

**ADDENDUM TO THE
PROGRAM ENVIRONMENTAL IMPACT REPORT
FOR THE
DUMBARTON TRANSIT ORIENTED DEVELOPMENT PROJECT**

FMC Parcel C 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
Folsom, CA 95630**

August 2018

EXHIBIT A

**ADDENDUM TO THE
PROGRAM ENVIRONMENTAL IMPACT REPORT FOR THE
DUMBARTON TRANSIT ORIENTED 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). The Parcel C Project Owner, LLC (the current project applicant) proposed minor changes to the approved 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 PEIR.

This Addendum has been prepared to provide information regarding: (1) the history of the project; (2) the proposed project; (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 project.

B. BACKGROUND

The site for the FMC Parcel C Project (proposed project) is a 17.4-acre lot within the Dumbarton TOD Specific Plan area in the City of Newark. The proposed project would be located within the City of Newark in southwestern Alameda County, west of the intersection of Hickory Street and Enterprise Drive, on portions of Assessor's Parcel Numbers (APN) 537-852-1-2; 537-852-2-7; and 537-852-2-8.

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).

C. OVERVIEW OF THE PROPOSED PROJECT

The project applicant is proposing to construct medium to medium-high density residential units in three Planning Areas. The total number of proposed housing units is 199 on 12.2 acres of the site to achieve an overall density of just over 16 housing units per acre. The applicant proposes to construct 73 single-family residential units within Planning Area 1, 75 single-family, alley loaded residential units within Planning Area 2, and 51 single-family, alley loaded residential units within Planning Area 3. Net density would range between approximately 15 and 18 dwelling units per acre.

The proposed project would avoid and permanently preserve all of the tidal wetlands on-site in a 2.74-acre open space area. The project will also provide a trail that is eligible to be part of the regional San Francisco Bay Trail, a bicycle and pedestrian trail that will eventually allow continuous travel around the shoreline of San Francisco Bay.

Additional changes under the current entitlement application include a rezone, planned development, and tract map. The City of Newark zoning designation for the project site is Business and Technology Park (BTP), which is inconsistent with the proposed land uses for the FMC Parcel C Project. Therefore, an amendment to the Zoning Ordinance to reflect the proposed land use designations for all APNs is required. The medium and medium-high density residential land use proposed for project site differs from the high density residential land use proposed in the 2013 Updated General Plan. However, City approval of the project would resolve the designation inconsistency. The medium-high density residential land use proposed for APN 537-852-2-7 differs from the land use proposed in the Dumbarton TOD Specific Plan. However, 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 would 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 PEIR 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 PEIR:

- 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 EIR or negative declaration under Section 15162.

The proposed project is substantially similar to the project evaluated in the adopted 2011 PEIR. Similar to the approved project, the proposed project involves constructing medium to medium-high density residential with approximately 2.97 acres of parks and open spaces areas on the project site which is substantially similar to the development area analyzed in the 2011 PEIR, which involved constructing medium-high density residential and parks and recreational open space. 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 2011 PEIR, 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 EIR or negative declaration are present, and only minor technical changes or additions are necessary to update the previously adopted 2011 PEIR; 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 Dumbarton TOD PEIR. The following project-specific technical studies were prepared and are included as appendices to the IS:

- Air Quality and Greenhouse Gas Emissions Technical Report for FMC Parcel C
- Biological Resources Technical Report for FMC Parcel C
- Section 106 Cultural Resources Assessment for FMC Parcel C
- Preliminary Geotechnical Investigation, Parcel C – FMC
- Acoustical Technical Report for FMC Parcel C
- Trip Generation Evaluation and Parking Analysis of the FMC Parcel C Project

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

The 2011 PEIR found that the approved project could have potentially significant impacts on air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology, drainage, and water quality, noise, public services and utilities, recreation, and traffic. For the proposed FMC Parcel C project, mitigation measures

were adopted from the 2011 Dumbarton TOD Specific Plan PEIR (Attachment A of the IS) to reduce the impacts on air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, public services, recreation, transportation and traffic, and utilities and service systems. Project-specific measures for impacts to air quality and noise were developed in accordance with mitigation measures adopted from the 2011 PEIR.

The proposed project will not introduce new or more significant impacts that were not previously disclosed in the Specific Plan PEIR. Based on the conclusions of the IS, an Addendum to the approved PEIR 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 project that was not previously analyzed in the PEIR.

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

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

No Impact: The proposed project would not result in an impact.

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 FMC Parcel C project.

INITIAL STUDY AND ENVIRONMENTAL EVALUATION

FMC Parcel C 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
Folsom, CA 95630

August 2018

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Appendix B	Mitigation Monitoring and Reporting Program for the FMC Parcel C Project
Appendix C	Air Quality and Greenhouse Gas Emissions Technical Report
Appendix D	Biological Resources Technical Report
Appendix E	Section 106 Cultural Resources Assessment
Appendix F	Preliminary Geotechnical Investigation
Appendix G	California Regional Water Quality Control Board San Francisco Bay Region Order No. R2-2015-0017
Appendix H	Acoustical Technical Report
Appendix I	Trip Generation Evaluation and Parking Analysis

INITIAL STUDY AND ENVIRONMENTAL EVALUATION

Project Title:	FMC Parcel C Project
Entitlement Requested:	Rezone Planned Development Tract Map
Lead Agency Name and Address:	City of Newark Community Development Department 37101 Newark Boulevard, Newark, CA 94560
Contact Person and Phone Number:	Terrence Grindall (510) 578-4206
Project Sponsor's Name and Address:	The Parcel C Project Owner, LLC Attn: Glenn Brown 500 La Gonda Way, Suite 102 Danville, CA 94526 (925) 984-7137
General Plan Designation (2013 Plan): High-density residential (HDR), Parks and Recreational Facilities, Community Commercial	Existing Zoning: Business and Technology Park (BTP)

1. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

This Initial Study addresses the proposed FMC Parcel C 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). Consistent with Public Resources Code (PRC) §21083.3 and State California Environmental Quality Act (CEQA) Guidelines §15152, this Initial Study focuses on any effects on the environment that are specific to the proposed project, or to the parcels 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 for which substantial new information shows that identified effects would be more significant than described in the PEIR.

This Initial Study 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 FMC Parcel C Project site lies within the Dumbarton TOD (Transit Oriented Development) Specific Plan Area which encompasses approximately 205 acres at the western edge of the City of Newark, CA. The TOD is generally bounded by a drainage ditch adjacent to San Mateo Transit Authority Railroad corridor (formerly Union Pacific and Southern Pacific Railroad tracks) to the north, on-going salt production and harvesting facilities to the west, a residential development under construction to the south, and a vacant former industrial property to the east. A Final PEIR (State Clearinghouse No. 2010042012) was prepared and certified, and the Dumbarton TOD Specific Plan was adopted by the City in 2011.

The Dumbarton TOD Specific Plan identifies the two parcels comprising most of the FMC Parcel C Project property as medium/high density residential. The proposed project would be located on portions of Assessor's Parcel Numbers (APN) 537-852-1-2; 537-852-2-7; and 537-852-2-8. The maximum number of units allowed on APN 537-852-1-2 is 246, and the maximum number of units allowed on APN 537-852-2-8 is 173. No residential units were allocated to APN 537-852-2-7 in the Specific Plan because it was designated as Park/Commercial space. The area designated as Park will be shifted eastward and a portion of the existing Park/Commercial parcel will be included in this project through a Lot Line Adjustment because it has recently been remediated for residential use.

Several technical studies used in preparation of the adopted PEIR have been incorporated into the analysis set forth in this Initial Study, as applicable, and as described further in Section 5, *Previous Relevant Environmental Analysis*. Additionally, the following technical reports or surveys were used in preparation of this Initial Study and are incorporated by reference:

- *A.L.T.A. / N.S.P.S. Land Title Survey FMC Property*, June 1, prepared by Carlson, Barbee & Gibson, Inc. (CBG).
- *Site Plan FMC Parcel C*, December 4, 2017, prepared by CBG.

- *Preliminary Stormwater Management Plan, FMC Parcel C*, November 10, 2017, prepared by CBG.
- *Trip Generation Evaluation and Parking Analysis of the FMC Parcel C Project*, November 16, 2017, prepared by Fehr & Peers, Transportation Consultants.
- *Air Quality and Greenhouse Gas Emissions Technical Report for the FMC Parcel C Project*, December 2017, prepared by HELIX Environmental Planning, Inc. (HELIX).
- *Acoustical Technical Report for the FMC Parcel C Project*, December 2017, prepared by HELIX.
- *Biological Resources Evaluation for the FMC Parcel C Project*, November 13, 2017, prepared by HELIX.
- *Section 106 Cultural Resource Assessment for the FMC Parcel C Project*, November 17, 2017, prepared by HELIX.
- *Preliminary Remedial Geotechnical Investigation Parcel C- FMC Enterprise at Hickory Street, Newark, California*, September 15, 2017, prepared by Berlogar Stevens & Associates (BSA).
- *File No. 2013-00152S Preliminary Jurisdictional Determination FMC Enterprise Development Area*, July 17, 2017, issued by Department of the Army, U.S. Army Corps of Engineers, Regulatory Division.
- Adoption of Site Cleanup Requirements and Recession of Order No. R2-2002-0060 for: FMC Corporation for the property located at: 8787 Enterprise Drive, Newark, Alameda County, May 21, 2015, issued by California Regional Water Quality Control Board San Francisco Region.

3. DESCRIPTION OF PROJECT

PROJECT LOCATION

The proposed project site is located within the City of Newark in southwestern Alameda County, west of the intersection of Hickory Street and Enterprise Drive. The eastern portion of the proposed 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 (quad). The western portion of the site is unsectioned (unsurveyed). Refer to **Figure 1** for the project’s regional location and **Figure 2** for an aerial photograph of the project site that depicts the APNs of the associated properties.



PROJECT SETTING AND SURROUNDING LAND USES

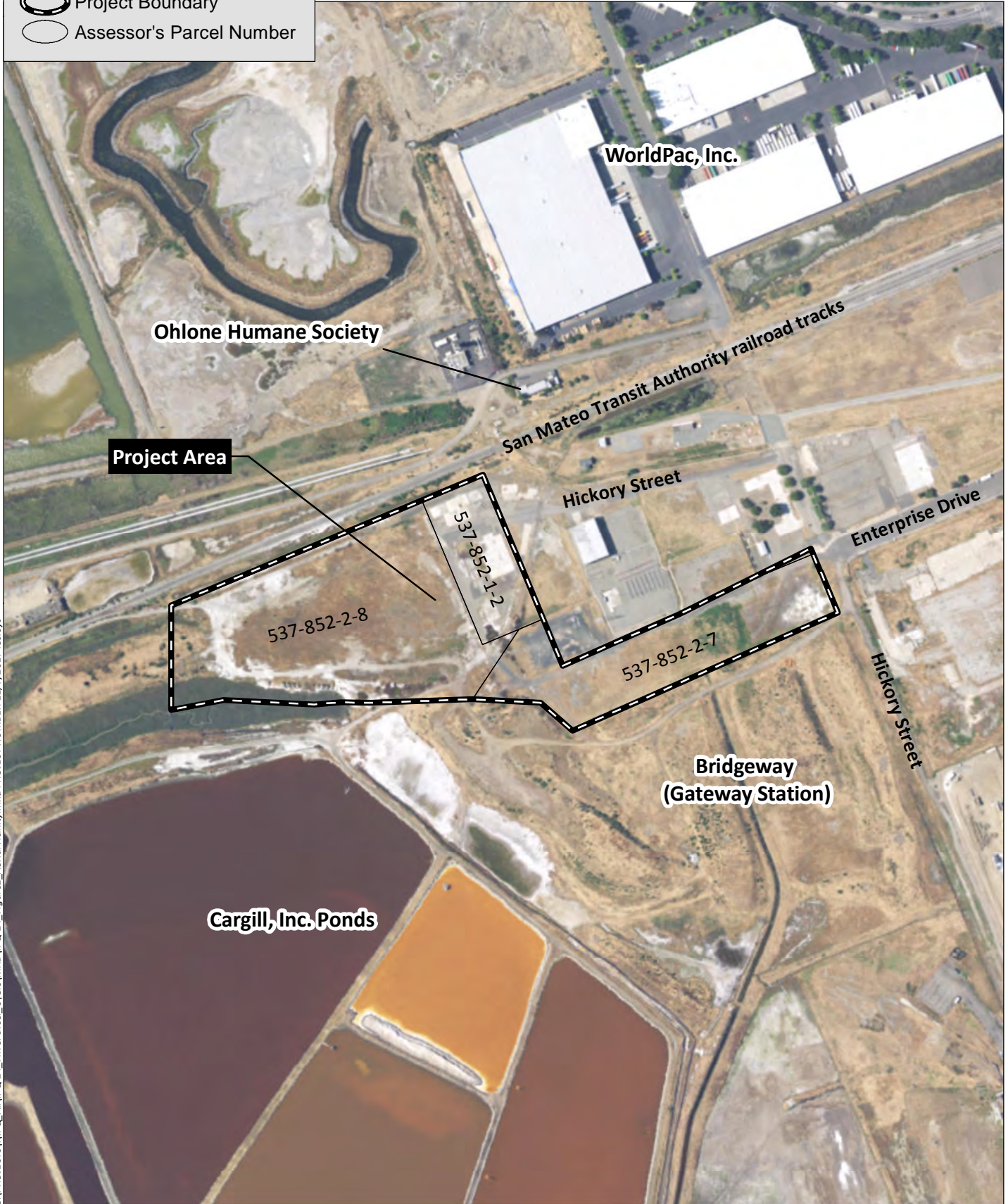
The project site is vacant following soil remediation that removed industrial contaminants that were remnants of prior uses. Industrial uses also occur adjacent to the project site, east of APN 537-852-1-2, and northeast of the San Mateo Transit Authority railroad corridor. To the south, a residential development is under construction within the Dumbarton TOD area. Salt evaporation ponds operated by Cargill, Inc. are located southwest of the project site, and part of the Don Edwards San Francisco Bay Wildlife Refuge is approximately 475 feet northwest of the project site, on the other side of the existing railroad tracks. The surrounding land uses are characterized by existing and former industrial parcels, residential development, and open space.

Terrain in the project site and surrounding area has been altered by industrial development, and most existing topographic relief is the result of fill for the railroad and industrial pads, excavation of artificial basins and channels, and diking of tidelands. The project site consists of leveled industrial pads and road and railroad embankments. Elevations on the project site range from 10 to 15 feet above mean sea level (amsl). Locally, a few natural hills remain along the historic bay margin north of Newark Slough, but terrain in the area surrounding the project site is overwhelmingly flat. The site is adjacent to a former barge canal that contains tidal salt marsh habitat. Precipitation is currently the only source of water at the project site.

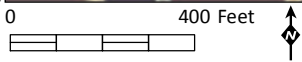
The site is barren except for some remnant cement pads and industrial sheds on APN 537-852-1-2. Two isolated ditches, that now contain seasonal wetlands, remain on APNs 537-852-1-2 and 537-852-2-7 and were avoided during the remediation. The site contains no other biological resources besides two tidal salt marshes at the western end of the site (APN 537-852-2-8) in the former barge canal that connects to San Francisco Bay. The western end of the site and those wetlands were also not affected by the remediation.

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 Project Boundary
 Assessor's Parcel Number



S:\PROJECTS\IPQ_Air\IPQ-24_FMCParcel_C\GIS\MXD\IPQ-24_Figure2_AerialVicinity.mxd PROJECT NUMBER 11/7/2017 lesleys



Source: Base Map Layers (SanGIS, 2016)
Map Date: November 2017

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PROPOSED PROJECT

The 17.4-acre FMC Parcel C Project site is proposed for medium to medium-high density residential units in three Planning Areas, which are discussed in more detail below. The total number of proposed housing units is 199 on 12.2 acres of the site to achieve an overall density of more than 16 housing units per acre. The proposed project would avoid and permanently preserve all of the tidal wetlands on-site in a 2.74-acre open space area. The project will also provide a trail that is eligible to be part of the regional San Francisco Bay Trail, a bicycle and pedestrian trail that will eventually allow continuous travel around the shoreline of San Francisco Bay. Additional proposed site improvements include: on- and off-street parking, parks and recreational areas, drive aisles, underground utilities, Low Impact Development (LID) drainage and water quality treatment structures, lighting, sidewalks, and landscaping. Refer to **Figure 3** for the site plan and **Figure 4** for the site design elements.

Planning Area 1

The applicant proposes to construct 73 single-family residential units on 4.86 acres in the western portion of the project site. Net density would be approximately 15 dwelling units per acre. Lots within this neighborhood would be 35 feet by 50 feet, and three floor plan options would be available for the units.

An approximately 13,330-square-foot (sf) water quality/bioretenion area is proposed in the southwest corner of Planning Area 1 and is depicted as Parcel A in Figures 3 and 4. Two open space areas are proposed in Planning Area 1; Parcel B is an approximately 2.74-acre open space and wetland preserve along the western boundary of the project site, and Parcel C is an approximately 1,369-sf open space area in the western portion of Planning Area 1, adjacent to Lots 66 and 67. Additionally, a 20-foot-wide recreational trail corridor borders the northern, western, and southern boundaries of Planning Area 1 and is anticipated to become part of the San Francisco Bay Trail.

Planning Area 2

The applicant proposes to construct 75 single-family, alley loaded residential units on 4.57 acres in the northeast corner of the project site. Net density would be approximately 16 dwelling units per acre. Four floor plan options are available for the units in this medium density neighborhood.

An approximately 1,865-sf open space area is proposed in Planning Area 2. The open space area is located at the end of 'B' Street and is depicted as Parcel D in Figures 3 and 4. The open space

area is adjacent to the 20-foot-wide recreational trail corridor that borders the northern boundary of Planning Area 2.

Planning Area 3

The applicant proposes to construct 51 single-family, alley-loaded residential units on 2.77 acres in the southeast portion of the project site. Net density would be approximately 18 dwelling units per acre. Four floor plan options are available for the units.

An approximately 6,710-sf open space area is proposed in Planning Area 3 and is depicted as Parcel E in Figures 3 and 4. The proposed open space area would be located in the western half of the neighborhood and would be adjacent to the Tract 8099 – Bridgeway Lennar project, south of the FMC Parcel C project site.

Circulation

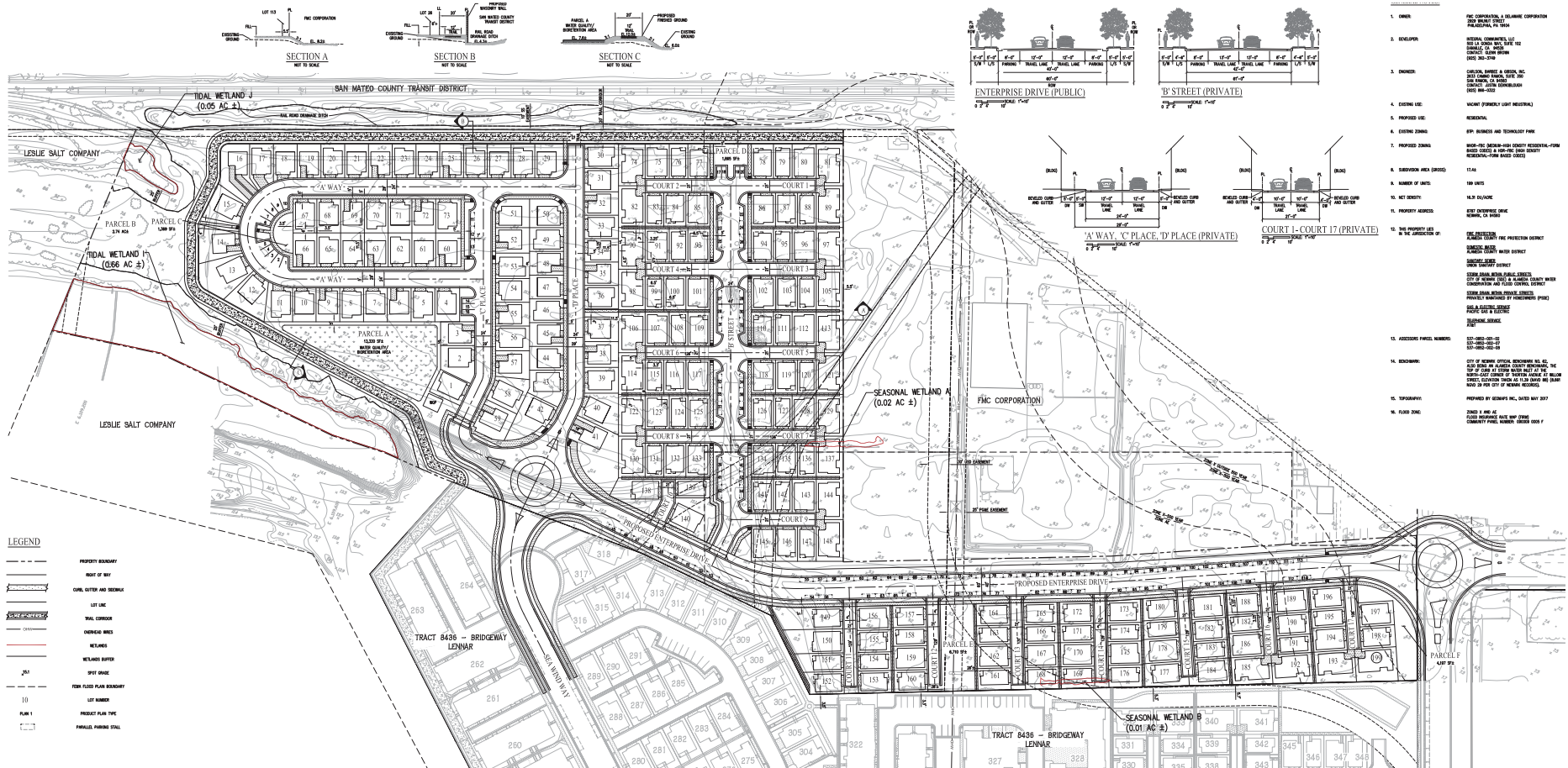
Vehicular Access/Street Design

Each neighborhood within the residential development would be accessible directly from Enterprise Drive. Planning Area 1 would be oriented along a few internal roadways serving the neighborhood, with two access points from Enterprise Drive. Planning Area 2 includes a north/south oriented roadway off Enterprise Drive that would function as the main arterial through the neighborhood with the nine courts branching off the main access road and a tenth court off Enterprise Drive. Planning Area 3 is accessible via seven courts that branch off Enterprise Drive. No direct vehicular access will be provided between the three residential neighborhoods. Seawind Way, a local street, would provide connection to Bridgeway, the Lennar neighborhood to the south.

