre park on the Gallade Property, and a 3.92-acre connection to the San Francisco Bay Trail at its currently unimproved connection on Willow Street.

The IS/MND for the SHH/FMC Project proposed to provide 0.17 acre of usable parkland as well as additional residential community areas in the townhome condominium neighborhood. An additional 0.29 acre of Biological Open Space would be protected from use by the public.

The quality and variety of the parkland and open space that could be provided by the Dumbarton TOD Specific Plan, which includes the proposed modified project, will encourage future residents to use recreational facilities within the Specific Plan area. Additionally, the regional open space located near the project site, along with a connection to the San Francisco Bay Trail on Willow Street will provide future residents with many opportunities to enjoy recreational resources and open space. The SHH/FMC IS/MND concluded that the proposed project would result in a less than significant impact on existing neighborhood and regional parks or other

recreational facilities, and no mitigation would be necessary. The proposed modified project would have no new impact.

Question b: No new impact

The IS/MND for the SHH/FMC proposed to construct a 0.17-acre park in the townhome condominium neighborhood. Construction of the park and other recreational/community facilities could result in temporary increases in air emissions, dust, noise, and erosion from construction activities. The SHH/FMC IS/MND concluded that although environmental impacts could result from the construction of the park, impacts could be reduced to a less-than-significant level if construction–related mitigation measures are enforced. The proposed modified project would have no new impact.

The Specific Plan MMRP measures 4.2-1a and 4.2-1b (Air Quality), and 4.10-1a, 4.10-1b (Construction Noise) would reduce the environmental impact associated with the construction of additional recreational facilities to a less than significant level.

XVI. TRANSPORTATION/TRAFFIC

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	■
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	■
c) 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?	☐	☐	☐	■
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	■
e) Result in inadequate emergency access?	☐	☐	☐	■
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	■

Transportation and Circulation were evaluated in Section 4.14 of the PEIR prepared for the Dumbarton TOD Specific Plan and Section 8.XVI of the IS/MND for the SHH/FMC Project (RBF 2011; HELIX 2014). Additionally, a project-specific trip transportation evaluation was conducted (Appendix D) to determine the proposed project's contribution to the traffic evaluated in the Specific Plan and to evaluate the project site circulation and access.

ACCESS AND PARKING

The proposed vehicular access and street design are described in detail in Section 3, *Description of Project*. The commercial development will be accessible directly from Enterprise Drive and Willow Street.

The proposed parking is also described in Section 3 and summarized here. A total of 118 parking stalls will be provided for the commercial development. A total of 87 parking spaces would be provided on the second level of the five-story commercial building and 31 parking spaces would be provided on-grade. The parking provided as part of the commercial development project would be shared between the retail store customers, hotel guests, and employees.

FIRE ACCESS

The minimum width available for driving or turning movements for fire trucks through the project site is 26 feet along Willow Street.

TRIP GENERATION

The proposed project is estimated to generate 1,360 daily external vehicle trips, 90 a.m. peak hour external vehicle trips, and 103 p.m. peak hour external vehicle trips (Fehr and Peers 2017). In comparison, the PEIR prepared for the Dumbarton TOD Specific Plan (RBF 2011) estimates that all land uses within the Specific Plan area will generate 14,131 daily external vehicle trips, 1,165 a.m. peak hour external vehicle trips, and 1,320 p.m. peak hour external vehicle trips. Therefore, the project's estimated contribution to the trips generated by the Specific Plan area is approximately ten percent for a typical weekday, eight percent for the a.m. peak hour, and eight percent for the p.m. peak hour. Refer to the memorandum containing the results of the traffic evaluation in Appendix D.

TRANSPORTATION SERVICES

The City maintains a network of pedestrian and bike trails throughout the city, in addition to a network of on-street bike lanes. Willow Street and Central Avenue are "unimproved

connections" to the San Francisco Bay Trail through the City of Newark. Additionally, the Newark Slough Trail is located approximately 2 miles northwest of the project site.

No private or public airports are located within the City of Newark. The nearest public airfields are San Carlos Airport located approximately 15 miles west of the project site, Mineta San Jose International Airport located approximately 20 miles southeast of the project site and Oakland International Airport located approximately 21 miles northwest of the project site. No private airports are located within 10 miles of the city.

EMERGENCY ACCESS

The City of Newark identifies most major streets in the city as emergency evacuation routes. No aspect of the proposed project would modify these streets or preclude their continued use as an emergency evacuation route. The proposed project has incorporated turning radius sufficient for fire truck access in the project's roadway design.

IMPACTS AND MITIGATION MEASURES FROM PREVIOUS RELEVANT ENVIRONMENTAL DOCUMENTATION

The Dumbarton TOD Specific Plan PEIR identified intersections in the Specific Plan area that would be impacted by buildout of the Dumbarton TOD. One of the intersections that would be impacted is the Willow Street/Enterprise Drive intersection which is adjacent to the northeast corner of the proposed modified project. The intersection is being designed to accommodate the Dumbarton TOD under a separate project in the Specific Plan area. Therefore, the mitigation measures that describe design options that address circulation abatement included in the PEIR does not apply to the SHH/FMC Project. The PEIR also contains a measure for the City to coordinate with AC Transit to improve bus service to the Specific Plan area. The PEIR identifies impacts to traffic on regional roadways in the project vicinity and includes a measure for project applicants to pay all applicable transportation-related fees in accordance with the latest adopted fee schedule at the time the permits are sought (MMRP measure 4.14-8).

EVALUATION OF TRANSPORTATION/TRAFFIC

Questions a, b: No new impact

The proposed parking was evaluated consistent with City requirements and the Dumbarton TOD Specific Plan. The project is proposing approximately 35 percent fewer parking spaces than required by City code. Therefore, a Transportation Demand Management (TDM) plan was prepared to reduce traffic congestion, parking demand, and air pollution impacts (Appendix D).

With implementation of the TDM, peak parking demand on weekends would be reduced to 118 parking spaces. The proposed modified project would provide 118 parking spaces, and the project would have no new impact.

The Dumbarton TOD Specific Plan contains parking policies that are recommended to be incorporated into the proposed project design:

Policy C-18 encourages the adoption of parking standards that prevent oversupply through shared parking and reduced minimum off-street requirements. The proposed modified project has incorporated shared parking that is consistent with this policy. Policy C-13 recommends bicycle parking as part of a transportation demand management program. Policy C-28 encourages the adoption of minimum bicycle parking requirements for commercial projects. As well, the PEIR prepared for the Dumbarton TOD Specific Plan lists secure bicycle parking of at least one space per 20 vehicle spaces within retail and office portions of the SP area as a greenhouse gas emissions mitigation measure. The proposed modified project would supply six bike racks which exceeds the standard listed in the Dumbarton TOD Specific Plan PEIR.

Implementation of the proposed modified project would result in an increase in traffic on Willow Street and Enterprise Drive, and buildout of the overall Specific Plan will result in significant and unavoidable impacts to the intersection at Willow Street and Enterprise Drive. However, the intersection is being evaluated and designed to accommodate the traffic generated by the Specific Plan buildout under a separate project in the Specific Plan area and is not the responsibility of the project applicant. Although the proposed modified project would result in a relatively small increase in trips generated in the area in relation to the capacity of nearby streets, the project is consistent with the Specific Plan and the General Plan, and would not conflict with the City's operational standards as projected under those plans. The PEIR prepared for the Dumbarton TOD Specific Plan identifies impacts to regional traffic significant and unavoidable. The proposed modified project's contribution to traffic impacts would be less than significant and would not exceed the impacts already identified in the PEIR. Consistent with the IS/MND for the SHH/FMC project, the following measure contained in the PEIR prepared for the Dumbarton TOD Specific Plan would be implemented to minimize impacts on regional traffic.

Dumbarton Mitigation Monitoring and Reporting Program Measure 4.14-8 (Regional Traffic)

The Specific Plan MMRP measure 4.14-8 requires that prior to issuance of building permits, the applicant shall pay all applicable transportation-related fees in accordance with the latest adopted fee schedule at the time permits are sought. Payment of these fees would partially mitigate the impacts of the Specific Plan developments.

Question c: No new impact

No private or public airports are located within the City of Newark. The nearest public airfields are 15, 20 and 21 miles from the proposed modified project. No private airports are located within 10 miles of the project site. The proposed modified project would not result in modification to any air travel route. There would be no new impact.

Question d: No new impact

The proposed modified project would construct one new driveway accessing Enterprise Drive and one new driveway accessing Willow Street for the proposed commercial development. Consistent with the IS/MND for the SHH/FMC Project, the proposed modified project would modify Enterprise Drive and Willow Street by introducing additional access points, which is consistent with the existing access of developed areas in the vicinity and the proposed access of the Specific Plan area. The project would not require additional modification to the roadways (e.g. re-alignment) other than already identified in the PEIR prepared for the Dumbarton TOD Specific Plan (RBF 2011) that will be conducted by others through the Specific Plan buildout. Therefore, the proposed modified project would have no new impact and no mitigation would be necessary.

Question e: No new impact

No aspect of the proposed modified project would modify streets currently used for emergency access or preclude their continued use as an emergency evacuation route. The project design has incorporated fire access elements to ensure adequate emergency access to the site. The plans would be approved by the City of Newark Fire Department prior to project implementation, consistent with the IS/MND for the SHH/FMC project; therefore, no new impact would occur, and no mitigation would be necessary.

Question f: No new impact

Consistent with the IS/MND for the SHH/FMC project, the proposed modified project would not result in any modification of, or interference with, any pedestrian, bicycle, or transit facility. Because the project would not result in the modification of any existing facility, and would not result in any interference with such facilities, there would be no new impact, and no mitigation would be necessary.

XVII. UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	■
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	■
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	■
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	■
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	■
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	■
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	■

The project area is served by the following service providers:

- Water supply – Alameda County Water District (ACWD) provides water to the cities of Fremont, Newark, and Union City, and would service the project site.

- Wastewater treatment and disposal – Union Sanitary District serves the cities of Fremont, Newark, and Union City, and would service the project site. Build out of the Specific Plan area could increase wastewater flows rates by 50 percent.

- Storm water drainage facilities – storm drains within the public streets are maintained by the City of Newark, while storm drains within private yards, lanes and passes will be privately maintained by the homeowners.

- Solid waste service –Republic Services, Inc. provides solid waste collection. The landfill servicing the site is the privately-owned Altamont Landfill, with a 30-year capacity.

IMPACTS AND MITIGATION MEASURES FROM PREVIOUS RELEVANT ENVIRONMENTAL DOCUMENTATION

Utilities are discussed in Section 4.12 of the PEIR prepared for the Dumbarton TOD Specific Plan and Section 8.XVII in the IS/MND for the SHH/FMC Project (RBF 2011; HELIX 2014). The PEIR concludes that the project would result in a population increase that would affect utilities. The PEIR states that policies would be included in the General Plan to address wastewater services for the Dumbarton TOD, and implementation of Mitigation Measure 4.12-2 would reduce impacts to the wastewater system to less than significant. The measure requires that individual projects within the Dumbarton TOD shall determine proposed new connections outside of those included in the Union Sanitary District Master Plan, and those improvements will be installed prior to issuance of a building permit. The City and Union Sanitary District shall verify that any necessary improvements will be available prior to occupation of those new residential dwelling units for which the improvements are needed.

The PEIR concludes that the landfill that would serve the proposed project has sufficient permitted capacity to accommodate the project's solid waste disposal needs.

EVALUATION OF UTILITIES AND SERVICE SYSTEMS

Questions a, b, e: No new impact

The Union Sanitary District provides wastewater treatment for the City of Newark and will service the Dumbarton TOD Specific Plan area, which includes the proposed modified project site. Wastewater lines exist within the Specific Plan area and eventually connect to the Alvarado Treatment Plant in Union City.

The water treatment plant is currently rated to treat and discharge 30 million gallons per day (mgd). The Union Sanitary District has a NPDES General Permit with the California State Water Board that allows treatment and discharge of 33 mgd. Build out of the Specific Plan area could increase wastewater flow rates by 50 percent, which would put the treatment plant at 86.6 percent of capacity. Although the Alvarado Treatment Plant has the capacity to support development within the project area, it may not be able to support full build out of the Specific Plan area. Additional improvements such as a new sewer main or equalization basin may be required, which could potentially have effects on the environment.

The 2013 Updated City of Newark General Plan policies address wastewater services for the Dumbarton TOD Specific Plan. The SHH/FMC IS/MND concluded that these policies, in addition to the implementation of Mitigation Measure 4.12-2, would reduce the impacts of the wastewater system to a less than significant level. The proposed modified project would have no new impact.

Dumbarton Mitigation Monitoring and Reporting Program Measure 4.12-2 (Wastewater)

Mitigation Measure 4.12-2 requires that additional improvements and connections beyond those included in the Union Sanitary District Master Sewer Plan shall be determined by individual projects within the Specific Plan area. Those improvements shall be installed prior to the issuance of a building permit. Implementation of this mitigation measure will reduce impacts to wastewater to less than significant.

Question c: No new impact

As described in Section 8.IX, *Hydrology* of this IS, to ensure the storm water system can adequately accommodate the proposed modified project, the following mitigation measure from the Dumbarton TOD Specific Plan PEIR would be implemented.

Dumbarton Mitigation Monitoring and Reporting Program Measure 4.8-4a (Hydrology)

The Specific Plan MMRP measure 4.8-4a specifies that plans submitted for grading permits shall include detailed hydrology reports. These reports shall demonstrate adequate stormwater conveyance and capacity is available in the existing facilities. If the reports find inadequate facilities, then the project applicant shall develop a detailed stormwater detention plan for the project site in accordance with the City standards and the ACFC.

Implementation of this measure would be consistent with the IS/MND for the SHH/FMC project and no new impact would occur.

Question d: No new impact

The Dumbarton TOD Specific Plan area, which includes the project site, is serviced by the ACWD. In compliance with SB 610, a Water Supply Assessment (WSA) was prepared for the Dumbarton TOD Specific Plan, which relies heavily on the Urban Water Management Plan (UWMP). According to the WSA, the Dumbarton TOD Specific Plan is included in the ACWD's water demand forecast and is consistent with planning assumptions.

Under normal precipitation conditions, the water supply is projected to meet the Specific Plan area's demand. However, in the future, water supply to the Specific Plan area, including the project site may be cut back because of shortages during dry years. These cut backs would depend on the severity of the dry-year shortage and would be consistent with the rest of the ACWD's service areas. According to the WSA, during critically dry years the ACWD would secure additional water supply through the Department of Water Resources, and, if necessary, would implement a drought contingency plan to cut back on water use. This would ensure the project would have sufficient water supply during drought years.

The SHH/FMC IS/MND concluded that compliance with the requirements provided in the WSA will ensure that there will be sufficient water supply to serve the Specific Plan area. Therefore, there would be a less than significant impact and no mitigation would be necessary. The proposed modified project would have no new impact.

Questions f and g: No new impact

Republic Services, Inc. currently provides the City of Newark with solid waste refuse, recycling, and hazardous materials collection services. After being processed at a facility in San Leandro, waste from the city is hauled to the privately-owned Altamont Landfill located in Livermore. The Altamont Landfill will serve the Dumbarton TOD Specific Plan area, which includes the project modified project. The Altamont Landfill has a permitted capacity of approximately 124 million cubic yards. Approximately 52.6 percent of this capacity has been used and approximately 48.4 percent remains. The landfill is estimated to cease operation in 2025 (CalRecycle 2017).

In compliance with requirements stipulated under the Integrated Waste Management Act (AB 939), the City of Newark, Republic Services, Inc., and the Alameda County Source Reduction and Recycling Board have implemented measures to reduce the amount of waste hauled to the Altamont Landfill. These agencies are promoting the recycling of many different

materials, which will help reduce the amount of solid waste entering the Altamont Landfill and would extend the lifetime of the landfill.

The SHH/FMC IS/MND concluded that because the landfill serving the project area is of sufficient capacity to accommodate solid waste needs, the impact would be less than significant and no mitigation would be necessary. The proposed modified project would have no new impact.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
The lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur. Where prior to commencement of the environmental analysis a project proponent agrees to mitigation measures or project modifications that would avoid any significant effect on the environment or would mitigate the significant environmental effect, a lead agency need not prepare an EIR solely because without mitigation the environmental effects would have been significant (per Section 15065 of the State CEQA Guidelines):				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	■
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?	☐	☐	☐	■
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	■

Question a: No new impact

The preceding analysis indicates that the proposed modified project would not have a significant adverse impact on overall environmental quality, including the potential to reduce the habitat of fish and wildlife species, or contribute to lowering populations to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.

Question b: No new impact

While the project would indirectly contribute to cumulative impacts associated with increased urban development in the city and region, these impacts have previously been evaluated in the PEIR prepared for the Dumbarton TOD Specific Plan, and are incorporated into the City of Newark's 2013 Updated General Plan. The PEIR concluded that development of the project site as allowed under the Dumbarton TOD Specific Plan may contribute to significant cumulative impacts as a result of contribution to the loss of vegetation and wildlife resources, impacts to cultural resources, seismic or soils hazards, greenhouse gas emissions, hazardous materials, hydrology and water quality, and noise levels. With implementation of the measures set forth in this Initial Study (and as previously analyzed in the PEIR and SHH/FMC IS/MND), cumulative impacts as a result of the Dumbarton TOD would be less than significant. No additional cumulative impacts as a result of the proposed modified project are identified.

Question c: No new impact

As outlined in other sections of this Initial Study, the project will adhere to mitigation measures previously prescribed in the Dumbarton TOD Specific Plan PEIR for potentially significant impacts to air quality, biological resources, cultural resources, seismic or soils hazards, greenhouse gases, hazardous materials, hydrology drainage and water quality, noise, wastewater treatment, regional traffic congestion and the stormwater system. These impacts have been reduced to a level of significance at both the project and cumulative level through project design and mitigation measures. Implementation of the proposed modified project will not result in substantial adverse effects to human beings either directly or indirectly.

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10. INITIAL STUDY PREPARERS

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Victor Ortiz, Air Quality Specialist
Jason Runyan, Noise Specialist

APPENDIX A

NEWARK GATEWAY MIXED-USE DEVELOPMENT PROJECT PLANS AND DETAILS

NEWARK GATEWAY

MIXED-USE DEVELOPMENT

ENTERPRISE DRIVE & WILLOW STREET

NEWARK, CA

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ARCHITECTURE
www.nehmer.com

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Developers & Investment, LLC

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Tony Baig
VillaDevelopers, Inc.
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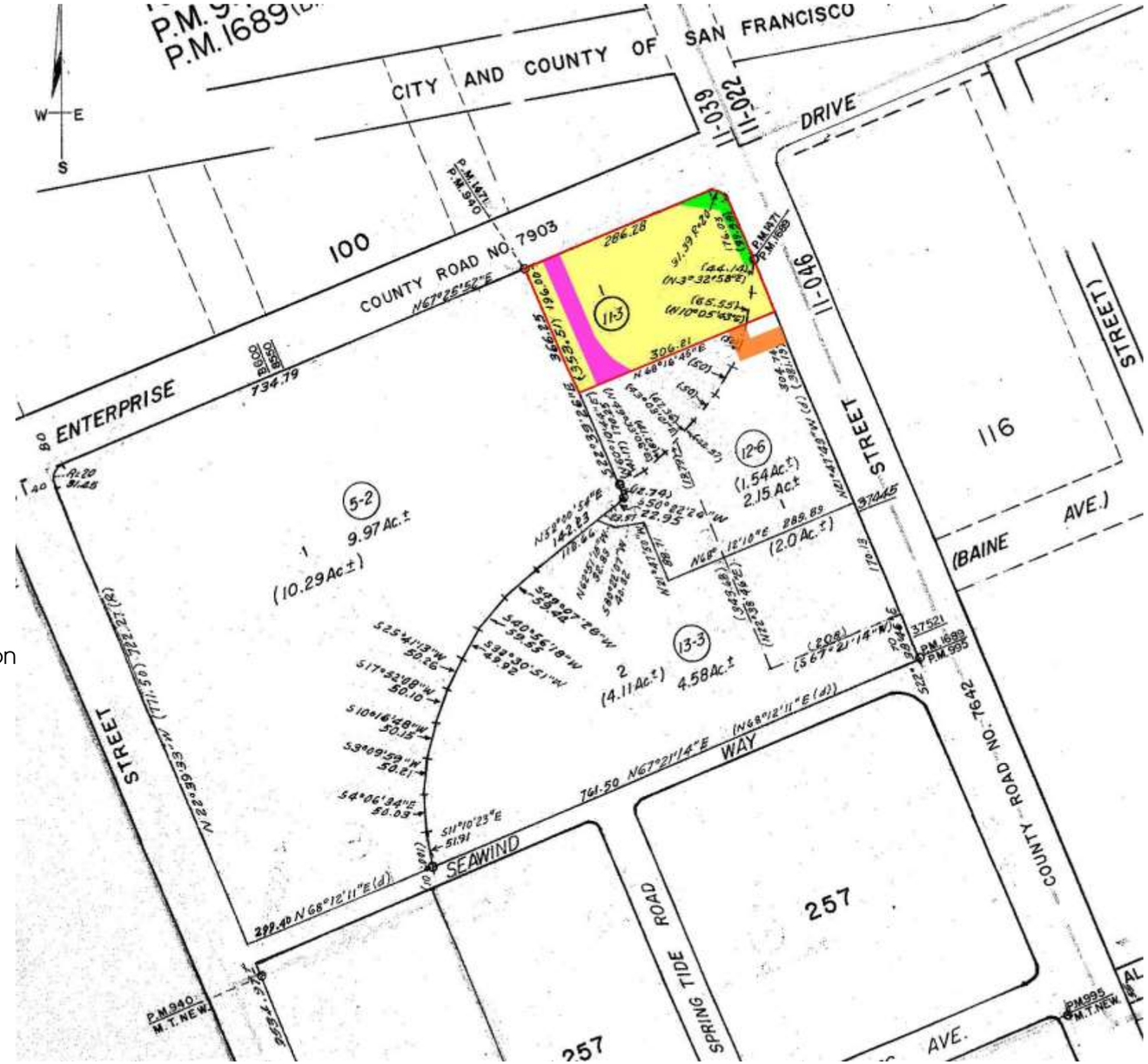
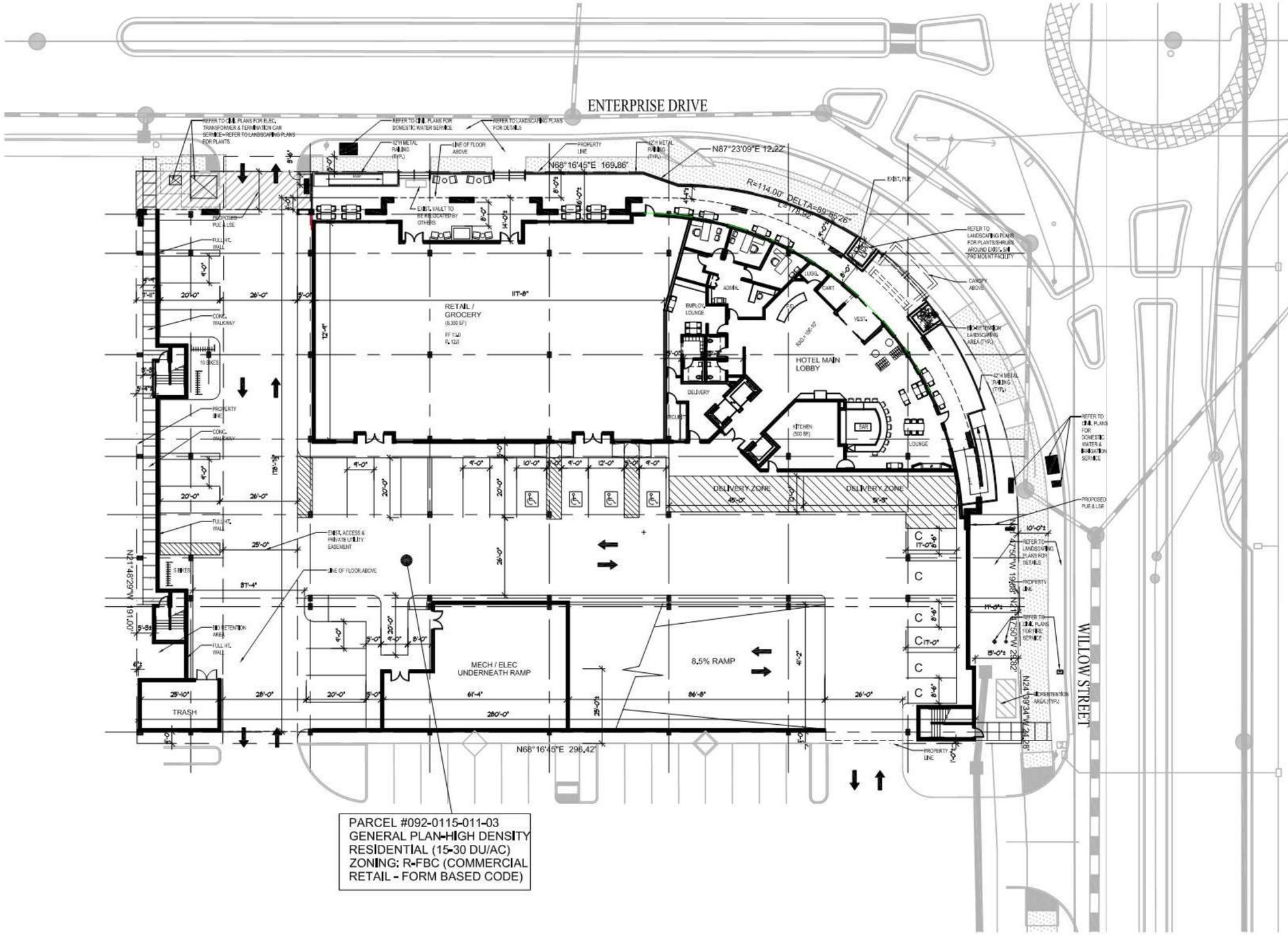




SITE INFORMATION:

- * SITE ADDRESS: 37445 WILLOW ST., NEWARK, CA 94560
- * TOTAL SITE AREA: 53,140 SF (1.22± AC)
- * TOTAL COVERED SITE AREA: 47,408 SF (89.2%)
- * LANDSCAPING/OPEN SPACE AREA: 5,735 SF
- * PROPOSED BLDG HEIGHT: 80'-0" TO THE HIGHEST POINT OF THE PARAPET.
- * EXISTING USES: VACANT
- * PROPOSED USES: - RESIDENTIAL R-1 HOTEL
  - MERCANTILE M RETAIL (GROCERY)

PROJECT DESCRIPTION:

A FIVE-STORY HOTEL & RETAIL BUILDING CONSISTS OF 146 ROOMS, 118 PARKING SPACES & APROX. 8,300 SF OF GROCERY.

