Appendix HYD
Civil Infrastructure Technical Report

Civil Narrative-CEQA Support

Oakland Athletics Proposed Development

Oakland, California

December 13, 2019

PREPARED BY:

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CIVIL NARRATIVE-CEQA SUPPORT

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1. INTRODUCTION

A. Purpose

The Oakland Athletics are reviewing the feasibility of a new baseball stadium and site development at the Howard Terminal site in Oakland, California. This Civil Narrative is provided to evaluate the project site for the technical aspects of the Civil Infrastructure required to support the proposed stadium and associated development. This narrative describes the site location, existing conditions, opportunities and constraints of the site, as well as specific details of the civil infrastructure components of the proposed stadium as required for the project Environmental Impact Review (EIR).

B. Project Site

The project site is located in the western Jack London District in Oakland, California. Currently owned and operated by the Port of Oakland, the site and adjacent parcels include approximately 57-acres of ancillary maritime uses, including parking and storage. The waterfront site is bounded by Embarcadero Road and Union Pacific Railroad tracks to the north, Oakland Inner Harbor to the south, Clay Street to the east and an existing scrap metal facility to the west (Schnitzer Steel). The project site fronts the Oakland Inner Harbor on the south side, and is accessed from Interstate 980, Interstate 880 and City of Oakland surface streets on the north, west and east.

BART stations are located approximately three quarters of a mile away at the 12th Street station on Broadway, and the West Oakland Bart Station at 7th Street and Mandela Parkway. The Amtrak/Railroad station is approximately one half mile east, at the Jack London Square station at 2nd and Alice Street. Ferry terminal access is within walking distance from Clay Street, on the east side of the site.

Martin Luther King Junior Way and Market Street currently connect the site to downtown Oakland in the north/south direction, and Union Pacific Railroad (UPRR) and Embarcadero run adjacent to the site in the east/west direction.

The southern portion of the Project site is an existing cast-in-place wharf structure that is supported by piles. The remaining site is understood to be on grade pavement supported by a quay wall. Existing hardscape and at-grade drainage facilities are located at the surface, and it is understood that the site has existing utility infrastructure to support the current Port operations, including water, power, storm drain and sewer. In addition, there are two existing City of Oakland storm drain mains

that run through the site at the extension of Market and Martin Luther King Junior Way, with outfalls to the bay.

Vistra (Dynergy) and Pacific Gas & Electric (PG&E) have facilities adjacent to the project site which front the northern portion of the project development. The existing scrap metal facility fronts the western side of the site. The northern side of the property is fronted by the existing Embarcadero, which runs east west along the frontage, as well as the existing Union Pacific Railroad tracks. The Union Pacific Railroad tracks are located within the railroad right of way directly adjacent to the Embarcadero, and include two railroad tracks, with a third track at some locations. The railroad tracks, Embarcadero and the terminus of the north-south City streets of Market Street, Martin Luther King Junior Way and Jefferson Street converge at the northern property line, and Embarcadero serves as the boundary of the site improvements. The existing 105-inch EBMUD sewer interceptor is a utility design consideration within 2nd Street, and 3rd Street (at Filbert Street) north of the project. The Oakland Inner Harbor fronts the south side of the project, with the existing wharf edge fronting the existing shoreline.



GRAPHIC SCALE
100 0 100 200

NOTE:

1. SCALE INDICATED IS FOR A 30"X42" SHEET. THE NOTED SCALE MUST BE ADJUSTED IF THIS DRAWING HAS BEEN REVISED FROM ITS ORIGINAL SIZE.

LEGEND

PROJECT SITE BOUNDARY

EXISTING BOUNDARY INFORMATION NOTE:

THIS BOUNDARY HAS NOT BEEN FIELD VERIFIED, NOR HAS IT BEEN CHECKED AGAINST ANY TITLE REPORTS OR ANY ADJACENT VESTING DEED DOCUMENTS. THE EXTERIOR BOUNDARY LINES AND DIMENSIONS OF HOWARD TERMINAL ARE BASED ON THE LEGAL DESCRIPTION CONTAINED IN THE DOCUMENT ENTITLED, "COVENANT TO RESTRICT USE OF PROPERTY, ENVIRONMENTAL RESTRICTION" RECORDED ON 3/03/03, IN DOC. 2003121181, ALAMEDA COUNTY RECORDS.

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PROJECT BASE MAP

HOWARD TERMINAL

12/13/19

EX1.0

C. Project Datum

Elevations, including tidal, floodplain, site and utility elevations, referred to herein, are based on several historically used datums. The City of Oakland Datum is understood to be the required datum for the project, as it is required for projects permitted within the City of Oakland, where there is an established monument network. The datum reference for each specific elevation is listed throughout the document and supporting exhibits, for clarity. The City of Oakland Datum, referred to as COD, is equal to the:

- North American Vertical Datum of 1988 (NAVD 88) plus 5.77 feet
- North Geodetic Vertical Datum of 1929 (NGVD 29, tidal) plus 0.06 feet
- Port of Oakland Datum (PORT) minus 6.24 feet

We understand the project will be permitted under the City of Oakland datum, and references to other datums are utilized to relay data from varying sources, when necessary.

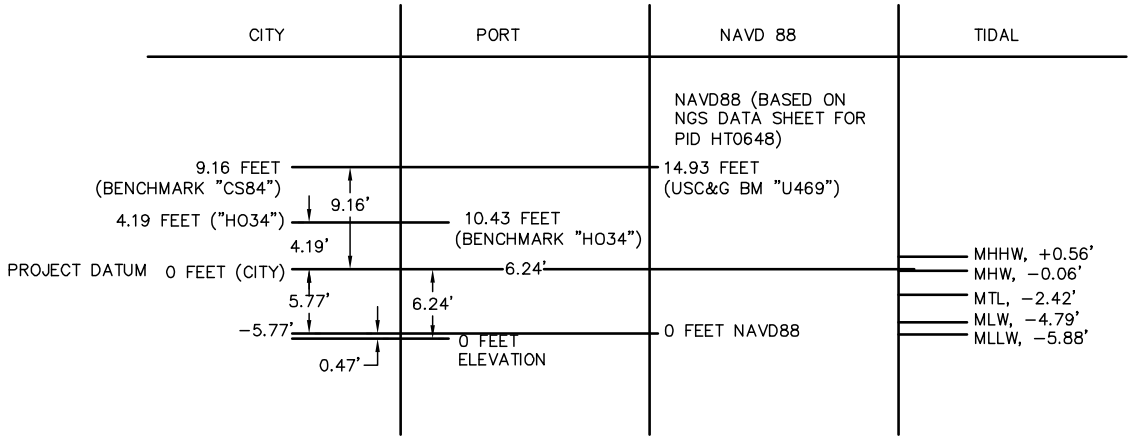
BENCHMARK

ELEVATIONS SHOWN HEREIN ARE ON THE CITY OF OAKLAND VERTICAL DATUM AND BASED ON CITY OF OAKLAND BENCHMARK "CS 84":
A FOUND U.S.C. & G.S. DISK AT THE CROSSING OF 5TH AVENUE AND THE SOUTHERN PACIFIC RAILROAD, BENEATH THE SOUTHBOUND LANES OF THE 880 FREEWAY, SET IN THE NORTHERLY FACE OF A COLUMN, APPROXIMATELY 25' WEST OF THE CENTERLINE OF 5TH AVENUE, 4.4 FEET ABOVE GROUND.
ELEVATION = 9.164 FT., CITY OF OAKLAND DATUM.

DATUM SUMMARY

BENCHMARK CITY OF OAKLAND DATUM
CITY OF OAKLAND BENCHMARK "CS84"
FOUND UCS&GS DISK AT THE CROSSING OF 5TH AVENUE AND THE SOUTHERN PACIFIC RAILROAD, BENEATH THE SOUTH-BOUND LANES OF 880 FREEWAY, SET IN NORTHERLY FACE COLUMN, APPROXIMATELY 25' WEST OF THE CENTERLINE OF 5TH AVENUE AND 4.4 FEET ABOVE THE GROUND.
ELEVATION USED: 9.16 FT., CITY OF OAKLAND DATUM
NOTE BENCHMARK IS NOW DESTROYED. INFORMATION SHOWN IS BASED ON OBSERVATIONS AND DATA PROVIDED IN 2002. NOT CURRENT.