Parking

The City requires that 2.5 parking spaces per unit be provided for single-family residential developments. The proposed project would construct 199 single-family residential units, requiring 498 parking spaces. A total of 512 parking spaces would be provided for the residential development. Of the 512 parking spaces provided, 398 parking spaces would be off-street garage parking and 114 parking spaces would be on-street surface parking.

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- OWNER: FMC CORPORATION, A DELAWARE CORPORATION
200 MARKET STREET
PHILADELPHIA, PA 19106
- DEVELOPER: NATIONAL COMMERCIAL REAL ESTATE INVESTMENT TRUST
1000 MARKET STREET, SUITE 100
PHILADELPHIA, PA 19106
CONTACT: LAMAR BROWN
PH: 215-561-2100
- DESIGNER: CARLOS BARBEE & GIBSON, INC.
300 FARMERS BUILDING, SUITE 200
SAN ANTONIO, TX 78202
CONTACT: CARLOS BARBEE
PH: 214-343-0000
- EXISTING USE: VACANT (PARKING LOT/RECREATION)
- PROPOSED USE: RESIDENTIAL
- EXISTING ZONING: RFP (RESIDENTIAL FUTURE PROGRESSIVE)
- PROPOSED ZONING: RM-100 (RESIDENTIAL MEDIUM-DENSITY HOUSING - FUTURE PROGRESSIVE - FUTURE ZONING)
- EXISTING AREA (SQ FT): 17.4A
- NUMBER OF UNITS: 100 UNITS
- NET DENSITY: 5.74 UNITS/AC
- EXISTING IMPROVEMENTS: NONE, OR IN PART
- THE PROPERTY IS: THE PROPOSED PROJECT
- ASSESSOR'S PARCEL NUMBER: 500-000-000-00
500-000-000-00
500-000-000-00
- EXEMPTION: NONE
- TERRAIN: PROPOSED BY GEORGE W. HALL, DATED MAY 2017
- FLOOD ZONE: ZONE 2 (0.01 AC FLOOD HAZARD AREA AND 0.00 AC EXISTING FLOOD HAZARD AREA)

- LEGEND**
- PROPERTY BOUNDARY
 - BOUNDARY OF LOT
 - CONVEYANCE AND DEEDS
 - LOT LINE
 - TRAIL CORRIDOR
 - OVERHEAD WIRE
 - WETLAND
 - WETLAND BUFFER
 - SPOT GRADE
 - PERM FLOOD PLAN BOUNDARY
 - LOT NUMBER
 - PLAN 1
 - PROJECT PLAN TYPE
 - PRIVATE PARKING STALL

Source: Carlson, Barbee & Gibson, Inc. 2018

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Site Summary

Unit Count: 199
 Net site Area: 12.2 AC
 Net density: 16.31 DU/AC

Plan Type Summary

Plan Type	S.F.	Bed	Bath	Garage	Total Units	% of total	Total Buildable SF
PA 1 - 35'x50' UA FRONT SFD							
Net Site Area:	4.86 AC						
Density:	15.02 DU/AC						
Plan 1	2,290	3	2.5	Standard	23	32%	52,670
Plan 2	2,355	4	3.5	Standard	25	34%	58,875
Plan 3	2,374	3	2.5	Standard	25	34%	59,350
					73	100%	170,895
PA 2 - UA CLUSTER							
Net Site Area:	4.57 AC						
Density:	16.41 DU/AC						
Plan 1	1,788	3	3	Standard	19	25%	33,972
Plan 2	2,182	3	3.5	Standard	19	25%	41,458
Plan 3	2,504	4	3.5	Standard	19	25%	47,576
Plan 4	2,699	4	3.5	Split	18	24%	48,582
					75	100%	171,588
PA 3 - UA CLUSTER							
Net Site Area:	2.77 AC						
Density:	18.41 DU/AC						
Plan 1	1,788	3	3	Standard	16	31%	28,608
Plan 2	2,182	3	3.5	Standard	17	33%	37,094
Plan 3	2,504	4	3.5	Standard	14	27%	35,056
Plan 4	2,699	4	3.5	Split	4	8%	10,796
					51	100%	111,554



Parking Summary

Parking Required:	No of units	Spaces required
Multifamily/SFD	199	498
TOTAL SPACES REQUIRED: 498		
Parking Provided:		Spaces provided
Multifamily/SFD garage		398
Surface parking:		114
TOTAL PARKING PROVIDED: 512		

FMC "PARCEL C"
 NEWARK | CALIFORNIA
 INTEGRAL COMMUNITIES | 16-131
 DATE 10 | 11 | 17



Source: INTEGRAL Communities, Urban Arena 2017

S:\PROJECTS\IPQ_A\IPQ-24_FMCParcel_C\Site Design

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Pedestrian Circulation

Sidewalks would be provided along at least one side of each neighborhood street and would connect to sidewalks along Enterprise Drive. The residential development would include walkways and crosswalks that would connect to off-site sidewalks along Enterprise Drive and the adjacent Tract 8099 – Bridgeway Lennar project, south of the FMC Parcel C Project site. Sidewalks or “pedestrian paseos” leading to the proposed recreational trail would be provided throughout Planning Areas 1 and 2 for pedestrian circulation.

Fire Access

The minimum width available for driving or turning movements throughout the project site would be 21 feet. Courts 1 through 17 are all 21 feet wide. The neighborhood streets would be at least 24 feet wide, and Enterprise Drive is proposed to be 40 feet wide. The project roadway and neighborhood design would provide adequate turning radii and drive areas for fire trucks and other emergency vehicles.

Parks and Open Space

The project includes approximately 2.97 acres of parks and open space areas. Two open space areas are proposed in Planning Area 1; Parcel B is an approximately 2.74-acre open space and wetland preserve area along the western boundary of the project site, and Parcel C is an approximately 1,369-sf park in the western portion of Planning Area 1, adjacent to Lots 66 and 67. An approximately 1,865-sf park is proposed in Planning Area 2 at the end of ‘B’ Street, and an approximately 6,710-sf park is proposed in Planning Area 3. The park proposed in Planning Area 3 would be located in the western half of the neighborhood and would be adjacent to the Tract 8099 – Bridgeway Lennar project, south of the FMC Parcel C Project site.

Additionally, a 20-foot wide trail corridor, containing a 12-foot-wide multi-purpose trail, would extend along the northern boundary and southwestern edge of the site. The proposed recreational trail is anticipated to become part of the regional San Francisco Bay Trail. Refer to Figure 4 for the project design elements.

Infrastructure

Grading and Drainage

Approximately 14.66 acres of the 17.4-acre project site would be disturbed during site preparation and grading. In preparing the site for construction, approximately 40 linear feet (lf)

of retaining wall, 20,000 sf of concrete pad, 230 sf of concrete structures and 67,600 sf of asphalt remaining on APN 537-852-1-2 would be demolished and removed.

Any remaining debris and vegetation within the area to be disturbed would be cleared, and the site would be graded. Grading would include 43,600 cubic yards of over-excavation and recompaction of existing on-site soils, plus over-excavation of about 10,000 cubic yards of shallow bedrock.

Existing conditions at the project site include 87,830 sf of concrete and asphalt, and the project site is currently considered to be 84.4% pervious. As part of project implementation, a total of 389,387 sf (51.4% of the site) of impervious area would be constructed on the project site, consisting of building foundations and paved areas. Approximately 48.6% of the site (367,084 sf) would be pervious areas that include the bioretention basin, the natural self-treating areas and other green areas.

In accordance with City of Newark standards, minimum elevations for lots are 11.25 feet (NGVD 29). Accordingly, approximately 70,000 cubic yards of clean soil would be imported to attain these required elevations. Import fill should contain no deleterious matter and rocks greater than 4 inches in largest dimension, and have Plasticity Index (PI) less than 20. Import fill materials will be subject to the evaluation by the Geotechnical Engineer prior to their use. The properties of the soil with respect to corrosivity will also be evaluated.

The project site would be graded to achieve 0.5 to 2 percent slope. Manufactured slopes would be constructed with a maximum 2:1.

Portions of the proposed project site are within a mapped FEMA 100-year Special Flood Hazard Area, Zone AE with a base flood elevation of 11 feet (NAVD 88) (or 8.24 feet NGVD 29). The proposed project design conforms with associated applicable City requirements for construction in flood hazard areas, which require that: (1) residential structures should be elevated to or above the base flood elevation or to a minimum of six inches above the building pad which shall be at a minimum elevation of 11.25 feet (NGVD 29) and (2) the top of curb grades for new residential streets within the noted AE Zone exhibit a minimum elevation of 10 feet (NGVD 29). Based on the noted requirements and related project design conformance, the drainage/water quality analysis concludes that all developed portions of the project site would be elevated above the mapped 100-year floodplain.

A Low Impact Development (LID) storm drain system comprised of bio-retention areas, curbs and gutters along the roadways, and underground storm drainpipes would be installed as part of the proposed project storm water management plan (CBG 2017). The grading described above would delineate the site into one, 14.1-acre drainage management area (DMA) and 3.26 acres of self-treating area (STA).

Storm water in DMA 1 would be collected in storm drains and directed to a 13,330-sf bioretention basin located in the western portion of the site, just east of the open space preserve. The bioretention basin would feature plants, 18" of soil mix and gravel to filter storm water. With up to potentially 10-inches of ponding depth of the bioretention basin would provide a storage volume of 11,330 cf (CBG 2018).

An overflow outlet would drain to the open space west of the bioretention basin. The treated overflow would drain via an upland outflow structure and dissipation pile and then flow down the bank and into the barge canal.

Water Supply

The Alameda County Water District (ACWD) would supply water to the proposed project, as described in the Dumbarton TOD Specific Plan PEIR and the associated Water Supply Assessment. The main water service to the project site would be from a 10-inch main within the Enterprise Drive extension, connecting to the existing 12-inch ACWD main at the intersection of Hickory Street and Enterprise Drive and to the existing 10-inch stub in Seawind Way. Eight-inch diameter mains would then be installed through the rest of the project site with tie-ins to the 10-inch main within the Enterprise Drive extension. The ACWD indicated in the adopted Water Supply Assessment for the Dumbarton TOD Specific Plan PEIR that demand associated with the Specific Plan would be consistent with its planning assumptions and is included in its forecast and water supply planning (ACWD 2010).

Sanitary Sewer

The Union Sanitary District would provide sanitary sewer service to the project site. Eight-inch diameter sanitary sewer lines would be installed in the main and ancillary roadways throughout the project site, and wastewater would gravity-flow off-site to the east via a proposed 8- to 12-inch sanitary sewer line in Enterprise Drive. That sewer line would continue east and connect to an existing 36-inch gravity sewer main in Willow Street, which ultimately connects to additional existing gravity mains and flows to the Newark Pump Station near the northwest corner of the

Specific Plan area. Wastewater from the Newark Station is then pumped to the Alvarado Treatment Plant, approximately 5 miles to the north.

Landscaping

The project proposes a landscaping plan that includes ornamental trees, shrubs, and groundcover. The conceptual landscaping design concentrates plantings along perimeter of the project site, along proposed neighborhood roadways and around the parking areas, and in parks within the Planning Area neighborhoods. All landscaping will be appropriately irrigated and maintained. Refer to Figure 4 for the project design and landscape plan.

Construction and Phasing

Demolition and grading activities are anticipated to begin in September 2018 and are expected to last four months. Infrastructure construction activities including utilities and construction of the building pads are anticipated to begin in the Spring or Summer of 2019, and are expected to last for six months. Site development activities would immediately follow, with all development construction activities to be completed within approximately two years or by October 2021.

Environmental Remediation and Mitigation

The project site has a history of hazardous materials contamination associated with previous land uses. Soil remediation on the project site was conducted in accordance with an Interim Remedial Action Workplan that was approved by the San Francisco Regional Water Quality Control Board (RWQCB) on June 1, 2017. Remediation of soils on the project site was completed on November 3, 2017, and a request for Site Closure for soil contamination was submitted to the RWQCB in December 2017.

The RWQCB approved an Interim Remedial Action Workplan for the remediation of groundwater under the project site on August 23, 2017. FMC conducts operation and maintenance of the groundwater extraction and treatment system for the shallow zone groundwater and the deeper Newark Aquifer with subsequent treatment and discharge to the Union Sanitary District. The remediation of groundwater and shallow ground water monitoring are on-going. Environmental Resources Management (ERM) will prepare and expects to submit a Completion Report for groundwater issues in December 2018 with RWQCB approval expected in February 2019.

4. REQUIRED APPROVALS

A listing and brief description of the regulatory permits and approvals required to implement the FMC Parcel C Project is provided below. This environmental document is intended to address the environmental impacts associated with several of the following discretionary actions and approvals:

City of Newark

- Rezone
- Planned Development
- Tract Map
- Consideration 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 environmental document is adequate under CEQA and the State CEQA Guidelines.
- Approve Project: The Newark City Council will consider approval of the project and the entitlements described above.

Agencies

The project will fill waters of the U.S./state and will need to obtain approval under a Clean Water Act Section 404 Nationwide Permit issued by the U.S. Army Corps of Engineers. A Clean Water Act Section 401 Water Quality Certification will also need to be issued by the San Francisco Bay Regional Water Quality Control Board. The following agencies will be consulted regarding Clean Water Act permitting:

- U.S. Fish and Wildlife Service and California Department of Fish and Wildlife
- San Francisco Bay Regional Water Quality Control Board (RWQCB)

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 FMC Parcel C project is included. The Dumbarton TOD Specific Plan PEIR evaluated impacts as a result of the entire Dumbarton TOD, including the FMC Parcel C project.

Tiering

“Tiering” refers to the relationship between a program-level EIR (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 Dumbarton TOD Specific Plan PEIR which was prepared at the program-level under State CEQA Guidelines Section 15168. As a program-level EIR, the Specific Plan PEIR 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 2013 Draft Updated General Plan and the Dumbarton TOD are projects that are related to the proposed FMC Parcel C 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 EIRs for the City of Newark 2013 Draft Updated General Plan and the Dumbarton TOD Specific Plan are comprehensive documents. As the result of 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 FMC Parcel C Project

This IS evaluates whether the environmental effects of the currently proposed FMC Parcel C Project were adequately addressed in the Dumbarton TOD Specific Plan PEIR. For impacts that were adequately addressed, this IS provides a cross-reference to the relevant discussion in the PEIR. Impacts specific to the FMC Parcel C Project that were not fully addressed in the Dumbarton TOD Specific Plan PEIR are evaluated in detail in this document. This document also identifies whether changes have occurred to the project or circumstances since the PEIR was certified that require additional analysis in this document. Mitigation measures contained in the Dumbarton TOD Specific Plan Mitigation, Monitoring, and Reporting Program (MMRP) relevant to the project have been identified and summarized in this Initial Study, and the full MMRP is included in Appendix A. Additional mitigation measures specific to the project that serve to implement the adopted TOD mitigation measures are also identified in this Initial Study, and included in the MMRP prepared for the FMC Parcel C Project included 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 would remain a “Potentially Significant Impact” after mitigation, 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

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

The project site is vacant following soil remediation that removed industrial contaminants from prior uses. The project site consists of leveled industrial pads and road and railroad embankments. The site is adjacent to a former barge canal that contains tidal salt marsh. Terrain on the project site and surrounding area has been altered for industrial development, and most existing topographic relief is the result of fill for railroad grades and industrial pads, excavation of artificial basins and channels, and diking of tidelands. Elevations on the project site range from 10 to 15 feet above mean sea level (amsl). Locally, a few natural hills remain along the historic bay margin north of Newark Slough, but terrain in the area surrounding the project site is overwhelmingly flat.

Other industrial uses occur adjacent to the project site, east of APN 537-852-1-2, and northeast of the San Mateo Transit Authority railroad corridor. To the south, a residential development is under construction within the Dumbarton TOD area. Salt evaporation ponds operated by Cargill, Inc. are located southwest of the project site, and part of the Don Edwards San Francisco Bay Wildlife Refuge is approximately 475 feet northwest of the project site, on the other side of the existing railroad tracks. The surrounding land uses are characterized by existing and former industrial parcels, residential development, and open space.

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. Currently 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 be viewed from the more immediate surroundings.

Impacts and Mitigation Measures from the Dumbarton Transit Oriented Development Specific Plan Certified PEIR

Visual resources (i.e., aesthetics) are discussed in Chapter 4.1 of the PEIR prepared for the Dumbarton TOD Specific Plan (RBF 2011). 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 Draft Updated General Plan. No impacts relating to visual resources/ aesthetics were identified in the PEIR, and therefore no mitigation measures were required.

Evaluation of Aesthetics

Question a: Less than significant 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 as an important scenic resource by the City of Newark or any other public agency. Therefore, construction of the proposed development would not interfere with or degrade a scenic vista. Impacts would be less than significant, and no mitigation would be necessary.

Question b: Less than significant impact

There are no state or locally designated scenic highways in the vicinity of the proposed project site (Caltrans 2017). Implementation of the proposed would not adversely affect scenic resources within a designated scenic highway. Impacts would be less than significant, and no mitigation would be necessary.

Question c: Less than significant impact

The existing visual character of the area surrounding the project site is defined by the vacant lots of former industrial land uses and ongoing construction and development. The western boundary and southwest corner of the project site hosts a tidal pickleweed marsh that would not be impacted by the proposed project. The remainder of project site is largely barren and post-remediation. Implementation of the project would result in the construction of 199 residential units, on-street parking areas, neighborhood parks, and landscaping, altering the existing visual character to a more community-focused, urban development visual character than is currently experienced by viewers. While the proposed project would result in a change in visual character on site, the proposed 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 surrounding land uses. A less-than-significant impact to visual character would occur, and no mitigation would be necessary.

Question d: Less than significant 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. 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 project design would limit light spillover and intensity, impacts would be less than significant, 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 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 or infrastructure 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).

Impacts and Mitigation Measures from the Dumbarton Transit Oriented Development Specific Plan Certified PEIR

As discussed in Chapter 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).

Evaluation of Agriculture and Forestry Services

Questions a, b: No impact

Because no important agricultural resources or activities exist on the project site, no impact would occur, and no mitigation would be necessary.

Questions c, d, e: No impact

Because no portions 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.

III. AIR QUALITY

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
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Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

A project-specific air quality evaluation was conducted (Appendix C, HELIX 2017a) and the methods and results are summarized in the following subsections.

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 Air 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 (CAAQS) 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 (O₃), carbon monoxide (CO), and nitrogen dioxide (NO₂) as either “Does not meet the primary standards,” “Cannot be classified,” or “Better than national standards.” For sulfur dioxide (SO₂), 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 1**.

Table 1. San Francisco Bay Area Air Basin Attainment Status

Pollutant	State of California Attainment Status	Federal Attainment Status
Ozone (1-hour)	Nonattainment	No Federal Standard
Ozone (8-hour)	Nonattainment	Nonattainment (marginal)
Suspended Particulate Matter (PM ₁₀)	Nonattainment	Attainment/Unclassified
Fine Particulate Matter (PM _{2.5})	Nonattainment	Nonattainment (moderate)
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: California Air Resources Board, 2017a; USEPA, 2017.

The City of Newark is currently in nonattainment for federal and state O₃ and PM_{2.5} standards. The City is in nonattainment for state PM₁₀ 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 and the air quality monitoring station closest to the City of Newark is the Hayward Monitoring Station. However, this station only monitors ozone, so data were obtained from the San Jose Monitoring Station for the other criteria air pollutants. The ambient pollutant concentrations collected at the stations during the last five available years (2012 through 2016) were reviewed for exceedances and violations of state and federal standards. The data show occasional violations of the state and federal ozone standards, state PM₁₀ standards, and federal PM_{2.5} standards. The state and federal SO₂, and NO₂ standards have not been exceeded in the past five years.

As shown in **Table 2**, the 1-hour O₃ concentration exceeded the state standard once in 2014 and twice in 2015. The 8-hour O₃ concentration exceeded the state standard once in 2013, four times in 2014 and two times in 2015. The 8-hour O₃ concentration exceeded the federal standard twice in 2015. The state 24-hour PM₁₀ standard was violated once in 2012, 2014 and 2015 and five times in 2013. The federal 24-hour PM_{2.5} standard was violated twice in 2012, 2014, and 2016 and six times in 2013. State standards for NO₂ were not exceeded at any time during the years 2012 through 2016.

Table 2. Summary of Annual Air Quality Data for Hayward and San Jose Air Quality Monitoring Stations

Pollutant	2012	2013	2014	2015	2016
<i>Ozone (O₃) Hayward Monitoring Station</i>					
Maximum 1-hour concentration (ppm)	<u>0.094</u>	0.085	<u>0.096</u>	<u>0.103</u>	0.083
Days above 1-hour state standard (>0.09 ppm)	0	0	1	2	0
Maximum 8-hour concentration (ppm)	0.065	<u>0.075</u>	<u>0.075</u>	<u>0.084</u>	0.064
Days above 8-hour state standard (>0.07 ppm)	0	1	4	2	0
Days above 8-hour federal standard (>0.075 ppm)	0	0	0	2	0
<i>Respirable Particulate Matter (PM₁₀) San Jose Monitoring Station</i>					
Maximum 24-hour concentration (µg/m ³)	<u>59.6</u>	<u>58.1</u>	<u>54.7</u>	<u>58.0</u>	41.0
Days above state standard (>50 µg/m ³)	1	5	1	1	0
Days above federal standard (>150 µg/m ³)	0	0	0	0	0
<i>Fine Particulate Matter (PM_{2.5}) San Jose Monitoring Station</i>					
Maximum 24-hour concentration (µg/m ³)	<u>38.4</u>	<u>57.7</u>	<u>60.4</u>	<u>49.4</u>	22.7
Days above federal standard (>35 µg/m ³)	2	6	2	2	0
<i>Nitrogen Dioxide (NO₂) San Jose Monitoring Station</i>					
Maximum 1-hour concentration (ppm)	0.067	0.058	0.058	0.049	0.051
Days above state 1-hour standard (0.18 ppm)	0	0	0	0	0
<i>Sulfur Dioxide (SO₂) San Jose Monitoring Station</i>					
Maximum 24-hour concentration (ppm)	0.003	0.001	*	*	*
Days above 24-hour state standard (>0.04 ppm)	*	*	*	*	*

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, 2017b; Ozone data was obtained from the Hayward Monitoring Station.