FACILITY PROGRAM:

FLOOR AREA SQUARE FOOTAGE:

* GROUND FLOOR:	15,010 SF
* RETAIL / GROCERY:	8,300 SF
* HOTEL ADMIN.:	885 SF
* HOTEL MAIN LOBBY:	1,590 SF
* HOTEL BAR / LOUNGE:	1,430 SF
* HOTEL B.O.H.:	2,825 SF
* PARKING L2 PLAN:	47,350 SF
* BACK OF HOUSE:	12,130 SF
* PARKING AREA:	35,220 SF
* 3rd FLOOR PLAN:	40,915 SF
* POOL & POOL DECK:	8,000 SF
* PUBLIC CORRIDOR:	3,860 SF
* BACK OF HOUSE:	2,260 SF
* GUESTROOM AREA:	26,775 SF
* 4th FLOOR PLAN:	32,915 SF
* CORRIDOR:	3,860 SF
* BACK OF HOUSE:	2,260 SF
* GUESTROOM AREA:	26,775 SF
* 5th FLOOR PLAN:	32,250 SF
* CORRIDOR:	3,670 SF
* BACK OF HOUSE:	2,350 SF
* GUESTROOM AREA:	13,400 SF
* ROOFTOP LOUNGE:	1,300 SF
* MEETING ROOMS:	2,300 SF
* PRE-FUNCTION:	1,100 SF
* RESTAURANT:	2,970 SF
* OUTDOOR SEATING:	700 SF
* BAR / LOUNGE:	1,950 SF
* KITCHEN:	2,470 SF
TOTAL:	168,440 SF

PARKING TABULATION:

* L2 PARKING PLAN:	87 SPACES
* ON-GRADE PARKING:	31 SPACES
TOTAL PROVIDED PARKING: (51C + 5HC + 62R)	118 SPACES
* BIKES:	PROVIDED 15 SPACES
* LOADING SPACES:	PROVIDED 2 SPACES
* HOTEL: (146 KEYS)	146 SPACES
* EMPLOYEES:	10 SPACES
* RETAIL (3/1000 x 8,300 SF):	25 SPACES
* 35% DEDUCTION:	-63 SPACES
TOTAL REQUIRED PARKING:	118 SPACES

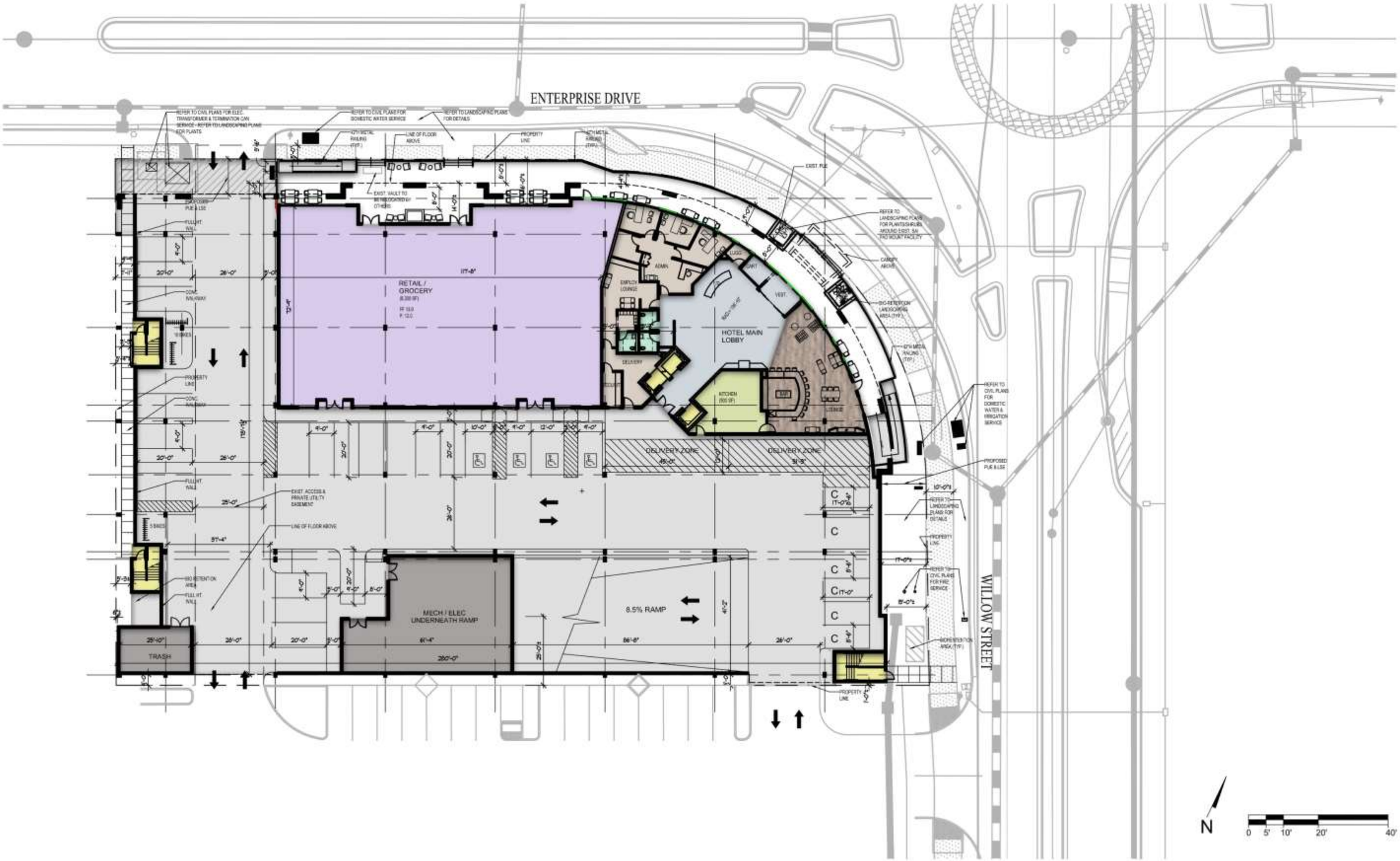
HOTEL ROOM MATRIX:

TYPE / FL	STE	K	QQ	K ADA ROLL IN	QQ ADA ROLL IN	K ADA	QQ ADA	TOTAL
3rd FL	-	33	22	1	1	2		59
4th FL		35	21			2	1	59
5th FL		17	11					28
TOTAL		85 (58%)	54 (37%)	1	1	4	1	146

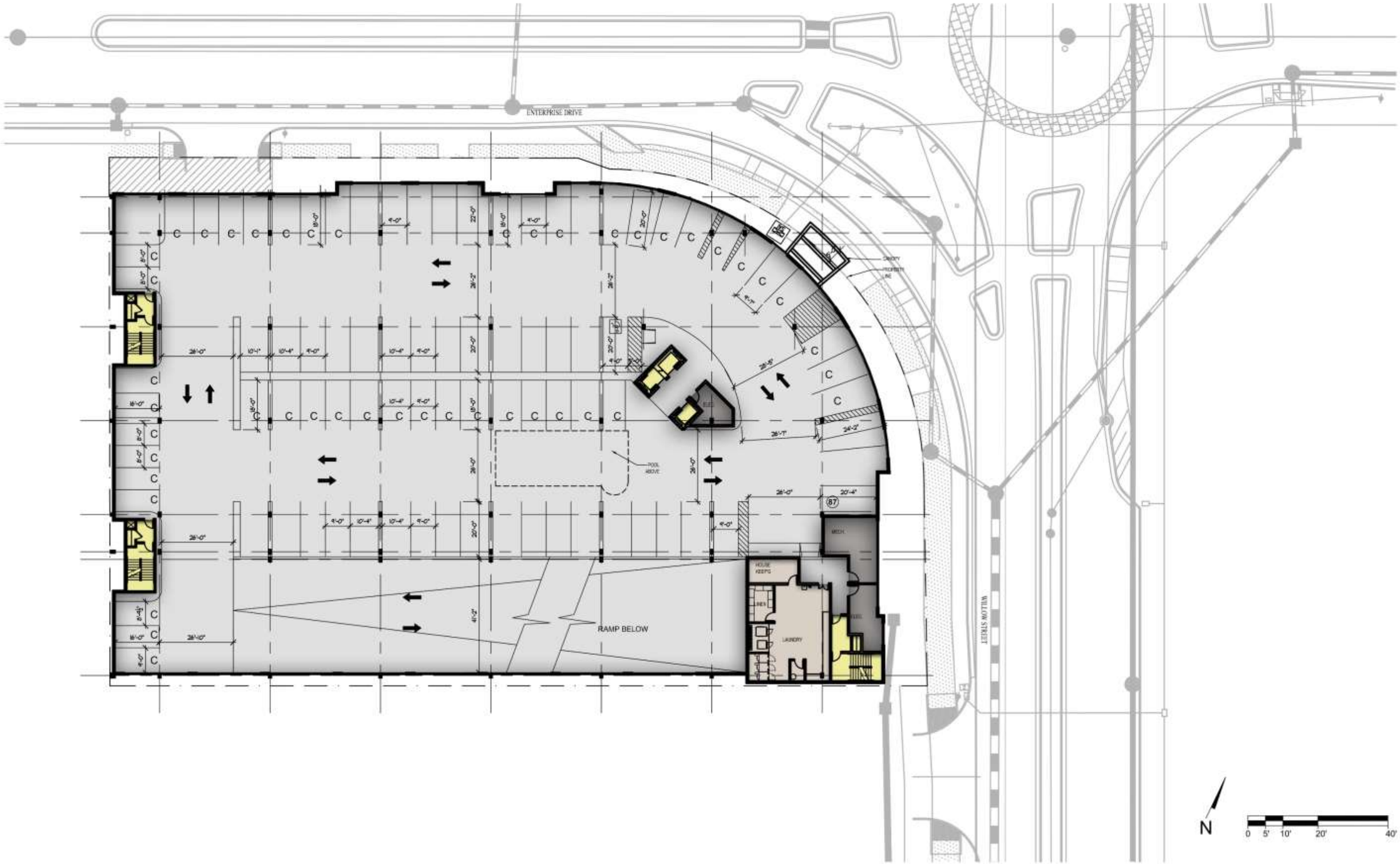
TYP. KING ROOM SIZE: 30'-0"L x 12'-6"W (CLEAR)
TYP. Q/Q ROOM SIZE: 34'-0"L x 12'-6"W (CLEAR)

0 5' 10' 20' 40'

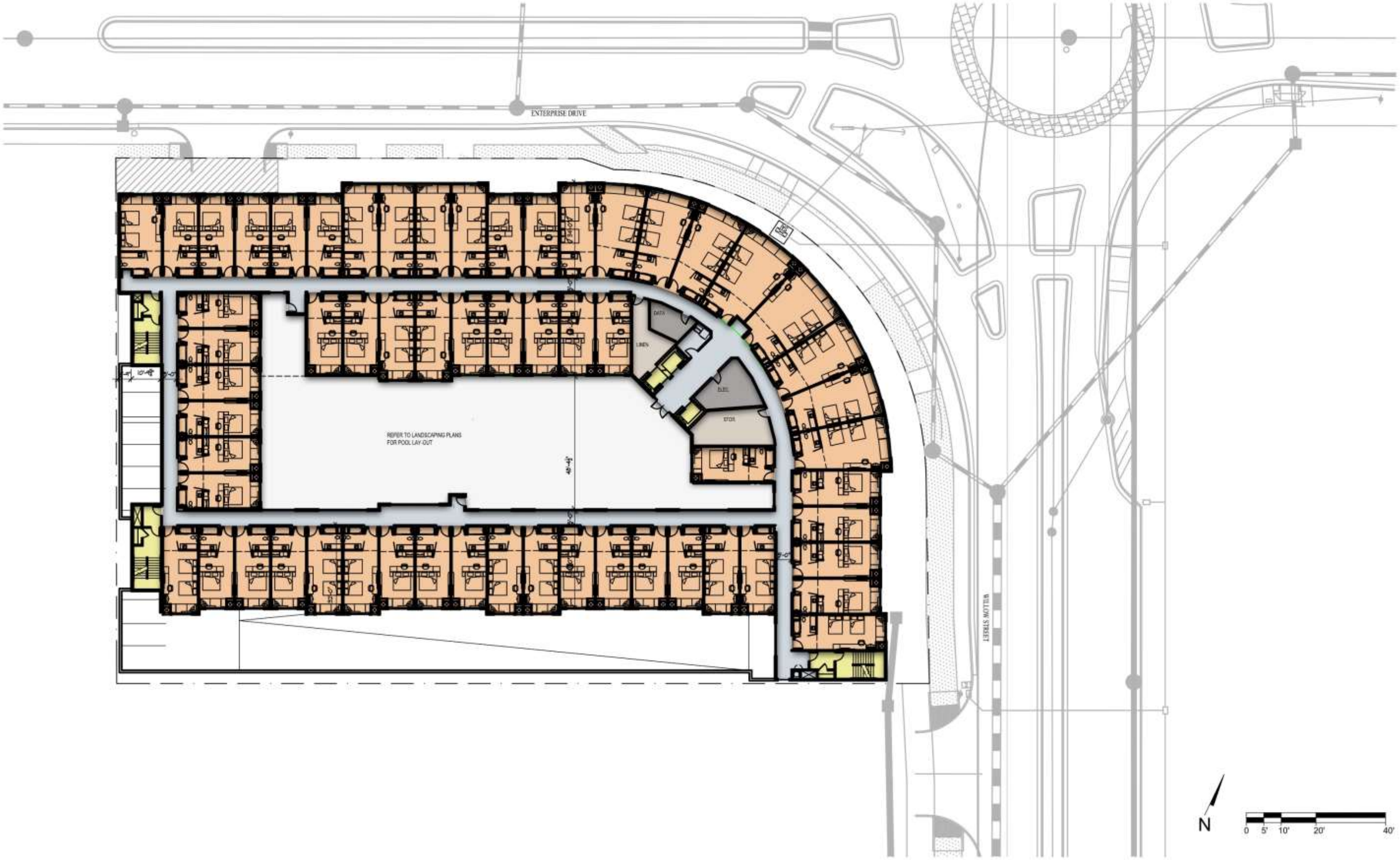
GROUND FLOOR PLAN



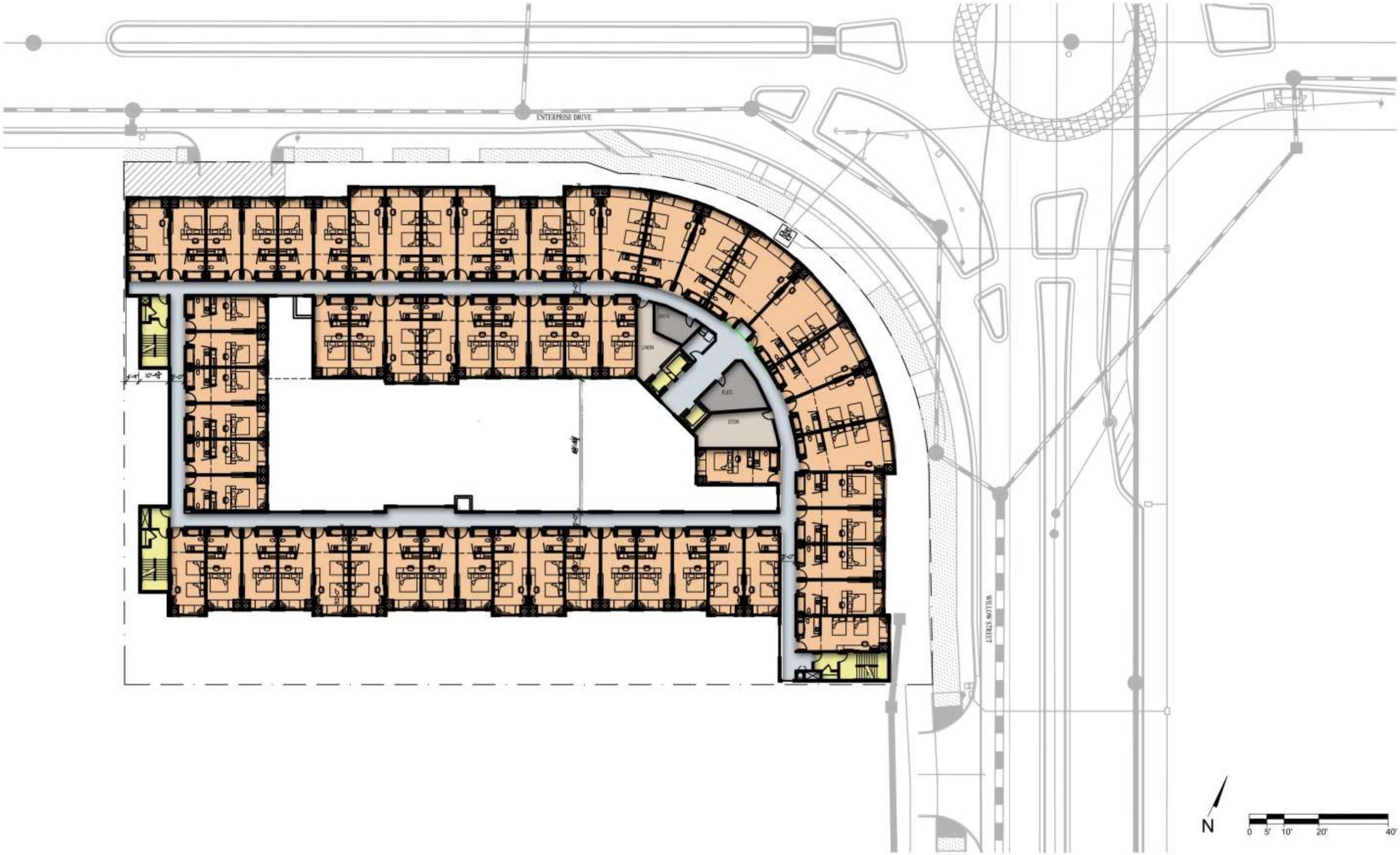
PARKING L2 PLAN



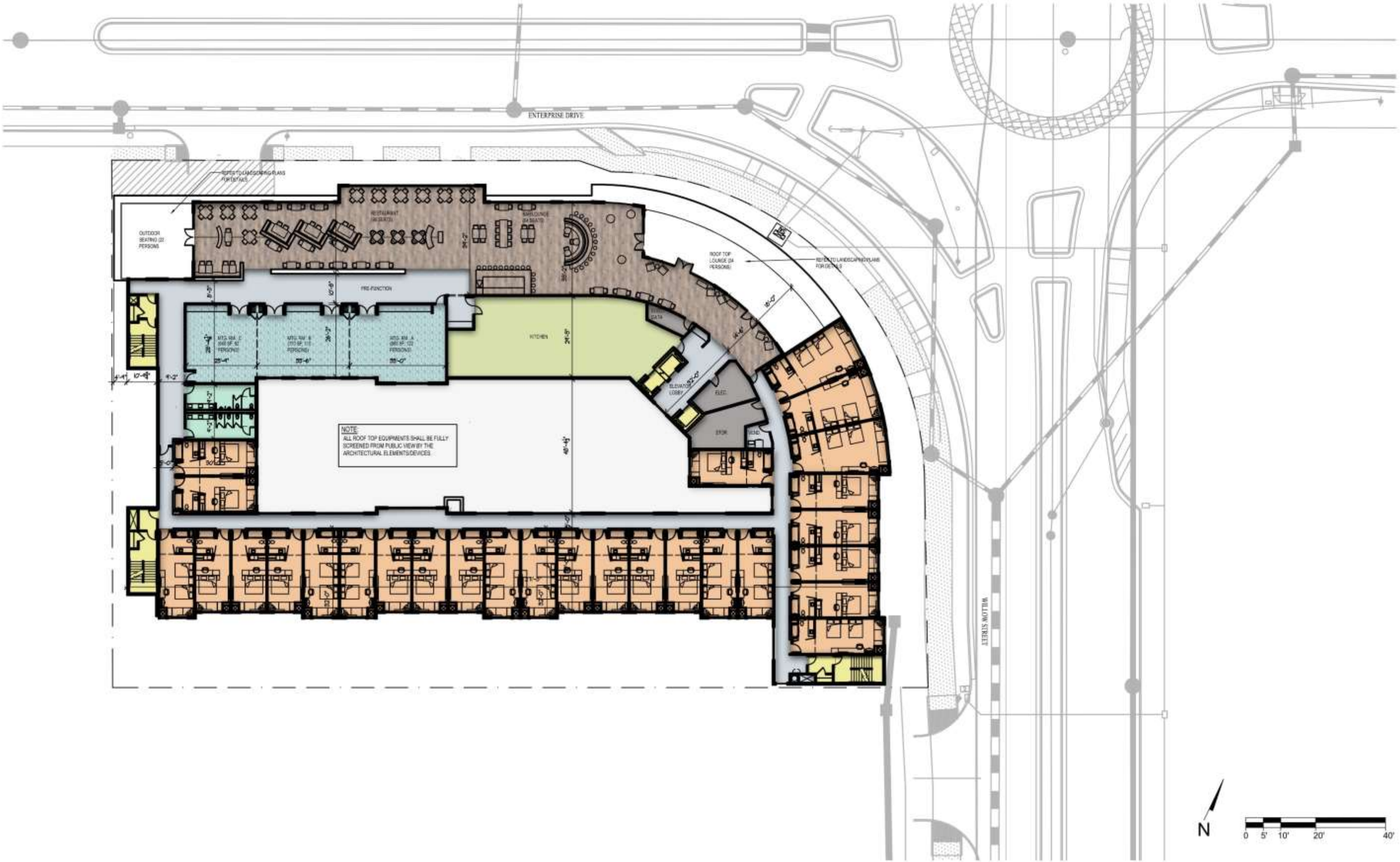
THIRD FLOOR PLAN



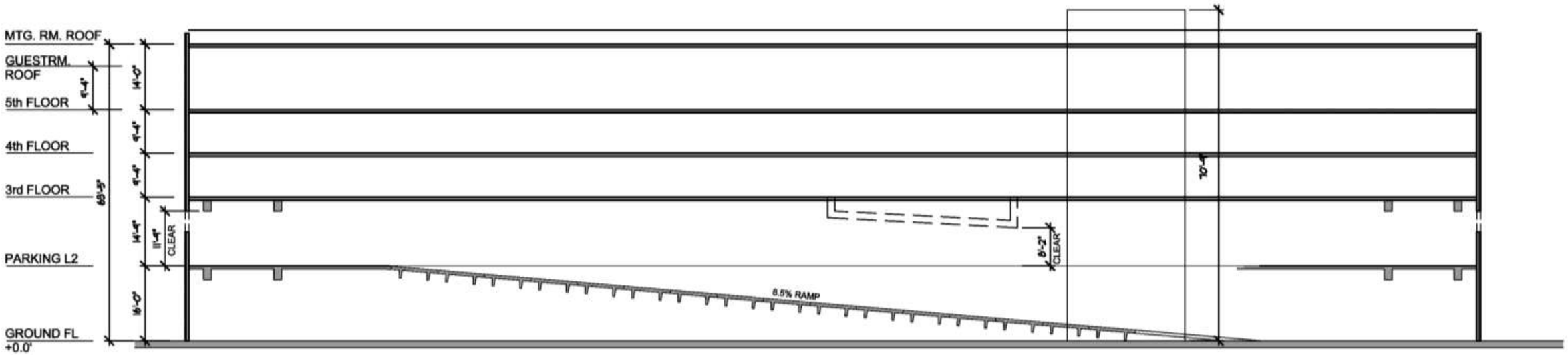
FOURTH FLOOR PLAN



FIFTH FLOOR PLAN

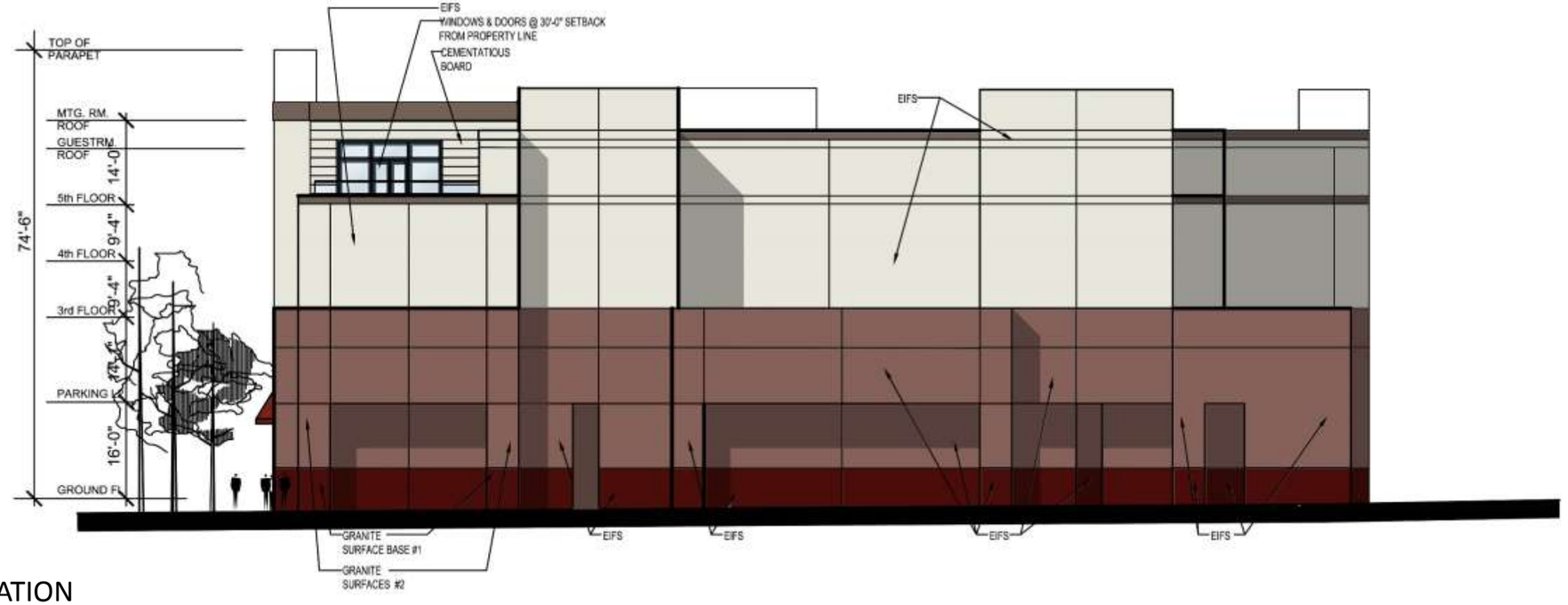


BUILDING SECTION



WILLOW STREET

ENTERPRISE DRIVE



RIGHT ELEVATION

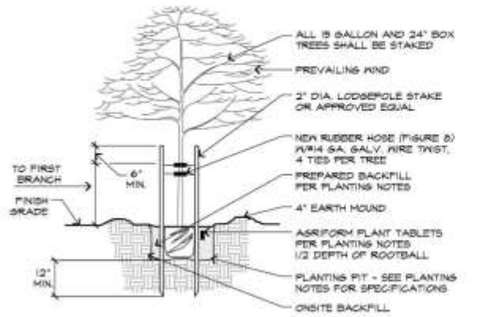
REAR ELEVATION

EXTERIOR RENDERING

CONDITIONAL USE PERMIT SUBMITTAL - 2017

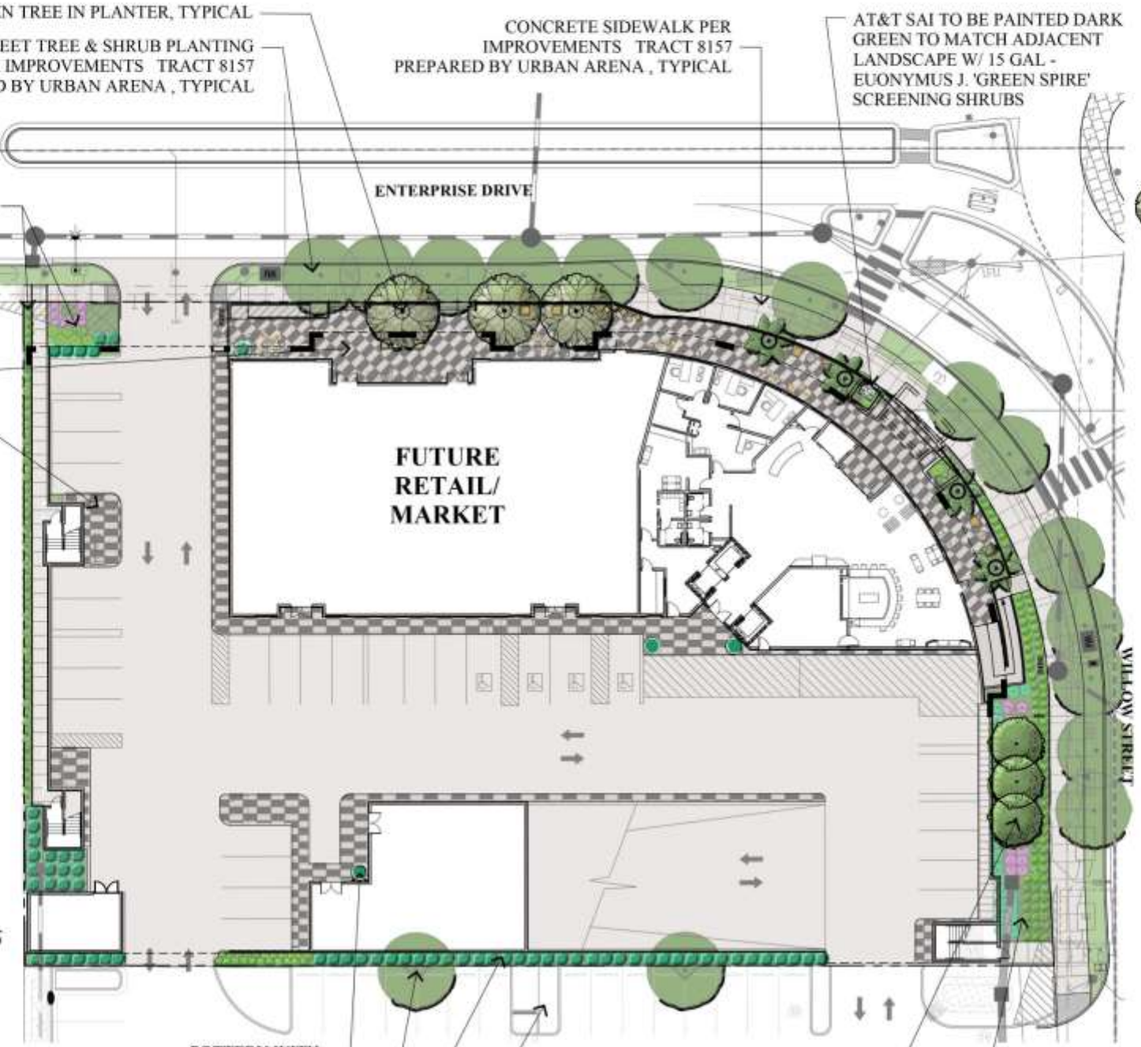
1ST FLOOR LANDSCAPE PLAN

TREE & SHRUB PLANTERS



NOTE:
1. ROOT CONTROL BARRIER PANELS SHALL BE REQUIRED WHERE TREES IS WITHIN 10' FROM PAVING. ROOT SOLUTIONS ROOT BARRIER OR EQUAL MAY BE USED. LENGTH OF BARRIER TO BE CENTERED ON TREE.

A **TREE PLANTING AND STAKING DETAIL** SCALE: 1/2" = 1'-0"



N

GRAPHIC SCALE
0 20 40 60
(IN FEET)
1 inch = 20 ft.