BENCHMARK PORT DATUM ELEVATION
PORT OF OAKLAND BENCHMARK "H034 TBM"
FOUND BRASS DISK "SHIP" IN MONUMENT WELL STAMPED "EBMUD CONTROL SURVEY SHIP 1960" OPPOSITE ENTRANCE TO KAISER CEMENT, 401 EMBARCADERO.
ELEVATION USED: 10.43 FT., PORT OF OAKLAND DATUM



1. TO CHANGE FROM CITY ELEVATION TO A PORT ELEVATION: SUBTRACT 6.24 FEET.

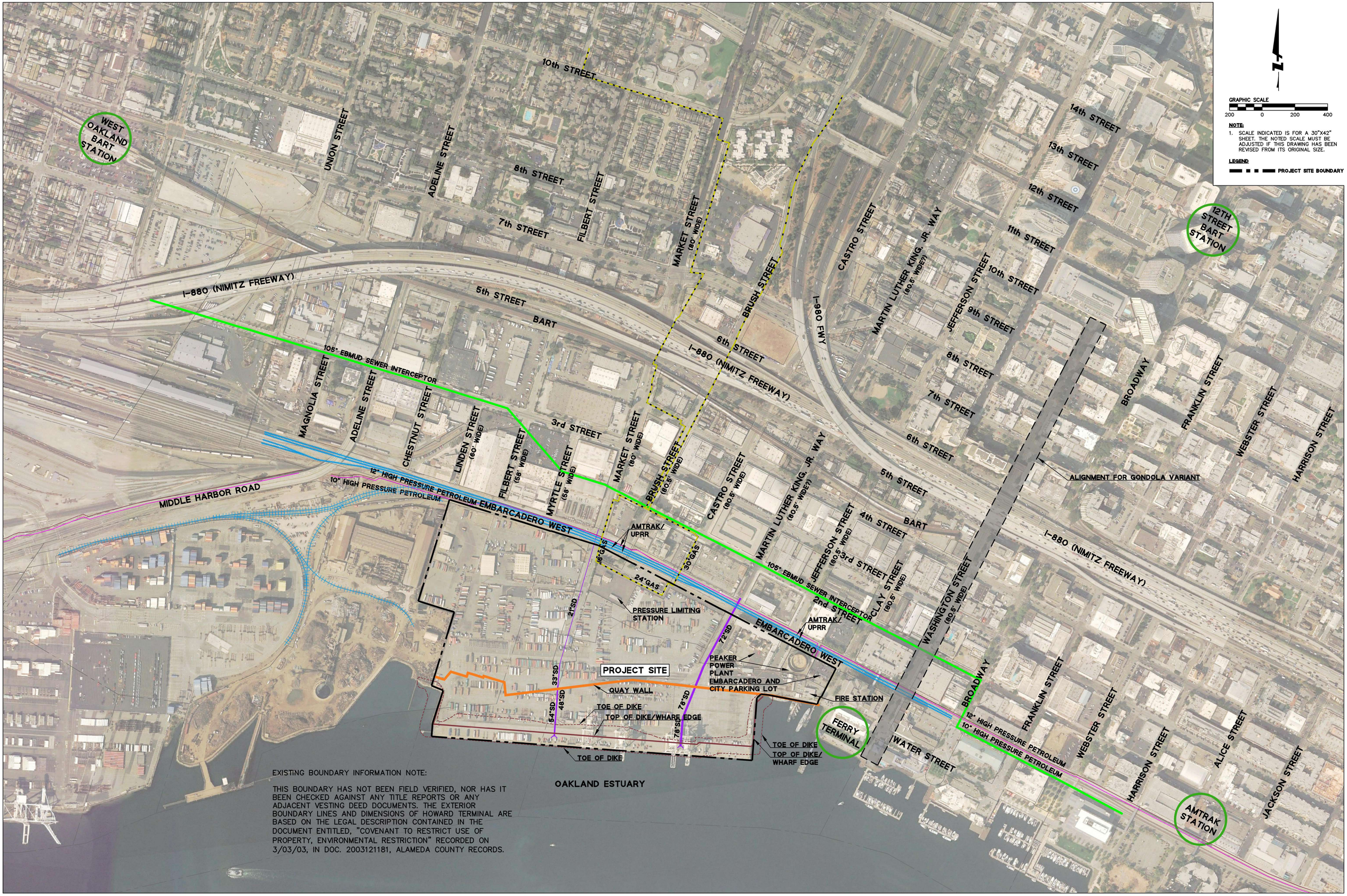
2. TO CHANGE FROM PORT ELEVATION TO A CITY ELEVATION: ADD 6.24 FEET.

D. Project Description

The proposed development at the project site includes a 35,000 seat ballpark, as well as supporting ballpark amenities and concessions, a performance center, hotel, hotel conference room, retail and civic spaces, office and residential development, public pedestrian promenades and public circulation spaces, as well as the supporting transportation infrastructure. Specific site improvements include: at-grade public streets for vehicular and pedestrian circulation, aerial gondola service from downtown Oakland, parking garages/lots, drop off and pick up zones for private, public and paid transportation services, offsite pedestrian overcrossings, at-grade railroad crossings at Market Street and Martin Luther King Junior Way, supporting utility infrastructure and landscaping, as well as designation of development parcels with mixed-use commercial, retail and residential units. In addition to the 35,000 seat stadium, 270,000 square feet of retail, cultural and civil spaces, 280,000 square feet of hotel space and a 50,000 square foot performance center, the project proposes approximately 3,300,000 square feet of residential space, as well as public open space along the project waterfront and the areas surrounding the proposed stadium. The project includes several variants, project elements that may or may not be implemented. A variant with significant civil infrastructure components includes aerial gondola service from downtown.

The project includes plans to extend existing City streets into the project site, including Market Street and Martin Luther King Junior Way. Market Street and Martin Luther King Junior Way cross the Union Pacific Railroad at-grade, prior to entering the project site. (There is no existing grade separation of the roadway and railroad tracks). Martin Luther King Junior Way and Market Street currently connect downtown Oakland to the project site in the north/south direction, and Union Pacific Railroad (UPRR) and Embarcadero run adjacent to the site in the east/west direction. Pedestrian and vehicular traffic will need to cross the UPRR tracks to gain access to the Stadium.

The Oakland Athletics are currently reviewing transportation and infrastructure improvements that may be required to support the project. We understand this traffic analysis will be provided under separate cover, which will assist in developing the transportation needs of the site, and to further define the roadway infrastructure needs, locations of proposed improvements, and on site infrastructure demands (parking garage sizes and locations, as well as roadway widths and locations, and how they are accessed).



EXISTING BOUNDARY INFORMATION NOTE:

THIS BOUNDARY HAS NOT BEEN FIELD VERIFIED, NOR HAS IT BEEN CHECKED AGAINST ANY TITLE REPORTS OR ANY ADJACENT VESTING DEED DOCUMENTS. THE EXTERIOR BOUNDARY LINES AND DIMENSIONS OF HOWARD TERMINAL ARE BASED ON THE LEGAL DESCRIPTION CONTAINED IN THE DOCUMENT ENTITLED, "COVENANT TO RESTRICT USE OF PROPERTY, ENVIRONMENTAL RESTRICTION" RECORDED ON 3/03/03, IN DOC. 2003121181, ALAMEDA COUNTY RECORDS.

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OVERALL CONSTRAINTS MAP WITH VARIANTS

HOWARD TERMINAL

12/13/19

EX2.0

E. Civil Design Constraints

The proposed Oakland Athletics Ballpark at the project site provides several opportunities for development of the stadium and the associated site improvements. In addition, there are civil design constraints associated with development at the existing site:

1. **Vistra (Dynergy) facilities and associated utility infrastructure:** Located on the northeastern side of the site, adjacent to Embarcadero at Jefferson Street, there is an existing Vistra (Dynergy) facility and utility "drum". These existing facilities are undergoing a change in their current operations. It is our understanding that this facility may be relocated and/or reconfigured on site as part of the Peaker Power Plant Project variant. We understand that the project developer and their architects will be reviewing the feasibility of frontage improvements in this area to accommodate the existing conditions at the interface to the ballpark development.

2. **Pacific Gas and Electric (PG&E) gas pressure limiting station and associated infrastructure:** Located between Market Street and Castro Street, south of Embarcadero, the existing PG&E pressure limiting station includes 24-inch high pressure gas transmission lines. It is our understanding that this facility is proposed to be relocated as part of a separate project, unrelated to the Project development. We understand that the site will be moved approximately one block north, and that the existing gas transmission main infrastructure will not be active in the current location. It is assumed that this parcel will be reviewed for the feasibility of improvements in this area to incorporate the layout into the surrounding ballpark development.

3. **Union Pacific Railroad (UPRR) tracks:** Within the Embarcadero roadway, on the northern side of the site, the existing Union Pacific Railroad tracks run east/west through this area of west Oakland. Several City streets cross the UPRR tracks at-grade, including Market Street and Martin Luther King Junior Way. These roadways are assumed to remain in place. The Project development plans to connect to the existing City streets north of the project site, and anticipates needing improvements to the vehicular and pedestrian crossings at the UPRR tracks to accommodate the proposed increase in traffic through this area. The California Public Utilities Commission (CPUC) and Union Pacific have defined standards for at-grade roadway crossings, and it is anticipated that these standards will be implemented at the at-grade crossings. Considerations at these crossings include pedestrian gates, fences, barriers

and signals, as well as signal interconnects to move vehicles through the intersection when trains are approaching. These improvements will be further considered as the project moves forward.

4. **City of Oakland 54-inch storm drain outfall:** There is an existing storm drain outfall to the Oakland Inner Harbor from Market Street, extending into the Project site, and discharges beneath the existing Wharf structure at the shoreline. This existing gravity storm drain infrastructure is one of two City of Oakland storm drain discharges to the bay within the site. This pipe collects storm water from the upstream city storm drain mains in the streets, and discharges them in a 54-inch outfall to the bay. We have assumed this storm drain main is required to remain and plan to maintain the outfall in place. The Project will decrease stormwater runoff below existing condition flows and plans to tie into the existing outfall at multiple locations, possibly upstream of existing onsite connections. As such, it may be necessary to upsize a segment of the existing onsite storm drain in order to accommodate stormwater flows in the proposed condition.