CO, NO₂, SO₂, PM₁₀ and PM_{2.5} data was obtained from the San Jose Jackson Street Monitoring Station.

Methods

Construction Emissions

Emissions from the construction phase of the project were assessed using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2. The CalEEMod utilizes emission factors from CARB's OFFROAD and EMFAC models for off-road equipment and on-road vehicles, respectively. 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 demolition, grading, underground infrastructure/utilities, building construction, paving, and architectural coating. For modeling purposes, it was assumed project development would begin April 2018 and end June 2020. A complete listing of the assumptions used in the analysis and model output is provided in the Air Quality and Greenhouse Gas Emissions Technical Report prepared for the project and provided as Appendix C to this Initial Study.

Construction emission calculations assume the implementation of standard dust control measures, including watering two times daily during grading, ensuring that all exposed surfaces maintain a minimum soil moisture of 12 percent, and limiting vehicle speeds on unpaved roads to 15 mph.

Architectural coatings were assumed to be compliant with the Dumbarton TOD Specific Plan, which contains a design measure of using low VOC coatings beyond local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings). The model assumed the VOC content of exterior and interior coatings would be no higher than 50 grams per liter (g/l).

Operation Emissions

Operational impacts were estimated using CalEEMod. Operational emissions typically include mobile sources (vehicle trips), energy sources (onsite energy use), and area sources. The emissions from mobile sources were calculated with the trip rates provided in the Trip Generation Evaluation and Parking Analysis of the FMC Parcel C Project (Fehr & Peers 2017), CalEEMod default trip lengths, and emission factors from EMFAC. Energy source emissions include natural gas combustion from water and space heating. Area sources include landscape equipment, consumer products, and architectural coatings (such as paint). Energy and area source emissions were calculated using CalEEMod defaults. All modeling output files are provided in Appendix C of this report.

Mobile source emissions for the proposed project were calculated using an average daily trip (ADT) estimate of 1,810 trips from the 199 single-family dwelling units based on the Trip Generation Evaluation and Parking Analysis of the FMC Parcel C Project (Fehr & Peers 2017).

Operational emission estimates incorporated the following Project design features into CalEEMod for the Project:

- Increase in land use density;
- Increase Transit Accessibility (0.1-mile distance);
- Provide Traffic Calming Measures by at least 25 percent;
- Energy efficiency of at least 10 percent beyond 2016 Title 24;
- Use of low VOC coatings and cleaning supplies;
- Installation of only natural gas fireplaces; and
- Reduce water use by at least 20 percent.

Levels of Significance

The BAAQMD has published thresholds of significance for new projects. In May 2017, 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. For this analysis, the BAAQMD's 2017 thresholds of significance (**Table 3**) were employed to determine the proposed 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.

Table 3. BAAQMD Air Pollutant Thresholds

Pollutant	Construction-Related	Operational-Related	
	Average Daily Emissions (pounds/day)	Average Daily Emissions (pounds/day)	Maximum Annual Emissions (tons/year)
Carbon Monoxide (CO)	none	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	
Nitrogen Oxides (NO _x)	54	54	10
Particulate Matter Exhaust (PM ₁₀)	82	82	15
Fine Particulate Matter Exhaust (PM _{2.5})	54	54	10
PM ₁₀ and PM _{2.5} Fugitive Dust	BMPs	none	
Sulfur Oxides (SO _x)	-	-	-
Lead and Lead Compounds	-	-	-
Volatile Organic Compounds (VOC)	54	54	10

Source: BAAQMD CEQA Guidelines May 2017.

Impacts and Mitigation Measures from the Dumbarton Transit Oriented Development Specific Plan Certified PEIR

Air Quality is discussed in Chapter 4.2 of the PEIR prepared for the Dumbarton TOD Specific Plan. 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: Less than significant impact with project level mitigation incorporated

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

Buildout of the proposed project would be consistent with the 2017 Bay Area Clean Air Plan (BAAQMD 2017b) because the total external trips for approved and pending projects for

Dumbarton TOD, including the FMC Parcel C Project, would be lower than what was predicted under the Dumbarton TOD Specific Plan (Fehr & Peers 2017).

Although land uses and densities of residential unit developments 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 total number of residential units proposed for the three project parcels combined would be consistent with the number of dwelling units allocated in the Dumbarton TOD Specific Plan and 2013 Updated General Plan. Further. As detailed in response III.b, the proposed project would not generate significant amounts of air pollutant emissions during construction or operation with implementation of the identified mitigation measures. The proposed project would not exceed screening criteria thresholds set by BAAQMD with mitigation, and no feature of the proposed project would conflict with or obstruct implementation of the 2017 Bay Area Clean Air Plan.

Question b: Less than significant impact with mitigation incorporated

Construction

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, HELIX 2017a) indicated that emissions related to project construction activities would exceed the BAAQMD’s significance threshold for NO_x. **Table 4** presents the modeled construction emissions for each phase of construction. During construction activities, the project applicant 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 NO_x generated during construction would be potentially significant and additional mitigation would be required.

Table 4. Maximum Daily Construction Emissions

Phase	Pollutant Emissions (pounds per day)					
	ROG	NO _x	CO	SO _x	Exhaust PM ₁₀	Exhaust PM _{2.5}
Demolition	0.47	9.19	3.57	0.02	0.21	0.19
Site Preparation	1.13	11.18	9.79	0.01	0.72	0.69
Grading	6.82	105.80	50.44	0.16	2.93	2.70
Underground Infrastructure/Utilities	1.39	13.14	12.08	0.02	0.93	0.85
Building Construction	1.34	10.84	9.41	0.03	0.31	0.29
Paving	1.80	17.58	15.31	0.02	0.96	0.88

Architectural Coatings	4.77	2.12	2.91	0.01	0.15	0.15
Construction Total	15	143	85	<0.5	5	5
Significance Thresholds	54	54	-	-	82	54
<i>Significant Impact?</i>	<i>No</i>	<i>Yes</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: *Air Quality and Greenhouse Gas Emissions Technical Report* prepared by HELIX Environmental Planning, Inc. dated December 2017.

Notes: Modeling assumes implementation of standard dust control measures, use of low VOC coatings, and implementation of MMRP measures 4.2-1a and 4.2-1b.

Mitigation Measures

The following mitigation measure is prescribed to reduce construction related NO_x emissions.

FMC Parcel C Project Specific Mitigation Measure AQ-01 in accordance with Dumbarton TOD PEIR Mitigation Monitoring and Reporting Program Measure 4.2-1b

Prior to the issuance of any Grading Permit, the Public Works Director and the Building Official shall confirm that the Grading Plan, Building Plans, and specifications stipulate that all diesel-powered off-road equipment used during construction shall meet Tier 4 final off-road emissions standards. A copy of each unit's certified Tier specification shall be provided to the City Building Department at the time of mobilization of each applicable unit of equipment.

Significance After Mitigation

Mitigation Measure (MM) AQ-01 would reduce NO_x emissions from off-road equipment during construction. As presented in **Table 5, Maximum Daily Construction Emissions with Mitigation**, with inclusion of MM AQ-01, emissions of all criteria pollutants related to Project construction would be below the BAAQMD's significance threshold. Thus, direct impacts from criteria pollutants generated during construction would be less than significant with mitigation.

Table 5. Maximum Daily Construction Emissions with Mitigation

Phase	Pollutant Emissions (pounds per day)					
	ROG	NO _x	CO	SO _x	Exhaust PM ₁₀	Exhaust PM _{2.5}
Demolition	0.25	6.74	3.58	0.02	0.03	0.03
Site Preparation	0.22	1.32	9.82	0.01	0.02	0.02
Grading	2.02	38.88	40.68	0.16	0.26	0.25
Underground Infrastructure/Utilities	0.25	0.87	12.10	0.02	0.03	0.03
Building Construction	1.02	7.86	9.31	0.03	0.07	0.06

Paving	0.44	1.27	17.80	0.02	0.04	0.04
Architectural Coatings	4.50	0.24	2.88	0.01	0.01	0.01
Construction Total	8	49	75	<0.5	<0.5	<0.5
Significance Thresholds	54	54	-	-	82	54
<i>Significant Impact?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: *Air Quality and Greenhouse Gas Emissions Technical Report* prepared by HELIX Environmental Planning, Inc. dated December 2017.

Notes: Modeling assumes implementation of standard dust control measures, use of low VOC coatings, implementation of MMRP measures 4.2-1a and 4.2-1b, and implementation of MM AQ-01.

Operation

The proposed project could result in minor emissions associated with area sources, 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, HELIX 2017a). As illustrated in **Table 6**, 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 6. Maximum Daily Operational Emissions

Emission Source	Pollutant Emissions (pounds/day)					
	VOC	NO _x	CO	SO _x	Exhaust PM ₁₀	Exhaust PM _{2.5}
Area	8.59	2.81	17.57	0.02	0.30	0.30
Energy	0.23	1.93	0.82	0.01	0.16	0.16
Mobile	2.76	18.20	30.99	0.10	0.10	0.10
Proposed Project Total	12	23	49	<0.5	1	1
Significance Threshold	54	54	-	-	82	54
<i>Significant Impact?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: *Air Quality and Greenhouse Gas Emissions Technical Report* prepared by HELIX Environmental Planning, Inc. dated December 2017.

Question c: Less than significant impact with mitigation incorporated

The San Francisco Bay Area region is in non-attainment for ozone (NO_x and ROG) and particulate matter (PM_{2.5} and PM₁₀). As discussed above, with implementation of MM AQ-01, no exceedance of the District's emission thresholds for criteria pollutants would be expected for the proposed project. The project would not result in a cumulatively considerable net increase in

any criteria pollutant. A less-than-significant impact would result, and no additional mitigation would be necessary.

Questions d and e: Less than significant 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 residential development are CO and DPM. An analysis of the project's potential to expose sensitive receptors to these pollutants is described below.

Construction Diesel Particulates

Construction activities are sporadic, transitory, and short-term in nature, and once construction activities have ceased, so, too, have emissions from construction activities. The DPM is not included as a criteria pollutant; however, it is recognized by the State of California as containing carcinogenic compounds. The risks associated with exposure to substances with carcinogenic effects are typically evaluated based on a lifetime of cancer exposure, which is defined in the California Air Pollution Control Officers Association (CAPCOA) Air Toxics "Hot Spots" Program Risk Assessment Guidelines (CAPCOA 1993) as 24 hours per day, 7 days per week, 365 days per year, for 70 years for residences and 40 years for school children. The DPM would be emitted from heavy equipment used in the construction process. The proposed construction period of less than approximately two years is much less than the 70-year/40-year period used for health risk determination. As shown in Table 5, emissions of PM during construction (which includes equipment emissions) would be below significance thresholds. Further, because diesel particulates are considered to have long-term health effects and construction would be a short-term event, emissions would not result in a significant long-term health risk to surrounding receptors. Therefore, potential construction impacts from DPM are considered less than significant and no mitigation is required.

Carbon Monoxide Hot Spots

The BAAB is designated as attainment for CO. As indicated in the BAAQMD CEQA Air Quality Guidelines, ambient concentrations of CO have decreased dramatically in the BAAB with the introduction of the catalytic converter in 1975. No exceedances of the CAAQS or NAAQS for CO have been recorded at nearby monitoring stations since 1991. As a result, the screening criteria in the BAAQMD's CEQA Air Quality 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.).

Based on the traffic data presented in Section 4.14 (Traffic) of the Dumbarton TOD Specific Plan PEIR, the projects included in the Specific Plan would not cause traffic volumes at local intersections to increase beyond 6,000 vehicles per hour. The intersection of Newark Boulevard and Jarvis Avenue would have the greatest traffic volumes with 5,652 vehicles per hour during Cumulative Plus Specific Plan Projects conditions. According to Fehr & Peers (2017), the proposed project is anticipated to account for approximately 13 percent of the total generated trips included in the Specific Plan. Therefore, the proposed project would not increase traffic volumes to 44,000 vehicles per hour for regular intersections, nor would the project increase traffic volumes to more than 24,000 vehicles per hour for intersections with limited mixing zones. Therefore, effects related to proposed project CO concentrations would be less than significant.

Operational Diesel Particulates

Exposure to DPM generated by traffic on roadways is a concern identified in the CARB Air Quality and Land Use Handbook. The CARB guidelines indicate that siting new sensitive land uses (such as residential uses) within 500 feet of a freeway or an urban road with 100,000 vehicles per day should be avoided. The nearest major freeway to the project site (Interstate 880) is located more than two miles east from the project site and is outside of the avoidance guidelines. The CARB also recommends siting sensitive land uses more than 1,000 feet from distribution centers. The nearest distribution center to the project site appears to be approximately 1,200 feet to the northeast. Both Interstate 880 and the nearest distribution center are outside the avoidance guidelines and downwind of the project site.

The Dumbarton TOD Specific Plan would provide space for a multimodal transit station that would include commuter train service. The Dumbarton Rail Transit Station would provide commuter rail service from the Union City Intermodal Transit Center across the Dumbarton Bridge to Menlo Park and finally connect to the Caltrain service that runs from San Francisco to San Jose. Although future rail uses would utilize cleaner diesel engines, a worst-case scenario would include the operation of six diesel trains per day with three to five minutes of locomotive idling during each stop at the station. Based on the land use plan for the proposed project,

residential uses would be located approximately 500 feet from the proposed transit station. The BAAQMD identifies diesel trains as a common source of DPM emissions and recommends a buffer distance of at least 1,000 feet between the locomotives and residences. Because the project would cite new residences within the 1,000-foot buffer, a health risk analysis is required.

The USEPA SCREEN3 model, the screening air dispersion modeling method approved by the CARB for such assessments, was used to estimate concentrations of DPM from the transit station to the project. The DPM emissions were estimated using emission factors provided in the USEPA's April 2009 *Technical Highlights – Emission Factors for Locomotives*. It was estimated that locomotives would result in 1.15 grams of DPM per day. Detailed modeling assumptions are included in Appendix C of this report.

Cancer Health Risk Assessment Methodology

The cancer risk is calculated by multiplying the annual average concentrations calculated using the SCREEN3 model and an inhalation exposure factor as in Equation 1 below (Office of Environmental Health Hazard Assessment 2015).

$$\text{Cancer Risk} = \text{Dose-inhalation} \times \text{CPF} \times \text{ASF} \times \text{ED/AT} \times \text{FAH}$$

Where:

Cancer Risk = Total individual lifetime excess cancer risk defined as the cancer risk that a hypothetical individual would face if exposed to carcinogenic emissions from a particular facility; this risk is defined as an excess risk because it is above and beyond the background cancer risk to the population contributed by emission sources not related to the Project; cancer risk is expressed in terms of risk per million exposed individuals.

CPF = Cancer Potency Factor

ASF = Age Sensitivity Factor for a specified age group

ED = Exposure duration for a specified age group

AT = Averaging time for lifetime cancer risk

FAH = Fraction of time spent at home

Dose-inhalation = $C_{air} \times \{BR/BW\} \times A \times EF \times 10^{-6}$

Where:

C_{air} = annual average concentration

{BR/BW} = daily breathing rate normalized to body weight

A = inhalation absorption factor

EF = exposure frequency

C_{air} is the annual average concentration at the closest receptor calculated from SCREEN3 in µg/m³. With the worst-case meteorological condition under SCREEN3, the highest 1-hour DPM concentration value at a residential receptor located 500 feet from the transit station was calculated to be 0.00942 µg/m³. The SCREEN3 model outputs and screening health risk calculations are provided in Appendix C of this report.

Non-Cancer Health Risk Characterization

Exposures to TACs such as DPM can also cause chronic (long-term) and acute (short-term) related non-cancer illnesses such as reproductive effects, respiratory effects, eye sensitivity, immune effects, kidney effects, blood effects, central nervous system, birth defects, or other adverse environmental effects. Risk characterization for non-cancer health risks is expressed as Hazard Index (HI). The HI is a ratio of the predicted concentration of a project's emissions to a concentration considered acceptable to public health professionals, termed the REL. When evaluating chronic non-cancer effects resulting from TAC exposures, a hazard quotient (HQ) is established for each individual TAC as follows and for each target organ affected by the individual TAC:

$$HI = C_{air} / REL_i$$

Where:

HI = chronic hazard index

C_{air} = Annual average concentration

REL = Chronic Reference Exposure Level

To evaluate the potential for adverse non-cancer health effects from simultaneous exposure to multiple TACs, the HQs for all TACs that affect the same target organ are summed yielding a hazard index (HI) as follows:

$$HI_{to} = \sum_{i=1}^n HQ_{tac}$$

Where:

HI_{to} = sum of the hazard quotients for all TACs affecting the same target organ

HQtac = hazard quotient for TAC and target organ.

The OEHHA has assigned a chronic non-cancer REL of 5 µg/m³ for DPM (OEHHA 2015). DPM has effects on the respiratory system, which accounts for essentially all of the potential chronic non-cancer hazards from DPM. Therefore, the only HI calculated was for the respiratory system.

Table 7 provides the results of the health risk assessment along with the BAAQMD’s Significance health risk thresholds. As shown in the table below, the project would not exceed the significance thresholds for cancer risk and chronic non-cancer hazard.

Table 7. Health Risk Assessment Results

Metric	Dispersion Model Estimate ¹	Significance Threshold	Exceeds Threshold?
3 rd Trimester Cancer Risk	0.02 in 1 million	10 in 1 million	No
0-2 Cancer Risk	0.61 in 1 million	10 in 1 million	No
2-16 Cancer Risk	0.75 in 1 million	10 in 1 million	No
16-30 Cancer Risk	0.11 in 1 million	10 in 1 million	No
Chronic Non-Cancer HI	0.0002	1.0	No

Note:

¹ Computed at the nearest sensitive receptor located approximately 500 feet south of the transit station.

Odors

According to the BAAQMD’S CEQA Air Quality Guidelines, land uses associated with odor complaints typically include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants. Odor impacts generally occur from either siting a new odor source (e.g., the project includes a proposed odor source near existing sensitive receptors), or siting a new receptor (e.g., the project includes proposed sensitive receptors near an existing odor source). The project involves construction of single family dwelling units. This use is not identified as major sources of odor emissions according to the CARB Air Quality and Land Use Handbook. The project would not be a source of nuisance odors associated with operations.

The project would not be located in close proximity to any facilities that are typically associated with odor complaints as identified by the BAAQMD. The surrounding land uses are characterized by existing and former industrial parcels, residential development, and open space. The project site is vacant following soil remediation that removed industrial contaminants that remained from prior uses. Other industrial uses occur adjacent to the project site, east of APN 537-852-1-2, and northeast of the San Mateo Transit Authority railroad corridor. To the south, a

residential development is under construction within the Dumbarton TOD area. Salt evaporation ponds operated by Cargill, Inc. are located southwest of the project site, and part of the Don Edwards San Francisco Bay Wildlife Refuge is approximately 475 feet northwest of the project site, on the other side of the existing railroad tracks. There are reports of odors that are caused by algae in the salt basins. 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 basins, impacts are not considered a significant odor source. Additionally, salt basins are not identified by the BAAQMD as a significant odor source. Therefore, the proposed residential uses would not be exposed to significant sources of objectionable odors and mitigation measures are not required.

IV. BIOLOGICAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any applicable policies protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The FMC Parcel C Project site was evaluated by professional biologists Stephen Stringer and Dr. George Aldridge, of HELIX Environmental Planning, Inc. (HELIX), using both review of existing documentation and biological surveys conducted at the site. The methods and results of the evaluation are presented in a biological technical report (BTR) prepared for the project (Appendix D, HELIX 2017b), and are summarized here.

Regulatory Framework Related to Biological Resources

Endangered Species Act

Special status species are protected by state and federal laws. The California Endangered Species Act (CESA; California Fish and Game Code Sections 2050 to 2097) protects species listed as threatened and endangered under CESA from harm or harassment. This law is similar to the Federal Endangered Species Act of 1973 (FESA; 16 USC 1531 *et seq.*) which protects federally threatened or endangered species (50 CFR 17.11, and 17.12; listed species) from take. For both laws, take of the protected species may be allowed through consultation with and issuance of a permit by the agency with jurisdiction over the protected species.

Nesting and Migratory Birds

Nesting birds are protected by state and federal laws. California Fish and Game Code (§3503, 3503.5, and 3800) prohibits the possession, incidental take, or needless destruction of any bird nests or eggs; Fish and Game Code §3511 designates certain bird species “fully protected” (including all raptors), making it unlawful to take, possess, or destroy these species except under issuance of a specific permit. Under the Migratory Bird Treaty Act of 1918 (16 USF §703-711), migratory bird species and their nests and eggs that are on the federal list (50 CFR §10.13) are protected from injury or death, and project-related disturbance must be reduced or eliminated during the nesting cycle.

Jurisdictional Waters

Any person, firm, or agency planning to alter or work in “waters of the U.S.,” including the discharge of dredged or fill material, must first obtain authorization from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA). Section 401 requires an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. must obtain a state certification that the discharge complies with other provisions of the CWA. The RWQCB administers the certification program in California. The RWQCB also

regulates discharges of pollutants or dredged or fill material to waters of the State which is a broader definition than waters of the U.S.

California Native Plant Protection Act

The California Native Plant Protection Act of 1977 (California Fish and Game Code Sections 1900 to 1913) requires all state agencies to use their authority to implement programs to conserve endangered and otherwise rare species of native plants. Provisions of the act prohibit the taking of listed plants from the wild and require notification of CDFW at least 10 days in advance of any change in land use other than changing from one agricultural use to another, which allows CDFW to salvage listed plants that would otherwise be destroyed.