NOTES:

1. ALL TREES SHALL BE PLANTED AND STAKED PER CITY STANDARDS.
2. TREES PLANTED WITHIN 5' OF HARDSCAPE ELEMENTS, SHALL HAVE A LINEAR ROOT BARRIER INSTALLED ADJACENT TO THE HARDSCAPE ELEMENT AT TIME OF TREE PLANTING.
3. LANDSCAPE AND IRRIGATION SHALL COMPLY WITH CITY'S CURRENT WATER-EFFICIENT LANDSCAPE ORDINANCE.
4. ALL PLANTING AREAS SHALL BE AUTOMATICALLY IRRIGATED PER CITY STANDARDS. USING LOW-FLOW SPRAY, BUBBLERS OR DRIP METHODS.
5. ALL PLANTING AREAS SHALL BE MULCHED TO A MINIMUM DEPTH OF 3".

PRELIMINARY PROPOSED PLANT PALETTE

TREES

BOTANICAL NAME	COMMON NAME	SIZE	WIDTH/HEIGHT	WATER USE
ENTERPRISE DRIVE & WILLOW STREET TREES REFER TO EXISTING APPROVED IMPROVEMENT PLANS				
EVERGREEN SCREEN TREE PRUNUS CAROLINIANA 'COMPACTA'	CAROLINA CHERRY	15 GALLON	15'/10'	LOW
ACCENT TREES CHAMAEROPS HUMILIS	MEDITERRANEAN FAN PALM	15 GALLON	15'/15'	LOW
SPECIMEN TREES ARBUTUS MARINA MULTI	MULTI TRUNK STRAWBERRY TREE	24" BOX	20'/30'	LOW

FIRST FLOOR/ GROUND LEVEL, THIRD FLOOR PLANTERS, AND FIFTH FLOOR PLANTERS

BOTANICAL NAME	COMMON NAME	SIZE	WIDTH/HEIGHT	WATER USE
SHRUBS -				
ACACIA 'COUSIN ITT'	LITTLE RIVER WATTLE	1 GALLON	3'/4'	LOW
AGAVE 'CARL'S DWARF	PINK AGAVE DWARF	1 GALLON	1'/3'	LOW
ALOE 'BLUE ELF'	DWARF ALOE	1 GALLON	2'/2'	LOW
ALOE POLYPHYLLA	AFRICAN SPIRAL ALOE	1 GALLON	1'/2'	LOW
ANIGOZANTHOS FLAVIDUS	KANGAROO PAW	1 GALLON	4'/3'	LOW
BOUTELOUA G. 'BLONDE AMBITION'	GRAMA GRASS	1 GALLON	2'/2'	LOW
BUDDLEIA DAVIDII'DWARF'	DWARF BUTTERFLY BUSH	1 GALLON	10'/10'	LOW
CAREX TUMULICOLA 'DIVULSA'	BERKELEY SEDGE	1 GALLON	1 1/2'/2'	LOW
CEANOTHUS 'RAY HARTMAN'	MOUNTAIN LILAC	1 GALLON	15'/10'	LOW
CHONDROPETALUM TECTORUM	CAPE REED	1 GALLON	5'/4'	LOW
DIETES BICOLOR 'MORAEA'	FORTNIGHT LILY	1 GALLON	4'/4'	LOW
DIETES IRIDOIDES	AFRICAN IRIS	1 GALLON	3'/4'	LOW
ERIGERON KARVINSKIANUS	SANTA BARBARA DAISY	1 GALLON	20"/36"	LOW
EUONYMUS JAPONICUS 'GREEN SPIRE'	GREEN SPIRE EUONYMUS	15 GALLON	2'/5'	LOW
FESTUCA GLAUCA	BLUE FESCUE	1 GALLON	10"/10"	LOW
FESTUCA MAIREI	MAIRES FESCUE	1 GALLON	5'/3'	LOW
FREMONTODENDRON CALIFORNIA	FLANNEL BUSH	1 GALLON	20'/12'	LOW
GREVILLEA 'MOELLII'	WOOLY GREVILLEA	1 GALLON	4'/5'	LOW
HELICTOTRICHON SEMPERVIRENS	BLUE OAT GRASS	1 GALLON	3'/3'	LOW
HESPERALOE SANGUINEA 'SPLENDENS'	RED CORAL BELLS	1 GALLONM	18"/18"	LOW
KNIPHOFIA 'NANCY'S RED'	RED HOT POKER	1 GALLON	24"/24"	LOW
LAVANDULA STOECHES 'OTTO QUAST'	SPANISH LAVANDER	1 GALLON	3'/3'	LOW
LAVATERA MARITIMA	TREE MALLOW	1 GALLON	10'/10'	LOW
LOROPETALUM C. 'GREEN N PINK'	FRINGE FLOWER	1 GALLON	8'/8'	LOW
LOROPETALUM C. 'PLUM DELIGHT'	FRINGE FLOWER	1 GALLON	8'/8'	LOW
LOROPETALUM C.'MONRAZ'	FRINGE FLOWER	1 GALLON	5'/5'	LOW
MUHLENBERGIA RIGENS	DEER GRASS	1 GALLON	4'/4'	LOW
MYRTUS C. 'COMPACTA'	DWARF MYRTLE	1 GALLON	4'/4'	LOW
NANDINA D. 'GULF STREAM'	COMPACT HEAVENLY BAMBOO	1 GALLON	4'/2'	LOW
NASSELLA TENUISSIMA	MEXICAN FEATHER GRASS	1 GALLON	2'/3'	LOW
NEPETA FAASSENNII	CATMINT	1 GALLON	1'/2'	LOW
OLEA E. 'LITTLE OLLIE'	DWARF OLIVE	5 GALLON	6'/6'	LOW
PENSTEMON HETEROPHYLLUS 'MARGARITA BOP'	BLUE BEDDER PENSTEMON	1 GALLON	2'/3'	LOW
PHORMIUM T. 'JACK SPRATT'	RED-BROWN DWARF FLAX	1 GALLON	2'/2'	LOW
PHORMIUM 'PLATTS BLACK'	BLACK NEW ZEALAND FLAX	5 GALLON	4'/4'	LOW
PHORMIUM H. 'MAORI QUEEN'	RED NEW ZEALAND FLAX	5 GALLON	5'/5'	LOW
PHORMIUM T. 'TONY TIGER'	DWARF NEW ZEALAND FLAX	1 GALLON	2'/2'	LOW
PRUNUS C. 'MONUS'	BRIGHT & TIGHT LAUREL	5 GALLON	10'/8'	LOW
ROSA RUGOSA	PINK RUGOSA ROSE	5 GALLON	8'/8'	LOW
ROSMARINUS OFFICINALIS 'TUSCAN BLUE'	UPRIGHT ROSEMARY	5 GALLON	7'/3'	LOW
SISYRINCHIUM BELLUM	BLUE-EYED GRASS	1 GALLON	12"/18"	LOW
SOLLYA HETEROPHYLLA	BLUEBELL CREEPER	1 GALLON	5'/5'	LOW
SYRINGA VULGARIS	COMMON LILAC	1 GALLON	20'/15'	LOW
TRACHELOSPERMUM JASMINOIDES	STAR JASMINE	1 GALLON	2'/10'	MEDIUM
TRICHOSTEMA 'LANATUM'	WOOLLY BLUE CURLS	1 GALLON	4'/5'	LOW
TULBAGHIA VIOLACEA	SOCIETY GARLIC	1 GALLON	14"/2'	MEDIUM
XYLOSMA C. 'COMPACTA'	COMPACT SHINY XYLOSMA	5 GALLON	8'/8'	LOW
ZANTEDESCHIA AETHIOPIA	COMMON CALLA LILY	1 GALLON	4'/2'	MEDIUM
ZEPHYRANTHES 'CANDIDA'	FAIRY LILY	1 GALLON	1'/2'	MEDIUM

BIO-RETENTION AREA

BOTANICAL NAME	COMMON NAME	SIZE	WIDTH/HEIGHT	WATER USE
GRASSES/ SHRUBS				
ALOE STRIATA	CORAL ALOE	1 GALLON	2'/2'	LOW
ARCTOSTAPHYLOS HOOKERI	MONTEREY MANZANITA	1 GALLON	7'/4'	LOW
BOUTELOUA GRACILIS	BLUE GRAMA GRASS	1 GALLON	1.5'/1'	LOW
CAREX 'TUMULICOLA'	BERKELEY SEDGE	1 GALLON	1'/1'	LOW
CAREX PRAEGRACILIS	CLUSTERED FIELD SEDGE	1 GALLON	1.5'/1.5'	LOW
CERATOSTIGMA PLUMBAGINOIDES	DWARF PLUMBAGO	1 GALLON	1'/5'	LOW
CHONDROPETALUM TECTORUM	BLUE RUSH	5 GALLON	3'/3'	LOW
CISTUS SKANBERGII	HYBRID ROCKROSE	5 GALLON	3'/5'	LOW
CORREA 'CARMINE'	AUSTR. CORAL BELLS	1 GALLON	3'/6'	LOW
CALIFORNIASTUCA GLAUCA	CALIFORNIA FESCUE	1 GALLON	2'/2'	LOW
IRIS DOUGLASIANA	DOUGLAS IRIS	1 GALLON	1.5'/2'	LOW
JUNCUS PATENS	GREY RUSH	1 GALLON	2'/1'	LOW
LUPINUS BICOLOR	MINIATURE LUPINE	1 GALLON	1'/1'	LOW
MIMULUS AURANTIACUS	COMMON MONKEY FLOWER	1 GALLON	3'/3'	LOW
MUHLENBERGIA RIGENS	DEER GRASS 5	GALLON	3'/3'	LOW
SCAEVOLA 'MAUVE CLUSTERS'	FAN FLOWER	1 GALLON	1'/4'	LOW
SISYRINCHIUM BELLUM	BLUE-EYED GRASS	1 GALLON	1'/1'	LOW
SISYRINCHIUM CALIFORNICA	YELLOW-EYED GRASS	1 GALLON	1'/1'	LOW
STACHYS BYZANTINE	LAMB'S EARS	1 GALLON	1'/3'	LOW
VERBENA TENUISECTA	MOSS VERBENA	1 GALLON	1'/5'	LOW

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3RD FLOOR LANDSCAPE PLAN

POOL LOUNGES WITH DUAL UMBRELLA

SMOOTH BLACK NOYA COBBLE AT BASE OF BUILDING WITH LIGHT WELLS BETWEEN RAISED CONCRETE PLANTER

PLANTED POTTERY WITH TREE

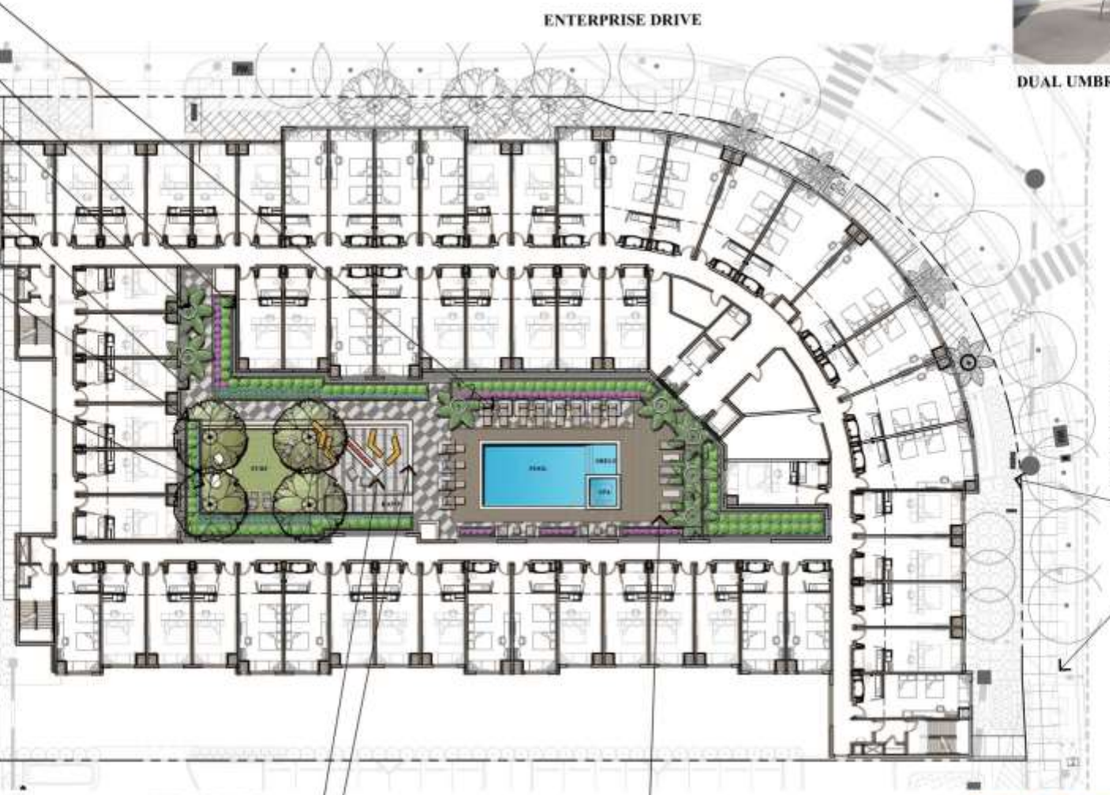
CONCRETE PAVERS WITH DARK/LIGHT PATTERN, TYPICAL

RAISED PLANTER WITH BIO FILTRATION AND BIO-FILTRATION PLANTING, TYPICAL- SEE PLANTING LEGEND, SHEET L1

PASSIVE RECREATION AREA: OPEN LAWN WITH LARGE, MEDIUM, AND SMALL SOMA STONE SEATING, ADIRONDAK CHAIRS, AND SPECIMEN TREES IN LARGE POTS WITH CONCRETE BASES

SOMA STONES IN FRONT OF RAISED CONCRETE PLANTERS

ILLUMINATED CONCRETE STEPS



FIRE PIT AREA: LONG CONCRETE FIRE PIT, COLORED CONCRETE SEAT WALLS, CONTRASTING ACCENT PAVING, MOVEABLE CASUAL SEATING

(2) 6" HIGH ILLUMINATED CONCRETE RISERS TO RAISED FIREPIT AND OPEN LAWN. ADA ACCESSIBLE RAMP W/ CONCRETE CURB TO ACCESS RAISED AREA.

IPE OR CONCRETE "WOOD" PLANK PAVING AROUND POOL AND SPA

FIRST FLOOR/GROUND LEVEL LANDSCAPE- SEE SHEET L1

DUAL UMBRELLA

LOUNGE

COOL ROOF PAVING BY TILE TECH

PORCELAIN PLANK ROOF PAVING BY TILE TECH

GRAPHIC SCALE

0 20 40 60

(IN FEET)

1 inch = 20 ft.

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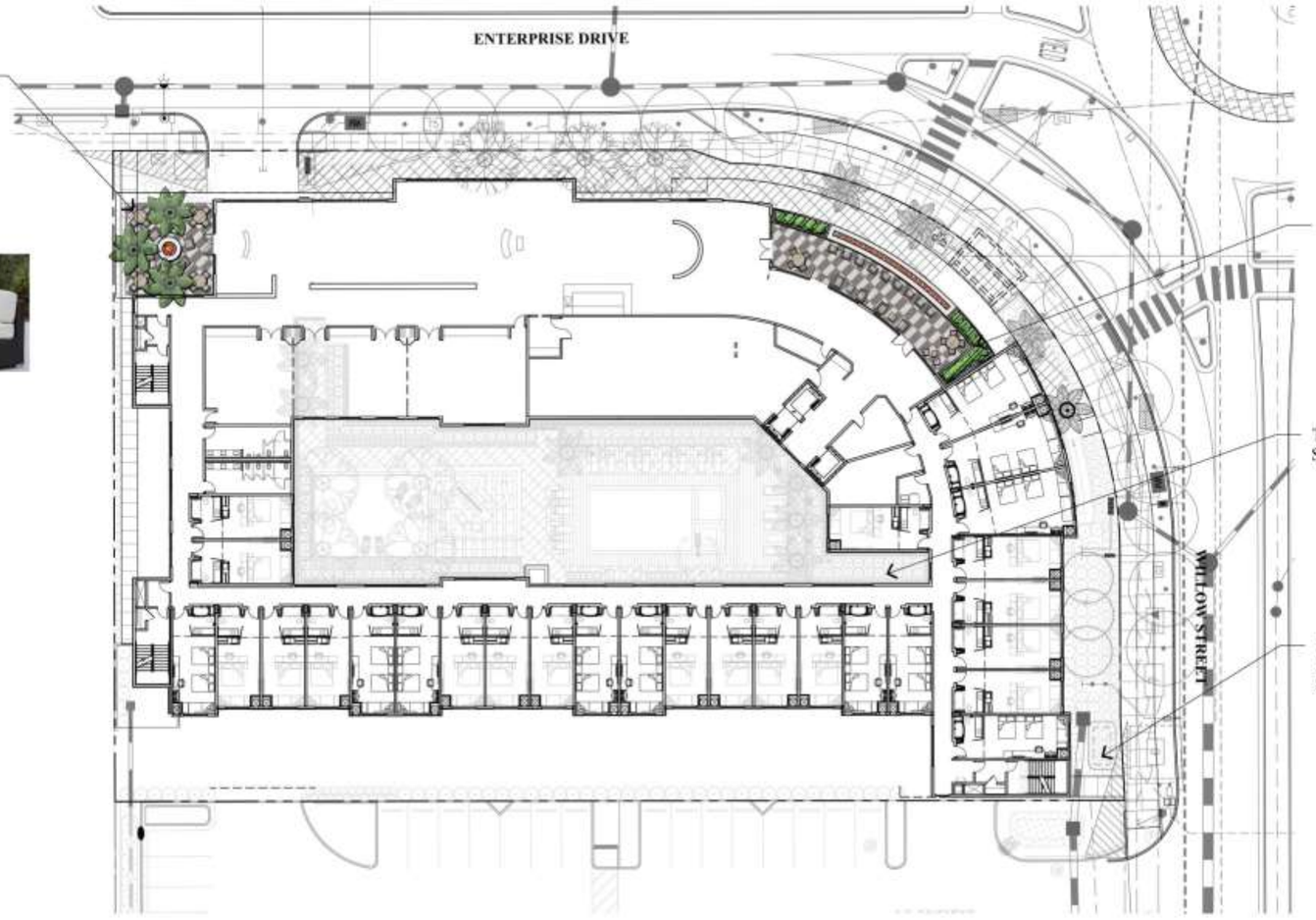
5TH FLOOR LANDSCAPE PLAN

OUTDOOR SEATING:
ROUND FIRE PIT WITH CLUB CHAIR SEATING, OUTDOOR DINING TABLES, AND CONCRETE PAVERS WITH DARK/ LIGHT PATTERN

ROUND CONCRETE FIRE PIT WITH CLUB SEATING



ROOF LOUNGE:
RAISED CONCRETE PLANTERS WITH GLASS RAIL, ARCED CONCRETE FIRE PIT WITH GLASS RAIL, CONCRETE PAVERS WITH DARK/LIGHT PATTERN, AND OUTDOOR SEATING

THIRD FLOOR LANDSCAPE-
SEE SHEET L2

FIRST FLOOR/GROUND LEVEL LANDSCAPE-
SEE SHEET L1

GRAPHIC SCALE
0 20 40 60
(IN FEET)
1 inch = 20 ft.

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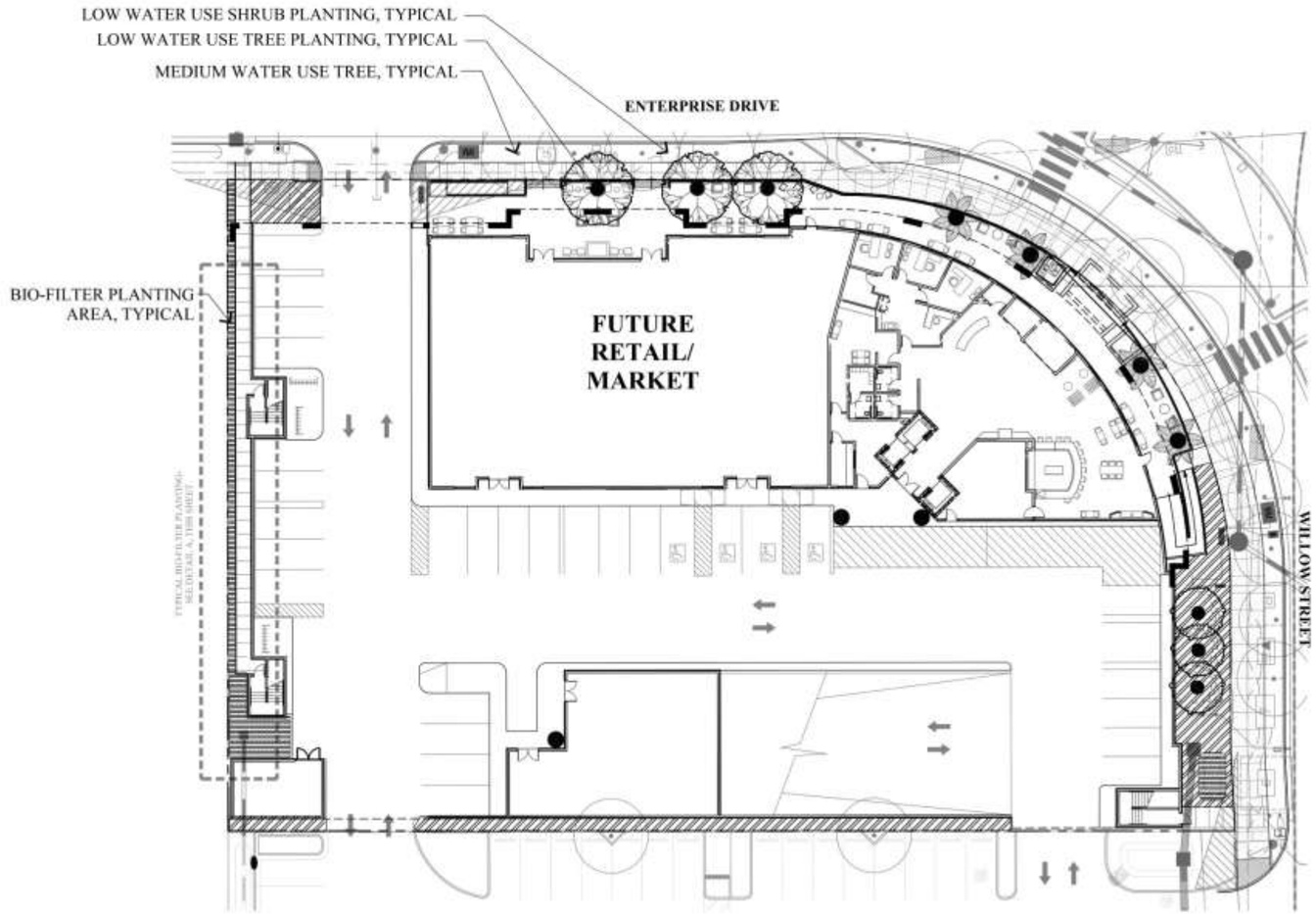
1ST FLOOR HYDROZONE PLAN



WATER USE CALCULATIONS:

THE MAXIMUM APPLIED WATER ALLOWANCE (MAWA) IN GALLONS PER YEAR IS BASE ON THE FOLLOWING FORMULA:

MAWA = (ETo)(0.62)(0.55 X LA)

THE ESTIMATED TOTAL WATER USE (ETWU) IS THE SUM TOTAL OF ESTIMATED WATER USE FOR EACH HYDROZONE IN GALLONS PER YEAR AND IS BASED ON THE FOLLOWING FORMULA:

$$ETWU = (ETo)(0.62)\left(\frac{PF \times HA}{IE} + SLA\right)$$

ETo	=	REFERENCE EVAPOTRANSPIRATION (INCHES PER YEAR)
LA	=	LANDSCAPE AREA
HA	=	HYDROZONE AREA (SQUARE FEET)
PF	=	PLANT FACTOR FROM WUCOLS
IE	=	IRRIGATION EFFICIENCY (0.71)
0.45	=	ET ADJUSTMENT FACTOR
0.62	=	CONVERSION FACTOR (TO GALLONS)

REFERENCE EVAPOTRASNPIRATION (ETo) = 47.0

MAXIMUM APPLIED WATER ALLOWANCE:

MAWA = 147.01 X (0.62) X (0.45 X 8,549) = 121,103 GAL/YR

ESTIMATED WATER USE:

LOW:

$ETWU = 147.01 \times (0.62) \times \left(\frac{0.20 \times 7,749}{0.71}\right) = 63,607$ GAL/YR

HIGH:

$ETWU = 147.01 \times (0.62) \times \left(\frac{0.80 \times 800}{0.71}\right) = 26,267$ GAL/YR

ESTIMATED TOTAL WATER USE: 89,874 GAL/YR

HYDROZONE INFORMATION TABLE - FIRST FLOOR

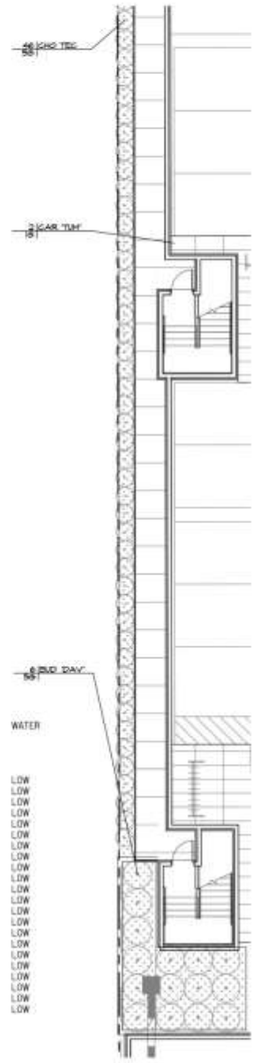
HYDROZONE (WATER USE)	ZONE/ VALVE	IRRIG. METHOD	AREA	% OF LANDSCAPE AREA
LOW	A-1	DRIP	2,378 SF	79%
LOW	A-2	BUBBLER	77 SF	3%
LOW	A-3	DRIP	532 SF	18%
		TOTAL	2,987 SF	100%

PRELIMINARY BIO-RETENTION PLANT PALETTE

BIO-RETENTION AREA

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE USE	WIDTH/HEIGHT	WATER
GRASSES/ SHRUBS					
*ALO STR	ALOE STRIATA	CORAL ALOE	1 GALLON	2'/2'	LOW
*ARC HOO	ARCTOSTAPHYLOS HOOKERI	MONTEREY MANZANITA	1 GALLON	1'/4'	LOW
*BOU GRA	BOUTELOUA GRACILIS	BLUE GRAMA GRASS	1 GALLON	1.5'/1'	LOW
BUD 'DAV'	BUDDLEJA 'DAVIDII'	BUTTERFLY BUSH	5 GALLON	5'/4'	LOW
*CAR 'TUM'	CAREX 'TUMULICOLA'	BERKELEY SEDGE	1 GALLON	1'/1'	LOW
*CAR PRA	CAREX PRAEGRACILIS	CLUSTERED FIELD SEDGE	1 GALLON	1.5'/1.5'	LOW
*CER PLU	CERATOSTIGMA PLUMBAGINOIDES	DWARF PLUMBAGO	1 GALLON	1'/5'	LOW
*CHO TEC	CHONDROPETALUM TECTORUM	BLUE RUSH	5 GALLON	3'/3'	LOW
CIS SKA	CISTUS SKANBERGII	HYBRID ROCKROSE	5 GALLON	3'/5'	LOW
*COR 'CAR'	CORREA 'CARMINE'	AUSTR. CORAL BELLS	1 GALLON	3'/6'	LOW
*FES CAL	FESTUCA CALIFORNICA	CALIFORNIA FESCUE	1 GALLON	2'/2'	LOW
*DIE IRI	DIETES IRIOIDES	FORTNIGHT LILY	1 GALLON	2'/2'	LOW
IRI DOU	IRIS DOUGLASIANA	DOUGLAS IRIS	1 GALLON	1.5'/2'	LOW
*JUN PAT	JUNCUS PATENS	GREY RUSH	1 GALLON	2'/1'	LOW
LUP BIC	LUPINUS BICOLOR	MINATURE LUPINE	1 GALLON	1'/1'	LOW
MIM AUR	MIMULUS AURANTIACUS	COMMON MONKEYFLOWER	1 GALLON	3'/3'	LOW
*MUH RIG	MUHLENBERGIA RIGENS	DEER GRASS	5 GALLON	3'/3'	LOW
SCA 'MJC'	SCAEVOLA 'MAUVE CLUSTERS'	FANFLOWER	1 GALLON	1'/4'	LOW
SIS BEL	SISYRINCHIUM BELLUM	BLUE-EYED GRASS	1 GALLON	1'/1'	LOW
SIS CAL	SISYRINCHIUM CALIFORNICA	YELLOW-EYED GRASS	1 GALLON	1'/1'	LOW
*STA BYZ	STACHYS BYZANTINE	LAMB'S EARS	1 GALLON	1'/3'	LOW
VER TEN	VERBENA TENUISECTA	MOSS VERBENA	1 GALLON	1'/5'	LOW

*SHADE TOLERANT PLANT - PARTIAL TO FULL SUN
**FULL SHADE PLANT



A TYPICAL BIO-FILTER PLANTING PLAN SCALE : 1"=10'-0"

HYDROZONE LEGEND

- BIO-FILTER PLANTING - LOW WATER USE
- SHRUB-PLANTING LOW WATER USE
- TREE-PLANTING LOW WATER USE

GRAPHIC SCALE

0 20 40 80

(IN FEET)
1 inch = 20 ft.