5. **City of Oakland 78-inch storm drain outfall:** There is an existing storm drain outfall to the Oakland Inner Harbor from Martin Luther King Jr. Way, extending into the Project site, which discharges beneath the existing Wharf structure at the shoreline. This existing gravity storm drain infrastructure is one of two City of Oakland storm drain discharges to the bay within the site. This pipe collects storm water from the upstream city storm drain mains in the streets, and discharges them in a 78-inch outfall to the bay. We have assumed this storm drain main is required to remain; however, relocation of this pipe is assumed to be feasible, and may be necessary to relocate in order to accommodate the proposed development at the site. Where the existing storm drain line is in conflict with proposed building improvements, the storm drain route is planned for relocation to a new outfall to the bay.

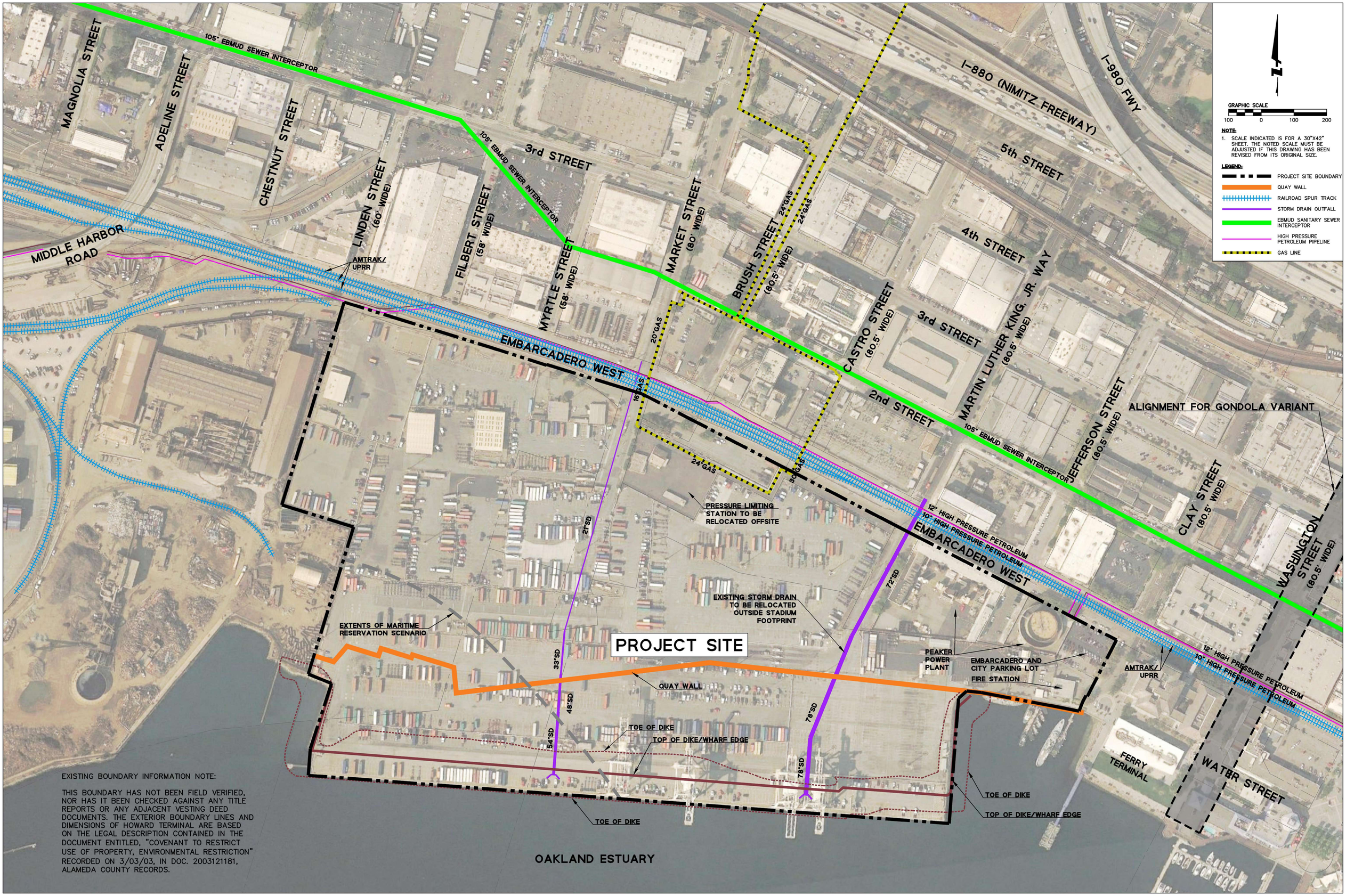
6. **Below-grade concrete quay wall**: There is an existing below grade concrete quay wall situated east-west, bisecting the site between the at-grade and pile supported portions of the parcel. This existing wall supports the shoreline underneath the site, and we understand it will remain in place. This infrastructure has been evaluated in a separate effort by the project Geotechnical Engineer.

7. **Below-grade rock dike:** There is an existing below-grade rock dike at the project site, adjacent to the shoreline at the Oakland Inner Harbor. This existing dike provides structural

support to the shoreline underneath the site, and is assumed to remain. The infrastructure is being evaluated under a separate effort, by the project Geotechnical Engineer and Shoreline Engineer.

8. **10-inch and 12-inch High Pressure Petroleum pipelines:** These existing high pressure pipelines are located within the Embarcadero roadway. The Project development does not plan to impact these existing facilities, and will consider their locations and operations in future utility and infrastructure designs.

9. **East Bay Municipal Utility District (EBMUD) 105-inch sanitary sewer interceptor pipe:** This existing sewer pipe is a transmission pipeline to route sewage from the City mains to the regional EBMUD sewer treatment plan near the Bay Bridge. The Project site development does not plan to impact this existing facility, and will consider its location in future utility and infrastructure designs.



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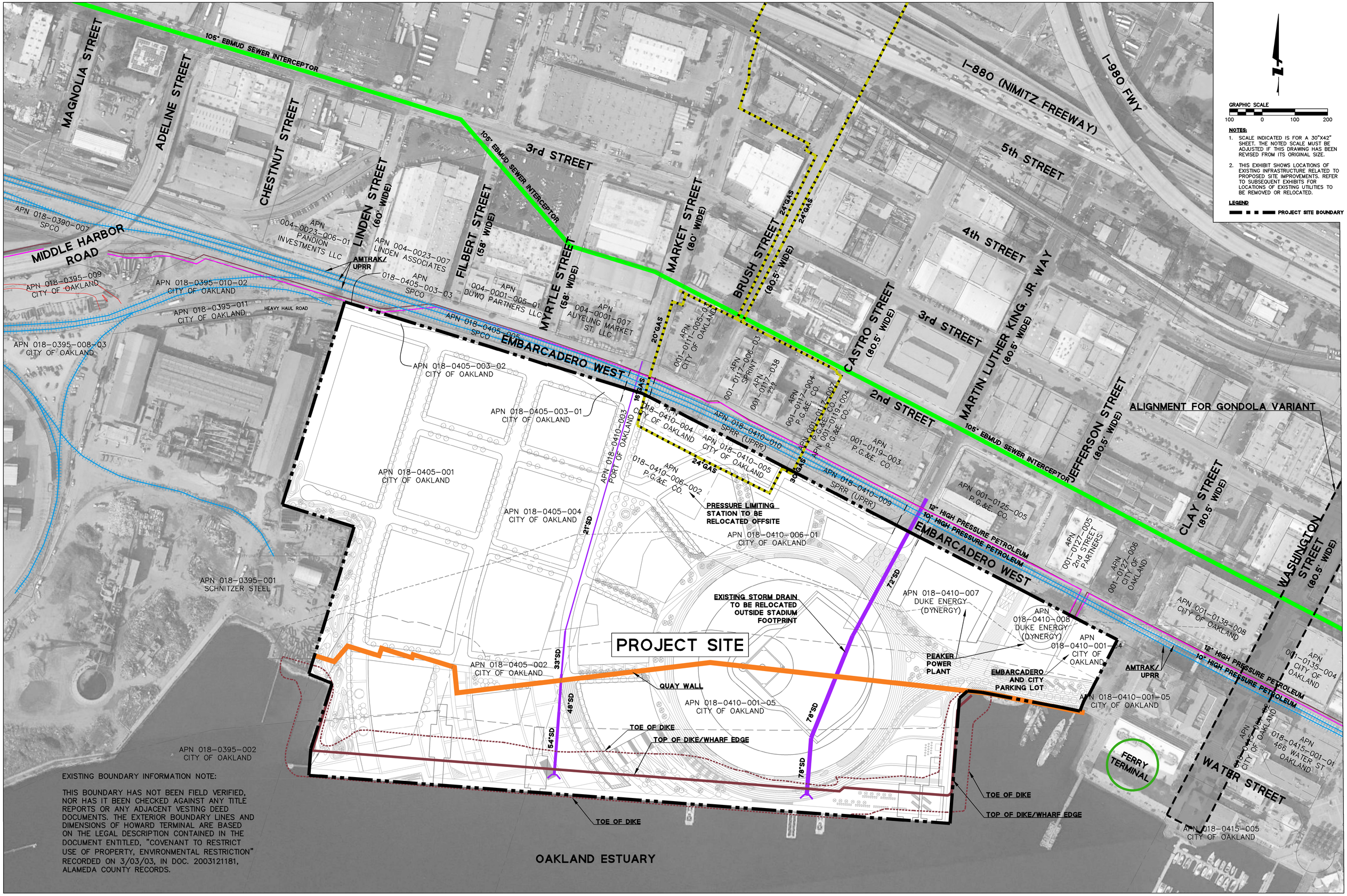
PROJECT CONSTRAINTS MAP WITH VARIANTS

HOWARD TERMINAL

12/13/19

EX3.0



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PROPOSED SITE PLAN AND PROJECT CONSTRAINTS

HOWARD TERMINAL

12/13/19

EX4.0

2. SITE IMPROVEMENTS

A. Existing Topography

Topographic surveys of the project site have been performed within the site and the adjacent street network. Based on the City of Oakland datum, the existing wharf structure on the south side of the site is approximately elevation 7.5, which slopes down to elevation 4 to 5 on the north side of the site, where the site meets the existing streets along Embarcadero road. Existing elevations at Market Street are elevation 4, at Martin Luther King Junior Way the elevation is approximately elevation 5, and at Jefferson Street the existing elevation is approximately 4, City of Oakland datum.