City of Newark Municipal Code - Trees

Chapter 8.16 of the City of Newark's Municipal Code, entitled *Preservation of Trees on Private Property* states: No person shall cut down, destroy, remove or move any tree, which shall include any live woody plant having one or more well defined perennial stems with a trunk diameter of six inches or greater measured at four feet above ground level, growing within the city limits on any parcels of land except developed residential parcels of land ten thousand square feet or less in area, unless a permit to do so has been obtained from the public works director (Ordinance 63 §2 (part), 1979).

Methods

Biological studies conducted included a desktop evaluation and background research to identify special-status species and other biological resources (e.g., wetlands) with the potential to occur on the project site or be affected by the proposed project as well as biological field surveys to document baseline conditions and special-status species and/or their habitats present on the site. These methods are presented in the following sections.

Special-Status Species Evaluation

Review of existing documentation included queries of public databases for records of sensitive species known to occur in the region. The San Francisco Bay – Delta Fish and Wildlife Office (USFWS) was consulted for a list of threatened and endangered species that may occur in the project site and/or be affected by the project; the California Native Plant Society (CNPS) database was queried for special-status plant species documented in the “Newark, CA” quad; the California Natural Diversity Database (CNDDDB), maintained by the California Department of

Fish and Wildlife (CDFW), was queried for special-status species documented within five miles of the project site. Species returned in these database queries were analyzed for potential to occur in the project site based on habitat requirements and geographic range.

Previous Studies

Studies conducted at the site by other parties and reviewed as part of this evaluation include a Preliminary Jurisdictional Determination of the 17-acre Enterprise Redevelopment Area (U.S. Army Corps of Engineers File No. 2013-00152S), based on a preliminary jurisdictional delineation prepared by WRA Environmental Consultants, and a Salt Marsh Harvest Mouse habitat assessment and research study conducted by Californian Environmental Services. The results of those studies are incorporated in detail into the BTR (Appendix D).

Biological Surveys




Biological surveys conducted at the project site include a biological reconnaissance survey, rare plant surveys, a salt marsh harvest mouse habitat assessment and research project that included live trapping for small mammals, and a burrowing owl habitat assessment. Biological surveys are described in detail in the BTR (Appendix D). Biological surveys included assessment of general site conditions, identification of habitats and land covers present in the site, focused surveys for rare plants and burrowing owl (*Athene cunicularia*), assessment of sensitive resources present or potentially supported on the site, and comprehensive inventories of plant and animal species.

Habitat Types Present

Vegetation communities/habitat types in the project site include ruderal/disturbed habitat (16.67 acres), tidal wetlands (0.71 acre), and seasonal wetland (0.03 acre). Habitat types in the project site are depicted in **Figure 5**.

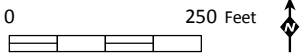
Ruderal/Disturbed

Ruderal/disturbed habitat occurs in areas that are heavily disturbed by past or ongoing human activities but retain a soil substrate. Ruderal/disturbed areas may be sparsely to densely vegetated, but do not support a recognizable community or species assemblage. Vegetative cover is usually herbaceous and dominated by a wide variety of weedy non-native species or a few ruderal native species. This habitat in the project site is either unvegetated post-remediation or heavily dominated by a dense cover of non-native annual grasses, with small patches of non-native forbs or ornamental hottentot-fig (*Carpobrotus edulis*).

-  Project Boundary
-  Ruderal/Disturbed (16.67 acres)
-  Wetland (0.73 acres)



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Source: WRA 2017, Esri 2017

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Ruderal/disturbed habitat provides low-quality habitat for wildlife, typically supporting only transient individuals using the area for dispersal, because of the sparse vegetation and lack of species diversity. Ruderal/disturbed habitat has little to no potential to support special-status species.

Tidal Wetlands

Tidal wetland (pickleweed marsh) is a natural community predominated by pickleweed (*Salicornia pacifica*) and other short (>1.5 meters), salt-tolerant wetland forbs and subshrubs. The canopy is dense to sparse, and evergreen. This community occurs in areas that are subject to daily tidal inundation by salt water. Pickleweed marsh occurs in a portion of the abandoned barge canal in the southwest of the project site, and in a portion of a small tidal ditch in the western end of the project site. These areas are connected to Newark Slough and experience daily tidal influence. The pickleweed marsh in these areas is characterized by a near-monoculture of pickleweed with scattered individuals of marsh gumplant (*Grindelia stricta* var. *angustifolia*), alkali heath (*Frankenia salina*), saltgrass (*Distichlis spicata*), and fiddle dock (*Rumex pulcher*) at the margins.

Pickleweed marsh in San Francisco Bay potentially supports a variety of special-status species, including plant, bird, and mammal species listed under FESA and CESA. This community is also considered a sensitive natural community, with a state rarity ranking of S3.

Seasonal Wetland

Seasonal wetland vegetation occurs as a type of disturbed habitat in two shallow, seasonally-ponded depressions in the eastern portion of the project site. Those depressions are remnant, constructed ditches that contain some hydrophytic vegetation. During the wet season, predominant species in the depressions include brass buttons (*Cotula coronopifolia*), Italian ryegrass (*Festuca perennis*), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), and curly dock (*Rumex crispus*). These areas begin drying in spring, and by summer are dominated by common tarweed (*Centromadia pungens* ssp. *pungens*), cut-leaf geranium (*Geranium dissectum*), cutleaf plantain (*Plantago coronopifolia*), and soft chess (*Bromus hordeaceus*). The predominantly ruderal, non-native, herbaceous species that dominate the vegetation in seasonal wetlands do not constitute an identifiable community and are present seasonally because saturated soil conditions exclude the upland weeds.

Special-Status Species and Protected Habitats with the Potential to Occur in the Project Site

Based on the evaluation of regionally-occurring special-status species conducted in preparation of the BTR (Appendix D), three special-status animal species have potential to occur in the project site or otherwise be affected by development of the proposed project: burrowing owl, saltmarsh common yellowthroat (*Geothlypis trichas sinuosus*), and Alameda song sparrow (*Melospiza melodia pusillula*). The project site also provides habitat for other nesting birds protected by state and federal regulations. Documentation of the evaluation for regionally-occurring special-status species to potentially occur in the project site and/or be affected by the proposed project is included in Appendix C of the BTR (Appendix D).

Burrowing Owl (*Athene cunicularia*)

Federal Status – None

State Status – SSC

Other – None

Burrowing owls are often found in open, dry grasslands, agricultural and range lands, and desert habitats. In addition to natural habitats, burrowing owls can be found in urban habitats such as at the margins of airports and golf courses and in vacant urban lots. Burrowing owls nest in underground burrows and commonly perch on nearby fence posts or mounds. The owls also use ground squirrel burrows, badger dens or artificial burrows such as abandoned pipes or culverts (CDFW 2012). Burrowing owls forage in grasslands and other open habitats primarily for insects and small mammals, and less often for reptiles, amphibians, and other small birds.

Survey History

All biological surveys included searching for burrowing owls, including transects of the site on April 13, 2017. No burrowing owl has been observed on the project site.

There are several reported occurrences in the CNDDDB of burrowing owls within 5 miles of the project area. Two of the occurrences overlap or are within 1 mile of the project site, but are from 1950 and 1983. Both occurrences are presumed extirpated. The nearest presumed extant occurrences are one occurrence 1.9 mile east of the project site where pairs and juveniles were observed on a property east of Mowry Avenue in 2005, and 1.9 mile north of the project site where two adults and five juveniles were observed in a pasture in 1993. Seven additional reported occurrences are within five miles of the project site.

Habitat Suitability/Potential to Occur in the Project Site

Post-remediation, the majority of the site is not suitable to support burrowing owl. The project site provides limited suitable nesting and foraging habitat for this species around the margin of the barge canal and along the extreme western boundary within the planned open space. These areas contain a few California ground squirrel burrows that could potentially be used by burrowing owl for nesting or stopover during winter migration. Winter migrant burrowing owls have been observed by HELIX on the adjacent property to the south as recently as winter 2016-2017, where ground squirrels and suitable burrows are much more abundant than they are in the project site.

Saltmarsh Common Yellowthroat (*Geothlypis trichas sinuosa*) and Alameda Song Sparrow (*Melospiza melodia pusillula*)

Federal Status – None

State Status – SSC

Other – None

The saltmarsh common yellowthroat and Alameda song sparrow are small songbirds that inhabit brackish- and freshwater marsh, and woody swamps. Both species build nests close to the ground in vegetation tall enough to remain above high tides. Nesting substrates include grasses, herbaceous vegetation, cattails (*Typha* spp.), tules (*Schoenoplectus* spp.), and shrubs (e.g., *Baccharis pilularis*; Shuford, *et al.* 2008). Both species occupy their breeding range year-round. Both species breed from mid-March to late July.

Survey History

All biological surveys included looking for saltmarsh common yellowthroat and Alameda song sparrow. None has been observed on the project site.

There are several reported occurrences in CNDDDB of saltmarsh common yellowthroat and Alameda song sparrow within 5 miles of the project area. The nearest reported occurrences in CNDDDB of saltmarsh common yellowthroat and Alameda song sparrow is along Newark Slough, approximately 0.5-mile northwest of the project site.

Habitat Suitability/Potential to Occur in the Project Site

The only suitable habitat for either of these species on the project site is pickleweed marsh in the abandoned barge canal and the tidal ditch. Neither species is expected to utilize the upland portions of the project site for nesting or foraging.

Nesting Birds

Common bird species found on the project site include species that nest on all types of substrata, including bare ground, herbaceous and woody vegetation, pipes, debris, poles, and structures. Potential nesting habitat is limited on the project site; however, the proposed project may include removal of vegetation that provides potential nesting habitat for nesting birds. Project construction activities would potentially result in impacts to nesting birds if construction of the proposed project commences during the typical nesting period for passerines and other migratory birds. Construction activities and construction-related disturbance (noise, vibration and increased human activity) could adversely affect these species if they were to nest in or adjacent to the project area. Potential effects include physical destruction of nests by construction equipment and/or nest abandonment.

Special Status Plants

Although there is marginal habitat for special-status plants on the site, no special-status plant species was observed on the site during botanical surveys conducted during the blooming season (Appendix F of the BTR [Appendix E]). Therefore, special-status plants are presumed absent from the project site and no impacts to special-status plant species are anticipated.

Jurisdictional Waters

The Preliminary Jurisdictional Determination issued by the U.S. Army Corps of Engineers identified a total of 0.73 acre of jurisdictional waters of the United States on the project site, consisting of 0.71 acre of tidal marsh and 0.02 acre of seasonal wetland. All waters of the United States on the project site are also considered waters of the State regulated by the San Francisco Bay Regional Water Quality Control Board. Tidal marsh areas in the project site are also regulated by CDFW; however, seasonal wetlands do not meet the definition of lakes or streams under section 1600 *et seq.* of the Fish and Game Code and are not regulated by CDFW.

Other Regionally-Occurring Special-Status Species Discussed Due to the Presence of Pickleweed Marsh

Although determined to be absent from the project site and adjacent habitat (see BTR in Appendix D), salt marsh harvest mouse (*Reithrodontomys raviventris*), California clapper rail (*Rallus longirostris obsoletus*), and western snowy plover (*Charadrius nivosus nivosus*) are discussed because of the presence of salt marsh habitat and the proximity of the project site to the San Francisco Bay margin.

Salt Marsh Harvest Mouse (*Reithrodontomys raviventris*)

Federal Status – Endangered

State Status – Endangered

Other – None

The salt marsh harvest mouse was federally listed as endangered in its entire range on October 13, 1970 (Federal Register 35: 16047). Critical habitat has not been designated for this species. This mouse is also state listed as endangered. A recovery plan for the salt marsh harvest mouse was prepared in 1984 and is currently under revision.

The federal and state listed salt marsh harvest mouse is endemic to tidal and brackish marsh habitats of the San Francisco Bay region. Salt marsh harvest mice are primarily found in the salt marshes along the northern San Pablo Bay, surrounding the Suisun Bay, and along the southern San Francisco Bay (USFWS 1984, Goals Project 2000). The acreage thought to be necessary to sustain a healthy salt marsh harvest mouse population is 150 acres or more (USFWS 2010). The salt marsh harvest mouse is critically dependent on dense cover and its preferred habitat is pickleweed. In marshes with an upper zone of halophytes, it uses this vegetation to escape high tides, and may also move into adjoining grasslands during the highest winter tides. The best type of pickleweed association for the species has: 100 percent vegetative cover with a cover depth of 30 to 50 centimeters at summer maximum, at least 60 percent cover of pickleweed, and additional halophytes such as fat hen (*Atriplex patula*) and alkali heath. The amount of salt grass, brass buttons, alkali bulrush (*Bolboschoenus maritimus*), or other species (e.g., *Scirpus* sp. or *Typha* sp.) should be low (USFWS 1984).

The *Salt Marsh Harvest Mouse and California Clapper Rail Recovery Plan* (USFWS 1984) points out that small marshes, separated by open land or dikes, have very low immigration, and that very few areas are likely to be recolonized.

Survey History

Dr. Gretchen Padgett-Flohr, a 10(a)(1)(A) salt marsh harvest mouse-permitted mammalogist (Permit No. TE-006112-6) conducted a habitat assessment for salt marsh harvest mouse at the project site per the requirements of the Dumbarton TOD PEIR MMRP. Dr. Padgett-Flohr conducted a site visit and habitat assessment on March 29, 2017 and she conducted a small mammal trapping survey between August 13, 2017 and August 23, 2017.

Habitat Suitability/Potential to Occur in the Project Site

Habitat Assessment

The CNDDDB documents an occurrence of SMHM within 0.5 mile of the project area in the salt marsh between the project site and Newark Slough. This is an extensive occurrence that includes all of Newark Slough and the extensive salt marshes associated with it. Other records of SMHM from the vicinity of the project site include occurrences in Mowry Slough 1.6 mile south of the project site and several occurrences north of State Route 84 within 2 miles of the site.

The project site outside of the abandoned barge canal and the tidal ditch was determined to not provide suitable habitat for SMHM because it is not subject to tidal influence, and is characterized by a predominance of upland, non-native grasses (Appendix E of the BTR [Appendix D]). Dr. Padgett-Flohr's assessment of the pickleweed marsh in the abandoned barge channel and the tidal ditch was that it meets the habitat elements necessary for SMHM but may be too narrow to provide refugia from predators.

In addition to her site assessment, Dr. Padgett-Flohr conducted small mammal live-trapping studies on the project site as part of a research project investigating the potential use of disturbed habitats by SMHM. No SMHM was found on the project site during the comprehensive live-trapping study.

SMHM Research Study

Live-trapping was conducted at the project site from August 13th, 2017 through August 23rd, 2017 consisting of a total of 50 live traps for a total of 500 consecutive trap nights. Sherman live-traps were completely covered with vegetation for insulation to reduce nocturnal heat loss and dew condensation. Sherman live-traps were baited with a mixture of walnut meats and birdseed and provided with cotton nesting material. Traps located in the Barge Canal slough were affixed with thick styrofoam pads under the traps to allow the traps to float if tidal water levels reached

the level of the traps. Traps were checked each morning within an hour of sunrise, closed during the day and then re-opened each evening within an hour of sunset. All small mammals captured were identified to species and released. The physical data and trap locations were recorded on data sheets.

A total of 71 house mice (*Mus musculus*) and one western harvest mouse (*Reithrodontomys megalotis*) were captured in 500 trap nights. No SMHM or any other species was captured.

Dr. Padgett-Flohr concluded that, although SMHM is known to use upland habitat that is contiguous with native salt marsh habitat, it is apparent that the species does not occur on the project site and likely does not occur in adjacent habitat. The species requires thick, dense stands of perennial pickleweed intermixed with other halophytic species that are mid-range in salinity level. Although this habitat is present on the site, no SMHM was captured.

SMHM are highly dependent on dense cover and it appears that despite the appearance of high-quality habitat in the slough, it may be that the slough is too narrow to provide suitable cover from predators. The Barge Canal Slough is approximately 165 feet in width at its widest point. This is important information as it gives a metric for the area that SMHM requires for survival. Gray fox is present on the site. The fox clearly had no trouble traveling within and throughout the Barge Canal Slough; this suggests that other predators would have similar ease of access to the entire slough.

FMC Parcel C is depauperate in small mammal species, as the only species captured was the non-native, house mouse and one western harvest mouse. There was no sign (i.e., small mammal trails, runways or burrows) of meadow vole (*Microtus californicus*) which typically inhabits upland, as well as salt marsh habitat.

California Clapper Rail (*Rallus longirostris obsoletus*)

Federal Status – Endangered

State Status – Endangered

Other – CDFW Fully Protected

California clapper rail inhabits tidal and brackish marsh with unrestricted daily tidal flows, well-developed tidal channel networks, and suitable upper marsh zone vegetation for nesting and cover during high tides. This species is currently restricted to the margins of San Francisco Bay. California clapper rail nests are built on platforms in areas of intricate channels to allow young to escape predators (USFWS 2013).

Survey History

There are no reported occurrences in the CNDDDB of California clapper rail in the project site. The closest reported occurrences of this species to the project site are in Newark Slough approximately 0.3 mile north and 0.5 mile west of the project site. This species was not observed in the project site during numerous biological surveys, including 500 trap-nights of small mammal trapping in the pickleweed marsh.

Habitat Suitability/Potential to Occur in the Project Site

The project site lacks suitable habitat for California clapper rail. The pickleweed marsh in the project site is not suitable habitat for this species because it lacks well-developed tidal channel networks. In addition, the pickleweed marsh lacks an upper marsh zone that could provide nesting and cover for this species during high tide. The pickleweed marsh in the project site transitions abruptly to disturbed uplands and is surrounded by developed/ disturbed areas. A gray fox was routinely observed in the center of the pickleweed marsh, indicating that the marsh is too narrow to provide cover from predators.

Western Snowy Plover (*Charadrius nivosus nivosus*)

Federal Status – Threatened

State Status – None

Other – CDFW Species of Special Concern

Western snowy plover nests above the high tide line on dune-backed beaches, sand spits, beaches at creek and river mouths, and salt pans at lagoons and estuaries. This species nests less often on bluff-backed beaches, dredge spoil sites, salt pond levees, dry salt ponds, and river bars. Populations consist of both year-round residents and migrants. In San Francisco Bay, western snowy plover nests in dry salt ponds managed for wildlife by USFWS and various park districts (USFWS 2007).

Survey History

There are no reported occurrences in the CNDDDB of western snowy plover in the project site. The closest reported occurrences of this species to the project site are approximately 3 miles north of the project site in Eden Landing Ecological Reserve. This species was not observed in the project site during numerous biological surveys, including 500 trap-nights of small mammal trapping in the pickleweed marsh.

Habitat Suitability/Potential to Occur in the Project Site

There is no habitat for western snowy plover in or adjacent to the project site. There is no suitable beach or salt pan habitat in the project site. The project site also lacks salt ponds or other unvegetated substrates required by this species for nesting.

Impacts and Mitigation Measures from the Dumbarton Transit Oriented Development Specific Plan Certified PEIR

Biological Resources are discussed in Chapter 4.3 of the PEIR prepared for the Dumbarton TOD Specific Plan. The PEIR concludes that construction of the project could have potentially significant adverse impacts on special-status animal and plant species and includes measures to reduce impacts to less than significant. Additionally, construction of the project could have a potentially significant adverse impact on wetlands and water of the State/U.S. and includes Mitigation Measure 4.3-6 to reduce impacts to less than significant.

The PEIR concluded that the Dumbarton TOD Specific Plan area is not located within a Habitat Conservation Plan or Natural Community Conservation Plan and would not conflict with the provisions of any such plan.

Evaluation of Biological Resources

Question a: Less than significant with project-level mitigation incorporated

Potential Impacts to Western Burrowing Owls

No burrowing owl or active burrow has been observed on the project site. However, there is a low chance that burrowing owl could occupy the site prior to development. The portion of the project site that provides suitable habitat for burrowing owl is within designated open space and will not be affected by the proposed project. Therefore, loss of occupied burrowing owl habitat is not anticipated. However, disturbance to burrowing owl individuals could occur as a result of construction activities (e.g., noise, human presence) if this species occupies the site prior to construction. Mitigation measure 4.3-3 shall be implemented in accordance with the Specific Plan MMRP.

Dumbarton Mitigation Monitoring and Reporting Program Measure 4.3-3 (Western Burrowing Owls)

The Specific Plan MMRP measure 4.3-3 specifies that prior to construction of any project within the project site, protocol burrowing owl surveys will be conducted by a qualified western burrowing owl biologist to ensure there is no impact to burrowing owls. Burrowing owl surveys will be conducted in accordance with CDFW's *Burrowing Owl Staff Report* (CDFW 2012). If potential burrows or birds are present, the appropriate measures in accordance with the MMRP and CDFW's *Burrowing Owl Staff Report* (CDFW 2012) shall be implemented, and the appropriate measures to mitigate for impacts to the owls applied.

With implementation of mitigation measure 4.3-3 in accordance with the Specific Plan MMRP, impacts to burrowing owls would be less-than-significant.

Potential Impacts to Alameda Song Sparrow, Saltmarsh Common Yellowthroat, and Other Nesting Passerines

Because there is no suitable habitat for either saltmarsh common yellowthroat or Alameda song sparrow outside of the pickleweed marsh areas at the edges of the project site, development of the proposed project would not result in direct impacts to either of these species. However, the project has potential for indirect impact on these species. Noise, vibration, and dust associated with construction activities may disrupt breeding behavior and/or cause nest abandonment if pairs of either species are nesting in pickleweed marsh adjacent to the project development area. Mitigation measure 4.3-4 shall be implemented in accordance with the Specific Plan MMRP. Pre-construction surveys will be conducted and appropriate nest-avoidance measures shall be implemented if these species are present adjacent to the construction area.

Post-construction use of the project may result in increases in human presence, lighting overspill, and domestic pets that might disrupt use of the adjacent pickleweed marsh habitat by both species. The keeping of outside feline pets or feral cat stations will be prohibited, thereby reducing the potential for cats to prey on or harass nesting passerines in suitable habitat near the project site. Lighting will be designed consistent with Policy LU-6.6 of the City General Plan Land Use Element, and the Site and Architecture Design Guidelines contained in the Specific Plan which require that the lighting be designed to reduce glare and over-lighting impacts. As a result, potential indirect impacts to nesting passerines associated with light and glare would be reduced.