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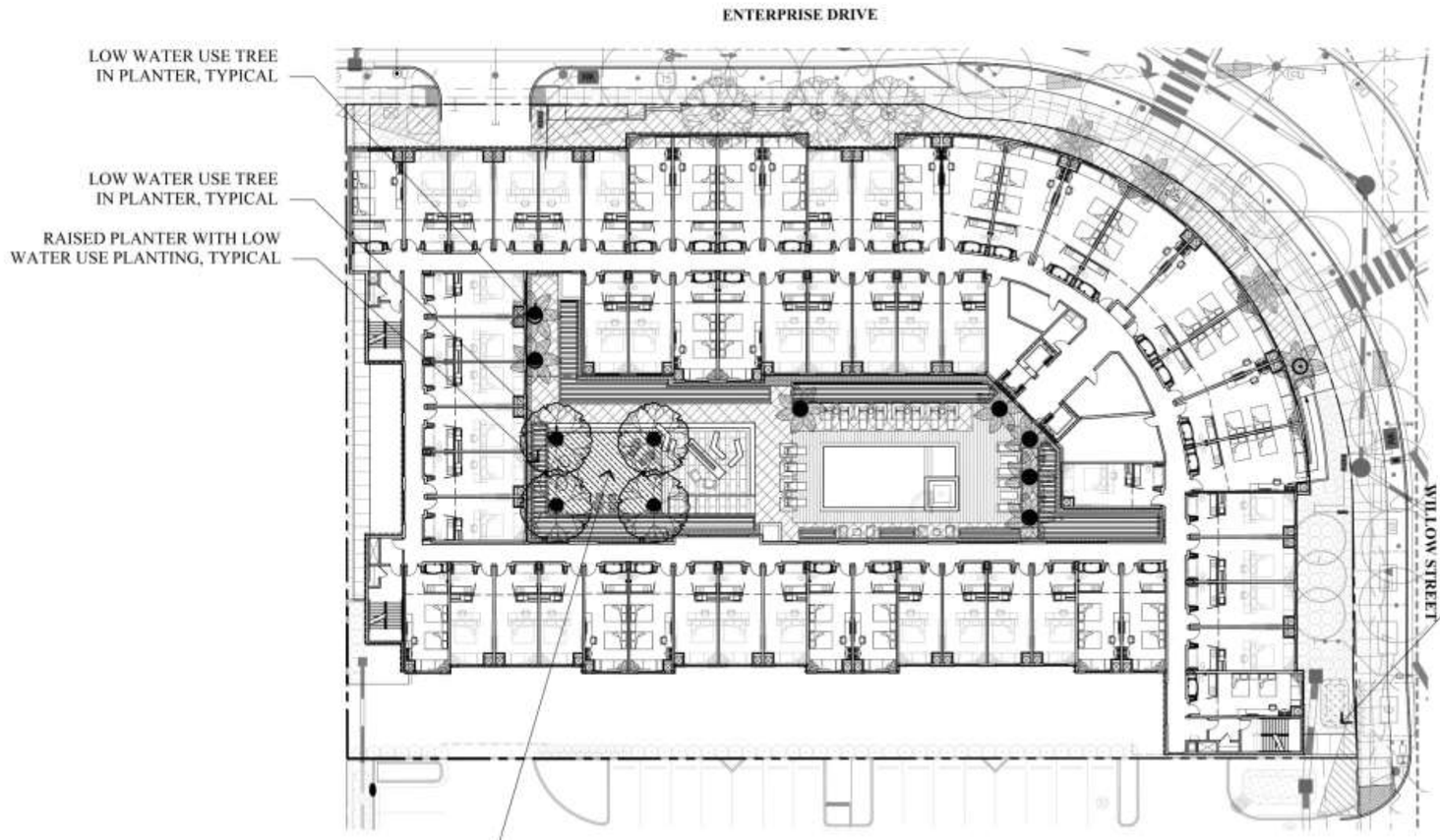
3RD FLOOR HYDROZONE PLAN



HYDROZONE INFORMATION TABLE - THIRD FLOOR

HYDROZONE (WATER USE)	ZONE/ VALVE	IRRIG. METHOD	AREA	% OF LANDSCAPE AREA
LOW	B-1	DRIP	2,916 SF	54%
LOW	B-2	BUBBLER	132 SF	3%
LOW	B-3	DRIP	1,502 SF	28%
HIGH	B-4	SPRAY	800 SF	15%
		TOTAL	5,355 SF	100%

* REFER TO SHEET L4 FOR WATER BUDGET CALCULATIONS

HYDROZONE LEGEND

BIO-FILTER PLANTING - LOW WATER USE

SHRUB-PLANTING LOW WATER USE

TREE-PLANTING LOW WATER USE

GRAPHIC SCALE

0 20 40 60

(IN FEET)

1 inch = 20 ft.

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5TH FLOOR HYDROZONE PLAN

BAY FRIENDLY LANDSCAPING PRACTICES
& W.E.L.O. COMPLIANCE NOTES:

Implementation of Bay friendly landscape guidelines consistent with Newark Municipal Code 15.44.080 are included in the landscape construction documents. Evidence of compliance with these guidelines are as follows:

1) Earthwork and Soil Health:

a. A laboratory soil analysis results and recommendations for compost and natural fertilizers will be submitted.

b. Design documents include specification to alleviate compacted soils to a depth of 8 inches prior to planting for all landscaped areas.

c. Planting specifications and plans that after construction, all soil on site is protected with a minimum of 3" of mulch.

d. When soil is amended, organic matter has a minimum content of 1 inch of quality compost.

2) Materials:

a. 100% of mulch is recycled from local, organic materials such as plant or wood waste.

b. 50% of landscape construction and demolition waste will be recycled.

3) Planting:

a. No species will require shearing.

b. Plant specified can grow to mature size within allocated space.

c. None of the species listed by Cal-IPC as invasive in the San Francisco Bay Area are included in the planting plan.

d. 100% of all non-turf plants are California native, Mediterranean or climate adapted plants.

e. Turf is not specified in areas less than 8 feet wide or in medians.

f. Turf shall not be installed on slopes exceeding 10%.

h. Plants will be grouped by water requirements and sun exposure within identified hydrozones on the irrigation plan.

4) Irrigation

a. A rain sensor shutoff will be implemented with irrigation controllers.

b. Sprinkler and spray heads are not specified for areas less than 8 feet wide.

c. Drip and bubbler irrigation equipment will be specified and installed with an operational distribution uniformity of 80% or greater to 100% of non-turf irrigated areas.

d. Irrigation in all turf areas will have a precipitation rate of 1 inch or less per hour and an operational distribution uniformity of 70% or greater.

e. Irrigation system will be operated at 70% of reference ET.

f. An irrigation meter is specified to track irrigation water.

5) Ongoing Maintenance

a. Organic mulch to a minimum of 3 inches will require regular reapplication.

b. Maintenance includes a schedule for reading the meter and reporting water use.

c. At completion of the installation, the contractor shall provide the property owner with precipitation rate for each valve zone, area calculations for each irrigation zone, and the irrigation plan.

d. Irrigation equipment will be regularly checked and any broken equipment will be immediately replaced.

e. Maintenance includes integrated pest management specifications.

Evidence of compliance with the State Model Water Efficient Landscape Ordinance is as follows:

1. WELO 492.4(A1) Preliminary hydrozone information for each typical lot is provided to the left. Square footage of landscaped area is shown on this typical water budget calculations.

2. WELO 492.4(A2) Water budget calculations show the Estimated Total Water Use (ETWU) and the Maximum Applied Water Allowance (MAWA) for gallons per year.

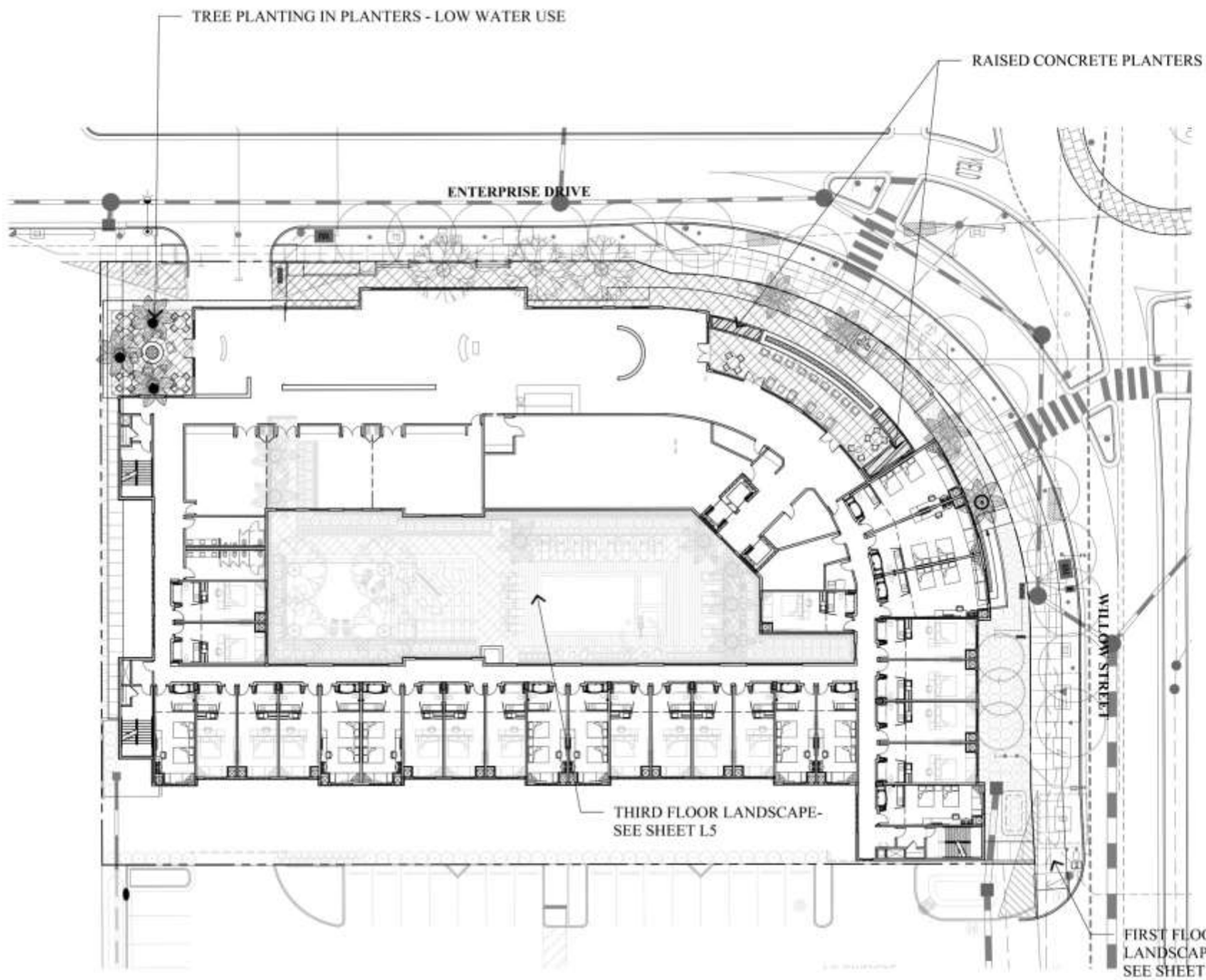
   Reference Evapotranspiration in inches per year (ETo) = 47
   ET Adjustment Factor (ETAF) = 0.7
   Conversion factor (to gallons per square foot) = 0.62.

3. WELO 492.4(B1) The plant factor (PF) = 0.3 for low water use, 0.6 for medium water use, and 0.8 for high water use.

4. WELO 492.4(C1) The MAWA equations are provided to the left.

   47 = Reference Evapotranspiration in inches per year (ETo)
   0.7 = ET Adjustment Factor (ETAF)
   0.62 = Conversion factor (to gallons per square foot)

5. WELO 492.4(D1) The ETWU equations with square footage of each hydrozone area are provided to the left. The values listed above for the MAWA are also used in the ETWU.



HYDROZONE INFORMATION TABLE - FIFTH FLOOR

HYDROZONE (WATER USE)	ZONE/ VALVE	IRRIG. METHOD	AREA	% OF LANDSCAPE AREA
LOW	C-1	DRIP	171 SF	79%
LOW	C-2	BUBBLER	36 SF	3%
		TOTAL	207 SF	100%

* REFER TO SHEET L4 FOR WATER BUDGET CALCULATIONS

HYDROZONE LEGEND

SHRUB-PLANTING LOW WATER USE

TREE-PLANTING LOW WATER USE

GRAPHIC SCALE

0 20 40 80

(IN FEET)
1 inch = 20 ft.

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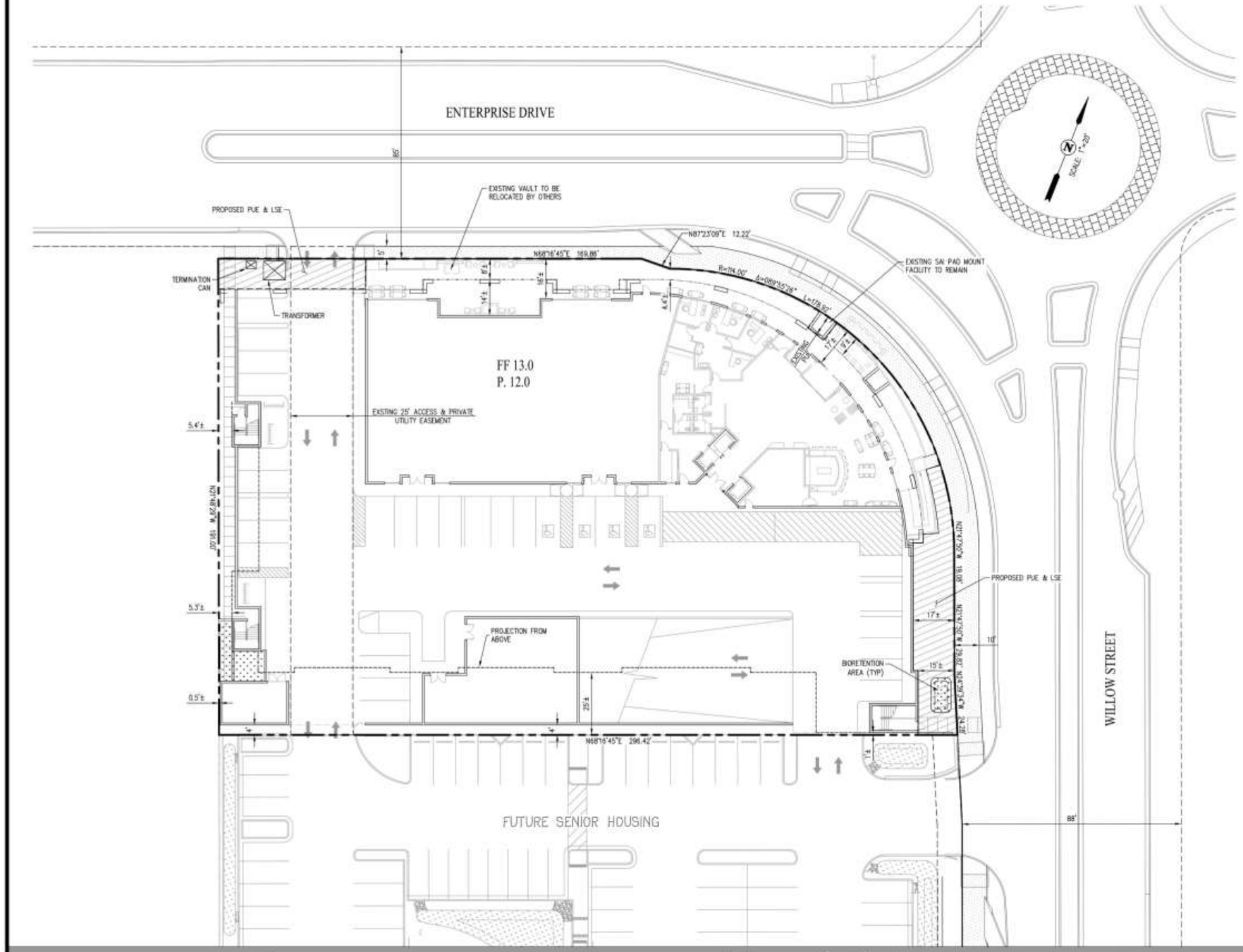

GENERAL NOTES:

1. OWNER/DEVELOPER: VILLADEVELOPERS, INC.
   2850 STEVENS CREEK BLVD
   SAN JOSE, CA 95128
   CONTACT: TONY BAIG
2. ENGINEER: CARLSON, BARBEE & GIBSON, INC.
   2633 CAMINO RAMON, SUITE 350
   SAN RAMON, CA 94583
   CONTACT: TERRY REEVES
   (925) 866-0322
3. SOILS ENGINEER: CORNERSTONE EARTH GROUP, INC.
   1259 OAKMEAD PARKWAY
   SUNNYVALE, CA 94085
   CONTACT: JOHN DYE
   (925) 245-4600

ABBREVIATIONS

AC	ACRES	LP	LOW POINT
A/C	ASPHALT CONCRETE	LS	LANDSCAPE
ACWD	ALAMEDA COUNTY WATER DISTRICT	MH	MANHOLE
ACFC & WCD	ALAMEDA COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT	ML	MONUMENT LINE
		OF	OVERFLOW
AD	AREA DRAIN	OHE	OVERHEAD ELECTRIC
B	BOTTOM OF BIORETENTION AREA	P	PAD
BFP	BACK FLOW PREVENTER	PL	PROPERTY LINE
EX	EXISTING	PUE	PUBLIC UTILITY EASEMENT
CB	CATCH BASIN	PSDE	PRIVATE STORM DRAIN EASEMENT
DW	DRIVEWAY	PVAE	PRIVATE VEHICLE ACCESS EASEMENT
EG	EXISTING GRADE	R/W	RIGHT OF WAY
EP	EDGE OF PAVEMENT	SF	SQUARE FEET
EVA	EMERGENCY VEHICLE ACCESS	SS	SANITARY SEWER
FF	FINISH FLOOR ELEVATION	SSE	SANITARY SEWER EASEMENT
FG	FINISHED GRADE	SD	STORM DRAIN
FH	FIRE HYDRANT	SDE	STORM DRAIN EASEMENT
FI	FIELD INLET	S/W	SIDEWALK
FL	FLOW LINE	TC	TOP OF CURB
GB	GRADE BREAK	TRC	TOP OF ROLLED CURB
GL	GARAGE LIP	TSM	TOP OF SOIL MIX ELEVATION
GR	GRATE ELEVATION	TYP	TYPICAL
HP	HIGH POINT	USD	UNION SANITARY DISTRICT
INV	INVERT	W	WATER
JT	JOINT TRENCH (BY OTHERS)	WLE	WATER LINE EASEMENT
LL	LOT LINE	WQ	WATER QUALITY

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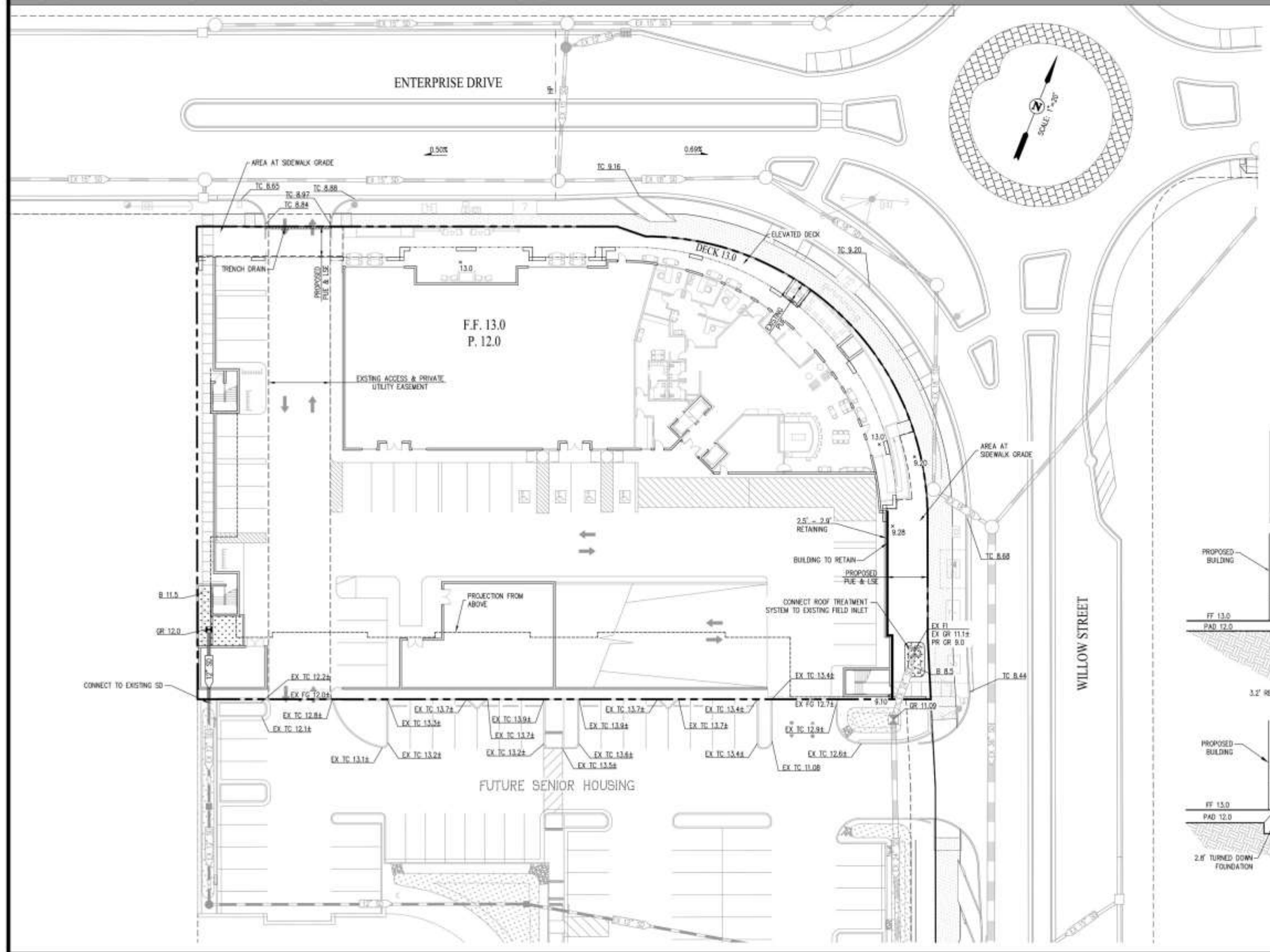
PRELIMINARY GRADING PLAN

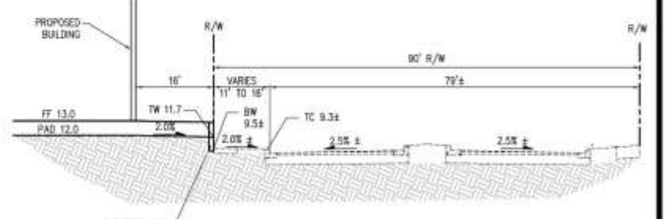


LEGEND:

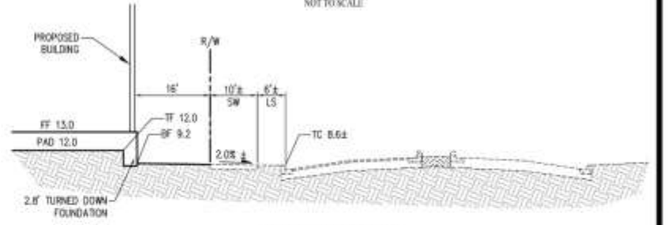
EXISTING	PROPOSED	DESCRIPTION
1	1	LOT NUMBER
		PROPERTY LINE
		LOT LINE
		RIGHT-OF-WAY LINE
		CENTER LINE
		EASEMENT LINE
		TOP OF CURB
EX SS	8" SS	SANITARY SEWER (PVC)
EX SD	18" SD	STORM DRAIN (PVC/RCP)
EX W	8"W	WATER (PVC)
EX JT	JT	JOINT TRENCH (BY OTHERS)
		STORM DRAIN FIELD INLET
		STORM DRAIN CATCH BASIN
		STORM DRAIN MANHOLE
		SANITARY SEWER MANHOLE
		FIRE HYDRANT
		WATER METER
		SEWER CLEANOUT
		WATER VALVE
		CURB CUT
		DIRECTION OF DRAINAGE
		PATH FOR OVERLAND RELEASE
+ 65.0	+ 66.0 HP	SPOT ELEVATIONS
		CONCRETE
		BIORETENTION

NOTES:

1. THIS GRADING AND DRAINAGE PLAN IS FOR SITE GRADING ONLY. INTERNAL GRADING OF THE BUILDING AND PARKING TO BE PROVIDED BY ARCHITECT.
2. ROOF LEADERS AND DECK/ROOF SURFACE DRAINS WILL CONVEY RUNOFF TO APPROPRIATE TREATMENT FACILITIES.
3. EXISTING IMPROVEMENTS ALONG SENIOR HOUSING SITE ARE ASSUMED TO BE CONSTRUCTED.



ENTERPRISE DRIVE
NOT TO SCALE



WILLOW STREET
NOT TO SCALE

20' 0' 10' 20' 40' 80'
GRAPHIC SCALE

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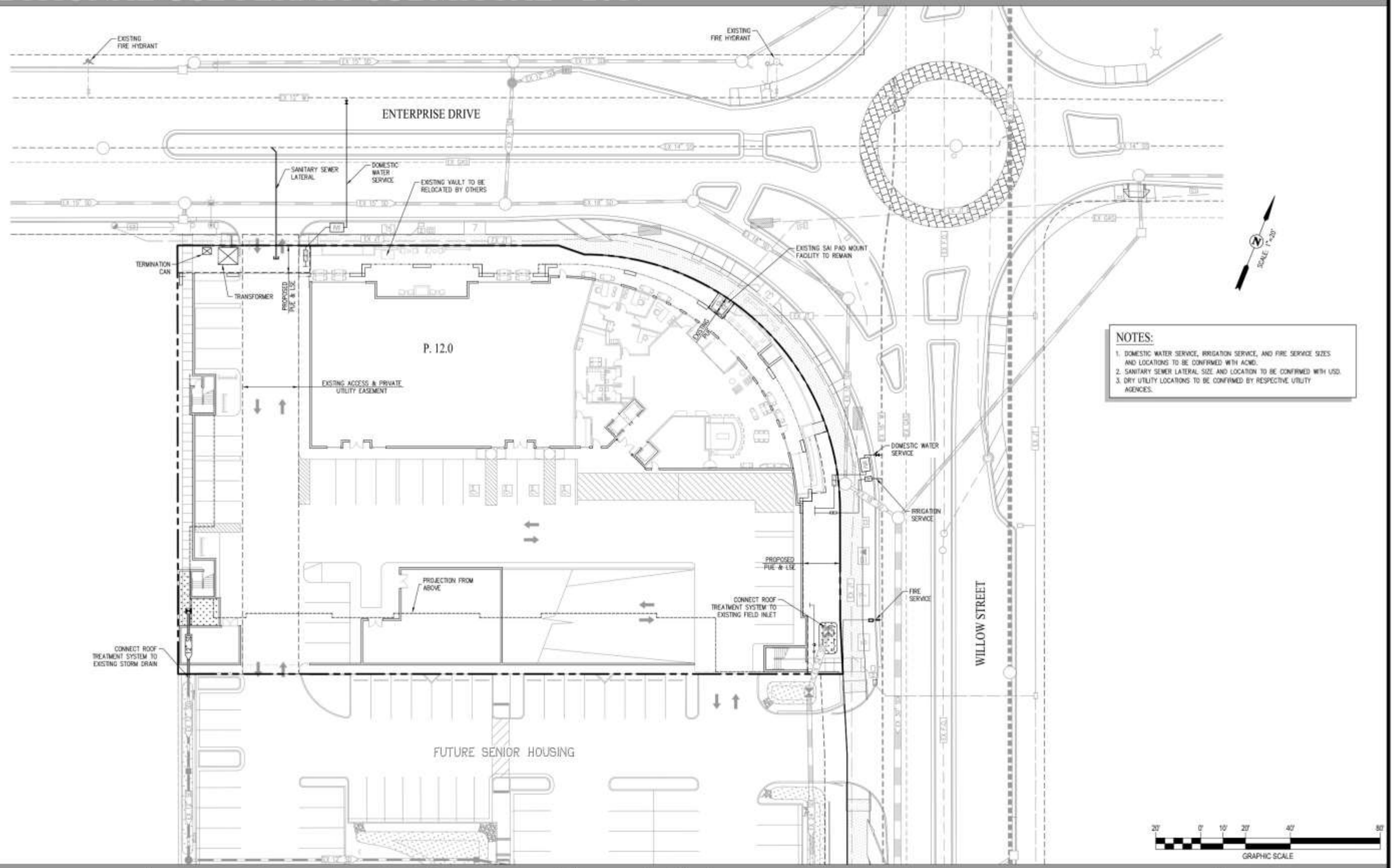
PRELIMINARY UTILITY PLAN



NOTES:

1. DOMESTIC WATER SERVICE, IRRIGATION SERVICE, AND FIRE SERVICE SIZES AND LOCATIONS TO BE CONFIRMED WITH ACWD.
2. SANITARY SEWER LATERAL SIZE AND LOCATION TO BE CONFIRMED WITH USD.
3. DRY UTILITY LOCATIONS TO BE CONFIRMED BY RESPECTIVE UTILITY AGENCIES.