The existing grades shown in the preliminary topographic survey are consistent with the record drawings obtained from the Port of Oakland, and confirm the existing elevations and drainage pattern.

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MAP NOTES

PROPERTY ADDRESS: 95 MARKET STREET, OAKLAND, CA

ASSESSOR'S PARCEL NO.: 018-0405-001-00, 018-0405-002-00, 018-0405-004-00, 018-0410-001-04, 018-0410-001-05, & 018-0410-001-06

FLOOD ZONE DESIGNATION: ZONE X
AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD. PER FLOOD INSURANCE RATE MAP (FIRM), NO. 06001C0066G, COMMUNITY NO. 065048 (CITY OF OAKLAND), PANEL 0066, SUFFIX G, EFFECTIVE DATE AUGUST 3, 2009 FROM FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

GROSS LAND AREA:

1. P.T.R. PARCEL AREAS	84.12 AC.
2. AREA 1 LEASE	7.075 AC.
3. AREA 2 LEASE	18.36 AC.
NET AREA	58.68 AC.

LAND USE: COMMERCIAL STORAGE & WHARF

ZONING: INDUSTRIAL ZONING

PARKING AREAS:
1. REGULAR SPACES 192
2. SEMI-TRUCK SPACES 20
3. ALL OTHER AREAS MARKED WITH PAINT STRIPES USED FOR SHIPPING CONTAINER STORAGE ON SITE (NOT COUNTED).

THERE WAS NO OBSERVED EVIDENCE OF RECENT EARTH MOVING WORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS ON THE DAY OF THE FIELD SURVEY.

REFERENCED TITLE INSURANCE POLICY

TITLE COMPANY: FIRST AMERICAN TITLE COMPANY
NATIONAL COMMERCIAL SERVICES
1850 MT. DIABLO BLVD., SUITE 300
WALNUT CREEK, CA 94596

TITLE REPORT NO.: NCS-900257-5-CC, NCS-900257-5-CC, NCS-900257-7-CC, NCS-900257-8-CC, NCS-900257-9-CC AND NCS-900257-13-CC

TITLE REPORT DATE: MARCH 29, 2018, MARCH 31, 2018, APRIL 30, 2018, MAY 1, 2018, MAY 9, 2018, MAY 10, 2018 & MAY 22-24, 2018

TITLE OFFICER: RONI SLOAN LOFTIN

TITLE VESTED IN: CITY OF OAKLAND, A MUNICIPAL CORP.

NATURE OF TITLE: FEE SIMPLE

NOTES:

1. HELD GPS VALUES FOR POINTS 1007, 1039 (2039 AS SHOWN HEREON), AND 1061 AS SHOWN ON CROSS L.S. R/S (RS 990) USING THE 1986 EPOCH VALUES OF SAID POINTS PER SAID MAP. THE VALUES FOR THESE POINTS ARE AS FOLLOWS:

PT. NO.	NORTHING	EASTING	DESCRIPTION
1007	2,126,485.00	6,033,057.86	MOLE 1947 (USCGS DISC IN CONC.)
1039	2,118,506.01	6,044,498.54	ADELINE OVER (A CUT CROSS IN S/W)
1061	2,103,533.92	6,059,136.54	ENC VER ((USCGS DISC IN MON. BOX)

2. DISTANCES AS SHOWN HEREON ARE CALIFORNIA COORDINATE SYSTEM, ZONE 3 GRID DISTANCES. MULTIPLY GRID DISTANCES BY A FACTOR OF 1.0000703 TO OBTAIN GROUND, LEVEL DISTANCES.

3. DISTANCES SHOWN HEREON ARE IN FEET AND DECIMALS THEREOF.

4. TOPOGRAPHIC AND PLANIMETRIC FEATURES SHOWN ON THIS MAP WERE COMPILED BY PHOTOGRAMMETRIC PROCESS BASED ON AERIAL PHOTOGRAPHY DATED SEPTEMBER 29, 2016 AND SUPPLEMENTED WITH GROUND SURVEYS ON OCTOBER 10-30, 2018.

5. THE LOCATION OF UTILITIES SHOWN ON THIS ALTA WERE DERIVED FROM SURFACE OBSERVATION ONLY.

6. THE SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION APPROVED A RESOLUTION FOR EXPANSION OF THE OAKLAND ESTUARY PER DOCUMENT #92217758. THE MAP ALSO INDICATES THE HIGH TIDE LINE WITHIN SAID DOCUMENT, AND IS APPROXIMATELY SHOWN HEREON AND CLEARLY LABELED AS "BCDC – APPROXIMATE HIGH TIDE LINE".

7. ORDINARY LOW TIDE LINE IS AN APPROXIMATE POSITION BASED ON SCALED LOCATION OF SAID LOW LINE AS SHOWN ON MAP ENTITLED, "OAKLAND WATERFRONT, SHOWING PROPERTIES ALONG HARBOR". PREPARED BY CITY ENGINEER, F.C. TURNER, DATED JULY 1910 (A.K.A. MAP 9-4). SAID LINE IS ESTIMATED LOW TIDE LINE OF 1852. FURTHERMORE, SAID LINE WAS ALSO DETERMINED TO BE THE EDGE OF THE SHIP CHANNEL PER CALIFORNIA SUPREME COURT DECISION OF 1897, "CITY OF OAKLAND V. OAKLAND WATERFRONT COMPANY".

GROSS AREAS	
P.T.R. LAND AREAS	84.12 AC.
LAND AREAS	84.12 AC.
AREAS 1 & 2	-25.44 AC.
NET AREA (HATCHED)	58.68 AC.



VICINITY MAP
NO SCALE

BKF NO. 20170324

LEGEND

CL—CL	CENTERLINE TO CENTERLINE DISTANCE
EXC. NO.	TITLE REPORT EXCEPTION NUMBER
M—M	MONUMENT TO MONUMENT DISTANCE
P.T.R.	PRELIMINARY TITLE REPORT NUMBER
O.L.T.L.	ORDINARY LOW TIDE LINE (SEE NOTE 7)
IN/OUT	ITEM AS SHOWN IN OR OUT OF PARCEL
(#) PCL. NUMBER	PRELIMINARY TITLE REPORT # PARCEL #
●	FOUND BRASS PIN IN CONCRETE, IN CITY MONUMENT WELL

LINETYPE LEGEND

- SUBJECT BOUNDARY- OUTER LIMIT
- SUBJECT BOUNDARY- INNER PARCELS
- ADJOINER BOUNDARIES
- CENTERLINE
- MONUMENT LINE
- EASEMENT LINE
- B.C.D.C. OFFSET LINE (SEE NOTE 6).
- PERALTA GRANT LINE
- LEASE RESTRICTION TO PORT
- CITY BOUNDARY
- CALTRANS PROPOSED HAUL ROAD
- MATCHLINE
- BUILDING LINE
- CURB LINE
- FENCE LINE
- × 12.34 SPOT ELEVATION

RECORD REFERENCES

(R1) PRELIMINARY TITLE REPORT	NCS-900257-4-CC
(R2) PRELIMINARY TITLE REPORT	NCS-900257-9-CC
(R3) PRELIMINARY TITLE REPORT	NCS-900257-13-CC
(R4) CALTRANS RECORD OF SURVEY	#406002
(R5) RECORD OF SURVEY NO. 1833	30-M-11 to 25
(R6) RECORD OF SURVEY NO. 880	14-M-14
(R7) RECORD OF SURVEY NO. 590	11-M-14

BASIS OF BEARINGS:

BEARINGS SHOWN HEREON ARE BASED CALIFORNIA COORDINATE SYSTEM (NAD 83), ZONE 3., EPOCH 1986, PER FAST STATIC GPS TIES TO POINTS 1007, 1033 AND 1061 AS SHOWN ON THE RECORD OF SURVEY MAP PREPARED BY GROSS LAND SURVEYING IN 1993, FILED IN BOOK 18 OF SURVEYS, AT PAGES 50 THROUGH 60 (A.K.A. RS 990) HOLDING THE 1986 EPOCH VALUES OF SAID POINTS PER SAID MAP.

ELEVATION DATUM:

BASED ON PORT OF OAKLAND BENCHMARK KNOWN AS "PORT 1", AN NGS FIRST ORDER, CLASS I BENCHMARK, PID HT0654, A BRASS DISC ("USC&GS, PORT 1") SET IN CONCRETE WALK AT F.D.R. PIER AND ENTRANCE TO THE POTOMAC YACHT SOUTHWEST OF THE INTERSECTION OF CLAY STREET AND WATER STREET. ELEVATION = 9.39 FEET (NAVD88). FOR THIS SURVEY THIS VALUE HAS BEEN CONVERTED TO CITY OF OAKLAND DATUM BY SUBTRACTING 5.77 FEET, RESULTING IN AN ELEVATION = 3.62 FEET (CITY OF OAKLAND DATUM).