Dumbarton Mitigation Monitoring and Reporting Program Measure 4.3-4 (Nesting Passerines)

The Specific Plan MMRP measure 4.3-4 specifies that 15 days prior to any earthmoving or construction work on individual parcels within the passerine nesting season (March 1 to September 1), preconstruction surveys will be conducted to include the project site and a 100-foot buffer from the project site. If nesting passerines are present, a 100-foot-wide buffer will be established around nests of special status birds, and a 75-foot-wide buffer will be established around nests of non-special status birds. The buffers will be maintained until August 1 unless determined by a qualified wildlife biologist that the nests may be removed.

With implementation of prohibitions on feline pets and feral cat stations, adherence to lighting guidelines in the General Plan and Specific Plan, and implementation of mitigation measure 4.3-4 in accordance with the Specific Plan MMRP, impacts to Alameda song sparrow, saltmarsh common yellowthroat, and other nesting passerines would be less-than-significant.

Potential Impacts to Nesting Raptors

There are no trees suitable for raptor nesting in the project site; the only potentially suitable trees within 300 feet of the project site are at the western end of Enterprise Drive. Mitigation measure 4.3-2 shall be implemented in accordance with the Specific Plan MMRP.

Dumbarton Mitigation Monitoring and Reporting Program Measure 4.3-2 (Nesting Raptors)

The Specific Plan MMRP measure 4.3-2 specifies that prior to any earthmoving or construction work on individual parcels within the raptor nesting season (February 1 to August 31), preconstruction surveys will be conducted to include the project site and a 300-foot buffer from the project site. If nesting raptors are present, a non-disturbance/avoidance buffer will be established based on specifications in the Specific Plan MMRP. A qualified raptor biologist would determine when the buffer can be removed, or the buffer may stay in place until August 31, and work may commence on September 1.

With implementation of the above measure, impacts to nesting raptors would be less-than-significant.

Potential Impacts to Special Status Plants

Although there is marginal habitat for special-status plants on the site, no special-status plant species were observed on the site during botanical surveys conducted during the blooming season. Therefore, special-status plants are presumed absent from the project site and no impacts to special-status plant species is anticipated. Mitigation measures for special status plants shall be implemented in accordance with the Specific Plan MMRP as modified below.

Dumbarton Mitigation Monitoring and Reporting Program Measure 4.3-5 (Special Status Plants)

The Specific Plan MMRP measure 4.3-5 specifies that prior to construction initiation, and City approval of site development, a special-status plant surveys shall be conducted in appropriate habitats during the appropriate period during which the species are most identifiable in accordance with CDFW, USFWS, and CNPS published survey guidelines. It further states that if special-status plants are identified on the site, avoidance, minimization, and mitigation measures will be implemented consistent with the requirements included in the Specific Plan MMRP.

Special-status plant surveys have been conducted consistent with MM 4.3-5 for the project site. A special-status plant survey report that includes the methods used, survey participants, and findings of the special-status plant surveys conducted on the project site is included in Appendix F of the BTR (Appendix D) demonstrating absence of special-status plants on the project site. The results of rare plant surveys are typically considered valid for two blooming seasons after the surveys are conducted. If development of the site commences by summer of 2019, no further mitigation measures are required for special-status plant species. If development of the site does not commence by the end of summer 2019, rare plant surveys should be conducted to re-verify presence/absence of special-status plant species. If special-status plant species were discovered with subsequent surveys, measures shall be implemented in accordance with the Specific Plan MMRP.

With implementation of the above mitigation, impacts to special status plants would be less-than-significant.

Potential Impacts to Salt Marsh Harvest Mouse

Dr. Padgett-Flohr, a qualified CDFW- and USFWS-permitted salt marsh harvest mouse biologist, determined that SMHM does not occur on the project site. No potential habitat for SMHM would be impacted by the proposed project because Salt Marshes I and J are being

avoided and preserved. Therefore, no impact to salt marsh harvest mouse would occur from development of the project site, and no compensatory mitigation is required.

Potential Impacts to California Clapper Rail

California clapper rail is not present on or adjacent to the site and will not be affected by the proposed project. No mitigation is required.

Potential Impacts to Western Snowy Plover

Western snowy plover is not present on or adjacent to the site and will not be affected by the proposed project. No mitigation is required.

Question b: No impact

No riparian habitat or other sensitive community will be impacted by the project; therefore, no mitigation is necessary. The project would place all tidal marsh areas in the site into designated open space that would be avoided by project activities. Neither seasonal wetlands nor ruderal/disturbed habitat are considered riparian habitat or a sensitive community.

Question c: Less than significant with project-level mitigation incorporated

A PJD has been issued by the U.S. Army Corps of Engineers and is included as Appendix D of the BTR (Appendix D). The project proposes to fill 0.03 acre of seasonal wetland waters of the U.S./State regulated by the U.S. Army Corps of Engineers and the San Francisco Bay Regional Water Quality Control Board. Mitigation measure 4.3-6 shall be implemented in accordance with the Specific Plan MMRP.

Dumbarton Mitigation Monitoring and Reporting Program Measure 4.3-6 (Wetlands)

The Specific Plan MMRP measure 4.3-6 requires that the project applicant obtain a jurisdictional delineation from the U.S. Army Corps of Engineers, and receive authorization for any proposed fill of waters of the U.S. / State. Project applicants are required to provide mitigation for unavoidable impacts through U.S. Army Corps of Engineers- and Regional Water Quality Control Board-approved methods, which may include purchase of credits, payment to an in-lieu fee program, on-site creation, or off-site creation at a minimum 1:1 ratio.

Permits will be obtained from the U.S. Army Corps of Engineers and the San Francisco Bay Regional Water Quality Control Board for fill of 0.03 acre of wetland and any required mitigation measures will be implemented.

Questions d: No impact

The project area and vicinity feature previous industrial land uses, and development with residential and commercial uses. The project site does not provide a migratory wildlife corridor, nor would development of the project impede the use of native wildlife nursery sites.

Question e: Less than significant with project-level mitigation incorporated

There is one tree in the project site that meets the criteria for protection under the City of Newark Municipal Code. The Specific Plan MMRP measure 4.3-8 shall be implemented prior to site disturbance for removal of any trees in the project site or off-site improvement areas that are protected by City Ordinance.

Dumbarton Mitigation Monitoring and Reporting Program Measure 4.3-8 (Protected Trees)

The Specific Plan MMRP measure 4.3-8 requires obtaining a permit from the public works director, replacement of removed trees at a 1:1 ratio, preparation of a Tree Management Plan, and monitoring and maintenance of the replacement plantings.

With implementation of the above measure, impacts to protected trees would be less-than-significant.

Question f: No impact

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. Therefore, no impacts to an existing adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan would occur, and no mitigation is necessary.

V. CULTURAL RESOURCES

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

Regulatory Setting

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 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 National Register of Historic Places.” Section 15064.5(b)(1) of the 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. For the purposes of CEQA, an historical resource is a resource listed in, or determined eligible for listing in the California Register of Historical Resources (CRHR). When a project could impact a resource, it must be determined whether the resource is an historical resource, which is defined as a resource that:

(A) is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political or cultural annals of California; and,

(B) Meets any of the following criteria: 1) is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; 2) is associated with the lives of persons important in our past; 3) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or 4) has yielded, or may be likely to yield, information important in prehistory or history. In addition, properties listed in or formally determined eligible for listing in the MRHP are automatically considered eligible for the CRHR.

CEQA applies to archaeological resources when (1) the archaeological resource satisfies the definition of a historical resource, or (2) the archaeological resource satisfies the definition of a “unique archaeological resource.” A unique archaeological resource is an archaeological artifact, object, or site that has a high probability of meeting any of the following criteria:

- The archaeological resource contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- The archaeological resource has a special and particular quality such as being the oldest of its type or the best available example of its type.
- The archaeological resource is directly associated with a scientifically recognized important prehistoric or historic event or person.

Cultural Background

Following is a brief summary providing a context in which to understand the background and relevance of resources that may occur in the general project area. This section is not intended to be a comprehensive review of the current resources available; rather, it serves as a general overview. Further details can be found in ethnographic studies, mission records, and major published sources.

Native American Background

At the time of European contact, the general Newark area was occupied by various tribelets that were part of the Ohlone (previously Costanoan) tribe of California Native Americans (Levy

1978). The Ohlone group designates a language family consisting of eight branches of the Ohlone language that are considered too distinct to be dialects, with each being related to its geographically adjacent neighbors (Levy 1978).

The various Ohlone tribes subsisted as hunter-gatherers and relied on local terrestrial and marine flora and fauna for subsistence (Levy 1978). The predominant plant food source was the acorn, but they also exploited a wide range of other plants and the protein sources included grizzly bear, elk, and black-tailed deer as well as smaller mammals. Waterfowl, including Canada geese, mallards, green-winged teal, and American widgeon, were captured in nets using decoys to attract them. Fish also played an important role in the Ohlone diet and included steelhead, salmon, and sturgeon (Jones 2007).

The Ohlone constructed watercraft from tule reeds and possessed bow and arrow technology. They fashioned blankets from sea otter pelts, fabricated basketry from twined reeds of various types, and assembled a variety of stone and bone tools in their assemblages. Ohlone villages typically consisted of domed dwelling structures, communal sweathouses, dance enclosures, and assembly houses constructed from thatched tule reeds and a combination of wild grasses, wild alfalfa, and ferns.

The Ohlone were politically organized into autonomous tribelets that had distinct cultural territories. Individual tribelets contained one or more villages with several seasonal camps for resource procurement within the tribelet territory. The tribelet chief could be either male or female, and the position was inherited patrilineally, but approval of the community was required. The tribelet chief and council were essentially advisors to the community and were responsible for feeding visitors, directing hunting and fishing expeditions, ceremonial activities, and warfare on neighboring tribelets.

The Gold Rush brought disease to the native inhabitants, and by the 1850s, nearly all the Ohlone had adapted in some way or another to economies based on cash income. Hunting and gathering activities continued to decline and were rapidly replaced with economies based on ranching and farming.

Historic Background – City of Newark

The city of Newark is located within Alameda County, California and is comprised of approximately 14 square miles of land. Newark was incorporated on September 22, 1955, and is part of what is referred to as the “Tri-City” area which includes Newark, Fremont and Union

City. In 2015, the city's population was approximately 44,000 people. The development of Newark followed the same patterns of change and growth as did most of California during the Mexican and American periods. After California statehood, the American presence in the San Francisco Bay region increased steadily. The following is excerpted from www.newark.org/vistors/history.

By the early 1850s, small landings were under construction along the San Francisco Bay area near Newark. In 1853, Mayhew's Landing included warehouses for wheat, hay, and coal and by 1856 the Mayhew Ranch included 1,500 acres of farmland extending inland to present-day I-880. Less than 20 years later, the Perrin brothers acquired the old Mayhews Ranch and extended their holdings to include property stretching from today's Jarvis Avenue on the north to south of Thornton Avenue. The Perrin brothers' "development project," the Green Point Dairy and Transportation Company, set the tone for future development. It was the Perrin brothers who first drew up plans to subdivide the Green Point Dairy into a townsite (located in the general vicinity of Thornton and Jarvis Avenues).

Work started on a railroad through the townsite from Dumbarton Point in 1875. In 1876, the railroad, together with the Green Point Dairy, were purchased and completed the South Pacific Coast Railroad, from Dumbarton Point south to Santa Cruz. Soon, a railroad station, roundhouse, and railroad shop buildings were being erected in the center of Newark in the area between Thornton Avenue, Sycamore Street, and Carter Avenue. Eventually, the railroad was extended north from Newark to Alameda, providing direct ferry service to San Francisco.

The completion of the railroad precipitated additional development in Newark. Hotels and stores were soon constructed, along with some of the first manufacturing industries, including a railroad car building firm and a foundry which later manufactured Wedgewood stoves. These enterprises joined the production of salt, which had been underway in the Newark area since the 1850s. Acquisitions and mergers of salt production companies throughout the Bay area ultimately resulted in formation of the Arden Salt Company, predecessor to Leslie Salt Company and today's Cargill Salt.

The city of Newark lies close to Silicon Valley with its high-tech companies and digital technology. Over the twentieth century, industrial growth within and surrounding Newark, added to the economic base. In September 1955, Newark was incorporated as the first new city in Alameda County in 47 years. Because of these efforts, Newark has built the Newark Mall, with its jobs and tax revenues, completed the Dumbarton Bridge and maintained and improved much of the Nimitz Freeway.

Historic Background – Dumbarton Cutoff of the Southern Pacific Railroad

The following historical context is largely adapted from John W. Snyder's (1996) evaluation of the Dumbarton Cutoff and Dumbarton Bridge.

The original Southern Pacific Railroad was founded in San Francisco as a land holding company in 1865 by a group of businessmen led by Timothy Phelps. The group planned to build a railroad running north to south from San Francisco to San Diego. The company was purchased in September 1868 by a group of businessmen known as the Big Four: Charles Crocker, Leland Stanford, Mark Hopkins and Collis P. Huntington. The Big Four had, in 1861, created the Central Pacific Railroad because of the Pacific Railroad Act. The Central Pacific started in California and built towards the east, while the Union Pacific Railroad started in St. Louis, Missouri and built westward. At this time, the nation had a comprehensive railroad system that connected the eastern states with some, more limited, systems operating in the southern states. The two systems met at Promontory Point, Utah in 1869, thus creating the first transcontinental rail system linking both east and west coasts. The next year, in 1870, the Central Pacific Railroad merged into the Southern Pacific Railroad (Southern Pacific Railroad, various websites, accessed 2017).

In 1901, following the death of Colis P. Huntington, railroad magnate Edward H. Harriman obtained control of Huntington's interest in the Southern Pacific and assumed the presidency of the railroad. Harriman immediately initiated a series of system-wide improvements to the Southern Pacific to improve its efficiency and to upgrade lines and bridges for modern traffic loadings. These efforts often took the form of newly-incorporated railroads that were totally controlled by the Southern Pacific Railroad, and that would be subsumed by the parent company upon their completion. In 1905 Harriman began improvements to main lines between San Francisco and the Pacific Northwest, between San Francisco and Ogden, and between San Francisco and New Orleans, where Southern Pacific steamships connected to New York. To facilitate these improvements, Harriman directed the incorporation of the Central California railway to build a 16.4-mile line between Niles in Alameda County and Redwood Junction in San Mateo County. The "Dumbarton Cutoff," in conjunction with the new Bayshore Cutoff, would unify and improve the Southern Pacific Railroad's terminal facilities in San Francisco, shortening the trip around the south end of the Bay by 50 miles and eliminating the need to ship freight across the Bay by ferry. The 1906 San Francisco earthquake further underscored the need to improve access to and from the city.

The Central California Railway was incorporated in 1906 to build a standard gauge railroad from Niles to Dumbarton Point, across San Francisco Bay to Redwood City, and then to a point near San Mateo. Newark was chosen to be the staging point for construction of the \$15 million-dollar Dumbarton Cutoff and its bridges across San Francisco Bay. Newark became a small boom town as bridge materials and other supplies arrived by rail from Oakland. Crews began by grading and setting track along the five miles between Niles and Newark, and the eleven miles between Newark and Redwood Junction. The bridges at Dumbarton and Newark Slough were then built, using an elaborate system of timber pile dolphins topped by a timber truss falsework that allowed shipping to proceed during construction. The timber pile dolphins and falsework acted as frameworks for the bridges' pivot piers and truss approach spans. The spans were initially assembled near the shoreline, and then carried and placed onto their piers by barge, using the tides for assistance. On land, crews used dredgers to build three miles of new railroad grade above the tidal marshes west of Newark.

The Dumbarton Cutoff was completed on September 12, 1910, although Harriman died in 1909 and never saw its completion. As soon as the line was completed it was leased to the Central Pacific Railroad, and then was sold to the railroad in 1912. The line represents the first successful bridging of San Francisco Bay, and proved to be the valuable freight link that Harriman had foreseen. During World War I, when U.S. railroads came under control of the United States Railroad Administration, the Dumbarton Cutoff was used by both the Southern Pacific and its competitor, the Western Pacific Railroad. During World War II the line carried massive amounts of trade for the war effort. Following the wars the line provided a vital transportation link between San Francisco and points to the east and north.

Freight trains continued to use the route through the 1970s, but traffic declined as the focus of shipping shifted from San Francisco to the Port of Oakland. The Southern Pacific Railroad closed the Dumbarton Cutoff in 1982. In 1996 the Dumbarton Cutoff was evaluated and found eligible for listing in the NRHP.

Records Searches

Northwest Information Center Record Search

On November 3, 2017, a record search including the Area of Potential Effect (APE) and a 0.50-mile radius beyond the APE boundary was conducted by HELIX at the Northwest Information Center in Rohnert Park. Results from the search indicate that a portion of the San Mateo Transit Authority Railroad corridor (Railroad), formerly the Southern Pacific Railroad, (P-01-001783)

outside the APE was previously evaluated and was considered eligible for listing on the NRHP. In addition, 18 studies have been conducted within the 0.50-mile search radius; two of the studies included the APE. A search of the Historic Properties Database File for Alameda County was negative for historic properties within the APE or a 0.50-mile radius.

Native American Heritage Commission Sacred Lands File Search

On November 3, 2017, HELIX sent a Sacred Lands File search request to the NAHC, and a response was received on November 17, 2017 indicating the search was negative. Included with the response was a list of six Native American tribal representatives that were sent information request letters on November 28th; no responses have been received. The NAHC correspondence relevant to the project is contained in Appendix E.

Pedestrian Survey and Historic Evaluation

Pedestrian Survey

HELIX Archaeologist, Katherine D. Thomas, surveyed the project APE on November 10, 2017. The APE is flat, sparsely developed land surrounded by industrial and commercial buildings in the western section of the City of Newark. The project area was owned by a previous company and paved with asphalt which has been recently milled resulting in very little native ground surface visibility.

Approximately 50 feet north of the northern border of the APE is the Dumbarton Cutoff (P-01-001783), which was formerly a component of the Southern Pacific Railroad and is now part of the San Mateo Transit Authority Railroad corridor. The Dumbarton Cutoff has previously been evaluated for the NRHP and was recommended eligible for listing. A short railroad spur diverges from the main rail line outside of the northwest corner of the APE. The spur and an associated siding run along the APE's northern boundary for approximately 1,000 feet before the spur exits the APE at its northernmost point. The railroad spur is evaluated below as a potential contributor to the Dumbarton Cutoff.

No pre-contact resources have been previously recorded within the APE or a 0.50-mile radius and none were identified during the field survey. One historic age resource, the Dumbarton Cutoff, has a small unused portion within the APE and a functioning portion extending outside the 0.50-mile radius. The portion of the Railroad within the APE has been evaluated for the NRHP and is considered not eligible for listing. No additional historic properties were identified within the APE.

Evaluation of Portion of Railroad within APE

In 1996 John W. Snyder evaluated the Dumbarton Cutoff and bridge for eligibility to the NRHP. Assuming a period of significance from 1909 to 1945, Snyder recommended the line eligible at the local level of significance in transportation and engineering. He found that under criterion A it is associated with system-wide improvements to the Southern Pacific Railroad that made it the standard railroad of the West, and is inextricably linked both with the economic growth of San Francisco and with national defense efforts during both world wars. Under criterion B, it is associated with the life of E.H. Harriman, who drove the modernization of the Southern Pacific during the early twentieth century. Under criterion C, contributive elements of the cutoff, including its bridges, are representative examples of their type, period, and method of construction. Snyder also found that overall the line retains integrity of its location, setting, feeling, and association. It should be noted that resources determined eligible for the NRHP are assumed to also be eligible for the CRHR, and are considered historical resources under CEQA.

The pedestrian survey included identification of a railroad spur that diverges from the Dumbarton Cutoff outside the APE, and then runs adjacent to and inside the APE's northern boundary. The Dumbarton Cutoff was evaluated for listing on the NRHP and was recommended as eligible, although the evaluation did not address the spur. As the railroad spur within the APE would not exist but for the Dumbarton Cutoff, was constructed during the Dumbarton Cutoff's period of significance (1909-1945), and would be destroyed during implementation of the proposed project, the spur was evaluated as a potential contributor to the Cutoff by HELIX Architectural Historian Kathleen A. Crawford.

The evaluation determined that the railroad spur does not adequately portray the significance that was attributed to the main line of Southern Pacific Railroad's Dumbarton Cutoff, and as such does not contribute to the Dumbarton Cutoff's eligibility for listing on the NRHP. The specifics of the evaluation are provided below.

The railroad spur does not contribute to the characteristics that qualify the Dumbarton Cutoff as an eligible property under Criterion A (association with events that have made a significant contribution to the broad patterns of our history). The spur is associated with the operation of a plant that produced commonly used chemicals but did not play a significant role in the overall development and operation of the larger Railroad system or substantially impact local, state, or national history. Unlike the Dumbarton Cutoff's main line, the spur is not associated with system-wide improvements to the Southern Pacific Railroad and is not linked to the economic growth of San Francisco or to national defense efforts.

The railroad spur does not contribute to the characteristics that qualify the Dumbarton Cutoff as an eligible property under Criterion B (association with the lives of significant persons in our past). There is no evidence to suggest that construction or operation of the spur are associated with any persons considered important in history, including E. H. Harriman.

The railroad spur does not contribute to the characteristics that qualify the Dumbarton Cutoff as an eligible property under Criterion C (embodiment of the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction). The style and construction techniques of the spur do not rise to the level of significance shown by the Dumbarton Cutoff's main line. The tracks within the APE are of standard gauge and standard manufacture, and the generic materials used in its construction have no unique or distinguishing characteristics or features. Likewise, the spur does not possess the significant and distinguishable design or method of construction that mark the Dumbarton Cutoff's contributing elements.

The railroad spur does not contribute to the characteristics that qualify the Dumbarton Cutoff as an eligible property under Criterion D (has yielded or may be likely to yield, information important in history or prehistory). Generic in materials and construction for its period, the railroad spur does not have the potential to be a primary source of information for local history, the railroad industry, or construction and operation of the Dumbarton Cutoff.