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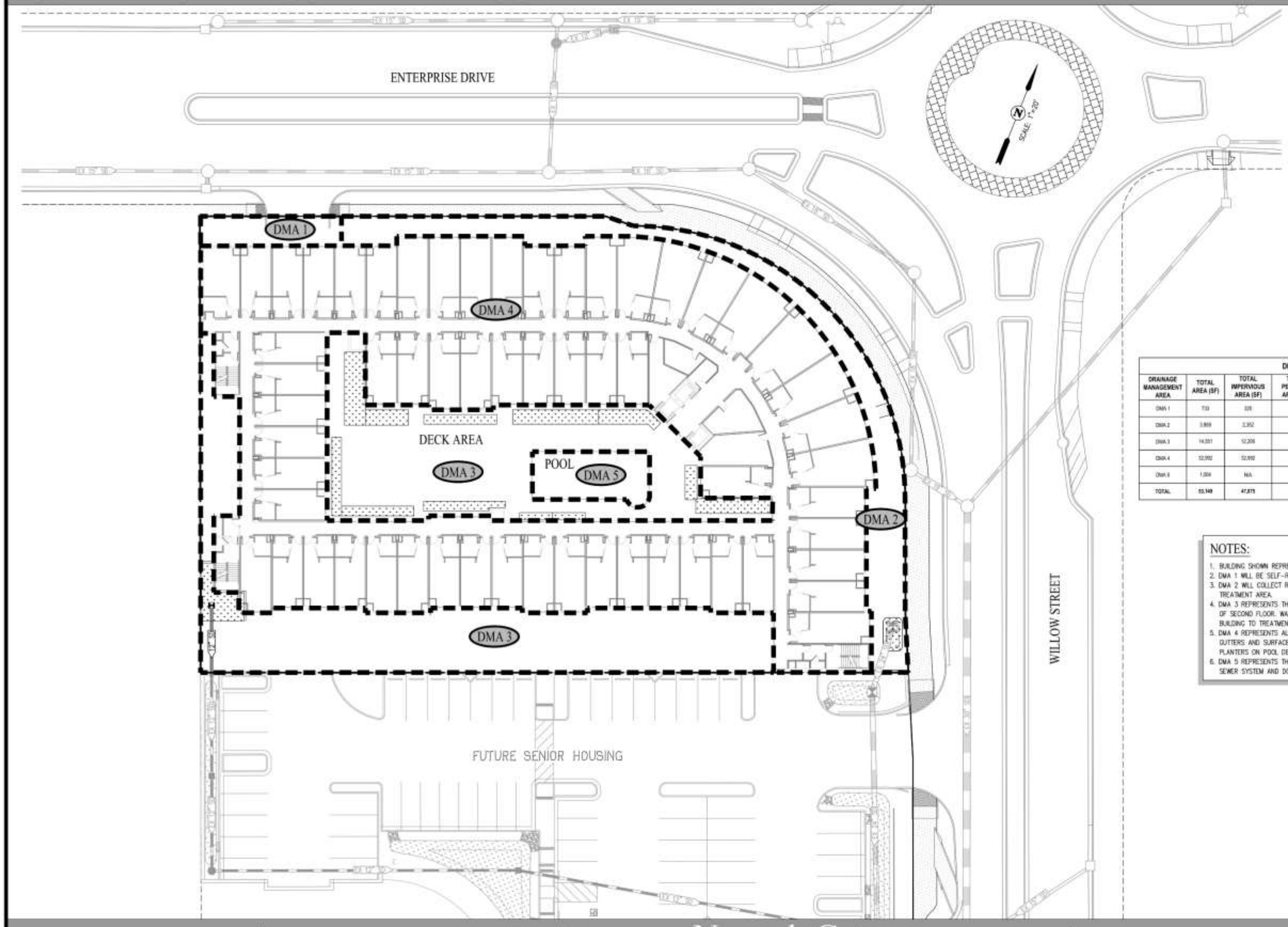
Newark Gateway

Mixed-Use Development

Enterprise Drive & Willow Street

C-3

PRELIMINARY STORMWATER CONTROL PLAN



LEGEND

- FIELD INLET
- DIRECTION OF FLOW
- STORM DRAIN
- BIORETENTION AREA
- DMA 1 — DRAINAGE MANAGEMENT AREA
- DRAINAGE MANAGEMENT AREA BOUNDARY

DRAINAGE MANAGEMENT SUMMARY TABLE

DRAINAGE MANAGEMENT AREA	TOTAL AREA (SF)	TOTAL IMPERVIOUS AREA (SF)	TOTAL PERVIOUS AREA (SF)	EFFECTIVE IMPERVIOUS AREA (SF)	SIZING METHOD	REQUIRED BIORETENTION AREA (SF)	DESIGN BIORETENTION AREA (SF)	PONDING DEPTH (in)
DMA 1	733	329	404		SELF-RETAINING			
DMA 2	3,869	2,352	1,517	2,504	FLOW (4% METHOD)	100	108	
DMA 3	14,551	12,206	2,345	12,441	FLOW (3% METHOD)	373	373	6.03
DMA 4	32,992	32,992	0	32,992	FLOW (4% METHOD)	1,320	1,809	
DMA 5	1,004	N/A	N/A	N/A	POOL SELF TREATING	N/A	N/A	
TOTAL	53,149	47,875	4,270	47,936		1,793	2,290	

NOTES:

1. BUILDING SHOWN REPRESENTS THIRD FLOOR.
2. DMA 1 WILL BE SELF-RETAINING.
3. DMA 2 WILL COLLECT RUNOFF WITH SURFACE DRAINS AND CONVEY IT TO TREATMENT AREA.
4. DMA 3 REPRESENTS THE POOL DECK AREA AND UNCOVERED PARKING AREA OF SECOND FLOOR. WATER WILL BE COLLECTED AND CONVEYED THROUGH BUILDING TO TREATMENT AREA ON WEST SIDE OF BUILDING.
5. DMA 4 REPRESENTS ALL ROOF AREA. RUNOFF WILL BE COLLECTED USING GUTTERS AND SURFACE DRAINS AND CONVEYED TO RAISED TREATMENT PLANTERS ON POOL DECK AREA USING DOWN SPOUTS.
6. DMA 5 REPRESENTS THE POOL AREA. POOLS ARE CONNECTED TO SANITARY SEWER SYSTEM AND DO NOT REQUIRE TREATMENT.

20' 0' 10' 20' 40' 80'
GRAPHIC SCALE

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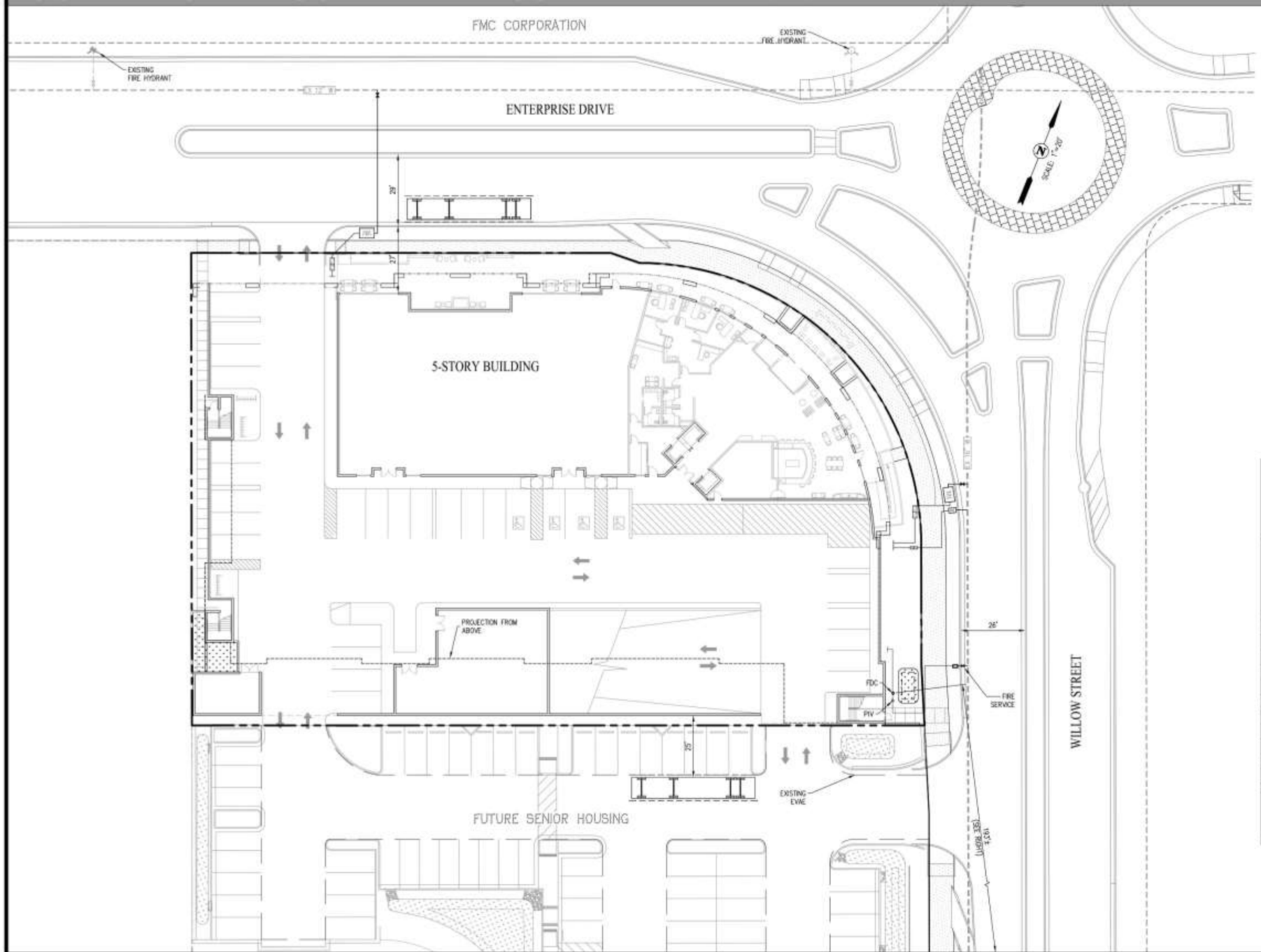
CONDITIONAL USE PERMIT SUBMITTAL - 2017

PRELIMINARY FIRE ACCESS PLAN



LEGEND:

PIV	POST INDICATOR VALVE
FDC	FIRE DEPARTMENT CONNECTION
EVAE	EMERGENCY VEHICLE ACCESS EASEMENT
	EXISTING FIRE HYDRANT
	FIRE TRUCK

FIRE INFORMATION

TYPE OF CONSTRUCTION: TYPE IIIA

FIRE AREA: 155,860 SF

REQUIRED FIRE FLOW: 5,750 GPM

FLOW DURATION: 4 HOURS

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APPENDIX B

MITIGATION, MONITORING, AND REPORTING PROGRAM FOR THE NEWARK GATEWAY MIXED-USE DEVELOPMENT PROJECT

Mitigation Measure	Implementation Procedure	Monitoring Responsibility	Monitoring/Reporting Action & Schedule	Non-Compliance Sanction/Activity	Monitoring Compliance Record Name/Date
Air Quality					
4.2-1a - Prior to issuance of any Grading Permit, the Public Works Director and the Building Official shall confirm that Grading Plans, Building Plans, and specifications stipulate that, in compliance with the BAAQMD CEQA Air Quality Guidelines, the following basic construction mitigation measures shall be implemented for all construction projects: • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • 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. • All vehicle speeds on unpaved roads shall be limited to 15 mph. • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. • Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum	Require as a condition of project approval. Project applicant includes measures on plans submitted for grading permits. Construction contractor implements control measures.	City Council and Planning Division Engineering/Building Division Building Division	Draft and incorporate condition as part of project approval. Review plans prior to issuance of grading permits to ensure that requirements described in Mitigation Measure 4.2-1a have been met. Conduct periodic site visits during demolition, grading and construction.	Deny project approval. Deny grading permits. Halt demolition, grading or construction until control measures are implemented.	

idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • A publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints shall be posted. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.					
4.2-1b - Prior to issuance of any Grading Permit, the Public Works Director and the Building Official shall confirm that the Grading Plans, Building Plans, and specifications stipulate that, in compliance with the BAAQMD CEQA Air Quality Guidelines, the following additional construction mitigation measures shall be implemented for all construction projects: ☐All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil	Require as a condition of project approval. Project applicant includes measures on plans submitted for grading permits. Construction contractor implements control measures.	City Council and Planning Division Engineering/Building Division Building Division	Draft and incorporate condition as part of project approval. Review plans prior to issuance of grading permits to ensure that requirements described in Mitigation Measure 4.2-1b have been met. Conduct periodic site visits during	Deny project approval. Deny grading permits. Halt demolition, grading or construction until control measures are implemented.	

moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. • All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. • Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity. • 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. • The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time. • All trucks and equipment, including their tires, shall be washed off prior to leaving the site. • Site accesses up 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. • Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from			demolition, grading and construction.		

sites with a slope greater than one percent. • Minimizing the idling time of diesel powered construction equipment to two minutes. • The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOX reduction and 45 percent PM reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available. • Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings). • Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NOX and PM. • Requiring all contractors use equipment that meets CARB's most					

recent certification standard for off-road heavy duty diesel engines.					
Biological Resources					
4.3-2 - In order to avoid impacts on nesting raptors, a nesting survey shall be conducted on individual project site parcels prior to commencing with earth-moving or construction work if this work would occur during raptor nesting season (between February 1 and August 31). The raptor nesting survey shall include examination of all trees on or within 300 feet of the entire project site, not just trees slated for removal, since ground vibrations and noise from earth-moving equipment can disturb nesting birds and potentially result in nest abandonment. Since northern harriers are ground nesting raptors, the nesting survey shall also include systematic walking transects across all suitable ground on the project site parcels. If nesting raptors are identified during the surveys, orange construction fence shall be installed to establish a 300-foot radius around the nest unless a qualified biologist determines that a lesser distance will adequately protect the nest (refer to discussion below for more detail). If the tree or nest is located off the project site, then the buffer shall be demarcated per the above where the buffer intersects the project site. The size of the non-disturbance buffer may be altered if a qualified raptor	Require as a condition of project approval. Project applicant hires qualified biologist to conduct nesting survey if grading or construction would occur during nesting season. Project applicant provides necessary buffer if nests are identified.	City Council and Planning Division Planning Division Planning/Building Divisions	Draft and incorporate condition as part of project approval. Prior to commencement of construction, ensure that survey has been conducted and requirements described in Mitigation Measure 4.3-2 have been met. Conduct periodic site visits during grading and construction.	Deny project approval. Delay commencement of construction. Halt construction until necessary buffer is provided.	

biologist conducts behavioral observations and determines the nesting raptors are well acclimated to disturbance. If this occurs, the raptor biologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to nesting raptors. If the buffer is reduced, the qualified raptor biologist shall remain onsite to monitor the raptors' behavior during heavy construction in order to ensure that the reduced buffer does not result in take of eggs or nestlings. No construction or earth-moving activity shall occur within the established buffer until it is determined by a qualified raptor biologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by August 1. This date may be earlier or later, and would have to be determined by a qualified raptor biologist. If a qualified biologist is not hired to monitor the nesting raptors then the full 300-foot buffers shall be maintained in place from February 1 through the month of August. The buffer may be removed and work may proceed as otherwise planned within the buffer on September 1.					

4.3-4 - In order to avoid impacts on nesting passerines, a nesting survey shall be conducted on individual project site parcels and within 100 feet of the parcel being developed prior to commencing initial earth-moving or construction work on that parcel if this work would occur during the passerine nesting season, that is, between March 1 and September 1. The nesting survey shall also survey lands within 100 feet of the parcel being developed. The nesting surveys shall be completed approximately 15 days prior to commencing work. If special-status birds are identified nesting on or near the project site, a 100-foot radius around all identified active nests shall be demarcated with orange construction fencing to establish a non-disturbance buffer. If an active nest is found offsite, the intersecting portion of the buffer that is onsite shall be fenced. No construction or earth-moving activity shall occur within this 100-foot staked buffer until it is determined by a qualified biologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones. If common (that is, not special-status) birds, for example, red-winged blackbird, are identified nesting on or adjacent to the project site, a non-disturbance buffer of 75 feet shall be established or as	Require as a condition of project approval. Project applicant hires qualified biologist to conduct nesting survey if grading or construction would occur during nesting season. Project applicant provides necessary buffer if nests are identified.	City Council and Planning Division Planning Division Planning/Building Divisions	Draft and incorporate condition as part of project approval. Prior to commencement of construction, ensure that survey has been conducted and requirements described in Mitigation Measure 4.3-2 have been met. Conduct periodic site visits during grading and construction.	Deny project approval. Delay commencement of construction. Halt construction until necessary buffer is provided.	

otherwise prescribed by a qualified ornithologist. The buffer shall be demarcated with orange construction fencing. Disturbance around an active nest shall be postponed until it is determined by the qualified wildlife biologist that the young have fledged and have attained sufficient flight skills to leave the area. Typically, most birds in the region of the project site are expected to complete nesting by August 1. However, in the region many species can complete nesting by the end of June or in early to mid-July. Regardless, nesting buffers shall be maintained until August 1 unless a qualified wildlife biologist determines that young have fledged and are independent of their nests at an earlier date. If buffers are removed prior to August 1st, the biologist conducting the nesting surveys shall prepare a report that provides details about the nesting outcome and the removal of buffers. This report shall be submitted to the City project planner prior to the time that buffers are removed if the date is before August 1.					
Cultural Resources					
4.4-1a - Prior to the issuance of grading permits for future development allowed within the Dumbarton TOD Specific Plan area, project sponsors shall retain qualified archaeologists meeting the Secretary of the Interior's Professional Qualification Standards to train the	Require as a condition of project approval. Project applicant hires qualified archaeologist to	City Council and Planning Division Planning Division	Draft and incorporate condition as part of project approval. Prior to issuance of grading permits, confirm that	Deny project approval. Deny issuance of grading permits.	

construction crew on the mechanisms used to identify cultural resources and to caution them on the legal and/or regulatory implications of knowingly destroying cultural resources or removing artifacts or human remains from the project sites. If subsurface deposits believed to be cultural or human in origin are discovered during the construction of future development projects within the Dumbarton TOD Specific Plan area, then all work shall halt within a 200-foot radius of the discovery and they shall be evaluated by a professional archaeologist. If a potentially-eligible resource is encountered, then the archaeologist, lead agency, and project sponsor shall arrange for either: 1) total avoidance of the resource, if possible; or 2) test excavations to evaluate eligibility and, if eligible, data recovery as mitigation. If human remains of any kind are found during construction activities, all activities shall cease immediately and the Alameda County Coroner shall be notified as required by State law (Section 7050.5 of the Health and Safety Code). If the coroner determines the remains to be of Native American origin, he or she shall notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the most likely descendant(s) (MLD) to be consulted	train construction crew. If subsurface deposits are discovered during construction, contractor halts work and complies with requirements, as described in Mitigation Measure 4.4-1a.	Planning/Building Divisions	archaeologist has been hired and training has been completed. Conduct periodic site visits during grading and construction.	Halt construction until requirements are met.	

regarding treatment and/or reburial of the remains.					
4.4-1b - Prior to approval of Tentative Subdivision Maps for any development within the Dumbarton TOD Specific Plan area that would directly affect any existing buildings or structures or the Union Pacific Railroad corridor, or is proposed within 100 meters (328 feet) of any existing buildings or structures or the Union Pacific Railroad corridor, the resource shall be evaluated for inclusion in the National Register by a qualified professional archaeologist familiar with the architecture and history of Alameda County. If the building or structure is considered eligible for inclusion in the National Register, then the project sponsor shall submit a study prepared by a qualified historian or architectural historian to determine whether the proposed project would materially alter in an adverse manner those physical characteristics of the known historical resource that conveys its historical significance.	Require as a condition of project approval. Project applicant hires qualified archaeologist or architectural historian to evaluate affected buildings or structures or the Union Pacific Railroad corridor and complies with requirements, as described in Mitigation Measure 4.4-1b.	City Council and Planning Division Planning Division	Draft and incorporate condition as part of project approval. Prior to approval of Tentative Maps, confirm that archaeologist or architectural historian has conducted evaluation, as needed, and requirements of Mitigation Measure 4.4-1b have been met.	Deny project approval. Deny Tentative Map approval.	
Geology and Soils					
4.5-1 - The ACWD regulates the construction, repair, and destruction of wells, exploratory holes, and other excavations located within the City of Newark under ACWD Ordinance No. 2010.01. Future developers within the Specific Plan area shall have a design-level geotechnical engineering investigation performed for their	Require as a condition of project approval. Project applicant submits design-level geotechnical investigation.	City Council and Planning Division Engineering Division	Draft and incorporate condition as part of project approval. Prior to issuance of grading permits, review geotechnical investigation and confirm that	Deny project approval. Deny issuance of grading permits.	

individual property or properties prior to its (their) development. The mitigation measures specified by the design-level geotechnical engineering investigations shall become conditions to the issuance of grading permits for such individual property. The design-level geotechnical engineering investigations shall only address each specific individual property proposing construction, unless future developers mutually agree to include more than one property in a single investigation. The design-level geotechnical engineering investigations shall take into consideration the specific locations and types of development, as well as specific soil and rock conditions identified by subsurface investigation and laboratory testing. The likely mitigation measure recommendations of the design-level geotechnical engineering investigations regarding the design and construction of project-related development are regularly employed, have known and proven efficacy, and could include without limitation, one or more of the following: • Removing the soft/loose soil by excavating the soil and backfilling the excavation with compacted soil, thus densifying the soft/loose soil; • Supporting structures on deep foundations, such as piles or piers;			recommendations are included in construction plans.		

• Improving the soft/loose soils by various methods, such as dynamic deep compaction, constructing surcharge fills, installing wick drains, grouting, and other methods; • Strengthening structures to withstand seismic shaking and differential ground settlement; and/or, • Other methods as determined by the geotechnical engineer in the geotechnical report to be prepared for the sites.					
4.5-2 - Prior to any soil improvement measures and/or dewatering activities, the project geotechnical engineer(s) shall coordinate with the ACWD to ensure compliance with ACWD Ordinance No. 2010-01.	Require as a condition of project approval. Project geotechnical engineer coordinates with ACWD.	City Council and Planning Division Engineering Division and ACWD	Draft and incorporate condition as part of project approval. Prior to issuance of grading permits, review plans and confirm that requirements of ACWD Ordinance No. 2010-01 are met.	Deny project approval. Deny issuance of grading permits.	
Greenhouse Gas Emissions					
Hazards and Hazardous Materials					
Hydrology and Water Quality					
4.8-4a - Plans submitted for grading permits shall include a detailed hydrology reports. The reports shall include calculations regarding the anticipated volume of stormwater runoff generated by the proposed development,	Require as a condition of project approval. Project applicant submits detailed	City Council and Planning Division Building/Engineering Divisions	Draft and incorporate condition as part of project approval. Review hydrology reports prior to	Deny project approval. Deny issuance of grading permits.	

and shall demonstrate that adequate stormwater conveyance and capacity is available in the existing facilities selected depending on the location of the proposed development (i.e., the Line F-1 channel, the City's existing outfall into the Line F-1 channel, the existing human-created tidal channel that is tributary to Newark Slough, and existing City facilities in Willow Street). The hydrology reports shall be subject to review and approval by the City Engineer. If the hydrology reports determine that the existing facilities do not have adequate stormwater conveyance and capacity to serve the proposed development, then the project applicant shall develop a detailed stormwater detention plan for the retention/detention of stormwater runoff on the project site. The stormwater detention facilities shall be designed with adequate capacity to ensure that that stormwater generated on the project site during a peak storm event is retained at a rate that would ensure that discharges from the site do not exceed pre-construction levels. All detention facilities shall be developed in conformance with the City's standards and the standards of the Alameda County Flood Control and Water Conservation District. The plans and specifications of the proposed detention facilities shall meet the standards of the City	hydrology reports and submits a detailed retention/detention plan if adequate conveyance and capacity is unavailable.		issuance of grading permits to ensure that requirements of Mitigation Measure 4.8-4a have been met.		

Engineering Department as an adequate engineering product. The construction of stormwater detention facilities may be phased to correspond with development of the project site over time, provided that adequate detention is provided at all times to ensure that runoff from the site does not exceed pre-construction levels.					
Land Use and Planning					
SHH/FMC Project Specific Mitigation Measure LUP-01 - The project applicant shall submit to the City of Newark for approval a revised Land Use Plan and revised Proposed Land Use Table supporting the adjustment to land uses on APN 092-0115-011.	Require as a condition of project approval.	City Council and Planning Department	Draft and incorporate condition as part of project approval.	Deny project approval.	
Noise					
4.10-1a - To reduce noise impacts due to construction, project applicants shall require construction contractors to implement a site-specific noise reduction program, subject to City review and approval, which includes that following measures, ongoing through demolition, grading and/or construction: • Restrict noise-generating activities at the construction site or in areas adjacent to the construction site to the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, and between 8:00 a.m. to 5:00 p.m. on Saturdays. • Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake	Require as a condition of project approval. Project applicant submits noise reduction program.	City Council and Planning Department Planning/Building Divisions	Draft and incorporate condition as part of project approval. Review noise reduction program prior to issuance of demolition, grading and/or building permits.	Deny project approval. Deny issuance of demolition, grading and/or building permits.	

silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds, wherever feasible). • Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electronically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler 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 where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible. • Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporated insulation barriers, or other measures to the extent feasible. • If feasible, the noisiest phases of construction shall be limited to less than 10 days at a time.					
4.10-1b - Prior to the issuance of each grading permit, project applicants shall submit to the City Building Inspection Division a list of measures to respond to and track complaints pertaining to	Require as a condition of project approval.	City Council and Planning Department	Draft and incorporate condition as part of project approval.	Deny project approval.	

construction noise, ongoing throughout demolition, grading, and/or construction. These measures shall include the following: • A procedure and phone numbers for notifying the City Building Inspection Division staff and Newark Police Department (during regular construction hours and off-hours). • A sign posted onsite pertaining the permitted construction days and hours and complaint procedures and who to notify in the event of a problem. The sign shall also include a listing of both the City and construction contractor's telephone numbers (during regular construction hours and off-hours). • The designation of an onsite construction complaint and enforcement manager for the project. The manager shall act as a liaison between the project and its neighbors (including onsite residents). The manager's responsibilities and authority shall include the following: - An active role in monitoring project compliance with respect to noise; - Ability to reschedule noisy construction activities to reduce effects on surrounding noise sensitive receivers; - Site supervision of all potential sources of noise (e.g., material delivery, shouting, debris box pick-up	Project applicant submits list of measures.	Building Division	Review list prior to issuance of grading permits to ensure that requirements of Mitigation Measure 4.10-1b have been met.	Deny issuance of grading permit.	

and delivery) for all trades; and, - Intervening or discussing mitigation options with contractors. • Notification of neighbors and occupants within 300 feet of the project construction area at least 30 days in advance of construction activities regarding the details and estimated duration of the activity; and, • A preconstruction meeting shall be held with the job inspectors and the general contractor/onsite project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.					
Public Services					
4.12-2 - Prior to approval of a tentative map within the Dumbarton TOD Specific Plan area, additional necessary improvements, if any, beyond those already included in the USD Master Plan and updated fee program, shall be determined regarding proposed new connections (from such tentative map development) and then-existing or proposed wastewater facilities. Such improvements shall be installed prior to issuance of a building permit and shall be consistent with requirements in the Sewer Master Plan (anticipated to be available in the summer of 2012). The City and USD shall verify that any necessary improvements will be available prior to	Require as a condition of project approval. Project applicant determines if any additional improvements are necessary. Project applicant installs any necessary improvements prior to issuance of building permits.	City Council and Planning Department Engineering/Building Divisions Engineering/Building Divisions	Draft and incorporate condition as part of project approval. Prior to approval of Tentative Maps, confirm the determination has been made. Prior to issuance of building permits, confirm that improvements have been installed.	Deny project approval. Deny Tentative Map approval. Deny issuance of building permits.	

occupation of those new residential dwelling units for which such improvements are necessary.					
Transportation and Traffic					
4.14-8 - Prior to issuance of building permits for a Specific Plan use, the applicant shall pay all applicable transportation-related fees in accordance with the latest adopted fee schedule at the time permits are sought. Such fees shall include, but not be limited to, the City of Newark Capital Facilities Fee for Transportation, and the ACTC Regional Transportation Impact Fee.	Require as a condition of project approval. Project applicant pays fees.	City Council and Planning Division Building Division	Draft and incorporate condition as part of project approval. Prior to issuance of building permits, collect required fees.	Deny project approval. Deny issuance of building permits.	