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1730 N. FIRST STREET
SUITE 600
SAN JOSE, CA 95112
408-467-9100 (PHONE)
408-467-9199 (FAX)
BKF 100+ YEARS
ENGINEERS . SURVEYORS . PLANNERS
CALIFORNIA

ALTA/NSPS LAND TITLE SURVEY
HOWARD TERMINAL
95 MARKET STREET
ALAMEDA COUNTY
OAKLAND

No.	Revisions

Date: 11-02-2018
Scale: 1" = 100'
Design: ---
Drawn: DFH
Approved: DSD
Job No: 20186934

Drawing Number:
ALTA
3 OF 7

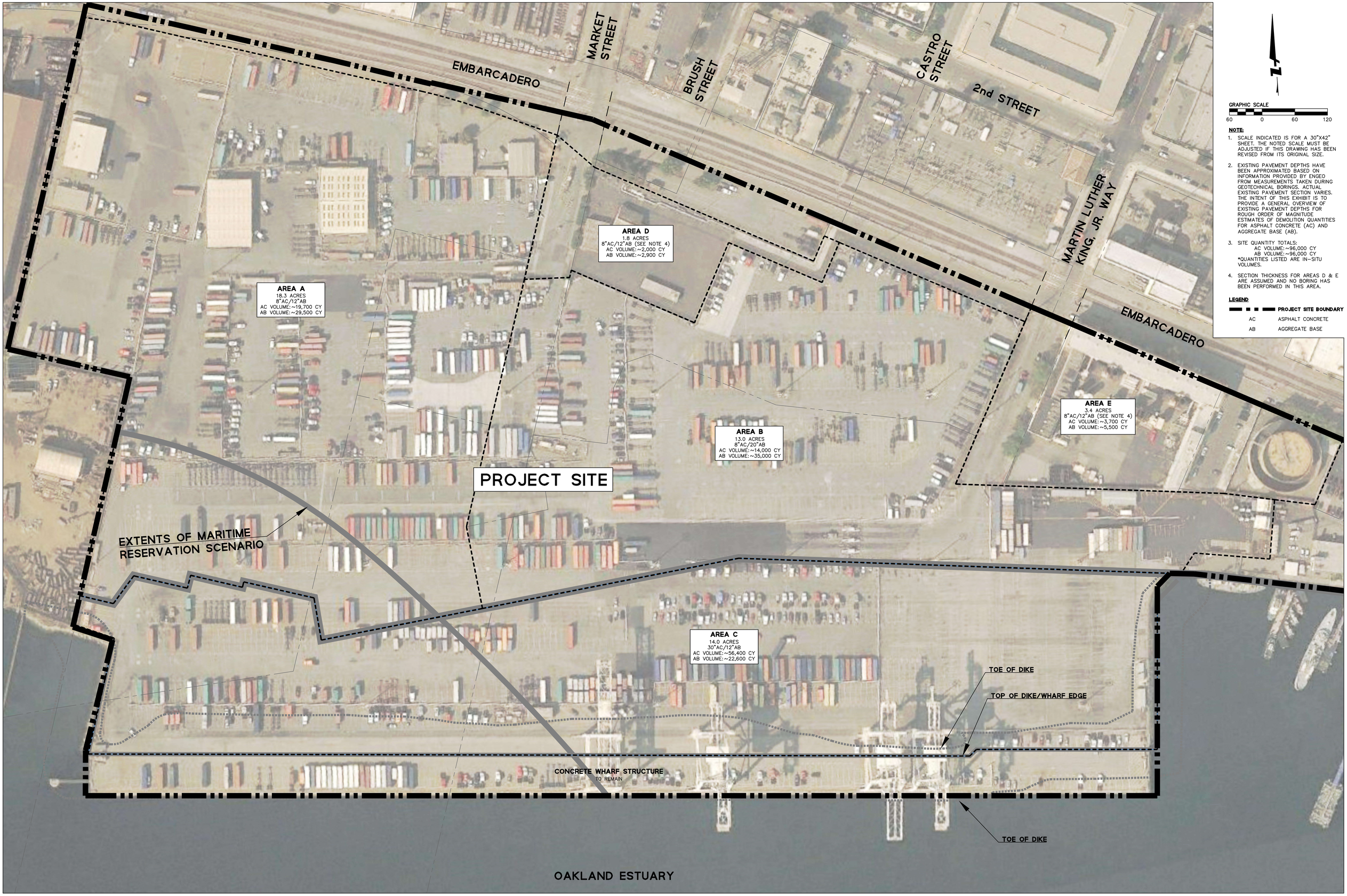
R:\20170324 Howard Terminal-Oakland\DWG\Howard Terminal ALTA.dwg
Plotted: 11/02/2018 10:19 AM by Hoang, Dan

B. Demolition

Port of Oakland record drawings show that the existing site consists of at-grade fill, as well as an existing wharf structure supported by piles. A concrete quay wall delineates the onsite fill from the Oakland Inner Harbor and existing wharf on the northern portion of the site, and a rock dike supports the on-site fill at the southern portion of the site.

Demolition of the existing site is expected to accommodate the proposed improvements. It is assumed that select demolition of the existing fill will be required. Geotechnical and structural review of the existing fill and wharf structure is on-going, and recommendations are provided to the project team under separate cover.

Existing site drawings provided by the Port of Oakland show the existing conditions at the project site based on NAVD 29 datum, which is 5.77 feet higher than City of Oakland Datum. The preliminary topographic survey of the site is based on the City of Oakland datum because the site development will be reviewed and permitted by the City, and there is an established monument network to support the City of Oakland datum. An aerial topographic survey was also prepared for use in design level evaluations of the existing conditions. The aerial will further define the existing topography and site features on the City of Oakland Datum. When reviewing historical documents for the site, they are likely on NGVD 29 datum and a conversion of 5.77 feet is required.



GRAPHIC SCALE

60 0 60 120

NOTE:

1. SCALE INDICATED IS FOR A 30"X42" SHEET. THE NOTED SCALE MUST BE ADJUSTED IF THIS DRAWING HAS BEEN REVISED FROM ITS ORIGINAL SIZE.
2. EXISTING PAVEMENT DEPTHS HAVE BEEN APPROXIMATED BASED ON INFORMATION PROVIDED BY ENGEO FROM MEASUREMENTS TAKEN DURING GEOTECHNICAL BORINGS. ACTUAL EXISTING PAVEMENT SECTION VARIES. THE INTENT OF THIS EXHIBIT IS TO PROVIDE A GENERAL OVERVIEW OF EXISTING PAVEMENT DEPTHS FOR ROUGH ORDER OF MAGNITUDE ESTIMATES OF DEMOLITION QUANTITIES FOR ASPHALT CONCRETE (AC) AND AGGREGATE BASE (AB).
3. SITE QUANTITY TOTALS:
   AC VOLUME:~96,000 CY
   AB VOLUME:~96,000 CY
   *QUANTITIES LISTED ARE IN-SITU VOLUMES.
4. SECTION THICKNESS FOR AREAS D & E ARE ASSUMED AND NO BORING HAS BEEN PERFORMED IN THIS AREA.

LEGEND

PROJECT SITE BOUNDARY

AC ASPHALT CONCRETE

AB AGGREGATE BASE

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EXISTING ONSITE PAVEMENT DEPTHS

HOWARD TERMINAL

12/13/19

EX5.0

C. Proposed Grading & Topography

The proposed Project development will be graded to connect at-grade to Market Street, Martin Luther King Junior Way, and Embarcadero on the north. It is assumed that improvements to the existing streets and associated sidewalks is required to facilitate the proposed development. Detailed street improvements will be identified as the project progresses, and traffic-based street improvements are identified, for both vehicular and pedestrian traffic.

The project site will be graded to accommodate the Federal Emergency Management Agency (FEMA) flood elevations, with proposed development above the base flood elevations. In addition, because the project is within the Bay Conservation and Development Commission (BCDC) jurisdiction at the 100-foot shoreline band, sea level rise will need to be accommodated on site. Because the site is high relative to the adjacent grades, both FEMA and sea level rise are anticipated to be accommodated within the proposed site development within the proposed grading and development concept.