Although in disrepair, the railroad spur generally retains integrity of design, as the extant materials appear to be original and not intentionally altered. Integrity of workmanship is non-existent for the spur, as the workmanship is not distinct, or representative of a particular period, culture or building method. The railroad spur's integrity of location and setting is mixed. It remains in its original place of construction, and therefore has integrity of location. The spur's integrity of setting, however, is poor compared with that of the larger Dumbarton Cutoff, having been diminished by extensive ground disturbances, demolition of the FMC facility, and associated alterations to the property's landscape. The railroad spur's integrity of feeling is limited, since there is no sense that it represents a component of a larger historical context, such as system-wide improvements to the Southern Pacific Railroad. The lack of integrity of setting, workmanship, and feeling together have affected any integrity of association that the railroad spur might convey.

Impacts and Mitigation Measures from the Dumbarton Transit Oriented Development Specific Plan Certified PEIR

The 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.

Evaluation of Cultural Resources

Questions a - d: Less than significant with project level mitigation incorporated

Record searches have resulted in negative findings for previously documented cultural resources. Although the site contains a short railroad spur associated with the historic Dumbarton Cutoff of the Southern Pacific Railroad, the spur has been evaluated and has been determined to not meet the criteria of an historical resource. Further, no archaeological resources have been found that could potentially meet the criteria of either an historical resource or a unique archaeological resource. The potential for the project site to contain significant paleontological resources or human remains is low.

Nevertheless, ground disturbance during project construction could reveal unknown, buried cultural resources. Measures contained in the Specific Plan MMRP (measures 4.4-1a and 4.4-1b) would be implemented to minimize impacts to cultural resources to a less-than-significant level.

Dumbarton Mitigation Monitoring and Reporting Program Measure 4.4-1a (Subsurface Resources)

The Specific Plan MMRP measure 4.4-1a specifies that prior to issuance of grading permits for each development, qualified archaeologists shall train the construction crew on identifying cultural resources and the legal and/or regulatory implications of destroying or removing cultural

resources or artifacts. If subsurface or previously unknown cultural resources or human remains are discovered during construction, avoidance and mitigation measures involving the qualified archaeologist, lead agency, and project sponsor will be implemented. The measure contains specific processes depending on the resource encountered.

Dumbarton Mitigation Monitoring and Reporting Program Measure 4.4-1b (Historic Buildings and Structures)

The Specific Plan MMRP measure 4.4-1b specifies that prior to approval of Tentative Subdivision Maps for any development in the Specific Plan area, any buildings, structures, or the railroad directly affected by or within 100 meters (328 feet) of development shall be evaluated for inclusion in the NRHP by a qualified professional archaeologist. If the building or structure is considered eligible, then the resource will be evaluated for impacts. If not eligible, no mitigation measures would be required.

With implementation of the above measures, impacts to cultural resources would be less than significant.

VI. GEOLOGY AND SOILS

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

A project-specific preliminary geotechnical investigation was prepared by Berlogar Stevens & Associates (BSA) and is included as Appendix F. Information pertinent to the 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 the identified 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 a substantial earthquake from off-site faults that could damage and destroy buildings and other structures.

Soils

Fill soils cover the site. Geologic deposits below the fill include Holocene Bay Mud deposits (Qhbm) in the western portion of the site, with Holocene Basin deposits over the central and eastern portions of the site (Helley and Graymer 1997). Bay Mud is saturated estuarine mud predominantly consisting of clay and silty clay that underlies marshlands and tidal mud flats of San Francisco Bay. The Bay Mud contains a few lenses of fine sand and silt, as well as a few shelly layers (oysters), and peat. The mud interfingers with and grades into fine-grained deposits at the distal edge of Holocene fans. Basin Deposits are silty clay to clay deposits found at the distal edge of alluvial fans adjacent to the Bay Mud. Mapping of the limits of Bay Mud deposits along the eastern shore of the southern San Francisco Bay (McDonald et. al. 1978) shows Bay Mud deposits being limited to the western portion of the site, consistent with mapping by Helley and Graymer (1997).

Geologic mapping of bedrock in the area of the site does not indicate the presence of bedrock on the site. However, bedrock was encountered at shallow depths in the central area of the site. The shallow bedrock appears to be continuous with two areas of bedrock (North Hill and South Hill)

immediately south of the site on the Bridgeway property. Those two bedrock hills, which are in line with the Coyote Hills, located about 3,600 feet northwest of the site, were previously investigated by BSA. The Coyote Hills are shown on the Preliminary Geologic Map Emphasizing Bedrock (Graymer, et. al., 1996). The Coyote Hills are mapped as consisting of Undivided Franciscan rocks, chert, greenstone, limestone and serpentinite.

With respect to the two bedrock hills south of the site, previous investigations of those hills by BSA indicated that the North Hill is composed of sandstone and claystone and is mantled with undocumented fill. The North Hill, including the area at the north end of the ridge extending into the FMC site, was partially covered with magnesia, whereas the South Hill is composed of serpentinite.

The approximate areal extent of shallow bedrock (within approximately 8 feet of the ground surface) is shown on Plate 2 in the geotechnical investigation. The shallow bedrock logged by BSA on the site consisted of slightly weathered to competent siltstone and sandstone of the Franciscan Assemblage. ERM logged weathered serpentine, consistent with Franciscan Assemblage bedrock, in their soil boring D2-A and test pit TP-5W at a depth of about 9 feet below ground surface (bgs). The site is blanketed by a layer of fill generally ranging in thickness from about 2 to 5 feet.

Deeper fills, on the order of about 8 feet deep, are present in areas where clearing of past structures, and environmental investigation and remediation activities have been performed. The surficial fills in the western portion of the site are predominately silty to clayey gravels or sands in the upper 2 to 3 feet. The surface soils in the eastern portion of the site are predominately clays and silts. The fill contains crushed rock, concrete, and brick in several areas. ERM reported encountering compacted construction debris containing crushed concrete, concrete block, brick, and wood with fragments of metal beams and pipes in the central portion of the western area (Parcel C) of the site. Intact concrete footings were also found at depths between 2 and 4 feet bgs on the western side of the site. They also reported finding a buried concrete structure at a former bittern pond, which extended to a depth of about 8 feet bgs, in the vicinity of boring B-7.

The alluvial soils underlying the fill consists of varying layers of lean silty to sandy clays, clayey to sandy silts, sand, and silty to clayey sands. The sandy layers were generally encountered between about 8 and 18 feet bgs, with sand deposits also encountered below about 38 feet in two of the four CPTs that extended to depths of at least 50 feet bgs. The granular soils are loose to medium dense, where present in the upper 10 to 20 feet of the site and medium dense to dense below. The fine-grained soils range in consistency from medium stiff to very stiff. A layer of

shells was encountered about 2-1/2 feet below the surface at boring B-11 adjacent to the wetlands area at the western side of the site. The deposit is about 1-1/2 feet thick. ERM logged a layer of shell fragments from 3-1/2 feet bgs to the maximum depth explored at their boring DG-206 of 10 feet bgs. See Appendix F for the detailed geotechnical investigation.

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 the Dumbarton Transit Oriented Development Specific Plan Certified PEIR

Geology and soils are discussed in Chapter 4.5 of the PEIR prepared for the Dumbarton TOD Specific Plan (RBF 2011). The PEIR concludes that project construction could expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death as a result of seismic-related ground shaking, liquefaction, or landslides and includes measures to reduce impacts to less than significant. The project could also result in substantial soil erosion, the loss of topsoil, or be located on a geologic formation or soil that is unstable and includes measures to reduced impacts to less than significant.

The PEIR concluded that there are no identified faults running through the Dumbarton TOD Specific plan area and the risk of ground rupture is non-existent. Additionally, future development allowed by the Dumbarton TOD Specific Plan would connect to the municipal sewer system and would not require the construction of septic tanks or an alternative wastewater disposal system.

Evaluation of Geology and Soils

Question a: Less than significant with project level mitigation incorporated

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. This could threaten the integrity of the structures on the project site and the people occupying those structures. 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. Due to the relatively flat topography of the project site, it is not susceptible to landslides as a result of seismic activity.

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.

The project-specific preliminary geotechnical investigation identified potentially liquefiable soils to a depth of 25 feet or more and recommended the soil should be densified to increase resistance to liquefaction. Based on the evaluation of the site conditions, Berlogar Stevens & Associates recommended the installation of stone columns for liquefaction remediation at this preliminary stage. It is estimated that stone columns can be utilized up to approximately 50 feet from adjacent occupied buildings or sensitive facilities, however, vibration monitoring should be performed to obtain a vibration attenuation relationship for the site (BSA 2017).

It should be noted that the preliminary conclusions and recommendations are intended to assist in evaluating and planning the project. These preliminary conclusions and recommendations are insufficient for the design of the proposed residential development at this site, and a design-level geotechnical investigation, including additional field exploration and laboratory testing, will be required. The preliminary conclusions and recommendations contained in this report are subject to modification, depending on the findings from the design-level geotechnical investigation (BSA 2017). Therefore, the Specific Plan MMRP measure 4.5-1 will be implemented to further reduce impacts to a less-than-significant level.

Dumbarton Mitigation Monitoring and Reporting Program Measure 4.5-1

Prior to site development, future developers are required to have design-level geotechnical engineering investigations performed on their individual property. Grading permits for the property shall be issued under the mitigation measures identified in the geotechnical investigation. These investigations shall consider the locations of the future developments and the types of developments as well as the soil and rock conditions as identified by underground investigation and laboratory testing.

Implementation of this mitigation measure would reduce seismic-related ground shaking, liquefaction, or landslide impacts to a less-than-significant level.

Question b: Less than significant with project level mitigation incorporated

Construction activities on the project site, such as grading and excavation, could potentially result in increased erosion or loss of topsoil from wind or stormwater. While the project could be exposed to erosion hazards or loss of topsoil, as noted in the PEIR, erosion can be controlled through mitigation measures developed by specific geotechnical investigations that are required by Specific Plan MMRP measure 4.5-2. Additionally, the project is required to adhere to local and statewide regulations, codes, and requirements, as described in mitigation measure 4.9-3 (Hydrology and Water Quality).

Implementation of these mitigation measures would reduce impacts due to soil erosion to a less-than-significant level.

Dumbarton Mitigation Monitoring and Reporting Program Measure 4.5-2 (Soil Erosion)

Erosion can be controlled through mitigation measures developed by specific geotechnical investigations that are required by mitigation measure 4.5-1. Additionally, the project is required to adhere to local and statewide regulations, codes, and requirements, as described in mitigation measure 4.9-3 (Hydrology and Water Quality).

Implementation of this mitigation measure would reduce impacts to soil erosion to a less-than-significant level.

Question c: Less than significant with project level mitigation incorporated

The upper 2 to 5 feet of the site is mantled with undocumented fill, with locally deeper fills where exploratory excavations and site demolition activities have occurred. The undocumented fill consists of general fill placed to raise the site above the tidal influenced zone, to construct a levee along the barge canal, to backfill holes that resulted from site demolition and clearing activities, and filling of holes associated with exploratory test pits and environmental remediation excavations. The extent of uncontrolled fill, both laterally and vertically are presently unknown. ERM excavated 53 test pits across the site. The test pits will need to be re-excavated and then backfilled with engineered fill unless documentation can be provided that the backfill soils were properly placed and compacted as engineered fill, compacted to not less than 90 percent relative compaction. The test pits were as deep as 9 feet at some locations.

While the project could experience differential ground settlement from areas that would be backfilled, implementation of Specific Plan MMRP measure 4.5-1 and adherence to the

mitigation measures prescribed in the design-level geotechnical engineering investigation would reduce these impacts to a less-than-significant level.

Question d: Less than significant with project level mitigation incorporated

Moderately expansive soils were encountered in the surficial soils that blanket the site, 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 and adherence to the mitigation measures prescribed in the design-level geotechnical engineering investigation would reduce these impacts to a less-than-significant level.

Question e: No impact

The project would connect 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.

VII. GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
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Would the project:

- | | | | | |
|--|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

A project specific GHG emission's evaluation was conducted (Appendix C, HELIX 2017a) and the methods and results are summarized in the following subsections.

Climate change refers to any significant change in measures of climate, such as average temperature, precipitation, or wind patterns over a period of time. Climate change may result from natural factors, natural processes, and human activities that change the composition of the atmosphere and alter the surface and features of the land. Significant changes in global climate patterns have recently been associated with global warming, which is an average increase in the temperature of the atmosphere near the Earth's surface; this is attributed to an accumulation of greenhouse gas (GHG) emissions in the atmosphere. GHGs trap heat in the atmosphere which, in turn, increases the Earth's surface temperature. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. The emission of GHGs through fossil fuel combustion in conjunction with other human activities appears to be closely associated with global warming.

GHGs, as defined under California's Assembly Bill 32 (AB 32), include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF₆). General discussions on climate change often include water vapor, ozone, and aerosols in the GHG category. Water vapor and atmospheric ozone are not gases that are formed directly in the construction or operation of development Projects, nor can they be controlled in these Projects. Aerosols are not gases. While these elements have a role in climate change, they are not considered by either regulatory bodies, such as CARB, or climate change

groups, such as the Climate Registry, as gases to be reported or analyzed for control. Therefore, no further discussion of water vapor, ozone, or aerosols is provided.

GHGs vary widely in the power of their climatic effects; therefore, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO₂. For example, since CH₄ and N₂O are approximately 25 and 298 times more powerful than CO₂, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 25 and 298, respectively (CO₂ has a GWP of 1). Carbon dioxide equivalent (CO₂e) is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO₂e. The atmospheric lifetime and GWP of selected GHGs are summarized in **Table 8**.

Table 8. Global Warming Potentials and Atmospheric Lifetimes

GREENHOUSE GAS	ATMOSPHERIC LIFETIME (years)	GLOBAL WARMING POTENTIAL (100-year time horizon)
Carbon Dioxide (CO ₂)	50.0–200.0	1
Methane (CH ₄)	12.0	25
Nitrous Oxide (N ₂ O)	114.0	298
HFC-134a	14	1,430
PFC: Tetrafluoromethane (CF ₄)	50,000.0	7,390
PFC: Hexafluoroethane (C ₂ F ₆)	10,000.0	12,200
Sulfur Hexafluoride (SF ₆)	3,200.0	22,800
Carbon Dioxide (CO ₂)	50.0–200.0	1
Methane (CH ₄)	12.0	25
Nitrous Oxide (N ₂ O)	114.0	298
HFC-134a	14	1,430

HFC: hydrofluorocarbons; PFC: perfluorocarbons
Source: IPCC 2007.

Regulatory Framework Relating to Greenhouse Gas Emissions

Refer to the *Air Quality and Greenhouse Gas Emissions Technical Report* in Appendix C (HELIX 2017a) for detailed descriptions of regulations related to GHGs.

State Regulations

Assembly Bill 32, the California Global Warming Solutions Act of 2006, recognizes that California is a source of substantial amounts of GHG emissions. The statute states that:

Global warming poses a serious threat to the economic wellbeing, public health, natural resources, and the environment of California. The potential adverse impacts of global

warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

In order to help avert these potential consequences, AB 32 established a State goal of reducing GHG emissions to 1990 levels by the year 2020.

As a follow-up to AB 32, Senate Bill (SB) 32 was passed by the California legislature in August 2016 to establish a California GHG emission reduction target of 40 percent below 1990 levels by 2030.

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 through the GHG monitoring process shows that the City has already achieved the first two of these goals.

Methods

Construction GHG emissions are generated by vehicle engine exhaust from construction equipment, on-road hauling trucks, vendor trips, and worker commuting trips. Operational GHG emissions for the proposed project are estimated by including purchased electricity; natural gas use for space and water heating; the electricity embodied in water consumption; the energy associated with solid waste disposal; and mobile source emissions. As described under methods in Section 8.III, *Air Quality*, construction and operation emissions were estimated using the CalEEMod Version 2016.3.2. All modeling output files are provided in Appendix C.

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 9**, the BAAQMD 2017 CEQA Guidelines do not have thresholds for construction GHG emissions, but do include operational related thresholds. For a project with a high-density housing option in a focused transit-oriented development area to meet the operational thresholds, it must show compliance with a qualified GHG reduction strategy, or be below a screening-level emission rate of 4.6 MT CO₂e per service population (residents plus employees) 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 9. BAAQMD Greenhouse Gas Emissions Thresholds

Pollutant	Construction-Related	Operational-Related
	Average Daily Emissions (pounds/day)	Maximum Annual Emissions (metric tons/year)
GHGs – Projects other than Stationary Sources	No threshold	Compliance with Qualified GHG Reduction Strategy OR 1,100 MT of CO ₂ e/yr OR 4.6 MT CO ₂ e/SP/yr (residents + employees)

Source: BAAQMD CEQA Guidelines Updated May 2017.

Impacts and Mitigation Measures from the Dumbarton Transit Oriented Development Specific Plan Certified PEIR

Greenhouse Gas Emissions is discussed in Chapter 4.6 of the PEIR prepared for the Dumbarton TOD Specific Plan. 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: Less than significant impact

Greenhouse gas emissions would be generated from the proposed residential 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 10**, total GHG emissions associated with construction are estimated at 1,677 MT of CO₂e.

Table 10. Estimated Construction Related GHG Emissions for the Proposed Project

Phase	Annual Emissions (metric tons/year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Demolition	19	0.00	0.00	19
Site Preparation	45	0.01	0.00	45
Grading	505	0.09	0.00	507
Underground Infrastructure/Utilities	99	0.03	0.00	100
Building Construction	733	0.05	0.00	734
Paving	145	0.04	0.00	147
Architectural Coatings	126	0.01	0.00	126
TOTAL	1,671	0.23	0.00	1,677

Source: *Air Quality and Greenhouse Gas Emissions Technical Report* prepared by HELIX Environmental Planning, Inc. dated December 2017.

The BAAQMD 2017 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.

The net increase in GHG emissions from the project would be 2,748 MT of CO₂e per year. The BAAQMD's 2017 CEQA Air Quality Guidelines establishes a threshold of 4.6 MT CO₂e per service population (residents plus employees) per year. The service population for the proposed project is estimated to be approximately 600 residents. By factoring in the service population, the project emissions equal 4.58 MT CO₂e per service population per year, which is lower than the threshold. Therefore, the project would not result in a significant impact associated with the emissions of GHG.

The estimated annual operational GHG emissions are presented in **Table 11**.

Table 11. Estimated Annual Operation Greenhouse Gas Emissions for the Proposed Project

Emission Source	Annual Emissions (metric tons/year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Area Source	19	0.00	0.00	19
Energy Use	868	0.03	0.01	872
Mobile	1738	0.08	0.00	1740
Solid Waste Management	36	2.15	0.00	90
Water Consumption	26	0.34	0.01	37
Tree Planting	(11)	0.00	0.00	(11)
OPERATIONAL TOTAL	2677	2.60	0.02	2748
Projected Service Population	600			
NET INCREASE PER Service Population	4.58 MT CO₂e/SP/yr			
Significance Threshold	4.6 MT CO ₂ e/SP/yr			
Significant Impact?	<i>No</i>			

Source: *Air Quality and Greenhouse Gas Emissions Technical Report* prepared by HELIX Environmental Planning, Inc. dated December 2017

Notes: Service population = residents + employees

Question b: Less than significant impact with mitigation incorporated

The PEIR prepared for the Dumbarton TOD Specific Plan concludes that the entire Dumbarton TOD project (which includes the FMC Parcel C Project) is consistent with all applicable GHG plans and policies. The FMC Parcel C Project design features were compared against the policies included in the 2013 Updated General Plan that's 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-3.2. Water Conservation Standards. Promote conservation through development standards, building requirements, irrigation requirements, landscape design guidelines, and other applicable City policies and programs.

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

The project would also be consistent with several Action Items listed in the Clean Air Plan. The CAP includes references that the proposed project would also be consistent with several Action Items within the City's CAP, namely the project's green principles and regional smart growth planning efforts it will achieve (i.e., residential units nearby the transit station, higher density, and mix of uses). The project would include the installation of energy- and water-efficient systems. The project would preserve all of the tidal wetlands on-site in a 2.74-acre open space as well as provide a bicycle and pedestrian trail eligible to be part of the San Francisco Bay Trail. 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, 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 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

Would the project:	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Hazards and hazardous materials are discussed in Chapter 4.7 of the PEIR (RBF 2011) prepared for the Dumbarton TOD Specific Plan. 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 that resulted in 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.

Beginning in 1969, the project site was subject to a series of waste discharge requirement orders, cease and desist orders, NPDES permits, and site cleanup requirements adopted by the San Francisco Bay Regional Water Board (RWQCB). The project site was subject to Final Site Cleanup Requirements (SCR) Order No. R2-2002-0060, adopted May 22, 2002, until May 21, 2015 when the RWQCB issued Order No. R2-2015-0017 that adopted cleanup requirements and rescinded that earlier Order. Order R2-2015-0017 is provided as Appendix G of this Initial Study and includes the Interim Remedial Action Workplans that detail how the residual impacts to the subsurface are to be remediated.

Those interim and other remedial measures are further described in Order R2-2015-0017. FMC has implemented remedial measures included in the approved Interim Remedial Action Workplans, and the RWQCB continues to provide regulatory oversight of the environmental investigation and remediation pursuant to the Order (ERM 2017). FMC conducts operation and maintenance of a groundwater extraction and treatment system for the shallow zone groundwater and the deeper Newark Aquifer with subsequent treatment and discharge to the Union Sanitary District (ERM 2017).

Removal of the affected soil at the project site was completed on November 3, 2017, in compliance with Order R2-2015-00, and a request for Site Closure for soil issues was submitted to the RWQCB by ERM in December 2017.

The RWQCB approved an Interim Remedial Action Workplan for the remediation of groundwater under on August 23, 2017. The remediation of groundwater and shallow ground water monitoring are ongoing. ERM will prepare and expect to submit a Completion Report for groundwater remediation performed pursuant to the above-referenced Remedial Action Workplan in December 2018 with SFBRWQCB approval expected in February 2019.

Impacts and Mitigation Measures from the Dumbarton Transit Oriented Development Specific Plan Certified PEIR

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 Hazardous Materials

Questions a, b, c: Less than significant 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 to 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 residential 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. Therefore, this impact is considered less than significant, and no mitigation is necessary.