APPENDIX C

AIR QUALITY AND GREENHOUSE GAS EMISSIONS CALEEMOD REPORT

Newark Gateway Mixed Use

Alameda County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	146.00	Room	1.19	106,080.00	0
Supermarket	8.30	1000sqft	0.19	8,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	405	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - GHG Intensity Factors based on 2015 PG&E inventory

Land Use - 8,300 sqft grocery and 146 room hotel on 1.38 acres

Construction Phase - Construction schedule based on info provided by Villa Developers

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Typical Utilities equipment

Grading -

Vehicle Trips - Fehr & Peers 2017

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation - Exceed 2016 Title 24 by 15%

Water Mitigation - CALGreen

Waste Mitigation - AB341

Architectural Coating - Low-VOC Coatings

Area Coating -

Trips and VMT -

Energy Use - PG&E 2017

Newark Gateway Mixed Use - Alameda County, Winter

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	50.00
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	10.00	21.00
tblConstructionPhase	NumDays	200.00	219.00
tblConstructionPhase	NumDays	4.00	43.00
tblConstructionPhase	NumDays	10.00	20.00
tblLandUse	BuildingSpaceSquareFeet	211,992.00	106,080.00
tblLandUse	LandUseSquareFeet	211,992.00	106,080.00
tblLandUse	LotAcreage	4.87	1.19
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Underground Utilities
tblOffRoadEquipment	PhaseName		Underground Utilities
tblProjectCharacteristics	CH4IntensityFactor	0.029	0
tblProjectCharacteristics	CO2IntensityFactor	641.35	405
tblProjectCharacteristics	N2OIntensityFactor	0.006	0
tblProjectCharacteristics	OperationalYear	2018	2020
tblVehicleTrips	ST_TR	8.19	8.15
tblVehicleTrips	ST_TR	177.59	20.48
tblVehicleTrips	SU_TR	5.95	8.15
tblVehicleTrips	SU_TR	166.44	20.48
tblVehicleTrips	WD_TR	8.17	8.15
tblVehicleTrips	WD_TR	102.24	20.48

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					
2018	2.9065	20.1573	16.1013	0.0312	4.9801	1.0792	5.7753	2.5431	1.0417	3.2746	0.0000	2,967.7713	2,967.7713	0.4590	0.0000	2,979.2459
2019	44.4833	18.5567	15.4797	0.0310	0.5148	0.9342	1.4490	0.1395	0.9020	1.0415	0.0000	2,939.8628	2,939.8628	0.4350	0.0000	2,950.7374
Maximum	**44.4833**	**20.1573**	**16.1013**	**0.0312**	**4.9801**	**1.0792**	**5.7753**	**2.5431**	**1.0417**	**3.2746**	**0.0000**	**2,967.7713**	**2,967.7713**	**0.4590**	**0.0000**	**2,979.2459**

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					
2018	2.9065	20.1573	16.1013	0.0312	2.2772	1.0792	3.0724	1.1540	1.0417	1.8855	0.0000	2,967.7713	2,967.7713	0.4590	0.0000	2,979.2459
2019	44.4833	18.5567	15.4797	0.0310	0.5148	0.9342	1.4490	0.1395	0.9020	1.0415	0.0000	2,939.8628	2,939.8628	0.4350	0.0000	2,950.7374
Maximum	**44.4833**	**20.1573**	**16.1013**	**0.0312**	**2.2772**	**1.0792**	**3.0724**	**1.1540**	**1.0417**	**1.8855**	**0.0000**	**2,967.7713**	**2,967.7713**	**0.4590**	**0.0000**	**2,979.2459**

Newark Gateway Mixed Use - Alameda County, Winter

	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**	**49.19**	**0.00**	**37.41**	**51.78**	**0.00**	**32.18**	**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	2.7760	1.5000e-004	0.0159	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0338	0.0338	9.0000e-005		0.0360
Energy	0.1241	1.1278	0.9474	6.7700e-003		0.0857	0.0857		0.0857	0.0857		1,353.3917	1,353.3917	0.0259	0.0248	1,361.4343
Mobile	2.1580	13.5836	23.2481	0.0695	5.2357	0.0856	5.3213	1.4030	0.0808	1.4838		7,046.5594	7,046.5594	0.3717		7,055.8513
Total	**5.0581**	**14.7115**	**24.2113**	**0.0762**	**5.2357**	**0.1714**	**5.4071**	**1.4030**	**0.1665**	**1.5696**		**8,399.9848**	**8,399.9848**	**0.3977**	**0.0248**	**8,417.3216**

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	2.7760	1.5000e-004	0.0159	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0338	0.0338	9.0000e-005		0.0360
Energy	0.0858	0.7800	0.6552	4.6800e-003		0.0593	0.0593		0.0593	0.0593		936.0375	936.0375	0.0179	0.0172	941.5999
Mobile	1.8537	10.6700	16.6766	0.0416	2.8659	0.0515	2.9175	0.7680	0.0486	0.8165		4,228.2814	4,228.2814	0.2903		4,235.5382
Total	**4.7155**	**11.4502**	**17.3477**	**0.0463**	**2.8659**	**0.1109**	**2.9768**	**0.7680**	**0.1079**	**0.8759**		**5,164.3527**	**5,164.3527**	**0.3083**	**0.0172**	**5,177.1741**

	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	**6.77**	**22.17**	**28.35**	**39.24**	**45.26**	**35.31**	**44.95**	**45.26**	**35.21**	**44.20**	**0.00**	**38.52**	**38.52**	**22.48**	**30.83**	**38.49**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2018	2/28/2018	5	43	
2	Underground Utilities	Trenching	3/1/2018	3/30/2018	5	22	
3	Building Construction	Building Construction	3/31/2018	1/31/2019	5	219	
4	Paving	Paving	2/1/2019	2/28/2019	5	20	
5	Architectural Coating	Architectural Coating	3/1/2019	3/29/2019	5	21	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 16.13

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 171,570; Non-Residential Outdoor: 57,190; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Underground Utilities	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Underground Utilities	Trenchers	1	7.00	78	0.50
Building Construction	Cranes	1	6.00	231	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	130	0.42
Paving	Paving Equipment	1	8.00	132	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
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Underground Utilities	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	47.00	19.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 2018

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					4.9144	0.0000	4.9144	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.4972	17.0666	6.7630	0.0141		0.7947	0.7947		0.7311	0.7311		1,421.2605	1,421.2605	0.4425		1,432.3219
Total	**1.4972**	**17.0666**	**6.7630**	**0.0141**	**4.9144**	**0.7947**	**5.7091**	**2.5256**	**0.7311**	**3.2568**		**1,421.2605**	**1,421.2605**	**0.4425**		**1,432.3219**

3.2 Grading - 2018

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	0.0370	0.0289	0.2714	6.6000e-004	0.0657	4.6000e-004	0.0662	0.0174	4.3000e-004	0.0179		65.3722	65.3722	2.0800e-003		65.4242
Total	**0.0370**	**0.0289**	**0.2714**	**6.6000e-004**	**0.0657**	**4.6000e-004**	**0.0662**	**0.0174**	**4.3000e-004**	**0.0179**		**65.3722**	**65.3722**	**2.0800e-003**		**65.4242**

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					2.2115	0.0000	2.2115	1.1365	0.0000	1.1365			0.0000			0.0000
Off-Road	1.4972	17.0666	6.7630	0.0141		0.7947	0.7947		0.7311	0.7311	0.0000	1,421.2605	1,421.2605	0.4425		1,432.3219
Total	**1.4972**	**17.0666**	**6.7630**	**0.0141**	**2.2115**	**0.7947**	**3.0062**	**1.1365**	**0.7311**	**1.8677**	**0.0000**	**1,421.2605**	**1,421.2605**	**0.4425**		**1,432.3219**

3.2 Grading - 2018

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	0.0370	0.0289	0.2714	6.6000e-004	0.0657	4.6000e-004	0.0662	0.0174	4.3000e-004	0.0179		65.3722	65.3722	2.0800e-003		65.4242
Total	**0.0370**	**0.0289**	**0.2714**	**6.6000e-004**	**0.0657**	**4.6000e-004**	**0.0662**	**0.0174**	**4.3000e-004**	**0.0179**		**65.3722**	**65.3722**	**2.0800e-003**		**65.4242**

3.3 Underground Utilities - 2018

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	0.8618	8.1622	6.4094	8.3900e-003		0.5968	0.5968		0.5491	0.5491		844.5062	844.5062	0.2629		851.0789
Total	**0.8618**	**8.1622**	**6.4094**	**8.3900e-003**		**0.5968**	**0.5968**		**0.5491**	**0.5491**		**844.5062**	**844.5062**	**0.2629**		**851.0789**

3.3 Underground Utilities - 2018

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	0.0370	0.0289	0.2714	6.6000e-004	0.0657	4.6000e-004	0.0662	0.0174	4.3000e-004	0.0179		65.3722	65.3722	2.0800e-003		65.4242
Total	**0.0370**	**0.0289**	**0.2714**	**6.6000e-004**	**0.0657**	**4.6000e-004**	**0.0662**	**0.0174**	**4.3000e-004**	**0.0179**		**65.3722**	**65.3722**	**2.0800e-003**		**65.4242**

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	0.8618	8.1622	6.4094	8.3900e-003		0.5968	0.5968		0.5491	0.5491	0.0000	844.5062	844.5062	0.2629		851.0789
Total	**0.8618**	**8.1622**	**6.4094**	**8.3900e-003**		**0.5968**	**0.5968**		**0.5491**	**0.5491**	**0.0000**	**844.5062**	**844.5062**	**0.2629**		**851.0789**

3.3 Underground Utilities - 2018

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	0.0370	0.0289	0.2714	6.6000e-004	0.0657	4.6000e-004	0.0662	0.0174	4.3000e-004	0.0179		65.3722	65.3722	2.0800e-003		65.4242
Total	**0.0370**	**0.0289**	**0.2714**	**6.6000e-004**	**0.0657**	**4.6000e-004**	**0.0662**	**0.0174**	**4.3000e-004**	**0.0179**		**65.3722**	**65.3722**	**2.0800e-003**		**65.4242**

3.4 Building Construction - 2018

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	2.5919	17.4280	13.8766	0.0220		1.0580	1.0580		1.0216	1.0216		2,030.8389	2,030.8389	0.4088		2,041.0596
Total	**2.5919**	**17.4280**	**13.8766**	**0.0220**		**1.0580**	**1.0580**		**1.0216**	**1.0216**		**2,030.8389**	**2,030.8389**	**0.4088**		**2,041.0596**

3.4 Building Construction - 2018

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	0.0970	2.5597	0.6300	5.2500e-003	0.1287	0.0184	0.1472	0.0371	0.0176	0.0547		552.8708	552.8708	0.0379		553.8190
Worker	0.2176	0.1696	1.5947	3.8600e-003	0.3861	2.7100e-003	0.3888	0.1024	2.5000e-003	0.1049		384.0616	384.0616	0.0122		384.3673
Total	**0.3146**	**2.7293**	**2.2247**	**9.1100e-003**	**0.5148**	**0.0211**	**0.5360**	**0.1395**	**0.0201**	**0.1596**		**936.9324**	**936.9324**	**0.0502**		**938.1863**

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	2.5919	17.4280	13.8766	0.0220		1.0580	1.0580		1.0216	1.0216	0.0000	2,030.8389	2,030.8389	0.4088		2,041.0596
Total	**2.5919**	**17.4280**	**13.8766**	**0.0220**		**1.0580**	**1.0580**		**1.0216**	**1.0216**	**0.0000**	**2,030.8389**	**2,030.8389**	**0.4088**		**2,041.0596**

3.4 Building Construction - 2018

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	0.0970	2.5597	0.6300	5.2500e-003	0.1287	0.0184	0.1472	0.0371	0.0176	0.0547		552.8708	552.8708	0.0379		553.8190
Worker	0.2176	0.1696	1.5947	3.8600e-003	0.3861	2.7100e-003	0.3888	0.1024	2.5000e-003	0.1049		384.0616	384.0616	0.0122		384.3673
Total	**0.3146**	**2.7293**	**2.2247**	**9.1100e-003**	**0.5148**	**0.0211**	**0.5360**	**0.1395**	**0.0201**	**0.1596**		**936.9324**	**936.9324**	**0.0502**		**938.1863**

3.4 Building Construction - 2019

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	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846		2,018.0224	2,018.0224	0.3879		2,027.7210
Total	**2.2721**	**15.9802**	**13.4870**	**0.0220**		**0.9158**	**0.9158**		**0.8846**	**0.8846**		**2,018.0224**	**2,018.0224**	**0.3879**		**2,027.7210**

3.4 Building Construction - 2019

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	0.0880	2.4276	0.5792	5.2100e-003	0.1287	0.0157	0.1444	0.0371	0.0150	0.0521		549.0124	549.0124	0.0363		549.9190
Worker	0.1964	0.1489	1.4134	3.7400e-003	0.3861	2.6500e-003	0.3887	0.1024	2.4400e-003	0.1049		372.8280	372.8280	0.0108		373.0974
Total	**0.2844**	**2.5765**	**1.9926**	**8.9500e-003**	**0.5148**	**0.0183**	**0.5331**	**0.1395**	**0.0174**	**0.1569**		**921.8404**	**921.8404**	**0.0470**		**923.0164**

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	2.2721	15.9802	13.4870	0.0220		0.9158	0.9158		0.8846	0.8846	0.0000	2,018.0224	2,018.0224	0.3879		2,027.7210
Total	**2.2721**	**15.9802**	**13.4870**	**0.0220**		**0.9158**	**0.9158**		**0.8846**	**0.8846**	**0.0000**	**2,018.0224**	**2,018.0224**	**0.3879**		**2,027.7210**

3.4 Building Construction - 2019

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	0.0880	2.4276	0.5792	5.2100e-003	0.1287	0.0157	0.1444	0.0371	0.0150	0.0521		549.0124	549.0124	0.0363		549.9190
Worker	0.1964	0.1489	1.4134	3.7400e-003	0.3861	2.6500e-003	0.3887	0.1024	2.4400e-003	0.1049		372.8280	372.8280	0.0108		373.0974
Total	**0.2844**	**2.5765**	**1.9926**	**8.9500e-003**	**0.5148**	**0.0183**	**0.5331**	**0.1395**	**0.0174**	**0.1569**		**921.8404**	**921.8404**	**0.0470**		**923.0164**

3.5 Paving - 2019

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	0.9038	9.1743	8.9025	0.0135		0.5225	0.5225		0.4815	0.4815		1,325.0953	1,325.0953	0.4112		1,335.3751
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9038**	**9.1743**	**8.9025**	**0.0135**		**0.5225**	**0.5225**		**0.4815**	**0.4815**		**1,325.0953**	**1,325.0953**	**0.4112**		**1,335.3751**

3.5 Paving - 2019

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	0.0543	0.0412	0.3910	1.0400e-003	0.1068	7.3000e-004	0.1075	0.0283	6.8000e-004	0.0290		103.1226	103.1226	2.9800e-003		103.1972
Total	**0.0543**	**0.0412**	**0.3910**	**1.0400e-003**	**0.1068**	**7.3000e-004**	**0.1075**	**0.0283**	**6.8000e-004**	**0.0290**		**103.1226**	**103.1226**	**2.9800e-003**		**103.1972**

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	0.9038	9.1743	8.9025	0.0135		0.5225	0.5225		0.4815	0.4815	0.0000	1,325.0953	1,325.0953	0.4112		1,335.3751
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9038**	**9.1743**	**8.9025**	**0.0135**		**0.5225**	**0.5225**		**0.4815**	**0.4815**	**0.0000**	**1,325.0953**	**1,325.0953**	**0.4112**		**1,335.3751**

3.5 Paving - 2019

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	0.0543	0.0412	0.3910	1.0400e-003	0.1068	7.3000e-004	0.1075	0.0283	6.8000e-004	0.0290		103.1226	103.1226	2.9800e-003		103.1972
Total	**0.0543**	**0.0412**	**0.3910**	**1.0400e-003**	**0.1068**	**7.3000e-004**	**0.1075**	**0.0283**	**6.8000e-004**	**0.0290**		**103.1226**	**103.1226**	**2.9800e-003**		**103.1972**

3.6 Architectural Coating - 2019

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	44.1793					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**44.4457**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

3.6 Architectural Coating - 2019

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	0.0376	0.0285	0.2707	7.2000e-004	0.0739	5.1000e-004	0.0744	0.0196	4.7000e-004	0.0201		71.3926	71.3926	2.0600e-003		71.4442
Total	**0.0376**	**0.0285**	**0.2707**	**7.2000e-004**	**0.0739**	**5.1000e-004**	**0.0744**	**0.0196**	**4.7000e-004**	**0.0201**		**71.3926**	**71.3926**	**2.0600e-003**		**71.4442**

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	44.1793					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**44.4457**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

3.6 Architectural Coating - 2019

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	0.0376	0.0285	0.2707	7.2000e-004	0.0739	5.1000e-004	0.0744	0.0196	4.7000e-004	0.0201		71.3926	71.3926	2.0600e-003		71.4442
Total	**0.0376**	**0.0285**	**0.2707**	**7.2000e-004**	**0.0739**	**5.1000e-004**	**0.0744**	**0.0196**	**4.7000e-004**	**0.0201**		**71.3926**	**71.3926**	**2.0600e-003**		**71.4442**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Walkability Design

Increase Transit Accessibility

Improve Pedestrian Network

Limit Parking Supply

	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	1.8537	10.6700	16.6766	0.0416	2.8659	0.0515	2.9175	0.7680	0.0486	0.8165		4,228.2814	4,228.2814	0.2903		4,235.5382
Unmitigated	2.1580	13.5836	23.2481	0.0695	5.2357	0.0856	5.3213	1.4030	0.0808	1.4838		7,046.5594	7,046.5594	0.3717		7,055.8513

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	1,189.90	1,189.90	1189.90	2,260,728	1,237,483
Supermarket	169.98	169.98	169.98	193,347	105,835
Total	1,359.88	1,359.88	1,359.88	2,454,075	1,343,318

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
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.558186	0.040947	0.190770	0.110456	0.017401	0.005228	0.022658	0.042795	0.002118	0.002805	0.005569	0.000308	0.000759
Supermarket	0.558186	0.040947	0.190770	0.110456	0.017401	0.005228	0.022658	0.042795	0.002118	0.002805	0.005569	0.000308	0.000759

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	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	0.0858	0.7800	0.6552	4.6800e-003		0.0593	0.0593		0.0593	0.0593		936.0375	936.0375	0.0179	0.0172	941.5999
NaturalGas Unmitigated	0.1241	1.1278	0.9474	6.7700e-003		0.0857	0.0857		0.0857	0.0857		1,353.3917	1,353.3917	0.0259	0.0248	1,361.4343

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					
Hotel	10654.5	0.1149	1.0446	0.8774	6.2700e-003		0.0794	0.0794		0.0794	0.0794		1,253.4707	1,253.4707	0.0240	0.0230	1,260.9194
Supermarket	849.329	9.1600e-003	0.0833	0.0699	5.0000e-004		6.3300e-003	6.3300e-003		6.3300e-003	6.3300e-003		99.9210	99.9210	1.9200e-003	1.8300e-003	100.5148
Total		**0.1241**	**1.1278**	**0.9474**	**6.7700e-003**		**0.0857**	**0.0857**		**0.0857**	**0.0857**		**1,353.3917**	**1,353.3917**	**0.0259**	**0.0248**	**1,361.4342**

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					
Hotel	7.32457	0.0790	0.7181	0.6032	4.3100e-003		0.0546	0.0546		0.0546	0.0546		861.7136	861.7136	0.0165	0.0158	866.8343
Supermarket	0.631753	6.8100e-003	0.0619	0.0520	3.7000e-004		4.7100e-003	4.7100e-003		4.7100e-003	4.7100e-003		74.3239	74.3239	1.4200e-003	1.3600e-003	74.7656
Total		**0.0858**	**0.7800**	**0.6552**	**4.6800e-003**		**0.0593**	**0.0593**		**0.0593**	**0.0593**		**936.0375**	**936.0375**	**0.0179**	**0.0172**	**941.5999**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	2.7760	1.5000e-004	0.0159	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0338	0.0338	9.0000e-005		0.0360
Unmitigated	2.7760	1.5000e-004	0.0159	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0338	0.0338	9.0000e-005		0.0360

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	0.3268					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4477					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4900e-003	1.5000e-004	0.0159	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0338	0.0338	9.0000e-005		0.0360
Total	**2.7760**	**1.5000e-004**	**0.0159**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0338**	**0.0338**	**9.0000e-005**		**0.0360**

6.2 Area by SubCategory

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	0.3268					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4477					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4900e-003	1.5000e-004	0.0159	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0338	0.0338	9.0000e-005		0.0360
Total	**2.7760**	**1.5000e-004**	**0.0159**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0338**	**0.0338**	**9.0000e-005**		**0.0360**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Newark Gateway Mixed Use

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	146.00	Room	1.19	106,080.00	0
Supermarket	8.30	1000sqft	0.19	8,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	405	**CH4 Intensity (lb/MWhr)**	0	**N2O Intensity (lb/MWhr)**	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - GHG Intensity Factors based on 2015 PG&E inventory

Land Use - 8,300 sqft grocery and 146 room hotel on 1.38 acres

Construction Phase - Construction schedule based on info provided by Villa Developers

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Typical Utilities equipment

Grading -

Vehicle Trips - Fehr & Peers 2017

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Energy Mitigation - Exceed 2016 Title 24 by 15%

Water Mitigation - CALGreen

Waste Mitigation - AB341

Architectural Coating - Low-VOC Coatings

Area Coating -

Trips and VMT -

Energy Use - PG&E 2017

Newark Gateway Mixed Use - Alameda County, Annual

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	50.00
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	10.00	21.00
tblConstructionPhase	NumDays	200.00	219.00
tblConstructionPhase	NumDays	4.00	43.00
tblConstructionPhase	NumDays	10.00	20.00
tblLandUse	BuildingSpaceSquareFeet	211,992.00	106,080.00
tblLandUse	LandUseSquareFeet	211,992.00	106,080.00
tblLandUse	LotAcreage	4.87	1.19
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Underground Utilities
tblOffRoadEquipment	PhaseName		Underground Utilities
tblProjectCharacteristics	CH4IntensityFactor	0.029	0
tblProjectCharacteristics	CO2IntensityFactor	641.35	405
tblProjectCharacteristics	N2OIntensityFactor	0.006	0
tblProjectCharacteristics	OperationalYear	2018	2020
tblVehicleTrips	ST_TR	8.19	8.15
tblVehicleTrips	ST_TR	177.59	20.48
tblVehicleTrips	SU_TR	5.95	8.15
tblVehicleTrips	SU_TR	166.44	20.48
tblVehicleTrips	WD_TR	8.17	8.15
tblVehicleTrips	WD_TR	102.24	20.48

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					
2018	0.3253	2.4317	1.7929	3.4800e-003	0.1564	0.1294	0.2858	0.0681	0.1239	0.1919	0.0000	302.9928	302.9928	0.0519	0.0000	304.2913
2019	0.5057	0.3249	0.2920	5.4000e-004	7.4800e-003	0.0173	0.0248	2.0200e-003	0.0166	0.0186	0.0000	47.1240	47.1240	8.5200e-003	0.0000	47.3371
Maximum	**0.5057**	**2.4317**	**1.7929**	**3.4800e-003**	**0.1564**	**0.1294**	**0.2858**	**0.0681**	**0.1239**	**0.1919**	**0.0000**	**302.9928**	**302.9928**	**0.0519**	**0.0000**	**304.2913**

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					
2018	0.3253	2.4317	1.7929	3.4800e-003	0.0983	0.1294	0.2277	0.0382	0.1239	0.1621	0.0000	302.9926	302.9926	0.0519	0.0000	304.2910
2019	0.5057	0.3249	0.2920	5.4000e-004	7.4800e-003	0.0173	0.0248	2.0200e-003	0.0166	0.0186	0.0000	47.1240	47.1240	8.5200e-003	0.0000	47.3370
Maximum	**0.5057**	**2.4317**	**1.7929**	**3.4800e-003**	**0.0983**	**0.1294**	**0.2277**	**0.0382**	**0.1239**	**0.1621**	**0.0000**	**302.9926**	**302.9926**	**0.0519**	**0.0000**	**304.2910**

	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**	**35.47**	**0.00**	**18.71**	**42.60**	**0.00**	**14.19**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2018**	**3-31-2018**	0.4008	0.4008
2	**4-1-2018**	**6-30-2018**	0.7470	0.7470
3	**7-1-2018**	**9-30-2018**	0.7552	0.7552
4	**10-1-2018**	**12-31-2018**	0.7578	0.7578
5	**1-1-2019**	**3-31-2019**	0.8155	0.8155
		Highest	0.8155	0.8155

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	0.5065	1.0000e-005	1.4300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7600e-003	2.7600e-003	1.0000e-005	0.0000	2.9400e-003
Energy	0.0226	0.2058	0.1729	1.2300e-003		0.0156	0.0156		0.0156	0.0156	0.0000	444.2722	444.2722	4.2900e-003	4.1100e-003	445.6037
Mobile	0.3954	2.4468	3.9804	0.0128	0.9179	0.0155	0.9334	0.2468	0.0146	0.2614	0.0000	1,176.7493	1,176.7493	0.0589	0.0000	1,178.2210
Waste						0.0000	0.0000		0.0000	0.0000	25.7291	0.0000	25.7291	1.5206	0.0000	63.7428
Water						0.0000	0.0000		0.0000	0.0000	1.4996	4.9834	6.4829	0.1540	3.6400e-003	11.4171
Total	**0.9245**	**2.6526**	**4.1547**	**0.0140**	**0.9179**	**0.0311**	**0.9490**	**0.2468**	**0.0302**	**0.2770**	**27.2287**	**1,626.0077**	**1,653.2363**	**1.7377**	**7.7500e-003**	**1,698.9876**

2.2 Overall Operational

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	0.5065	1.0000e-005	1.4300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7600e-003	2.7600e-003	1.0000e-005	0.0000	2.9400e-003
Energy	0.0157	0.1424	0.1196	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	356.1735	356.1735	2.9700e-003	2.8400e-003	357.0944
Mobile	0.3405	1.9345	2.7943	7.6900e-003	0.5024	9.2700e-003	0.5117	0.1351	8.7300e-003	0.1438	0.0000	709.3630	709.3630	0.0454	0.0000	710.4982
Waste						0.0000	0.0000		0.0000	0.0000	6.4323	0.0000	6.4323	0.3801	0.0000	15.9357
Water						0.0000	0.0000		0.0000	0.0000	1.1996	3.9867	5.1863	0.1232	2.9100e-003	9.1337
Total	**0.8626**	**2.0769**	**2.9153**	**8.5400e-003**	**0.5024**	**0.0201**	**0.5225**	**0.1351**	**0.0196**	**0.1546**	**7.6319**	**1,069.5259**	**1,077.1579**	**0.5518**	**5.7500e-003**	**1,092.6650**

	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	**6.70**	**21.70**	**29.83**	**39.04**	**45.26**	**35.41**	**44.94**	**45.26**	**35.32**	**44.18**	**71.97**	**34.22**	**34.85**	**68.25**	**25.81**	**35.69**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2018	2/28/2018	5	43	
2	Underground Utilities	Trenching	3/1/2018	3/30/2018	5	22	
3	Building Construction	Building Construction	3/31/2018	1/31/2019	5	219	
4	Paving	Paving	2/1/2019	2/28/2019	5	20	
5	Architectural Coating	Architectural Coating	3/1/2019	3/29/2019	5	21	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 16.13

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 171,570; Non-Residential Outdoor: 57,190; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	6.00	187	0.41
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Underground Utilities	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Underground Utilities	Trenchers	1	7.00	78	0.50
Building Construction	Cranes	1	6.00	231	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	130	0.42
Paving	Paving Equipment	1	8.00	132	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
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Underground Utilities	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	47.00	19.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 2018

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					0.1057	0.0000	0.1057	0.0543	0.0000	0.0543	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0322	0.3669	0.1454	3.0000e-004		0.0171	0.0171		0.0157	0.0157	0.0000	27.7209	27.7209	8.6300e-003	0.0000	27.9367
Total	**0.0322**	**0.3669**	**0.1454**	**3.0000e-004**	**0.1057**	**0.0171**	**0.1228**	**0.0543**	**0.0157**	**0.0700**	**0.0000**	**27.7209**	**27.7209**	**8.6300e-003**	**0.0000**	**27.9367**

3.2 Grading - 2018

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	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	0.0000
Worker	7.2000e-004	5.7000e-004	5.6500e-003	1.0000e-005	1.3600e-003	1.0000e-005	1.3700e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.2851	1.2851	4.0000e-005	0.0000	1.2861
Total	**7.2000e-004**	**5.7000e-004**	**5.6500e-003**	**1.0000e-005**	**1.3600e-003**	**1.0000e-005**	**1.3700e-003**	**3.6000e-004**	**1.0000e-005**	**3.7000e-004**	**0.0000**	**1.2851**	**1.2851**	**4.0000e-005**	**0.0000**	**1.2861**