GRAPHIC SCALE

80 0 80 160

LEGEND

- SITE BOUNDARY
- GRADE BREAK AT HIGH POINT
- BFE BASE FLOOD ELEVATION
- EX EXISTING GRADE
- FF FINISHED FLOOR
- FG FINISHED GRADE

NOTE:

1. SCALE INDICATED IS FOR A 30"X42" SHEET. THE NOTED SCALE MUST BE ADJUSTED IF THIS DRAWING HAS BEEN REVISED FROM ITS ORIGINAL SIZE.
2. FEMA BASE FLOOD ELEVATION (BFE) EL 3.93 (CITY OF OAKLAND DATUM, COD)

EMBARCADERO
MYRTLE STREET
MARKET STREET
BRUSH STREET
CASTRO STREET
2nd STREET
EMBARCADERO
MARTIN LUTHER KING, JR. WAY
JEFFERSON STREET (80.5' WIDE)
CLAY STREET (80.5' WIDE)
BLOCK 17 FF 10.0
BLOCK 13 FF 10.0
BLOCK 10 FF 10.0
BLOCK 9 FF 10.0
BLOCK 14 FF 10.0
BLOCK 11 FF 10.0
BLOCK 4
BLOCK 3 FF 10.0
BLOCK 2 FF 10.0
FF 10.5 BLOCK 5
BLOCK 15 FF 10.0
BLOCK 12 FF 11.0
FF 14.5 BLOCK 6
BLOCK 16 FF 10.0
BLOCK 8 FF 10.0
FF 12.0 BLOCK 7
FIELD = 10.0
BLOCK 18 FF 6.0
FERRY TERMINAL
CONFORM TO EXISTING GRADE
3:1 MAX CONFORM TO EXISTING GRADE
CONFORM TO EXISTING ELEVATIONS
STREET IMPROVEMENTS AND CONFORM TO EXISTING GRADE
LEGISLATIVE LAND TRUST
OAKLAND ESTUARY

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PRELIMINARY SITE GRADING

HOWARD TERMINAL

12/13/19

EX6.0

D. Overall Development Proposal

It is our understanding that the proposed improvements include the following elements. These elements are being considered, as the baseline site upgrades required to make the site feasible for a proposed development by the Oakland Athletics. Throughout the Civil Infrastructure Review, we have considered the following improvements, and identified the infrastructure opportunities and constrains associated with these improvements:

1. Proposed 35,000 person capacity ballpark,
2. Development of residential, retail, cultural and civic uses,
3. Hotel and conference room,
4. Performance center,
5. At-grade, and structurally supported open spaces,
6. Pedestrian and vehicular accommodations for drop off, circulation and parking,
7. Associated site utility infrastructure and roadway facilities.

E. Street & Pedestrian Improvements

Roadway and pedestrian infrastructure improvements are expected at the existing streets to support the proposed ballpark and development. Details of these improvements are described in separate project documents.

Market Street and Martin Luther King Junior Way currently cross at-grade with the UPRR tracks at stop-controlled intersections. A pedestrian walkway over the railroad to the project site is being considered, to provide a dedicated pedestrian crossing

A separate study is being performed by Fehr & Peers, which analyzes overall traffic patterns, mass transit options, and additional offsite infrastructure upgrades for street widths, lane configurations and signal installations or modifications.

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F. Gondola

The project is proposing use of a gondola as a mass transit option for people visiting the project site on a daily basis, and for events. The enclosed gondola would transport people from downtown Oakland to the Oakland waterfront, where they would then walk to the Howard stadium and adjacent development. The proposed gondola route is along the existing Washington Street alignment, within the City of Oakland Right of Way. The gondola is proposed to start at a new gondola station adjacent to the City of Oakland Convention Center at 10th Street, between Broadway and Clay Street. The gondola would then travel overhead on a cable that would be centered by a tower at the 4th and Washington Street intersection. The gondola would end at a new gondola station adjacent to the Oakland Inner Harbor at the Water Street and Washington Street intersection. Along this route, the gondola is proposed to traverse over the Nimitz Freeway at the Interstate 880 and 980 interchange. A separate report has been provided that details the gondola variant

3. UTILITIES

A. Sanitary Sewer

1. Existing Infrastructure

a. *Wastewater Treatment*

Sanitary sewer treatment is provided by East Bay Municipal Utility District (EBMUD) at the Main Wastewater Treatment Plant (MWWTP), which is located at the eastern end of the San Francisco-Oakland Bay Bridge. The plant's maximum treatment capacity is 320 million gallons per day (mgd) for primary treatment and 168 mgd for secondary treatment. 63 million gallons of wastewater is treated at the plant every day, and storage basins provide plant capacity for a short term hydraulic peak of 415 mgd. In 2008, the treatment plant was operating at 69 million gallons per day, which seems to imply that the treatment plant is currently operating below capacity. EBMUD has been recycling, reusing and producing renewable energy at its wastewater plan since 1985, and it utilizes sewage inflow for creation of green energy, nutrient rich solid conditioner and recycled water, according to the EBMUD website.

b. *Collection System*

The existing sanitary sewer collection within and surrounding the site is presented on the following exhibit. The City owns and operates the collection system, while EBMUD owns and operates the interceptor trunk lines, which convey wastewater to the MWWTP. The Project site is currently served by two City of Oakland sewer lines in Market Street and Martin Luther King Jr. Way. Both of these sewer lines run north under Embarcadero road, where they connect to the EBMUD 105-inch interceptor within 2nd Street.

2. Proposed Infrastructure

a. *System Capacity*

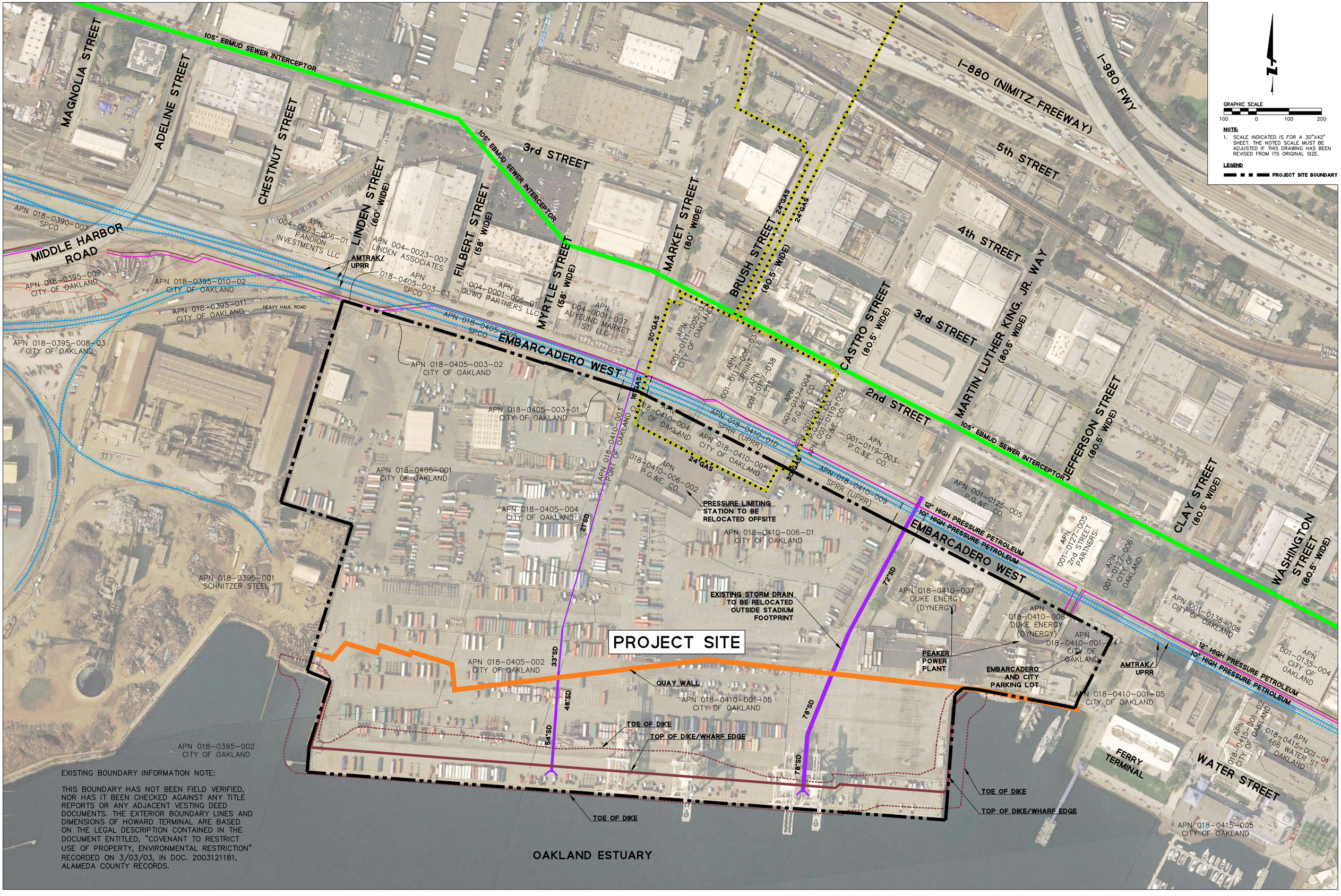
The City of Oakland has sewer flow allocation at the EBMUD treatment plant for discharge and treatment of the wastewater generated within the City of Oakland. The City's sewer flow allocation is divided into basins and sub-basins based on the sewer collection system networks. The Project site is located in sub-basin 64, as shown on the City basin map. The City of Oakland was contacted, but did not provide comment about the current system capacity in Sub basin 64 prior to issuance of this report.

It is assumed that sub basin 64 is currently operating at capacity, and local sewer infrastructure improvements may be required in the City sewer mains to support the project. Due to the relatively short distance between the proposed project site and the existing EBMUD interceptor, it is assumed that new sewer mains from the site to the EBMUD interceptor would be feasible. The City of Oakland would permit this work within their right of way and EBMUD would permit modifications to the sewer connections at the interceptor, if required. Laterals to the EBMUD interceptor are permitted only by the City of Oakland.