Question d: Less than significant with project level mitigation incorporated

The project site has a history of hazardous materials contamination associated with previous land uses that may create a significant hazard to the public or the environment if not appropriately remediated. The San Francisco Bay RWQCB provides regulatory oversight of the properties, and has participated in ongoing coordination to remediate the project site. The project applicant will continue to coordinate with the RWQCB to properly implement the Interim Remedial Action Workplans developed for the project site.

Once environmental remediation of the project site is complete, the project applicant will submit a request of Site Closure with the RWQCB. The Specific Plan MMRP measures 4.7-1a-c would be implemented to avoid, minimize, and mitigate impacts to the public and the environment as a result of hazardous materials.

Dumbarton Mitigation Monitoring and Reporting Program Measure 4.7-1a-c (Hazardous Materials)

The Specific Plan MMRP measure 4.7-1a specifies that prior to issuance of a building permit for any property within the Specific Plan area with residual environmental contamination, the agency with primary oversight shall have determined that the proposed land use and development for that property does not present an unacceptable risk to human health. This may be implemented through institutional controls, site specific measures, a risk management plan, and deed restrictions based on applicable cleanup standards. Measure 4.7-1b requires that all areas be cleared prior to grading, and Measure 4.7-1c requires that soils imported into the Specific Plan area from off-site shall be tested for toxic or hazardous materials.

With implementation of the above measures, impacts as a result of hazardous material contamination would be less than significant.

Questions e, f: No impact

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 would occur, and no mitigation is necessary.

Question g: Less than significant 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 project. No significant impact would occur, and no mitigation would be necessary.

Question h: Less than significant impact

The project site is provided urban levels of fire protection by the City and would not increase the risk of wildland fires. No significant impact would occur, and no mitigation is necessary.

IX. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Hydrology and water quality are discussed in Chapter 4.8 of the PEIR prepared for the Dumbarton TOD Specific Plan (RBD 2011). Information pertinent to the proposed project is summarized below.

The project site has undergone soil remediation and reflects the history of past hydrologic manipulation. Precipitation is the only source of water for the study area. 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 Enterprise Drive convey surface runoff from parcels fronting this street 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 project site is within FEMA panel 06001C0443G effective 8/3/2009. The majority of the project site is located within an area

classified as Zone AE which indicates this area has a 1 percent annual chance of flooding and is within a 100-year floodplain (FEMA 2017).

The project site 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.

Impacts and Mitigation Measures from the Dumbarton Transit Oriented Development Specific Plan Certified PEIR

Hydrology, Drainage, and Water Quality are discussed in Section 4.8 of the PEIR prepared for the Dumbarton TOD Specific Plan. 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 project would construct a new outfall to discharge to the barge canal.

Evaluation of Hydrology and Water Quality

Questions a, c, e, f: Less than significant 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. No significant impact would result, and no mitigation would be necessary.

Question b: Less than significant impact

Implementation of the 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 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 proposed development would not substantially reduce groundwater recharge. No significant impacts would occur, and no mitigation would be necessary.

Question d: Less than significant with project level mitigation incorporated

Implementation of the project would increase impervious areas, subsequently reducing absorption rates in some areas, and would alter 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. Existing storm drains in the area provide flood control and to ensure the storm water system can adequately accommodate the proposed 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 PEIR’s 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.

With implementation of the above measure, potential flooding on or off-site would be reduced to a less-than–significant level.

Questions g, h: Less than significant impact

Portions of the project site are within a mapped FEMA 100-year Flood Hazard AE Zone with a base flood elevation of 8.24 feet (NGVD 29). The proposed project design conforms with associated applicable City requirements for development in flood hazard areas, which require that: (1) building pads for all occupied structures within the noted AE Zone have a minimum elevation of 11.25 feet (NGVD 29); (2) finished floor elevations for occupied structures within the noted AE Zone are a minimum of six inches above the building pad elevation; and (3) the top of curb grades for new residential streets within the noted AE Zone exhibit a minimum elevation of 10 feet (NGVD 29). Based on the noted requirements and related project design conformance, all developed portions of the project site would be elevated above the mapped 100-year floodplain. Impacts would be less than significant, and no mitigation is necessary.

Question i: Less than significant impact

The 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 was 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 project. Impacts would be less than significant, and no mitigation is necessary.

Question j: Less than significant 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 effect from inundation by seiche, tsunami, or mudflow, and no mitigation would be necessary.

X. LAND USE AND PLANNING

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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 General Plan and the City of Newark Zoning Ordinance. Further, the FMC Parcel C Project is included in the Dumbarton TOD Specific Plan.

The Dumbarton TOD Specific Plan identifies the two parcels comprising most of the project property as medium/high density residential. The Specific Plan identifies an allowable density range of 14-25 dwelling units per gross developable acre for medium density residential, 16-60 dwelling units per gross developable acre for medium/high density residential, and 25-60 dwelling units per gross developable acre for high density residential. Additionally, the Specific Plan identifies a maximum number of units that may be developed on each APN: the maximum number of units allowed on APN 537-852-1-2 is 246, and the maximum number of units allowed on APN 537-852-2-8 is 173. No residential units were allocated to APN 537-852-2-7 in the Specific Plan because it was designated as parks and recreational open space and commercial/office space. This land use designation issue will be addressed through a Lot Line Adjustment to extend the residential land use designation to cover the entire project site. With

the Lot Line Adjustment, the proposed project is consistent with the Specific Plan land use designation.

The land use designation for the project site in the 2013 Updated General Plan is high density residential (HDR), parks and recreational facilities, and community commercial. The City of Newark zoning designation is Business and Technology Park (BTP), which is inconsistent with the proposed land uses for the FMC Parcel C Project. Implementation of the project would require a rezone of the project site from BTP to medium-high density residential-form base code (MHDR-FBC) for the development of single-family residential units.

The total number of units planned for the FMC Parcel C project is 199 dwelling units.

Impacts and Mitigation Measures from the Dumbarton Transit Oriented Development Specific Plan Certified PEIR

Land Use is discussed in Chapter 4.9 of the PEIR certified for the Dumbarton TOD Specific Plan (RBF 2011). 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 residential and 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. All impacts as a result of land use were anticipated to be less-than-significant, and therefore no mitigation measures were required.

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.

The Transfer of Dwelling Units Policy allows for the transfer of dwelling units between APNs as long as the net increase does not exceed the total dwelling units permitted by the Specific Plan (2,500 units).

Evaluation of Land Use and Planning

Question a: No impact

The surrounding lots are currently vacant former industrial lands that are planned for development through the Dumbarton TOD, of which the FMC Parcel C Project is a part. The project would not physically divide an established community. Therefore, there would be no impact and no mitigation would be required.

Question b: Less than significant impact

The City of Newark zoning designation is Business and Technology Park (BTP), which is inconsistent with the proposed land uses for the FMC Parcel C Project. Therefore, an amendment to the Zoning Ordinance to reflect the proposed land use designations for all APNs is required.

The medium and medium-high density residential land uses for the project site would be inconsistent with the land use proposed in the 2013 Updated General Plan. However, City approval of the project would resolve the designation inconsistency. The medium-high density residential land use proposed for APN 537-852-2-7 differs from the land use proposed in the Dumbarton TOD Specific Plan. However, 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 would be submitted to the City for approval.

The number of dwelling units proposed for construction on APN 537-852-2-7 exceeds the maximum number of units allowed for that APN in the Specific Plan (0 units). The Specific Plan allows for a transfer of dwelling units between APNs, in the event there would not be a net increase in the total number of dwelling units permitted by the Specific Plan (2,500 units). Because the project is proposing to construct 220 fewer dwelling units on APNs 537-852-1-2 and 537-852-2-8 combined than is identified in the Specific Plan, those dwelling units could be transferred to APN 537-852-2-7. A revised Unit Allocation Table would be submitted to the City for each proposed transfer of dwelling units. A City of Newark approval of the density transfer is anticipated.

Question c: No impact

No Habitat Conservation Plan or Natural Community Conservation Plan has been approved for the project area. Therefore, implementation of the FMC Parcel C Project would not conflict with any conservation plans. No impact would result, and no mitigation would be necessary.

XI. MINERAL RESOURCES

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Impacts and Mitigation Measures from the Dumbarton Transit Oriented Development Specific Plan Certified PEIR

As discussed in Chapter 1.2 of the PEIR prepared for the Dumbarton TOD Specific Plan, 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).

Evaluation of Mineral Resources

Questions a, b: No impact

The 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 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 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (including construction)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

A project-specific acoustical study was conducted (Appendix H, HELIX 2017d) and the methods and results are summarized in the following subsections.

The predominant existing noise sources in the vicinity of the FMC Parcel C Project is vehicular traffic on Willow Street, although, due to the distance from the street, the existing noise levels are minor. The future Dumbarton Rail Corridor, located approximately 50 feet north of the

project's northern property line, would be the predominant noise source when it is operational. No commercial airports are located within two miles of the project site, though occasional overflights from aircrafts travelling to and from nearby airports. The nearest airports to the proposed project site are the Palo Alto general aviation airport located 6 miles southwest of the site and the Hayward Executive Airport located 10 miles to the north. The San Jose International Airport is 13 miles southeast of the project site. Potential noise impacts as a result of the proposed 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. Single-family residential land uses are considered "normally acceptable" in exterior noise environments of 60 dBA L_{DN} or less.

The City of Newark General Plan Noise Element identifies interior noise standards of 45 dBA L_{DN} or less for single-family residential land uses.

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. A new single-family residential development is located approximately 600 feet to the southeast of the southeastern corner of the project site. The planned on-site residences (including outdoor use areas) are also considered noise-sensitive receptors. This analysis also includes an assessment of potential noise impacts to planned future residential uses included as part of the Dumbarton TOD Specific Plan. The nearest future residences to the project site would be located adjacent to the south of the project at the Bridgeway Lennar Project.

Methods

Modeling of the outdoor noise environment for transportation noise was accomplished using the Traffic Noise Model version 2.5 (TNM 2.5). TNM 2.5 was released in February 2004 by the U.S. Department of Transportation. TNM 2.5 calculates the average hourly noise level from model inputs and traffic data. Input variables included projected traffic volumes, estimated truck composition percentages, and vehicle speeds. The model-calculated one-hour equivalent noise level (L_{EQ}) noise output, which uses the peak hour traffic volumes, is the equivalent of the $dBA L_{DN}$ (Caltrans 2009).

Modeling for rail noise was performed using the Create Railroad Noise Model (Harris Miller Miller & Hanson, Inc. 2006), which is based upon the Federal Transit Administration's General Transit Noise Assessment. Modeling for the noise barrier was performed using Computer Aided Noise Abatement (CadnaA) version 2017. 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, and uses the most up-to-date calculation standards to predict outdoor noise impacts.

Project construction noise was analyzed using the Roadway Construction Noise Model (RCNM; U.S. Department of Transportation [USDOT] 2008), which utilizes estimates of sound levels from standard construction equipment.

Levels of Significance

Construction Noise

The City of Newark Municipal Code does not specify 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 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 7:00 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. According to the FTA, a ground-borne vibration level of 0.2 inch-per-second peak particle velocity (PPV) should be considered as the damage threshold criterion for structures deemed “fragile” (FTA 2006). Consistent with the Dumbarton TOD Specific Plan PEIR, this analysis has assumed a conservative threshold of 0.2-inch-per-second PPV (City of Newark 2011). For vibration to project residences from rail noise, based on FTA vibration impact criteria, 80 vibration velocity decibels (VdB) is the applicable maximum acceptable vibration level for residential uses adjacent to a rail corridor with less than 30 vibration events per day (i.e., infrequent events) passing by the site.

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 "Year 2035 with Project" condition to the "Existing" condition. 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 dB 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 project in combination with other related projects (combined effects), it must also be demonstrated that the project has an incremental (cumulatively considerable) effect. In other words, a significant portion of the noise increase must be due to the 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: Less than significant with project level mitigation incorporated

Refer to the *Acoustical Report for the FMC Parcel C Project* (HELIX 2017d) in Appendix H for a detailed discussion of the results of the noise study.

Construction Noise

The loudest pieces of construction equipment anticipated for the project would be a scraper working during the grading phase. Construction equipment would not be in constant use during the eight-hour operating day. The analysis assumes that the scraper would be in operation for 40 percent of a given hour during a typical construction day.

The nearest potential noise-sensitive land uses to the proposed grading areas would be adjacent to the project site to the south at the future Bridgeway Lennar Project. Although these residences are not constructed yet, there is the potential for them to be constructed and occupied before proposed project construction. Construction equipment would be mobile and over the course of a typical construction day, equipment may be closer or farther than 100 feet from the nearest property line. For modeling purposes, the construction equipment was assumed to operate at an average distance of 100 feet from the southern property line.

Based on these assumptions, the highest impact level for a scraper at the nearest noise-sensitive land use is 73.6 dBA L_{EQ} . In addition, construction activity would occur within the allowable construction hours. Therefore, construction noise would not exceed the construction noise planning limits (75 dBA for an eight-hour average time period), and no new impacts would occur.

Although noise impacts resulting from construction of the proposed project are anticipated to be less than significant, the following measures contained in the PEIR prepared for the Dumbarton TOD Specific Plan will be implemented:

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 on-site residents from transportation noise

Rail Noise

The Dumbarton TOD Specific Plan PEIR determined that residences within 600 feet of the Dumbarton transit corridor may be exposed to significant noise levels, and mitigation measure 4.10-3 from the PEIR required an acoustical assessment for project within this distance. Measures (e.g., attenuation barriers, acoustically rated windows, upgraded insulation, etc.) shall be implemented where conditions exceed the Noise and Land Use Compatibility Criteria of “Normally Acceptable” noise exposure levels. Therefore, in accordance with the mitigation measure, an acoustical assessment was prepared that analyzed rail noise (HELIX 2017d).

If the future transit and freight corridor extension is constructed and operational, it would be the dominant noise source at the project site, particularly for the residences located in the northern portion of the project site. The exterior areas of these residences would be located approximately 20 feet south of the project’s northern property line, and the property line is located approximately 55 feet south of the rail track centerline. Therefore, the exterior areas of the northernmost proposed residences would be located approximately 75 feet from the rail track centerline. The rail 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 67 dBA L_{DN} at the exterior areas of the project’s northernmost residences, assuming no barrier. This would exceed the 60 dBA L_{DN} exterior use noise levels allowed under the 2013 Updated General Plan Noise Element compatibility standards for single-family residential developments, and impacts would be potentially significant.

Exterior-to-interior analysis assumes a minimum 15 dBA L_{DN} reduction from the outside to the inside of a structure, assuming standard building construction methods. Therefore, project residences exposed to noise levels in excess of 60 dBA L_{DN} may be subject to interior noise above the 45 dBA L_{DN} threshold. The 60 dBA L_{DN} noise contour from future rail activities would be located at a distance of approximately 210 feet; therefore, project residences within 210 feet would be exposed to exterior noise levels above 60 dBA L_{DN} from rail noise and interior

noise levels may exceed 45 dBA L_{DN} . Interior noise levels for these residences would be potentially significant.

The following design element will be implemented under the FMC Parcel C Project to reduce exterior noise levels from rail noise to less than significant:

FMC Parcel C Project Specific Mitigation Measure NOI-01 in accordance with Dumbarton TOD PEIR Mitigation Monitoring and Reporting Program Measure 4.10-3

Noise levels at the exterior use areas of the single-family residences with backyards that are adjacent to the trail and northern property line shall be reduced to 60 dBA L_{DN} or below. Noise reduction for on-site exterior noise impacts could be accomplished through a 12-foot high on-site noise barrier (wall). The sound wall would be installed on the northern property line of the residential lots, from the western edge of Lot 16 to the eastern edge of Lot 30. A 12-foot-high sound wall would also be installed on the northern property line of the “Parcel D” park area. The sound attenuation wall must be solid and constructed of masonry, wood, plastic, fiberglass, steel, or a combination of those materials, as long as there are no cracks or gaps, through or below it. The wall can be made of composite wood with a solid lower section with a clear glass or plastic upper section to maintain views. Any seams or cracks must be filled or caulked. If wood is used, it can be tongue and groove and must be at least one-inch total thickness or have a density of at least 3½ pounds per square foot. Where architectural or aesthetic factors allow, glass or clear plastic ¾ of an inch thick or thicker may be used on the upper portion, if it is desirable to preserve a view. Sheet metal of 18 gauge (minimum) may be used, if it meets the other criteria and is properly supported and stiffened so that it does not rattle or create noise itself from vibration or wind. Any door(s) or gate(s) must be designed with overlapping closures on the bottom and sides and meet the minimum specifications of the wall materials described above. The gate(s) may be of one-inch thick or better wood, solid-sheet metal of at least 18-gauge metal, or an exterior-grade solid-core steel door with prefabricated doorjamb.

With implementation of the 12-foot high sound wall, noise levels would be reduced to 60 dBA L_{DN} , which would not exceed the 60 dBA L_{DN} exterior use noise level compatibility standard from the 2013 Updated General Plan Noise Element for single-family residential developments, and impacts would be less than significant.

The following design element will be implemented under the FMC Parcel C Project to reduce interior noise levels from rail noise to less than significant:

FMC Parcel C Project Specific Mitigation Measure NOI-02 in accordance with Dumbarton TOD PEIR Mitigation Monitoring and Reporting Program Measure 4.10-3

An interior noise analysis of proposed residences within 210 feet of the Dumbarton rail corridor centerline shall be completed prior to building permit issuance to determine appropriate measures to be incorporated into the building design to ensure residential interior noise levels would be below 45 dBA L_{DN} . These land use-noise compatibility measures shall include:

Where exterior residential 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 buildings. If predicted noise levels are found to be in excess of 45 dBA L_{DN} for residential buildings, the report shall identify architectural materials or techniques that could be included to reduce noise levels to 45 dBA 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).

With implementation of project-specific mitigation measure NOI-02, noise impacts from rail activities to interior noise levels would be less than significant.

Traffic Noise

The nearest roadway to the project would be Enterprise Drive, which would be extended through the project site. This street is anticipated to have a 25 miles per hour (mph) speed limit. In addition, the southeastern most residences of the project would be located adjacent to Hickory Street. The speed of the vehicles traveling on this section of Hickory Street would be anticipated to be 25 mph due to the roundabout T-intersection that is near the residences adjacent to the street. The vehicle breakdown on these streets was assumed to be 97 percent automobiles, 2

percent medium trucks, and 1 percent heavy trucks, which is a typical breakdown in residential areas.

At peak hour, Enterprise Drive through the project site would generate a noise level of 58.6 dBA L_{DN} at a distance of 30 feet from the roadway centerline to the nearest project residence property lines, which would be below the 60 dBA L_{DN} exterior use noise level allowed under the 2013 Updated General Plan Noise Element compatibility standard for single-family residential developments.

The three easternmost project residences would be adjacent to Hickory Street, set back approximately 60 feet from the roadway centerline. Traffic from Hickory Street would generate a noise level of 58.7 dBA L_{DN} at this distance, which would be below the 60 dBA L_{DN} exterior use noise level compatibility standard.

Willow Street is located approximately 1,200 feet from the easternmost project residences. At this distance, traffic noise levels from Willow Street would be 46.5 dBA L_{DN} , well below the 60 dBA L_{DN} exterior use noise level compatibility standard, and would therefore be less than significant.

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, given that the project residences would not be exposed to exterior noise levels above 60 dBA L_{DN} from vehicle traffic noise, interior noise impacts from traffic noise would be less than significant.

Material transport truck noise from the Cargill solar salt basins would also generate noise in the vicinity. The access roads for these trucks are located to the south, across the tidal wetlands south of the project site. The nearest residence, Lot 1, would be located approximately 265 feet to the northeast from the nearest access road. Assuming 36 total truck trips per hour during a peak hour of salt export, the noise level for the single-family residences closest to the access road for the salt trucks was modeled at 49.4 dBA L_{DN} . As the truck trips associated with the salt trucks would not generate noise levels in excess of the 60 dBA L_{DN} exterior use noise level compatibility standard, impacts would be less than significant.

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

Acceptable exterior noise levels at residential properties resulting from project 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 main source of operational noise from the FMC Parcel C Project would be from the heating, ventilation, and air conditioning (HVAC) units associated with each residence. Modeling assumed that the air conditioning condenser would be a Carrier 38HDR060 split system. This unit typically generates a noise level of 56 dBA at a distance of 7 feet. The closest HVAC units to off-site residences would occur on the southeastern portion of the site, adjacent to the future Bridgeway Lennar Project residences, although the exact location of the HVAC units is unknown at the time of preparation of this document. For this analysis, it is conservatively assumed that the HVAC units would be located on the ground close to the property line with the adjacent residences. Project residences may have HVAC units as close as 20 feet to the adjacent residences. At this distance, HVAC noise levels would be as high as 46.9 dBA L_{EQ} , which would exceed the most restrictive nighttime noise limit of 45 dBA L_{EQ} . HVAC noise levels would not exceed 45 dBA L_{EQ} at a distance of 25 feet or greater. Therefore, HVAC units located within 25 feet of the nearest off-site residence would generate potentially significant noise.

The following mitigation will be implemented under the FMC Parcel C Project to bring HVAC noise levels to less than significant:

FMC Parcel C Project Specific Mitigation Measure NOI-03 in accordance with Dumbarton TOD PEIR Mitigation Monitoring and Reporting Program Measure 4.10-3:

For off-site residences located within 25 feet of ground-mounted HVAC equipment, attenuation of HVAC noise levels to 45 dBA L_{EQ} (for usable outdoor space) to adjacent off-site residences shall be ensured by a qualified acoustician prior to issuance of certificates of occupancy. Potential noise control measures to achieve the performance standard for outdoor usable space include, but are not limited to, proper setbacks or noise control barriers, including a 6-foot wood fence, around the HVAC units and/or the outdoor usable space.

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

The largest change in noise levels at off-site receivers from the Existing to Existing plus Project traffic conditions from segments with existing noise levels between 60 dBA L_{DN} and 65 dBA L_{DN} was modeled on Hickory Street at approximately 1.5 dBA L_{DN} (from 61.1 to 62.6 dBA L_{DN}). The largest change in noise levels between the Year 2035 and Year 2035 plus Project would occur on the same segment at 1.3 dBA L_{DN} (from 61.5 to 62.8 dBA L_{DN}). Because the existing noise levels are between 60 dBA L_{DN} and 65 dBA L_{DN} , project-added traffic noise levels would need to increase existing noise by 3 dBA L_{DN} for impacts to be considered significant. The project's increase in noise levels would be below this threshold.