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					0.0476	0.0000	0.0476	0.0244	0.0000	0.0244	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0322	0.3669	0.1454	3.0000e-004		0.0171	0.0171		0.0157	0.0157	0.0000	27.7209	27.7209	8.6300e-003	0.0000	27.9367
Total	**0.0322**	**0.3669**	**0.1454**	**3.0000e-004**	**0.0476**	**0.0171**	**0.0646**	**0.0244**	**0.0157**	**0.0402**	**0.0000**	**27.7209**	**27.7209**	**8.6300e-003**	**0.0000**	**27.9367**

3.2 Grading - 2018

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	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	0.0000
Worker	7.2000e-004	5.7000e-004	5.6500e-003	1.0000e-005	1.3600e-003	1.0000e-005	1.3700e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.2851	1.2851	4.0000e-005	0.0000	1.2861
Total	**7.2000e-004**	**5.7000e-004**	**5.6500e-003**	**1.0000e-005**	**1.3600e-003**	**1.0000e-005**	**1.3700e-003**	**3.6000e-004**	**1.0000e-005**	**3.7000e-004**	**0.0000**	**1.2851**	**1.2851**	**4.0000e-005**	**0.0000**	**1.2861**

3.3 Underground Utilities - 2018

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	9.4800e-003	0.0898	0.0705	9.0000e-005		6.5700e-003	6.5700e-003		6.0400e-003	6.0400e-003	0.0000	8.4274	8.4274	2.6200e-003	0.0000	8.4929
Total	**9.4800e-003**	**0.0898**	**0.0705**	**9.0000e-005**		**6.5700e-003**	**6.5700e-003**		**6.0400e-003**	**6.0400e-003**	**0.0000**	**8.4274**	**8.4274**	**2.6200e-003**	**0.0000**	**8.4929**

3.3 Underground Utilities - 2018

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	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	0.0000
Worker	3.7000e-004	2.9000e-004	2.8900e-003	1.0000e-005	7.0000e-004	1.0000e-005	7.0000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6575	0.6575	2.0000e-005	0.0000	0.6580
Total	**3.7000e-004**	**2.9000e-004**	**2.8900e-003**	**1.0000e-005**	**7.0000e-004**	**1.0000e-005**	**7.0000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6575**	**0.6575**	**2.0000e-005**	**0.0000**	**0.6580**

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	9.4800e-003	0.0898	0.0705	9.0000e-005		6.5700e-003	6.5700e-003		6.0400e-003	6.0400e-003	0.0000	8.4273	8.4273	2.6200e-003	0.0000	8.4929
Total	**9.4800e-003**	**0.0898**	**0.0705**	**9.0000e-005**		**6.5700e-003**	**6.5700e-003**		**6.0400e-003**	**6.0400e-003**	**0.0000**	**8.4273**	**8.4273**	**2.6200e-003**	**0.0000**	**8.4929**

3.3 Underground Utilities - 2018

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	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	0.0000
Worker	3.7000e-004	2.9000e-004	2.8900e-003	1.0000e-005	7.0000e-004	1.0000e-005	7.0000e-004	1.9000e-004	0.0000	1.9000e-004	0.0000	0.6575	0.6575	2.0000e-005	0.0000	0.6580
Total	**3.7000e-004**	**2.9000e-004**	**2.8900e-003**	**1.0000e-005**	**7.0000e-004**	**1.0000e-005**	**7.0000e-004**	**1.9000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.6575**	**0.6575**	**2.0000e-005**	**0.0000**	**0.6580**

3.4 Building Construction - 2018

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	0.2540	1.7079	1.3599	2.1600e-003		0.1037	0.1037		0.1001	0.1001	0.0000	180.5499	180.5499	0.0364	0.0000	181.4586
Total	**0.2540**	**1.7079**	**1.3599**	**2.1600e-003**		**0.1037**	**0.1037**		**0.1001**	**0.1001**	**0.0000**	**180.5499**	**180.5499**	**0.0364**	**0.0000**	**181.4586**

3.4 Building Construction - 2018

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	0.0000
Vendor	9.2500e-003	0.2510	0.0573	5.2000e-004	0.0122	1.7900e-003	0.0140	3.5400e-003	1.7100e-003	5.2500e-003	0.0000	49.9389	49.9389	3.2000e-003	0.0000	50.0188
Worker	0.0193	0.0152	0.1512	3.8000e-004	0.0364	2.7000e-004	0.0367	9.6900e-003	2.5000e-004	9.9300e-003	0.0000	34.4132	34.4132	1.0800e-003	0.0000	34.4402
Total	**0.0286**	**0.2661**	**0.2086**	**9.0000e-004**	**0.0487**	**2.0600e-003**	**0.0507**	**0.0132**	**1.9600e-003**	**0.0152**	**0.0000**	**84.3521**	**84.3521**	**4.2800e-003**	**0.0000**	**84.4590**

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	0.2540	1.7079	1.3599	2.1600e-003		0.1037	0.1037		0.1001	0.1001	0.0000	180.5497	180.5497	0.0364	0.0000	181.4584
Total	**0.2540**	**1.7079**	**1.3599**	**2.1600e-003**		**0.1037**	**0.1037**		**0.1001**	**0.1001**	**0.0000**	**180.5497**	**180.5497**	**0.0364**	**0.0000**	**181.4584**

3.4 Building Construction - 2018

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	0.0000
Vendor	9.2500e-003	0.2510	0.0573	5.2000e-004	0.0122	1.7900e-003	0.0140	3.5400e-003	1.7100e-003	5.2500e-003	0.0000	49.9389	49.9389	3.2000e-003	0.0000	50.0188
Worker	0.0193	0.0152	0.1512	3.8000e-004	0.0364	2.7000e-004	0.0367	9.6900e-003	2.5000e-004	9.9300e-003	0.0000	34.4132	34.4132	1.0800e-003	0.0000	34.4402
Total	**0.0286**	**0.2661**	**0.2086**	**9.0000e-004**	**0.0487**	**2.0600e-003**	**0.0507**	**0.0132**	**1.9600e-003**	**0.0152**	**0.0000**	**84.3521**	**84.3521**	**4.2800e-003**	**0.0000**	**84.4590**

3.4 Building Construction - 2019

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	0.0261	0.1838	0.1551	2.5000e-004		0.0105	0.0105		0.0102	0.0102	0.0000	21.0533	21.0533	4.0500e-003	0.0000	21.1545
Total	**0.0261**	**0.1838**	**0.1551**	**2.5000e-004**		**0.0105**	**0.0105**		**0.0102**	**0.0102**	**0.0000**	**21.0533**	**21.0533**	**4.0500e-003**	**0.0000**	**21.1545**

3.4 Building Construction - 2019

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	0.0000
Vendor	9.8000e-004	0.0279	6.1800e-003	6.0000e-005	1.4300e-003	1.8000e-004	1.6100e-003	4.2000e-004	1.7000e-004	5.9000e-004	0.0000	5.8203	5.8203	3.6000e-004	0.0000	5.8293
Worker	2.0500e-003	1.5600e-003	0.0158	4.0000e-005	4.2700e-003	3.0000e-005	4.3000e-003	1.1400e-003	3.0000e-005	1.1600e-003	0.0000	3.9202	3.9202	1.1000e-004	0.0000	3.9230
Total	**3.0300e-003**	**0.0295**	**0.0219**	**1.0000e-004**	**5.7000e-003**	**2.1000e-004**	**5.9100e-003**	**1.5600e-003**	**2.0000e-004**	**1.7500e-003**	**0.0000**	**9.7405**	**9.7405**	**4.7000e-004**	**0.0000**	**9.7523**

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	0.0261	0.1838	0.1551	2.5000e-004		0.0105	0.0105		0.0102	0.0102	0.0000	21.0532	21.0532	4.0500e-003	0.0000	21.1544
Total	**0.0261**	**0.1838**	**0.1551**	**2.5000e-004**		**0.0105**	**0.0105**		**0.0102**	**0.0102**	**0.0000**	**21.0532**	**21.0532**	**4.0500e-003**	**0.0000**	**21.1544**

3.4 Building Construction - 2019

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	0.0000
Vendor	9.8000e-004	0.0279	6.1800e-003	6.0000e-005	1.4300e-003	1.8000e-004	1.6100e-003	4.2000e-004	1.7000e-004	5.9000e-004	0.0000	5.8203	5.8203	3.6000e-004	0.0000	5.8293
Worker	2.0500e-003	1.5600e-003	0.0158	4.0000e-005	4.2700e-003	3.0000e-005	4.3000e-003	1.1400e-003	3.0000e-005	1.1600e-003	0.0000	3.9202	3.9202	1.1000e-004	0.0000	3.9230
Total	**3.0300e-003**	**0.0295**	**0.0219**	**1.0000e-004**	**5.7000e-003**	**2.1000e-004**	**5.9100e-003**	**1.5600e-003**	**2.0000e-004**	**1.7500e-003**	**0.0000**	**9.7405**	**9.7405**	**4.7000e-004**	**0.0000**	**9.7523**

3.5 Paving - 2019

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	9.0400e-003	0.0917	0.0890	1.4000e-004		5.2200e-003	5.2200e-003		4.8200e-003	4.8200e-003	0.0000	12.0211	12.0211	3.7300e-003	0.0000	12.1143
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.0400e-003**	**0.0917**	**0.0890**	**1.4000e-004**		**5.2200e-003**	**5.2200e-003**		**4.8200e-003**	**4.8200e-003**	**0.0000**	**12.0211**	**12.0211**	**3.7300e-003**	**0.0000**	**12.1143**

3.5 Paving - 2019

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	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	0.0000
Worker	4.9000e-004	3.8000e-004	3.7900e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0400e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9429	0.9429	3.0000e-005	0.0000	0.9436
Total	**4.9000e-004**	**3.8000e-004**	**3.7900e-003**	**1.0000e-005**	**1.0300e-003**	**1.0000e-005**	**1.0400e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**0.9429**	**0.9429**	**3.0000e-005**	**0.0000**	**0.9436**

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	9.0400e-003	0.0917	0.0890	1.4000e-004		5.2200e-003	5.2200e-003		4.8200e-003	4.8200e-003	0.0000	12.0211	12.0211	3.7300e-003	0.0000	12.1143
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**9.0400e-003**	**0.0917**	**0.0890**	**1.4000e-004**		**5.2200e-003**	**5.2200e-003**		**4.8200e-003**	**4.8200e-003**	**0.0000**	**12.0211**	**12.0211**	**3.7300e-003**	**0.0000**	**12.1143**

3.5 Paving - 2019

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	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	0.0000
Worker	4.9000e-004	3.8000e-004	3.7900e-003	1.0000e-005	1.0300e-003	1.0000e-005	1.0400e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9429	0.9429	3.0000e-005	0.0000	0.9436
Total	**4.9000e-004**	**3.8000e-004**	**3.7900e-003**	**1.0000e-005**	**1.0300e-003**	**1.0000e-005**	**1.0400e-003**	**2.7000e-004**	**1.0000e-005**	**2.8000e-004**	**0.0000**	**0.9429**	**0.9429**	**3.0000e-005**	**0.0000**	**0.9436**

3.6 Architectural Coating - 2019

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	0.4639					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8000e-003	0.0193	0.0193	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.6809	2.6809	2.3000e-004	0.0000	2.6866
Total	**0.4667**	**0.0193**	**0.0193**	**3.0000e-005**		**1.3500e-003**	**1.3500e-003**		**1.3500e-003**	**1.3500e-003**	**0.0000**	**2.6809**	**2.6809**	**2.3000e-004**	**0.0000**	**2.6866**

3.6 Architectural Coating - 2019

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	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	0.0000
Worker	3.6000e-004	2.7000e-004	2.7600e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6854	0.6854	2.0000e-005	0.0000	0.6859
Total	**3.6000e-004**	**2.7000e-004**	**2.7600e-003**	**1.0000e-005**	**7.5000e-004**	**1.0000e-005**	**7.5000e-004**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6854**	**0.6854**	**2.0000e-005**	**0.0000**	**0.6859**

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	0.4639					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8000e-003	0.0193	0.0193	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.6809	2.6809	2.3000e-004	0.0000	2.6866
Total	**0.4667**	**0.0193**	**0.0193**	**3.0000e-005**		**1.3500e-003**	**1.3500e-003**		**1.3500e-003**	**1.3500e-003**	**0.0000**	**2.6809**	**2.6809**	**2.3000e-004**	**0.0000**	**2.6866**

3.6 Architectural Coating - 2019

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	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	0.0000
Worker	3.6000e-004	2.7000e-004	2.7600e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6854	0.6854	2.0000e-005	0.0000	0.6859
Total	**3.6000e-004**	**2.7000e-004**	**2.7600e-003**	**1.0000e-005**	**7.5000e-004**	**1.0000e-005**	**7.5000e-004**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6854**	**0.6854**	**2.0000e-005**	**0.0000**	**0.6859**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Diversity

Improve Walkability Design

Increase Transit Accessibility

Improve Pedestrian Network

Limit Parking Supply

	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	0.3405	1.9345	2.7943	7.6900e-003	0.5024	9.2700e-003	0.5117	0.1351	8.7300e-003	0.1438	0.0000	709.3630	709.3630	0.0454	0.0000	710.4982
Unmitigated	0.3954	2.4468	3.9804	0.0128	0.9179	0.0155	0.9334	0.2468	0.0146	0.2614	0.0000	1,176.7493	1,176.7493	0.0589	0.0000	1,178.2210

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hotel	1,189.90	1,189.90	1189.90	2,260,728	1,237,483
Supermarket	169.98	169.98	169.98	193,347	105,835
Total	1,359.88	1,359.88	1,359.88	2,454,075	1,343,318

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
Hotel	9.50	7.30	7.30	19.40	61.60	19.00	58	38	4
Supermarket	9.50	7.30	7.30	6.50	74.50	19.00	34	30	36

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Hotel	0.558186	0.040947	0.190770	0.110456	0.017401	0.005228	0.022658	0.042795	0.002118	0.002805	0.005569	0.000308	0.000759
Supermarket	0.558186	0.040947	0.190770	0.110456	0.017401	0.005228	0.022658	0.042795	0.002118	0.002805	0.005569	0.000308	0.000759

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	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	0.0000	201.2020	201.2020	0.0000	0.0000	201.2020
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	220.2030	220.2030	0.0000	0.0000	220.2030
NaturalGas Mitigated	0.0157	0.1424	0.1196	8.5000e-004		0.0108	0.0108		0.0108	0.0108	0.0000	154.9715	154.9715	2.9700e-003	2.8400e-003	155.8924
NaturalGas Unmitigated	0.0226	0.2058	0.1729	1.2300e-003		0.0156	0.0156		0.0156	0.0156	0.0000	224.0692	224.0692	4.2900e-003	4.1100e-003	225.4007

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					
Hotel	3.88889e+006	0.0210	0.1906	0.1601	1.1400e-003		0.0145	0.0145		0.0145	0.0145	0.0000	207.5261	207.5261	3.9800e-003	3.8000e-003	208.7594
Supermarket	310005	1.6700e-003	0.0152	0.0128	9.0000e-005		1.1500e-003	1.1500e-003		1.1500e-003	1.1500e-003	0.0000	16.5431	16.5431	3.2000e-004	3.0000e-004	16.6414
Total		**0.0226**	**0.2058**	**0.1729**	**1.2300e-003**		**0.0156**	**0.0156**		**0.0156**	**0.0156**	**0.0000**	**224.0692**	**224.0692**	**4.3000e-003**	**4.1000e-003**	**225.4007**

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					
Hotel	2.67347e+006	0.0144	0.1311	0.1101	7.9000e-004		9.9600e-003	9.9600e-003		9.9600e-003	9.9600e-003	0.0000	142.6664	142.6664	2.7300e-003	2.6200e-003	143.5141
Supermarket	230590	1.2400e-003	0.0113	9.4900e-003	7.0000e-005		8.6000e-004	8.6000e-004		8.6000e-004	8.6000e-004	0.0000	12.3052	12.3052	2.4000e-004	2.3000e-004	12.3783
Total		**0.0157**	**0.1424**	**0.1196**	**8.6000e-004**		**0.0108**	**0.0108**		**0.0108**	**0.0108**	**0.0000**	**154.9715**	**154.9715**	**2.9700e-003**	**2.8500e-003**	**155.8924**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	885768	162.7199	0.0000	0.0000	162.7199
Supermarket	312910	57.4831	0.0000	0.0000	57.4831
Total		**220.2030**	**0.0000**	**0.0000**	**220.2030**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hotel	791514	145.4050	0.0000	0.0000	145.4050
Supermarket	303732	55.7970	0.0000	0.0000	55.7970
Total		**201.2020**	**0.0000**	**0.0000**	**201.2020**

6.0 Area Detail

6.1 Mitigation Measures Area

	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	0.5065	1.0000e-005	1.4300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7600e-003	2.7600e-003	1.0000e-005	0.0000	2.9400e-003
Unmitigated	0.5065	1.0000e-005	1.4300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7600e-003	2.7600e-003	1.0000e-005	0.0000	2.9400e-003

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	0.0596					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4467					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.4300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7600e-003	2.7600e-003	1.0000e-005	0.0000	2.9400e-003
Total	**0.5065**	**1.0000e-005**	**1.4300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**2.7600e-003**	**2.7600e-003**	**1.0000e-005**	**0.0000**	**2.9400e-003**

6.2 Area by SubCategory

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	0.0596					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4467					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3000e-004	1.0000e-005	1.4300e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7600e-003	2.7600e-003	1.0000e-005	0.0000	2.9400e-003
Total	**0.5065**	**1.0000e-005**	**1.4300e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**2.7600e-003**	**2.7600e-003**	**1.0000e-005**	**0.0000**	**2.9400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.1863	0.1232	2.9100e-003	9.1337
Unmitigated	6.4829	0.1540	3.6400e-003	11.4171

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	3.70355 / 0.411505	5.1210	0.1207	2.8500e-003	8.9871
Supermarket	1.02313 / 0.0316431	1.3620	0.0333	7.9000e-004	2.4300
Total		**6.4829**	**0.1540**	**3.6400e-003**	**11.4171**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hotel	2.96284 / 0.329204	4.0968	0.0965	2.2800e-003	7.1897
Supermarket	0.818501 / 0.0253145	1.0896	0.0267	6.3000e-004	1.9440
Total		**5.1863**	**0.1232**	**2.9100e-003**	**9.1337**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.4323	0.3801	0.0000	15.9357
Unmitigated	25.7291	1.5206	0.0000	63.7428

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	79.94	16.2271	0.9590	0.0000	40.2020
Supermarket	46.81	9.5020	0.5616	0.0000	23.5408
Total		**25.7291**	**1.5205**	**0.0000**	**63.7428**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hotel	19.985	4.0568	0.2398	0.0000	10.0505
Supermarket	11.7025	2.3755	0.1404	0.0000	5.8852
Total		**6.4323**	**0.3801**	**0.0000**	**15.9357**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX D

TRAFFIC TECHNICAL MEMORANDUM AND TRANSPORTATION DEMAND MANAGEMENT PLAN

FEHR PEERS

DRAFT MEMORANDUM

Date: March 7, 2017

To: Dave Claycomb, HELIX Environmental Planning, Inc.

From: Francisco Martin and Lee Reis, Fehr & Peers

Subject: Transportation Evaluation of the Newark Gateway Mixed-Use Development Project

OK17-0159

This memorandum presents the findings of the transportation evaluation prepared for the Newark Gateway Mixed-Use Development Project in Newark, CA. The Project proposes construction of an 8,300 square foot grocery store and a 146-room hotel on a currently vacant parcel at the southwest corner of the Enterprise Drive/Willow Street intersection. The Project site is part of a larger development area addressed in the *Dumbarton Transit Oriented Development Specific Plan Final Environmental Impact Report* (SP EIR) (Final EIR – July 2011).

The Project's transportation evaluation is divided into two parts:

1) A trip generation estimate that confirms that the Project along with all other approved and planned developments in the SP area would generate fewer trips than the land uses assumed in the SP EIR, and
2) A parking analysis that determines that the proposed parking supply would not meet City code requirements and would not accommodate the estimated peak parking demand.

The transportation evaluation is summarized below.

BACKGROUND

The Project site was originally designated for medium/high density residential uses in the SP EIR. An Initial Study/Mitigated Negative Declaration was subsequently prepared for the SHH/FMC site

in 2014, which proposed a 75-unit senior housing facility, 88 condominiums, and a 15,000 foot grocery store. The senior housing facility and condominiums were proposed on the SHH portion of the site, which have since been approved. The 15,000 square foot grocery store was planned for the FMC portion of the site, which is the same as the current Project site; however, the current Project is now proposing a different development as described below.

PROJECT DESCRIPTION

The 1.38-acre Project site is currently proposing an 8,300 square foot grocery store and a 146-room hotel, with a total of 118 shared parking spaces. The hotel would also provide three meeting rooms, a rooftop restaurant, and lounge. Although the SP EIR does not specifically address hotels within the Dumbarton TOD plan area, hotels are a conditional use within the Form-Based Code (FBC) for the SP area.

PROJECT TRIP GENERATION

Trip generation is the process of estimating the number of vehicles that would likely access the Project. The trip generation for both the proposed Project and the SP EIR were estimated using the methods, formulas, and rates presented by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual, 9th Edition* and *Trip Generation Manual, 8th Edition*, respectively. Consistent with the SP EIR, this analysis assumes that 80 percent of the traffic generated by the grocery store component of the Project would remain internal to the SP area. Internalization reductions were not applied to the proposed hotel since it's expected that the trips generated by the hotel would start or end at a location external to the SP area.

The proposed Project would be located less than a half-mile from the future Dumbarton Rail Transit Station. Considering, the proximity of the project to the future Dumbarton Rail Transit Station, it would be reasonable to assume that some Project trips would shift to transit. However, the future of the Dumbarton Rail line is uncertain due to funding constraints. Therefore, as a reasonable worst-case scenario, no transit reductions were assumed in the trip generation estimates, which is consistent with the trip generation estimates in the SP EIR. **Table 1** presents the trip generation summary for the Project. The Project is estimated to generate 1,360 daily, 90 AM peak hour, and 103 PM peak hour external vehicle trips.

TABLE 1
NEWARK GATEWAY PROJECT TRIP GENERATION SUMMARY

Land Use	Units[1]	ITE Code	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
New Uses									
Hotel	146 Rooms	310[2]	1,190	42	36	78	52	37	89
Grocery Store	8.3 KSF	850[3]	850	31	28	59	36	33	69
Total			*2,040*	*73*	*64*	*137*	*88*	*70*	*158*
Reductions									
Internalization[4]			*-680*	*-25*	*-22*	*-47*	*-29*	*-26*	*-55*
Net External Project Trips			**1,360**	**48**	**42**	**90**	**59**	**44**	**103**

Notes:
1. KSF = 1,000 square feet.
2. ITE *Trip Generation (9th Edition)* land use category 310 (Hotel):
   Daily: T = 8.17 * (X)
   AM Peak Hour: Ln (T) = 0.85 * Ln (X) + 0.12 (54% in, 46% out)
   PM Peak Hour: T = 0.61 * (X) (58% in, 42% out)
3. ITE *Trip Generation (9th Edition)* land use category 850 (Supermarket):
   Daily: T = 102.24 * (X)
   AM Peak Hour: T = 7.07 * (X) (52% in, 48% out)
   PM Peak Hour: T = 8.37 * (X) (52% in, 48% out)
4. As in the SP EIR, the following is assumed: 80 percent of the traffic generated by the grocery store land use would be internal to the SP area.

Source: ITE *Trip Generation Manual*, 9th Edition; Fehr and Peers, 2017.

CUMULATIVE SPECIFIC PLAN AREA TRIP GENERATION

The City of Newark has approved or is reviewing the following developments within the SP area:

- Trumark site – 244 single-family units
- Torian site – 547 townhomes/condos
- SHH site – 88 condos and 75 senior housing units
- Gateway Station West – 321 single-family units and 268 apartments

Table 2 summarizes the trip generation for all approved and pending developments within the SP area. Consistent with the SP EIR, this analysis assumes that nine percent of the vehicle trips generated by the approved and pending developments would be internal to the SP area. The proposed Project combined with all other approved and pending projects in the SP area would generate about 10,810 daily, 795 AM peak hour, and 985 PM peak hour external vehicle trips. This corresponds to about 76 percent of daily, 68 percent of the AM peak hour and 75 percent of PM peak hour trips assumed in the SP EIR. Considering that the trip generation of the Project combined with all other approved and pending projects in the SP area is less than that of the SP EIR, we do not anticipate that the proposed Project would cause off-site transportation impacts that were not addressed in the SP EIR.

TABLE 2
SPECIFIC PLAN AREA TRIP GENERATION SUMMARY

Land Use	Units[1]	ITE Code	Daily	AM Peak Hour	PM Peak Hour
Approved/Pending Developments in SP Area Excluding Newark Gateway Project					
Single-Family Homes	565 DU	210[2]	5,640	429	565
Apartments	268 DU	220[3]	1,710	134	158
Townhomes/Condos	635 DU	230[4]	2,790	184	222
Senior Housing	75 DU	252[5]	250	28	24
		Total External and Internal Trips	10,390	775	969
		Internalization Reductions (-9%)[6]	*-940*	*-70*	*-87*
		Total External Trips	***9,450***	***705***	***882***
Newark Gateway Project					
		Total External Trips	1,360	90	103
Total External Trips For Approved/Pending Projects Including Newark Gateway Project			***10,810***	***795***	***985***
SP EIR Trip Generation Assumptions					
		Total External Trips[7]	14,131	1,165	1,320
Percentage of Approved/Pending Projects External Trips to SP EIR Total External Trips			***76%***	***68%***	***75%***

Notes:
1. KSF = 1,000 square feet.
2. ITE *Trip Generation (8th Edition)* land use category 210 (Single-Family Housing):
   Daily: T = 9.98 * (X); AM Peak Hour: T = 0.76 * (X); PM Peak Hour: T = 1.00 * (X)
3. ITE *Trip Generation (8th Edition)* land use category 220 (Apartments):
   Daily: T = 6.35 * (X); AM Peak Hour: T = 0.50 * (X); PM Peak Hour: T = 0.59 * (X)
4. ITE *Trip Generation (8th Edition)* land use category 230 (Condominium/Townhouse):
   Daily: T = 4.39 * (X); AM Peak Hour: T = 0.29 * (X); PM Peak Hour: T = 0.35 * (X)
5. ITE *Trip Generation (9th Edition)* land use category 252 (Senior Adult Housing - Attached):
   Daily: T = 2.98 * (X) + 21.05; AM Peak Hour: Ln (T) = 0.84 * Ln (X) - 0.30
   PM Peak Hour: Ln (T) = 0.99 * Ln (X) - 1.11
6. As in the SP EIR, the following is assumed: 9 percent of traffic generated by residential uses would be internal to the SP area.
7. Based on Table 4.14-6 on page 4.14-37 of the *Dumbarton TOD Specific Plan Draft EIR* (RBF, May 2011).

Source: ITE *Trip Generation Manual*, 8th and 9th Editions; Fehr and Peers, 2017.

PARKING ANALYSIS

Fehr & Peers conducted an analysis to determine the amount of parking required for the site uses, 146 hotel rooms and 8,300 square-feet of grocery store. City of Newark Municipal Code establishes parking requirements, but these may not accurately reflect demand, especially for mixed-use developments. This section includes the parking required by City code and the estimated parking demand.

PROJECT PARKING SUPPLY

The Project proposes 118 off-street parking spaces, which would be shared between the grocery store and hotel. A total of 31 parking spaces are proposed on the ground floor parking lot, and 87 spaces are proposed in the second floor parking structure. On-street parking on Enterprise Drive and Willow Street would be prohibited in the vicinity of the Project site, therefore all grocery store patrons/employees and hotel guests/employees are expected to park in the 118 off-street parking spaces proposed by the Project.

PARKING REQUIRED PER CITY CODE

The City of Newark Municipal Code defines general parking regulations by establishing basic ratios for required vehicle parking spaces for various lands uses. **Table 3** summarizes the minimum off-street parking requirement for the proposed project, using the code requirements for hotel and general retail uses. As shown in Table 3, City code requires 181 off-street parking spaces while the project proposes 118 off-street spaces, therefore the proposed off-street supply would be 63 spaces less than required by the City code. Overall, the project is proposing about 35 percent fewer parking spaces than required by City code.

TABLE 3
CITY OF NEWARK MUNICIPAL CODE PARKING REQUIREMENTS

Land Use	Size	Parking Code Requirement		Parking Supply	Parking Deficit
		Rate	Total Spaces		
Hotel	146 Rooms	1 per room[1] 1 per employee	146 spaces 10 spaces	**118 spaces**	***-63 spaces***
Grocery Store	8.3 KSF[2]	3 per KSF	25 spaces		
	Total	**--**	**181 spaces**		

Notes:
1. Assumes average of two beds per room: requirement is one parking space for each guest room or for each two beds, whichever is greater.
2. KSF = Thousand Square Feet.

Sources: *City of Newark Municipal Code, Chapter 17.37 – Form Based Codes* and *Chapter 17.60 – Off-Street Parking and Loading*.

Bicycle Parking Requirements

The SP includes policies that encourage the provision of secure bicycle parking racks, including Street Network Policy C-13 and Bicycle Circulation Policy C-28. Policy C-13 recommends bicycle parking as part of a transportation demand management program while Policy C-28 encourages the adoption of minimum bicycle parking requirements for both residential and commercial projects. The SP EIR also recommends secure bicycle parking of at least one space per 20 vehicle spaces within retail components of the SP area. According to SP policies, the site should provide a minimum of six bicycle parking spaces, which corresponds to one space per 20 vehicle spaces based on the current plans. The Project proposes 10 bicycle parking spaces, which is adequate for the site.

PARKING DEMAND EVALUATION

Weekday and weekend peak parking demand for the proposed Project was estimated using ITE *Parking Generation, 4th Edition*, and Urban Land Institute (ULI) *Shared Parking, 2nd Edition*. **Table 4** presents peak parking demand on a typical weekday and Saturday for the proposed Project. The parking demand for the hotel assumes full occupancy of the hotel. Since the ITE *Parking Generation* rates are primarily based on data collected at suburban single-use, freestanding sites, we adjusted the ITE-based parking demand by applying the U.S. Environmental Protection Agency (EPA)'s Mixed-Use Trip Generation (MXD) tool[1]. It is estimated that about four percent of the proposed project trips would be by non-auto travel modes. Thus, the parking demand for the project is estimated to be 155 weekday and 200 weekend spaces, assuming that each use would have its own designated parking supply.

[1] Trip Generation Tool for Mixed-Use Developments (2012). www.epa.gov/dced/mxd_tripgeneration.html. Travel survey data was gathered from 239 mixed-use developments (MXDs) in six major metropolitan regions, and correlated with the characteristics of the sites and their surroundings. The findings indicate that the mix of employment and residents, overall size and density of development, internal connectivity for walking or driving among land uses, availability of transit service, and surrounding trip destinations within the immediate area outside the Project site all affect the external traffic generated and parking demand.

TABLE 4
NEWARK GATEWAY PROJECT PARKING DEMAND EVALUATION

Land Use	Size	Parking Supply	Weekday Automobile Parking Demand[1]			Weekend Automobile Parking Demand[2]		
			Demand Rate	Total Demand	Parking Deficit	Demand Rate	Total Demand	Parking Deficit
Hotel	146 Rooms	118 spaces	0.89 per OR[3]	130 spaces	--	1.2 per OR[3]	175 spaces	--
Grocery Store	8.3 KSF[4]		3.78 per KSF	31 spaces		3.92 per KSF	33 spaces	
Subtotal		*118 spaces*	*161 Spaces*		*-43 spaces*	*208 Spaces*		*-90 spaces*
Walk/Bike Reduction[5]		--	*-6 spaces*		--	*-8 spaces*		--
Total Without Shared Parking		**118 spaces**	**155 spaces**		**-37 spaces**	**200 spaces**		**-82 spaces**
Shared Parking Reduction[6]		--	*-28 spaces*		--	*-28 spaces*		--
Total Assuming Shared Parking		**118 spaces**	**127 spaces**		**-9 spaces**	**172 spaces**		**-54 spaces**
Transit Reduction[5]		--	-6 spaces		--	-9 spaces		--
Total Assuming Shared Parking and Transit		**118 spaces**	**121 spaces**		**-3 spaces**	**163 spaces**		**-45 spaces**

Notes:
1. Based on ITE Parking Generation, Fourth Edition: suburban, weekday, average demand (Hotel – ITE 310, 100% occupancy; Grocery Store – ITE 850).
2. Based on ITE Parking Generation, Fourth Edition: suburban, Saturday, average demand (Hotel – ITE 310, 100% occupancy; Grocery Store – ITE 850).
3. OR = Occupied Rooms.
4. KSF = Thousand Square Feet.
5. Reductions assumed: 4% for walk/bike and 5% for transit.
6. Shared parking reductions assumed due to time of day adjustments: 18% for weekdays and 14% for weekends.

Source: ITE Parking Generation, Fourth Edition and ULI Shared Parking, Second Edition.

Shared Parking is defined as the ability to share parking spaces due to variations in the accumulation of vehicles by hour, by day, or by season at individual land uses. According to the ULI shared parking methodology, parking demand for a grocery store generally peaks during the day and parking demand for a hotel peaks at night. Assuming that the project would not provide designated spaces for either use, sharing parking between the grocery store and hotel would reduce the overall parking supply for the project by about 18 percent for weekdays and 14 percent for weekends.

Accounting for shared parking, the Project is expected to generate a parking demand of 127 spaces during a typical weekday and 172 spaces during a typical weekend; which would result in an off-street parking deficit of nine spaces on weekdays and 54 spaces on weekends.

Construction of the Dumbarton Rail Transit Station can potentially reduce peak parking demand by about five percent. As shown in Table 4, the project is expected to generate a peak parking demand of 121 spaces during a typical weekday and 163 spaces during a typical weekend accounting for shared parking and completion of the Dumbarton Rail Transit Station; which would result in an off-street parking deficit of three spaces on weekdays and 45 spaces on weekends.

In conclusion, the total off-street parking supply proposed by the Project is less than both the City code requirement and the estimated peak weekday and weekend parking demand. Parking demand for the Project is expected to be highest on weekends. To minimize potential parking impacts, Fehr & Peers recommends the following:

- Increase proposed off-street parking supply by 54 spaces to meet the estimated peak parking demand
- Implement valet parking during peak parking demand periods
- Develop and implement a Transportation Demand Management (TDM) Plan for the Project to reduce the parking demand by incentivizing people to access the Project site via walking, bicycling or transit

Please contact Francisco Martin if you have any questions or comments on the information presented in this memorandum.

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Newark Gateway Mixed-Use Development

Transportation Demand Management (TDM) Plan

Prepared for:

Cord Associates

April 7, 2017

Hexagon Transportation Consultants, Inc.
Hexagon Office: 4 North Second Street, Suite 400, San Jose, CA 95113
Hexagon Job Number: 17KK03
Phone: 408.971.6100
Document Name: Newark Gateway Hotel TDM_2017-4-7.docx

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1. Introduction

Hexagon Transportation Consultants, Inc. has prepared this transportation demand management (TDM) plan for the proposed mixed-use development at the southwest corner of the Willow Street and Enterprise Drive intersection in Newark, California (see Figure 1). The project proposes to construct an 8,300 square-foot grocery store and a 146-room hotel on a 1.38-acre vacant site. Figure 2 shows the proposed site plan. Access to the project site will be provided via driveways along Willow Street and Enterprise Drive.

The project proposes to provide 118 parking spaces when 181 spaces are required in the Newark Code or Ordinances. For this reason, a TDM plan is required to identify TDM measures that can be implemented by the project to reduce parking demand.

This TDM plan includes free shuttle services, an on-site car-share program, an on-site bicycle share program, a transit subsidy program for employees, financial incentives for employees who bike or walk to work, and an on-site TDM coordinator.

Scope of TDM Study

Transportation demand management (TDM) is a combination of services, incentives, facilities, and actions that reduce single-occupant vehicle (SOV) trips to help relieve traffic congestion, parking demand, and air pollution problems. The purpose of TDM is to (1) reduce the amount of traffic generated by new development; (2) promote more efficient utilization of existing transportation facilities and ensure that new development is designed to maximize the potential for alternative transportation usage; (3) reduce the parking demand generated by new development and allow for a reduction in parking supply; and (4) establish an ongoing monitoring and enforcement program to guarantee the desired trip and parking reductions are achieved.

The main goal of the proposed TDM plan for the mixed-use project is to achieve a reduction in parking demand through a combination of appropriate measures to promote alternative forms of transportation. As outlined in Section 17.76.070 of the Newark Code of Ordinances, the planning commission may grant a variance to the required number of off-street parking spaces for a project if (1) the project generated traffic will not require strict or literal interpretation and enforcement of off-street parking requirements; (2) the parking reduction will not result in parking on public streets that would adversely affect the traffic flow on surrounding streets; and (3) the parking reduction will not create a safety hazard.

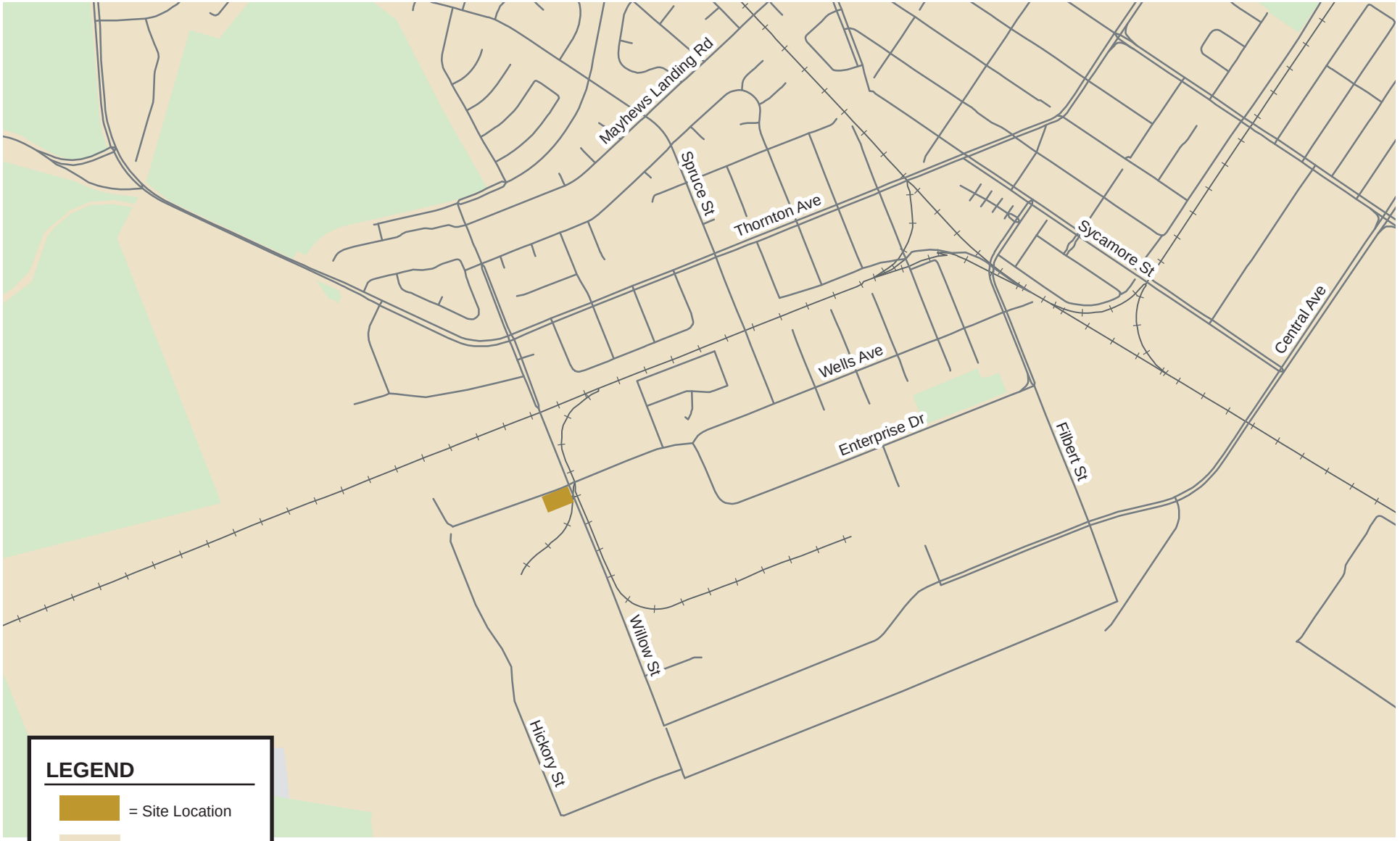

Figure 1
Project Location

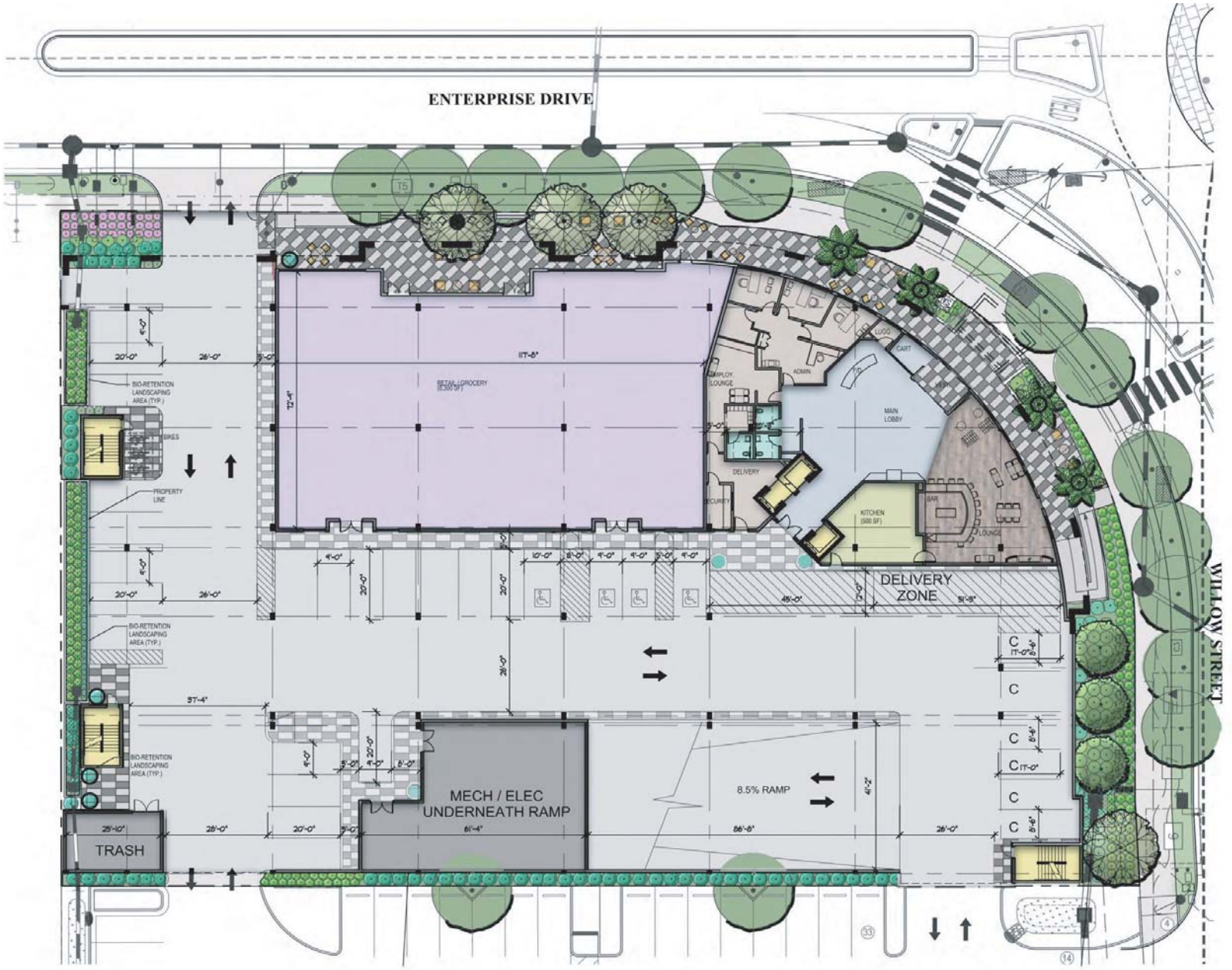

Figure 2
Proposed Site Plan

NORTH
Not to Scale

2. Existing Transportation Facilities and Services

Transportation facilities and services that support sustainable modes of transportation include commuter rail, buses and shuttle buses, bicycle facilities, and pedestrian facilities. This chapter describes existing facilities and services near the project site that will support the TDM measures contained in this plan.

Transit Services

AC Transit Bus Service

Existing transit service in Newark is provided by Alameda-Contra Costa (AC) Transit. There is currently no scheduled bus route serving the project area. Instead, AC Transit provides a Flex bus service for customers in Newark to get to and from the Union City BART station upon request. Pick up and drop off locations are at selected bus stops within the service zone, including the Union City BART station. Newark Flex departs the Union City BART station every hour at the :10 and the :40 minute mark from 6:00 AM to 8:00 PM between Monday and Friday. The nearest bus stops to the project are located at the Enterprise Drive and Wells Avenue intersection, about 1,300 feet east of the project site.

Planned Transit Improvements

The project site is located in the Dumbarton Transit Oriented Development (TOD) Specific Plan area. A future Dumbarton transit station is to be located on Enterprise Drive near the project site. The transit station would provide commuter rail service from the Union City BART station across the Dumbarton rail bridge to Menlo Park, and connect riders in east bay cities to Caltrain on the Peninsula. There is no identified schedule for the completion of the commuter rail service.

Pedestrian Facilities

Pedestrian facilities consist of sidewalks and crosswalks. Because most of the land in the Specific Plan area has not been developed, there are minimal pedestrian connections and amenities in the Specific Plan area. Sidewalks exist along the north side of Enterprise Drive west of Willow Street. There is no sidewalk on Willow Street or Enterprise Drive along the project frontage. There is no crosswalk at the Willow Street/Enterprise Drive intersection.

The Specific Plan area, when built out, would include a mix of residential, office, retail, public/quasi-public, and park and open space uses developed in close proximity to planned regional public transit facilities. Under the plan, streets in the area would accommodate all users including drivers, bicyclists, pedestrians, persons with disabilities, and transit users. Therefore, it is expected that as the area is

developed, pedestrian facilities, including sidewalks and crosswalks, would be installed along the existing streets (Enterprise Drive, Hickory Street, Central Avenue, Willow Street) and new neighborhood streets within the Specific Plan area.

Bicycle Facilities

Bicycle facilities include bike paths (Class I), bike lanes (Class II) and bike routes (Class III). Bike paths are paved multi-use trails that are separated from roadways and are shared between pedestrians and bicyclists. Bike lanes are lanes on roadways designated for use by bicycles with special lane markings, pavement legends, and signage. Bike routes are existing streets that accommodate bicycles but are not separate from the existing travel lanes. Routes are typically designated only with signs.

In the project vicinity, bike lanes exist along Thornton Avenue between the northern City limit and Hickory Street. Bike routes exist along Thornton Avenue between Hickory Street and Willow Street, along Willow Street from Cedar Boulevard to Central Avenue, and along Enterprise Drive between Willow Street and Filbert Street (see Figure 3)

According to the 2017 Draft Pedestrian and Bicycle Master Plan, bike lanes are proposed on Thornton Avenue, Enterprise Drive, and Willow Street in the project vicinity.

Figure 3
Existing and Proposed Bicycle Facilities

3. Parking

The project would construct an 8,300 square-foot grocery store and a 146-room hotel on a 1.38-acre vacant site. The project proposes to provide 118 parking spaces shared between the retail and hotel uses.

City of Newark Required Parking

Vehicular parking requirements for the project are specified in the City Code Section 17.37.100 for the retail use and in the. City Code Section 17.60.090 for the hotel use. Table 1 summarizes the required parking spaces for each individual use. The project is required to provide a total of 181 vehicular parking spaces, with each proposed use treated separately.

Table 1
Required Parking Spaces

Land Use	Size	Parking Requirement	Required Spaces
Grocery Store	8,300 Sq. ft.	3 spaces per 1,000 sq. f.t[1]	25
Hotel	146 rooms	1 space per room or each two beds, whichever is greater, plus	146
		1 space per employee[2]	10
Total Required Spaces with each use treated separately			**181**

Notes:
1. City Code Section 17.37.100.
2. City Code Section 17.60.090. Assumes average of two beds per room and 10 employees.

Project Proposed Parking

As stated above, the project is required to provide a total of 181 vehicle parking spaces based on the City's parking requirements. The project proposes to provide 118 parking spaces on site, which is less than the City's parking requirement. The project requests a reduction in the parking requirement for the retail and hotel uses based on shared parking and based on the implementation of a TDM plan.

A shared parking analysis was performed to evaluate the overall parking demand with parking spaces shared among retail and hotel uses without any TDM reductions (see Table 2). The parking demands for the retail and hotel uses throughout the day were calculated based on the time-of-day trend data published in the Urban Land Institute (ULI) Shared Parking report. The results show that, without a TDM reduction, the maximum parking demand would be 154 spaces, which would occur at 11 PM.

Table 2
Shared Parking without a TDM Reduction

Hour of Day	Retail		Hotel Guest		Hotel Employee		Total	
	Wkdy	Wknd	Wkdy	Wknd	Wkdy	Wknd	Wkdy	Wknd
6 a.m.	1	1	139	139	1	1	140	140
7 a.m.	2	2	131	131	3	3	136	136
8 a.m.	5	4	117	117	9	9	131	130
9 a.m.	11	10	102	102	9	9	122	121
10 a.m.	17	14	88	88	10	10	115	112
11 a.m.	22	18	88	88	10	10	119	115
Noon	24	21	80	80	10	10	114	111
1 p.m.	25	23	80	80	10	10	115	113
2 p.m.	24	25	88	88	10	10	122	123
3 p.m.	23	25	88	88	10	10	121	123
4 p.m.	23	24	95	95	9	9	127	128
5 p.m.	24	23	102	102	7	8	133	132
6 p.m.	24	20	110	110	4	6	137	136
7 p.m.	24	19	110	110	2	6	135	134
8 p.m.	21	17	117	117	2	6	139	139
9 p.m.	14	13	124	124	2	6	140	143
10 p.m.	8	9	139	139	2	5	149	152
11 p.m.	3	4	146	146	1	5	**150**	**154**
Midnight	0	0	146	146	1	3	147	149
	Parking Demand by Each Use						Max. Demand	
	25	**25**	**146**	**146**	**10**	**10**	**150**	**154**

Time of Day parking rates based on Urban Land Institute (ULI) *Shared Parking, 2nd Edition, 2005*.

The shared parking analysis indicates that the peak parking demand would happen from 9 PM to 6 AM, when the parking demand for the retail use and hotel employees would be extremely low. The parking demand for hotel guests would peak during this midnight period. Therefore, the TDM plan focus on the hotel guests. The TDM plan can also apply to the hotel employees. However, because the parking demand for the hotel employees peaks during the midday, the parking reduction from the hotel employees would not reduce the peak parking demand at night. In order to reduce the parking demand to match the provision of 118 parking spaces on site, it will be necessary for the TDM Plan to reduce the hotel guest parking by about 25 percent (see Table 3).

Table 3
Shared Parking with a TDM Reduction

Hour of Day	Retail		Hotel Guest[1]		Hotel Employee		Total	
	Wkdy	Wknd	Wkdy	Wknd	Wkdy	Wknd	Wkdy	Wknd
6 a.m.	1	1	105	105	1	1	106	106
7 a.m.	2	2	99	99	3	3	104	104
8 a.m.	5	4	88	88	9	9	102	101
9 a.m.	11	10	77	77	9	9	97	96
10 a.m.	17	14	66	66	10	10	93	90
11 a.m.	22	18	66	66	10	10	98	94
Noon	24	21	61	61	10	10	95	92
1 p.m.	25	23	61	61	10	10	96	94
2 p.m.	24	25	66	66	10	10	100	101
3 p.m.	23	25	66	66	10	10	99	101
4 p.m.	23	24	72	72	9	9	104	105
5 p.m.	24	23	77	77	7	8	108	107
6 p.m.	24	20	83	83	4	6	110	109
7 p.m.	24	19	83	83	2	6	108	107
8 p.m.	21	17	88	88	2	6	111	110
9 p.m.	14	13	94	94	2	6	109	112
10 p.m.	8	9	105	105	2	5	**115**	**118**
11 p.m.	3	4	110	110	1	5	114	118
Midnight	0	0	110	110	1	3	111	113
	Parking Demand by Each Use						Max. Demand	
	25	**25**	**110**	**110**	**10**	**10**	**115**	**118**

Time of Day parking rates based on Urban Land Institute (ULI) *Shared Parking, 2nd Edition, 2005*.
1. A 25% TDM reduction was applied to the required hotel guest parking spaces, which results in a reduction of 36 spaces.

4. TDM Plan

This chapter describes the TDM plan for the project, which includes TDM measures developed to meet the 25 percent parking reduction for hotel guests and an ongoing monitoring and enforcement program to guarantee the desired parking reduction is achieved.

Proposed TDM Measures

The TDM measures to be implemented for the proposed hotel include design features, programs, and services that promote sustainable modes of transportation and reduce the vehicle traffic and parking demand that would be generated by the project. Such measures encourage use of transit and shuttle services, biking, and walking. For the proposed project, these include the following:

Loading Zone

The project will include a 96-foot loading/delivery zone in the parking garage next to the hotel entrance. This design would facilitate the use of taxis and rideshare services (e.g., Uber, Lyft, and Wingz) for hotel guests to access the site without cars. With the option of accessing the hotel through these ridesharing services and without a car, the need for a parking space would be reduced.

Bicycle Parking

The Dumbarton TOD Specific Plan includes policies that encourage the provision of bicycle parking spaces. Policy C-13 recommends bicycle parking as part of a transportation demand management program while Policy C-28 encourages the adoption of minimum bicycle parking requirements for both residential and commercial projects. The Specific Plan EIR also recommends secure bicycle parking of at least one space per 20 vehicle spaces within retail components of the Specific Plan area. According to SP policies, the site should provide a minimum of six bicycle parking spaces, based on the 118 provide vehicle parking spaces and one bicycle space per 20 vehicle spaces. The project proposes 10 bicycle parking spaces for retail employees, hotel employees, and hotel guests, which is adequate for the site.

Free Shuttle Services for Guests and Employees

The proposed hotel will offer free shuttles to guests and employees. The shuttle destinations would be determined based on guest preferences. It is initially thought that shuttles would serve Newark, Union City, northern Fremont, and the San Jose International Airport. Since the proposed project is a hotel, a portion of the guests would likely be traveling through the airport. With the option of using the free

shuttle, the need for a car and a parking space would be reduced. San Jose International Airport is approximately 20 miles driving distance from the proposed project.

The free shuttles will also be offered to the hotel employees between the hotel and major bus stops/transit stations within the service area.

On-Site Car-Share Program for Guests

The proposed hotel will provide on-site access to a car-sharing service such as Zipcars for hotel guests. Vehicles will be located on-site allowing hotel guests to come and go at their convenience. Vehicles can be reserved prior to visiting the hotel.

On-Site Bicycle Share Program for Guests

The proposed hotel will provide on-site bicycles for hotel guests to use. The bicycles will be stored in a secured common space that can be checked out by guests. Inclusion of a bike share program would likely reduce the need for guests to use a car.

Employee Subsidized or Free Transit Passes

The proposed hotel will offer subsides or free transit passes (AC Transit, ACE, or BART) for their employees. There are a number of ways to structure a financial incentive for transit. The hotel can cover the total monthly cost of transit for those employees who take transit through a pre-tax benefit, or purchase transit passes themselves and distribute them to employees.

Employee Financial Incentives for Biking or Walking to Work

The project will provide the hotel employees with financial incentives to utilize carpooling, biking, or walking when commuting to and from the project site. Offering financial incentives can have a measurable impact on encouraging employees to try modes other than driving alone to work. Daily, weekly, or monthly financial incentives could be offered to those employees who use a bike, carpooling, or walking as their primary mode of travel to work.

On-Site TDM Coordinator and Services

The proposed hotel will provide an on-site TDM coordinator, who will be responsible for implementing and managing the TDM plan. The TDM coordinator will be a point of contact for guests and employees should TDM-related questions arise, and will be responsible for ensuring that guests are aware of all transportation options and how to fully utilize the TDM plan. The TDM coordinator will provide the following services and functions to ensure the TDM plan runs smoothly:

- Provide guests information at the time of check-in. The process will include information about public transit services, ridesharing services (e.g., Uber, Lyft, and Wingz), bicycle maps, the on-site bicycle-share program, the on-site car-sharing program, and the guest shuttle.
- Manage the on-site bicycle-share program to ensure the bicycles remain in good condition.
- Manage the on-site car-share program to ensure the vehicles are used in the manner intended by the car-sharing service.
- Provide information to employees about subsidized transit passes and the financial incentive programs for employees who bike or walk to work.
- Conduct parking surveys annually to track actual parking demand and determine whether additional TDM measures, or another parking solution, is needed.

TDM Implementation and Monitoring

As previously stated, the primary purpose of the TDM plan is to reduce the parking demand from the hotel guests by 25 percent. Monitoring will be necessary to ensure that the TDM measures are effective and continue to be successfully implemented.

The future hotel operator will be responsible for ensuring that the TDM measures are implemented.

The TDM plan will need to be re-evaluated annually for the life of the project. An annual parking count and TDM report should be prepared by an independent consultant and reported to the City. The report will include findings of the parking counts and effectiveness of the TDM measures offered to guests and employees. If it is determined that the 25 percent parking reduction is not being achieved (i.e., the on-site parking garage reaches full capacity), additional TDM measures would need to be introduced to ensure that the parking demand is being addressed by the project without the burden being placed on outside entities.

Conclusions

The TDM measures to be implemented by the project include planning and design measures related to the attributes of the site location, the site design, and on-site amenities. Such measures encourage use of transit and shuttle services, biking, and walking. The TDM plan includes the following measures:

- Passenger loading zone
- Bicycle parking spaces
- Free shuttle services for guests and employees
- On-site car share program for guests
- On-site bicycle share program for guests
- Employee subsidized or free transit passes
- Employee financial incentives for bike or walk to work
- On-site TDM coordinator and services