For the roadway segment with an existing noise level under 60 dBA L_{DN}, Enterprise Street, the change in noise levels at off-site receivers from the Existing and Existing plus Project traffic conditions was modeled at approximately 4.5 dBA L_{DN} (from 51.7 to 56.2 dBA L_{DN}). The change in noise levels between the Year 2035 to Year 2035 plus Project traffic conditions would be 4.3 dBA L_{DN} (from 51.9 to 56.2 dBA L_{DN}). Because the existing noise levels are below 60 dBA L_{DN}, project-added traffic noise levels would need to increase existing noise by 5 dBA L_{DN} for impacts to be considered significant. The project's increase in noise levels would be below this threshold.

For the cumulative traffic impacts, a 3.2 dBA increase would occur from the Existing to Year 2035 plus Project for the Willow Street segment where the existing noise level was 60.5 dBA L_{DN}, which would be a cumulative noise impact. However, the project's contribution would only be 0.6 dBA, which would not exceed the 1 dBA increase in noise threshold for a cumulatively considerable contribution to the cumulative noise impact.

Given the aforementioned, project traffic noise impacts would be less than significant.

Question b: Less than significant impact

Construction Vibration

Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be conducted by the project. A possible source of vibration during general project construction activities would be a vibratory roller, which may be used within 75 feet of the nearest off-site residences to the south. A vibratory roller would create approximately 0.210 inch per second PPV at a distance of 25 feet (Caltrans 2013). A 0.210 inch per second PPV vibration level would equal 0.063 inch per second PPV at a distance of 75 feet. This would be lower than the 0.2-inch-per-second PPV FTA threshold for "fragile" structures. Therefore, although a vibratory roller may be perceptible to nearby human receptors, temporary impacts associated with the roller (and other potential equipment) would be less than significant.

Rail Vibration

Residences in close proximity to railroad tracks can experience effects of ground-borne vibration caused by passing trains. The United States Department of Transportation Federal Transit Administration's railroad vibration guidelines, Transit Noise and Vibration Impact Assessment (2006), provides criteria for acceptable levels of ground-borne vibration for various types of land uses that are sensitive to vibration. As described under Question a), future rail use within the

Dumbarton transit corridor assumes six daytime and four nighttime passenger trains and four nighttime freight trains, for a total of 14 trains per day. Based on FTA vibration impact criteria, 80 VdB is the applicable maximum acceptable vibration level for residential uses adjacent to a rail corridor with less than 30 vibration events per day (i.e., infrequent events) passing by the site.

The project's closest residential units to a passing train would be located at a distance of approximately 75 feet from the track centerline. FTA guidelines predict that freight train vibration levels at 50 mph are 82 VdB at 75 feet from the track centerline and 70 VdB for commuter trains. It was assumed that trains would be traveling at 35 mph as they would pass the site at a slower speed due to the need to slow down at (or speed up from) the nearby transit station that would be built if rail service was implemented. The FTA provides a 3 VdB reduction from 50 mph to 35 mph. Additionally, typical wood frame residential buildings would receive a 5 VdB reduction. The FTA guidelines also suggest an additional 6 VdB be included to account for amplification due to resonance of floors, walls, and ceilings. Accounting for reductions listed above and adding in the 6 VdB resonance factor, the freight train vibration levels at the project's nearest residences to passing trains are anticipated to be 80 VdB and the commuter train levels would be 71 VdB. Because these levels would not exceed the 80 VdB limit, associated impacts would be less than significant.

Question e, f: No 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 residents of the project would not be exposed to adverse levels of noise due to aircraft overflight. Thus, no impact 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 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project proposes to construct a medium and medium-high density residential development in an area planned primarily for high density residential in the City of Newark 2013 Updated General Plan. The number of residential units constructed would exceed the total number of residential units planned for APN 537-852-2-7, but the Transfer of Dwelling Units Policy in the Specific Plan allows density transfer between APNs in the Specific Plan area without exceeding the total number of dwelling units allowed under the Specific Plan. The total number of residential units planned for the three APNs combined is 419 units, and the project proposes to construct 199 units.

Impacts and Mitigation Measures from the Dumbarton Transit Oriented Development Specific Plan Certified PEIR

Population and Housing is discussed in Chapter 4.11 of the PEIR prepared for the Dumbarton TOD Specific Plan (RBF 2011). 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: Less than significant impact

Implementation of the project would result in the construction of 199 medium and medium-high density residential units. The project would increase the available housing, which would be expected to increase population in the area; however, the increase in housing is consistent with the General and Specific Plans. Therefore, the project would not induce unplanned substantial growth in the City of Newark. The impact would not be significant, and no mitigation would be required.

Questions b, c: No 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 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 Impact
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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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Other public facilities?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The proposed 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 of 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 the Dumbarton Transit Oriented Development Specific Plan Certified PEIR

Public Services is discussed in Chapter 4.12 of the PEIR prepared for the Dumbarton TOD Specific Plan (RBF 2011). 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 \$2.97 per square foot for residential uses.

Evaluation of Public Services

Questions a, b, c, d: Less than significant 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 density residential, recreational, and commercial/office land uses. Under the proposed project, the parcel would be developed with medium and medium-high density residential land uses with some recreational and open space areas. The project proposes to construct 220 fewer units than allocated to all three APNs combined in the Specific Plan and would not result in a significant increase in service demands or render the current service levels to be inadequate, as (a) service demands for the medium and medium-high density residential land use would be similar or less than those envisioned under the medium-high density residential and commercial/office land uses, and (b) implementation of the additional medium and medium-high density residential land use would be off-set by not developing the commercial/office land use. The project sponsor 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, impacts to public services would be less than significant and no mitigation is necessary.

Question e: Less than significant with project level mitigation incorporated

To ensure that the wastewater services to the project site are adequate, the Specific Plan MMRP measure 4.12-2 will be implemented. With implementation of the following measure, the impact of the project on wastewater services would be less than significant.

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 Impact
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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?

<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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b) Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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As described in Section 3, *Description of Project*, of this Initial Study, the FMC Parcel C Project proposes to construct approximately 2.97 acres of parks and open space areas. The project would construct three neighborhood parks and an approximately 2.74-acre open space and wetland preserve area along the western boundary of the project site. Additionally, a 20-foot wide trail corridor, including a 12-foot-wide multi-purpose trail, is proposed along the northern boundary and southwestern edge of the site. The proposed recreational trail is anticipated to become part of the regional San Francisco Bay Trail.

Recreation is discussed in Chapter 4.13 of the PEIR prepared for the Dumbarton TOD Specific Plan (RBF 2011). The FMC Parcel C 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 the Dumbarton Transit Oriented Development Specific Plan Certified PEIR

As outlined in the Dumbarton TOD Specific Plan PEIR, the Specific Plan area, which includes FMC Parcel C Project, designates approximately 16.3 acres of parkland for 2,500 residential units. This equates to a ratio of two acres of parkland per 1,000 residents, which falls short of the General Plan goal of 3.5 acres. The Dumbarton TOD Specific Plan proposes a reduced parkland ratio 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 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 Bay Trail at its currently “unimproved connection” on Willow Street.

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. The PEIR also concluded that construction of parkland could potentially have adverse effects on the environment; however, implementation of construction-related mitigation measures would reduce those impacts to a less than significant level.

Evaluation of Recreation

Question a: Less than significant 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 FMC Parcel C 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 project proposes to provide approximately 0.23-acre of usable parkland as well as an additional 2.74 acres of open space and wetland preserve area.

The quality and variety of the parkland and open space that could be provided by the Dumbarton TOD Specific Plan, which includes the FMC Parcel C Project, would encourage future residents to use recreational facilities within the Specific Plan area. Additionally, the regional open space located near the project site, along with the proposed recreational trail that would be eligible to be part of the San Francisco Bay Trail, would provide future residents with many opportunities to enjoy recreational resources and open space. The FMC Parcel C 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.

Question b: Less than significant with project level mitigation incorporated

The FMC Parcel C Project proposes to construct approximately 0.23-acre of neighborhood parkland and 2.74 acres of open space and wetland preserve area. Construction of the parks and other recreational trails or facilities could result in temporary increases in air emissions, dust, noise, and erosion from construction activities. However, with the implementation of Specific Plan MMRP measures 4.2-1a and 4.2-1b (Air Quality) and 4.10-1a and 4.10-1b (Construction Noise), impacts that could result from the construction of the park and recreation areas would be reduced 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 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Transportation and Circulation were evaluated in Chapter 4.14 of the PEIR prepared for the Dumbarton TOD Specific Plan (RBF 2011). Additionally, a project-specific trip generation

evaluation and parking analysis was conducted (Appendix I, Fehr & Peers 2017) 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*. Each neighborhood within the residential development would be accessible directly from Enterprise Drive.

The proposed parking is also described in Section 3 and summarized here. A total of 512 parking spaces would be provided for the residential development. Of the 512 parking spaces provided, 398 parking spaces would be off-street garage parking and 114 parking spaces would be on-street surface parking. The parking provided as part of the project exceeds the minimum required parking of 498 parking spaces by 14 parking spaces.

Fire Access

The minimum width available for driving or turning movements through the project site is 21 feet. Courts 1 through 17 are all 21 feet wide. The neighborhood streets are at least 24 feet wide, and Enterprise Drive is proposed to be 40 feet wide. The project roadway and neighborhood design would provide adequate turning radii and drive areas for fire trucks and other emergency vehicles.

Trip Generation

The proposed project is estimated to generate 1,810 daily external vehicle trips, 137 a.m. peak hour external vehicle trips, and 181 p.m. peak hour external vehicle trips (Fehr and Peers 2017). The proposed project combined with all other approved and pending projects in the SP area would generate approximately 13,840 daily external vehicle trips, 1,015 a.m. peak hour, and 1,284 p.m. peak hour external vehicle trips. 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. This corresponds to approximately 98 percent of daily, 87 percent of the a.m. peak hour, and 97 percent of p.m. peak hour trips assumed in the SP PEIR. Refer to the memorandum containing the results of the trip generation evaluation in Appendix I.

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. Sidewalks would be provided along each neighborhood street and would connect to sidewalks along Enterprise Drive. The residential development would include walkways and crosswalks that would connect to off-site sidewalks along Enterprise Drive and the adjacent Tract 8099 – Bridgeway Lennar project, south of the FMC Parcel C project site.

A 20-foot-wide recreational trail corridor is proposed along the northern boundary of the project site as well as the western and southern boundaries of Planning Area 1. The proposed recreational trail is anticipated to become part of the San Francisco Bay Trail. Sidewalks or “pedestrian paseos” leading to the proposed recreational trail would be provided throughout Planning Areas 1 and 2 for pedestrian circulation.

No private or public airports are located within the City of Newark. The nearest airports to the proposed project site are the Palo Alto general aviation airport located 6 miles southwest of the site and the Hayward Executive Airport located 10 miles to the north. The San Jose International Airport is 13 miles southeast 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 project would modify these streets or preclude their continued use as an emergency evacuation route. The project has incorporated turning radius sufficient for fire truck access in the project’s roadway design.

Impacts and Mitigation Measures from the Dumbarton Transit Oriented Development Specific Plan Certified PEIR

Transportation and Circulation were evaluated in Chapter 4.14 of the PEIR prepared for the Dumbarton TOD Specific Plan (RBF 2011). The PEIR 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: Less than significant impact with project level mitigation incorporated

The proposed parking was evaluated consistent with City requirements and the Dumbarton TOD Specific Plan. The proposed parking exceeds that required by the City (Appendix I, Fehr & Peers 2017). Further, the Dumbarton TOD Specific Plan contains parking policies that are recommended to be incorporated into the design:

Policy C-18 encourages the adoption of parking standards that prevent oversupply through shared parking and reduced minimum off-street requirements. The FMC Parcel C Project has incorporated shared parking (on-street parking) that is consistent with this policy and provided 14 parking spaces in exceedance of the parking required.

Although the project would result in a relatively small increase in trips generated in the area in relation to the capacity of nearby streets, the FMC Parcel C 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 FMC Parcel C Project's contribution to traffic impacts would be less than significant, and would not exceed the impacts already identified in the PEIR. 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 impact

No private or public airports are located within the City of Newark. The nearest public airfields are 6, 10, and 13 miles from the project site. No private airports are located within 10 miles of the project site. The project would not result in modification to any air travel route. There would be no impact, and no mitigation would be required.

Question d: Less than significant impact

The proposed project would extend Enterprise Drive and construct multiple access roads to the residential development. The access roads proposed would branch from Enterprise Drive. Although the project would modify Enterprise Drive by introducing additional access points, the project 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. Because the modifications to the roadways would be minor and compatible with the access in the vicinity, and the overall Specific Plan area, the project would result in a less-than-significant impact, and no mitigation would be necessary.

Question e: Less than significant impact

No aspect of the 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 will be approved by the City of Newark Fire Department prior to project implementation; therefore, no significant impact to fire protection would occur, and no mitigation would be necessary.

Question f: Less than significant impact

The project would not conflict with any adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. The project also would not result in the decreased performance or safety of such facilities. The project includes the construction of pedestrian facilities throughout the residential development, including a proposed recreational trail that would be eligible to be a part of the San Francisco Bay Trail. This would result in a less-than-significant 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 Impact
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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 would 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 the Dumbarton Transit Oriented Development Specific Plan Certified PEIR

Utilities are discussed in Chapter 4.12 of the PEIR prepared for the Dumbarton TOD Specific Plan (RBF 2011). 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: Less than significant with project level mitigation incorporated

The Union Sanitary District provides wastewater treatment for the City of Newark and will service the Dumbarton TOD Specific Plan area, which includes the FMC Parcel C 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 Draft Updated City of Newark General Plan policies address wastewater services for the Dumbarton TOD Specific Plan. 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.

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. The City and the 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. Implementation of this mitigation measure will reduce impacts to wastewater to less than significant.

Question c: Less than significant with project level mitigation incorporated

As described in Section 8.IX, *Hydrology and Water Quality* of this IS, to ensure the storm water system can adequately accommodate the proposed project, the following mitigation measure from the Dumbarton TOD Specific Plan PEIR will 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 reduce potential impacts to a less-than-significant level, and no further mitigation would be necessary.

Question d: Less than significant impact

The Dumbarton TOD Specific Plan area, which includes the FMC Parcel C Project, 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 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.

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.

Questions f and g: Less than significant 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

FMC Parcel C Project. The Altamont Landfill has a permitted capacity of approximately 125 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.

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.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>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):</p>				
<p>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?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>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)?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Question a: Less than significant impact

The preceding analysis indicates that the proposed FMC Parcel C 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: Less than significant 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), cumulative impacts as a result of the Dumbarton TOD would be less than significant. No additional cumulative impacts as a result of the FMC Parcel C Project are identified.

Question c: Less than significant 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, the environment from constructing Parcel A Park, regional traffic congestion and the stormwater system. These impacts have been reduced to a less-than-significant level at both the project and cumulative level through project design and mitigation measures. Implementation of the project would not result in substantial adverse effects to human beings either directly or indirectly.

9. REFERENCES

Alameda County Water District (ACWD). 2010. Water Supply Assessment for the Dumbarton Transit Oriented Development Project. Prepared for City of Newark. October 2010.

Association of Environmental Professionals (AEP). 2017. 2017 California Environmental Quality Act Statute and Guidelines. January 2017.

Bay Area Air Quality Management District (BAAQMD). 2017a. California Environmental Quality Act Air Quality Guidelines. Adopted May 2017.

_____. 2017b. Bay Area Final 2017 Clean Air Plan. Adopted on April 19, 2017.

Berlogar Stevens & Associates (BSA). 2017. Preliminary Remedial Geotechnical Investigation Parcel C- FMC Enterprise at Hickory Street, Newark, California. September 15.

California Air Resources Board (CARB). 2017a. Area Designations. Proposed Amendments to State Area Designations and Maps. Released April 22, 2013. Accessed on November 20, 2017 at <<http://www.arb.ca.gov/desig/changes.htm#reports>>.

_____. 2017b. Air Quality Trend Summaries for Sacramento County. Accessed on November 20, 2017 at <http://www.arb.ca.gov/adam>.

California Department of Conservation (CDC). 2017. California Important Farmland Finder Interactive Map. Accessed online on November 8, 2017 at <http://maps.conservation.ca.gov/ciff/ciff.html/>.

California Department of Fish and Wildlife (CDFW). 2012. Staff Report on Burrowing Owl Mitigation. March.

_____. 2017a. Natural Diversity Database, Commercial Version, Biogeographic Data Branch. Query criteria: BIOS Selection. Report printed March 16, 2017. Information expires on September 3, 2017.

_____. 2017b. Natural Diversity Database, Available at: <https://map.dfg.ca.gov/rarefind/view/RareFind.aspx#>. Accessed 21 March 2017.

_____. 2017c. Longfin Smelt Fact Sheet. Accessed online November 2017 at: https://www.dfg.ca.gov/delta/data/longfinsmelt/documents/LongfinsmeltFactSheet_July09.pdf

California Department of Transportation (Caltrans). 2017. Map of Officially Designated Scenic Highways in Alameda County. Accessed on November 8, 2017 at http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm.

_____. 2013. Transportation and Construction Vibration Guidance Manual, Environmental Engineering, Hazardous Waste, Air, Noise, Paleontology Office. September.

California Native Plant Society (CNPS). 2017a. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [Accessed 16 March 2017]. Queried for the Newark USGS 7.5-minute quads.

_____. 2017b. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [Accessed 21 March 2017]. Queried for individual species as referenced.

California Regional Water Quality Control Board San Francisco Region. 2015. Adoption of Site Cleanup Requirements and Reversion of Order No. R2-2002-0060 for: FMC Corporation for the property located at: 8787 Enterprise Drive, Newark, Alameda County. May 21.

Californian Environmental Services (CES). 2017a. Parcel C, Newark, California: Habitat Assessment for Salt Marsh Harvest Mouse. Prepared for Resource Balance Inc. April 2017.

_____. 2017b. Research Project Investigating Salt Marsh Harvest Mouse Use of Disturbed Sites; "FMC Parcel C." Prepared for Resource Balance Inc. October 2017.

CalRecycle. 2017. Solid Waste Information System: Altamont Landfill & Resource Recovery. SWIS Number: 01-AA-0009. Accessed November 10, 2017. Available at: <http://www.calrecycle.ca.gov/SWFacilities/Directory/01-AA-0009/Detail/>.

Carlson, Barbee & Gibson, Inc. (CBG). 2017a. Site Plan FMC Parcel C. November 6.

_____. 2017b. Preliminary Stormwater Management Plan, FMC Parcel C. November 10.

_____. 2017c. A.L.T.A. / N.S.P.S. Land Title Survey FMC Property. June 1.

City of Newark. 2013. Updated General Plan.

Department of the Army, U.S. Army Corps of Engineers, Regulatory Division. 2017. File No. 2013-00152S Preliminary Jurisdictional Determination FMC Enterprise Development Area. July 17.

Environmental Resources Management (ERM). 2017. Enterprise Redevelopment Area Remedial Investigation Report FMC Newark Facility. July 31.

Federal Emergency Management Agency (FEMA). 2017. FEMA Flood Map Service Center. Accessed on November 10, 2017 at <https://msc.fema.gov/portal>.

Fehr & Peers Transportation Consultants. (Fehr & Peers). 2017. Trip Generation Evaluation and Parking Analysis for FMC Parcel C in Newark, CA. Memorandum to HELIX Environmental Planning, Inc. November 17, 2017.

Graymer, R.W., Jones, D.L., and Brabb, E.E. 1996 Preliminary Geologic Map Emphasizing Bedrock Formations in Alameda County, California: Derived from the Digital Database USGS Map Open-File 96-252, Scale 1:75000.

HELIX Environmental Planning, Inc. (HELIX). 2017a. *Air Quality and Greenhouse Gas Emissions Technical Report for the FMC Parcel C Project*. December 2017.

_____. 2017b. *Biological Technical Report for the FMC Parcel C Project*. November 2017.

_____. 2017c. *Section 106 Cultural Resource Assessment for the FMC Parcel C Project*. November 2017.

_____. 2017d. *Acoustical Technical Report for the FMC Parcel C Project*. December 2017.

Helley, E.J., and Graymer, R.W. 1997. Quaternary Geology of Alameda County, And Parts of Contra Costa, Santa Clara, San Mateo, San Francisco, Stanislaus, And San Joaquin Counties, California: A Digital Database, USGS Map Open-File 97-97, Scale 1:100000.

Intergovernmental Panel on Climate Change (IPCC). 2007. Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Intergovernmental Panel on Climate Change, Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press, 2007, 996.

McDonald, S.D., Nichols, D.R., Wright, N.A., and Atwater, B., 1978, Map Showing Thickness of Young Bay Mud, Southern San Francisco Bay, California, USGS Misc. Field Studies

Map MF-976, Scale 1:125000.

Natural Resources Conservation Service (NRCS). 2017. Web Soil Survey. Accessed online November 8, 2017. available at:

<http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>.

RBF Consulting (RBF). 2011. *Dumbarton Transit Oriented Development Specific Plan Draft Environmental Impact Report (State Clearinghouse No. 2010042012)*. Prepared for the City of Newark. May 2011.

San Francisco Public Utilities Commission (SFPUC). 2017. Calaveras Dam Replacement Project. Accessed February 20, 2017 and available at: <https://sfwater.org/index.aspx?page=979>.

United States Environmental Protection Agency (EPA). 2017. Nonattainment areas for criteria pollutants. Accessed on November 20, 2017 at <https://www.epa.gov/green-book>.

U.S. Department of Transportation (USDOT). 2008. Roadway Construction Noise Model.

U.S. Fish and Wildlife Service (USFWS). 1984. The salt marsh harvest mouse/California clapper rail recovery plan. USFWS Region 1, Portland, Oregon.

_____. 2010. Draft Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California. January 2010. U.S. Fish and Wildlife Service, Sacramento, California.

_____. 2017. List of threatened and endangered species that may occur in and/or may be affected by [the] proposed project. U.S. Fish and Wildlife Service, San Francisco Bay – Delta Fish and Wildlife Office, Sacramento, California. Consultation Code 08ESMF00-2016-SLI-0894. Dated March 16.

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