This due diligence review assumes that the existing EBMUD waste water system treatment capacity can accommodate the proposed development within the existing EBMUD infrastructure. The proposed residential, commercial and retail uses will increase the demand over the existing site discharge. Sewer discharge estimates are included for the site development and the proposed ballpark.

b. ***Collection System Improvements***

Two existing sewer lines in Market Street and Martin Luther King Jr. Way discharge City sewer into the EBMUD interceptor. Both of these lines are situated on the eastern and western sides of the proposed ballpark, and likely have limited use, given the existing industrial use within the site. This due diligence review assumes that the location of these lines can remain, with new pipelines installed from the site beneath the railroad tracks, extending to the EBMUD interceptor in 2nd Street. This assumption will need to be verified with a more detailed review of the condition of existing infrastructure.



EXISTING BOUNDARY INFORMATION NOTE:

THIS BOUNDARY HAS NOT BEEN FIELD VERIFIED, NOR HAS IT BEEN CHECKED AGAINST ANY TITLE REPORTS OR ANY ADJACENT VESTING DEED DOCUMENTS. THE EXTERIOR BOUNDARY LINES AND DIMENSIONS OF HOWARD TERMINAL ARE BASED ON THE LEGAL DESCRIPTION CONTAINED IN THE DOCUMENT ENTITLED, "COVENANT TO RESTRICT USE OF PROPERTY, ENVIRONMENTAL RESTRICTION" RECORDED ON 3/03/03, IN DOC. 2003121181, ALAMEDA COUNTY RECORDS.

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ONSITE EXISTING UTILITY PLAN

HOWARD TERMINAL

12/13/19

EX8.0



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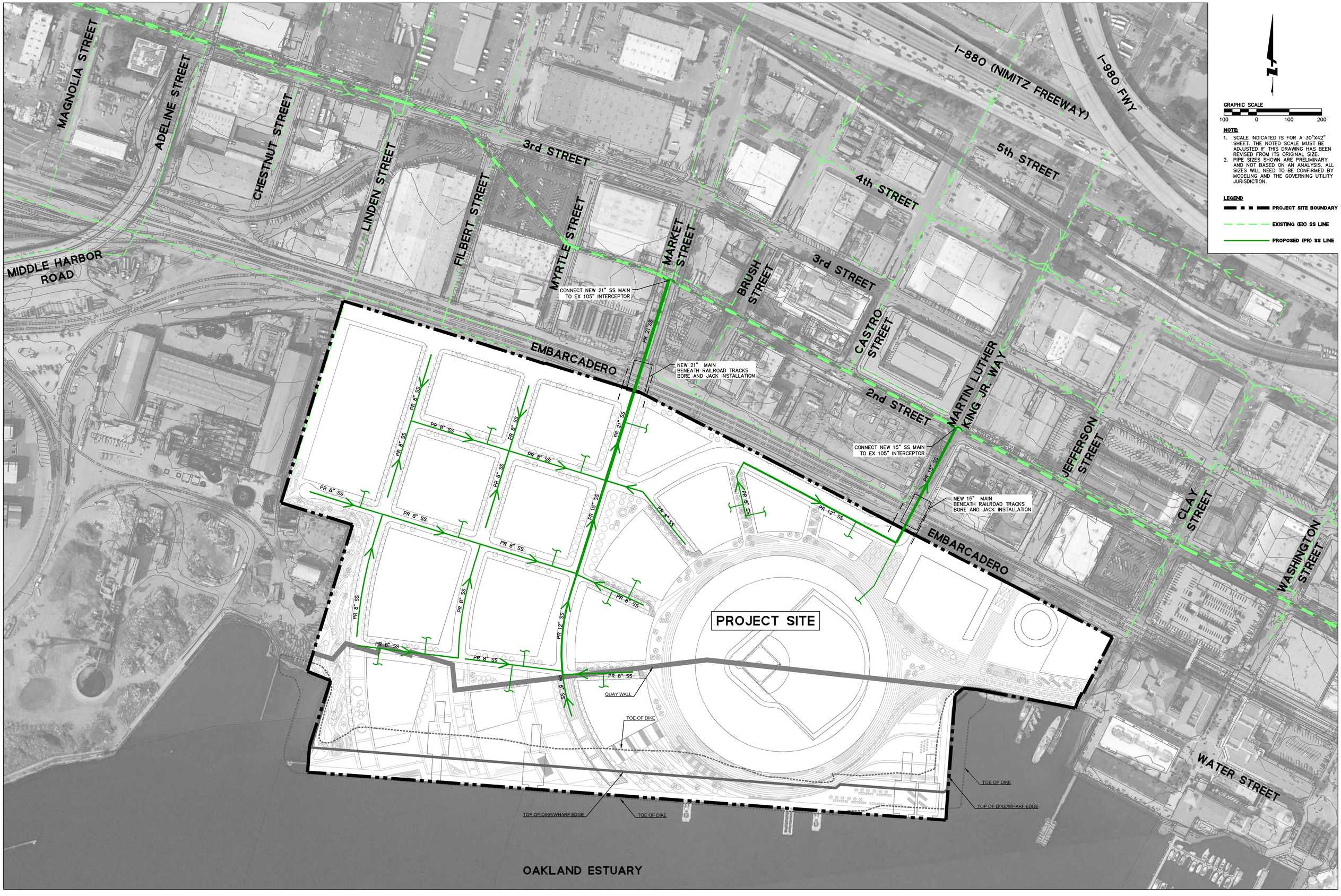
EXISTING SANITARY SEWER INFRASTRUCTURE

HOWARD TERMINAL

12/13/19

EX9.0



GRAPHIC SCALE
100 0 100 200

NOTE:

1. SCALE INDICATED IS FOR A 30"X42" SHEET. THE NOTED SCALE MUST BE ADJUSTED IF THIS DRAWING HAS BEEN REVISED FROM ITS ORIGINAL SIZE.
2. PIPE SIZES SHOWN ARE PRELIMINARY AND NOT BASED ON AN ANALYSIS. ALL SIZES WILL NEED TO BE CONFIRMED BY MODELING AND THE GOVERNING UTILITY JURISDICTION.

LEGEND

- PROJECT SITE BOUNDARY
- EXISTING (EX) SS LINE
- PROPOSED (PR) SS LINE

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PROPOSED SANITARY SEWER INFRASTRUCTURE

HOWARD TERMINAL

12/13/19

EX9.1

B. Domestic Water

1. Existing Infrastructure

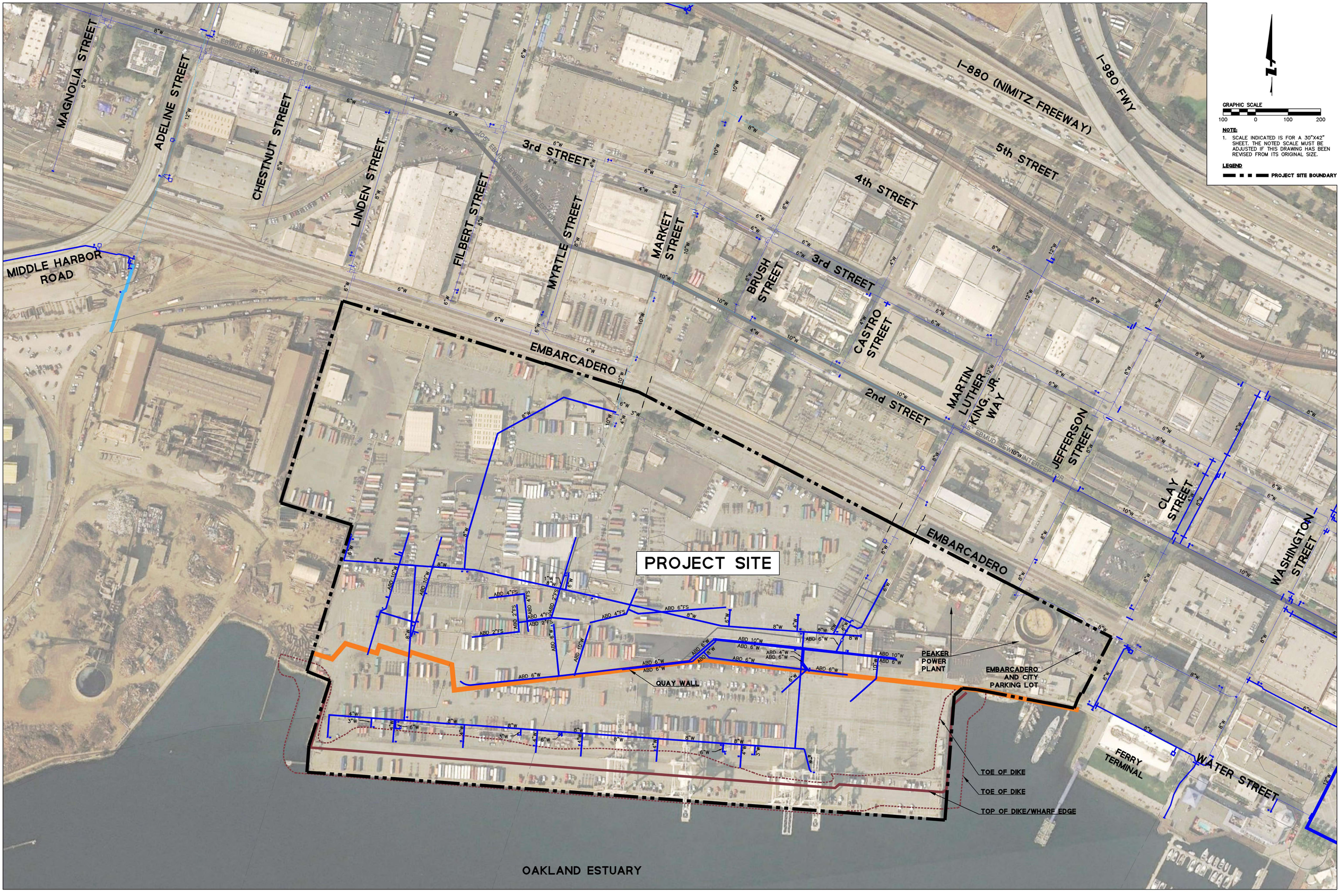
a. Water Supply

Water service to the Project is provided by East Bay Municipal Utility District (EBMUD), which owns, operates and maintains the water transmission system within the City of Oakland. The project site is located within the proposed Downtown Oakland Specific Plan area, per a letter from EBMUD dated March 19, 2018. The Specific Plan area includes approximately 37 miles of existing EBMUD water distribution pipelines. According to EBMUD, portions of these pipelines may need to be replaced at the Project sponsor's expense, depending on site design proposal and estimated demands. However, it is assumed that EBMUD has available water supply to service the new ballpark, and proposed water infrastructure within the Project development will be designed per EMBUD standards. New water mains are assumed to range in size from 10 to 12 inches to serve the proposed development. A conceptual layout of proposed onsite domestic water infrastructure is shown in the following exhibits. Per EBMUD, proposed development projects within the Specific Plan area should plan to:

1. Perform a Water Supply Assessment (WSA) for projects that exceed the threshold requirements of the California Environmental Quality Act (CEQA). EBMUD has performed a WSA in response to a request dated February 21, 2019, and summarized the results in a letter to the City of Oakland, dated May 14, 2019. As detailed in the EBMUD response, the City provided a water demand estimate of 1,616,200 gallons per day (gpd) based off the City's sanitary sewer flow estimate, which also included wet weather infiltration. EBMUD states that the City's projection overestimates the potable water demands, and provided its own estimate of 854,400 gpd for the increase in water demand at Project build-out. This estimate utilizes EBMUD's land-use demand approach, system capacity charge studies on similar projects, and various reference data. Based on water demand data from Oracle Park, the nearby ballpark for the San Francisco Giants, BKF anticipates a higher water demand for the Project than the EBMUD estimate.

2. Install main extensions to serve the project development to provide adequate domestic water supply, fire flow and system redundancy, which will be the Project sponsor's cost. EBMUD's New Business office should be contacted to request water service and to estimate costs of providing water service.

Currently, there is no recycled water available to the project site. However, EBMUD may require installation of a recycled water main (served by potable water) to facilitate future recycled water use, and may provide recycled water to the Project site area if there is a large demand for its use. EBMUD is currently evaluating the installation of recycled water mains in Martin Luther King Jr. Way and 3rd Street. If these mains are installed, the Project could connect at the intersection of Martin Luther King Jr. Way and 3rd Street and extend a recycled water main approximately three blocks to the site.



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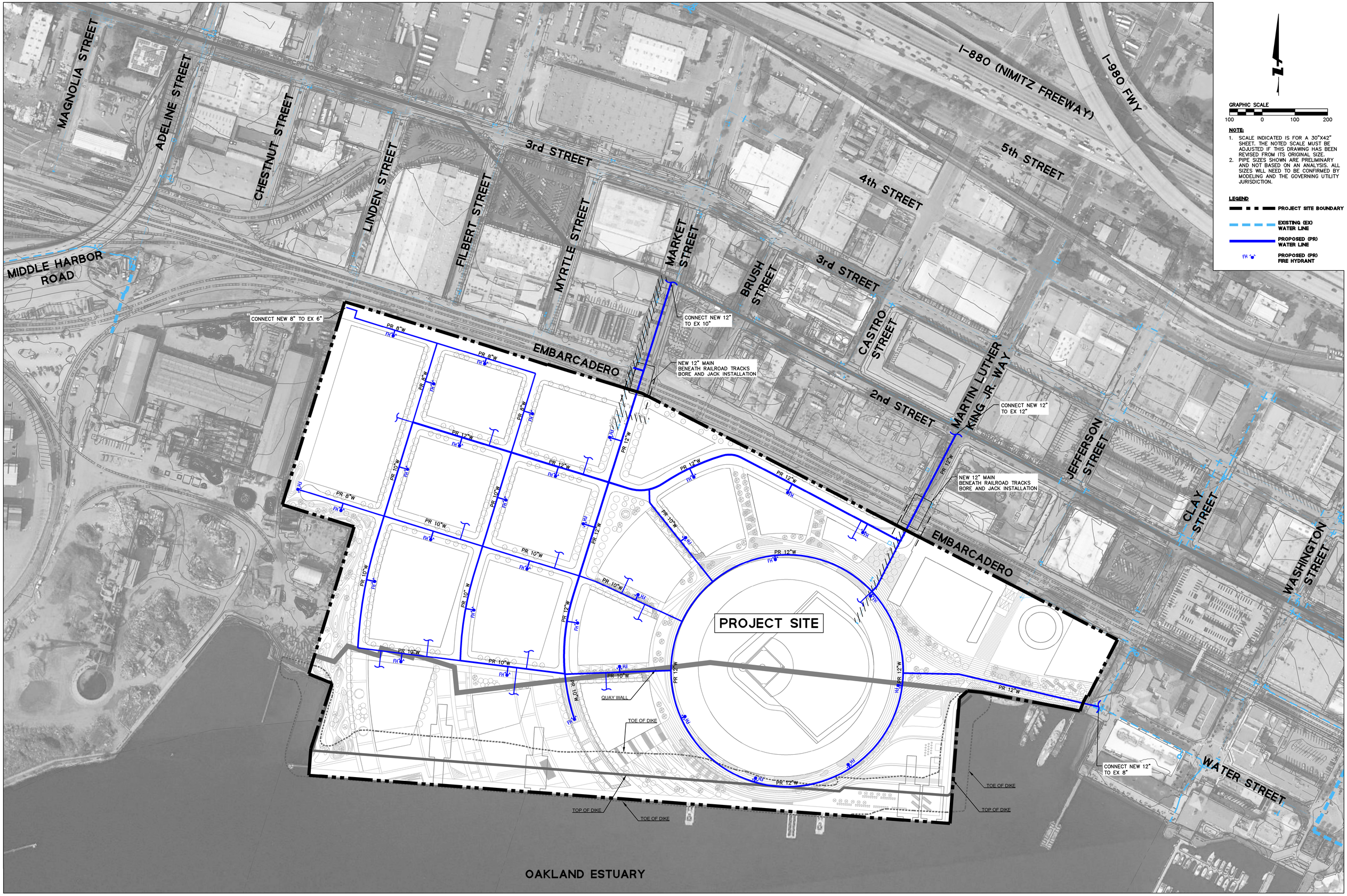
EXISTING DOMESTIC AND FIRE WATER INFRASTRUCTURE

HOWARD TERMINAL

12/13/19

EX10.0



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PROPOSED DOMESTIC AND FIRE WATER INFRASTRUCTURE

HOWARD TERMINAL

12/13/19

EX10.1

b. Distribution System

Existing water distribution within and surrounding the site is presented in the following exhibit. The site is currently serviced by 10-inch waterline from Market Street and 8-inch line from Martin Luther King Jr. Way. An 8-inch service line is also located along the frontage of the site in Embarcadero from Jefferson Street to Clay Street.

Existing pressure and flow data were provided by EBMUD at three locations in the vicinity of the site: at Market Street (10" main), at Martin Luther King Jr. Way (8" main), and at Jefferson Street (8" main). The pressure and flow data from EBMUD are included in Appendix C, along with conversion of the data to determine available flow at 20 psi residual pressure, per California Fire Code. At the 10" domestic water main in Market Street, 3,625 gallons per minute (gpm) is calculated at 20 psi residual pressure. At the 8" domestic water main in Martin Luther King Jr. Way, 2,608 gpm is calculated at 20 psi residual pressure. The Project will further evaluate existing water flow and pressure as specific uses are more defined. It is assumed that a fire protection engineer will evaluate the necessity of proposed fire pumps for the Project development parcels and ballpark.

c. System Capacity

The proposed ballpark is proposed to have a total capacity of 35,000 seats. This is 15,000 seats less than the existing stadium that has a total capacity of 50,000 seats. The proposed ballpark use will have a net decrease in water demand, and the residential, commercial and retail uses will be additional water demands for the site. It is assumed that EBMUD would allocate the existing water use to the proposed site, but further coordination and evaluation of proposed demands is required.

d. Distribution System Improvements

It is assumed that multiple points of connection to the existing domestic water system will be required to deliver adequate pressure and flow throughout the site. The proposed connection points are listed below and shown on the following exhibits.

- 6" domestic water connection at Linden Street
- 12" domestic water connection at Market Street (bore and jack beneath railroad)
- 12" domestic water connection at Martin Luther King Jr. Way (bore and jack beneath railroad)
- 8" domestic water connection at Jefferson Street
- 8" domestic water connection at Clay Street

Multiple points of connection to the EBMUD water distributions system allow for a looped water system at the site. The looped system would provide greater water pressure and flow, including redundancy for the proposed site. Pressure and flow performance data from EBMUD indicates that there are no known local distribution system issues. It is expected that the multiple points of connection and pipe size upgrades of the mains in Market Street Martin Luther King, Jr. Way will result in improved performance of the system at the site. This data will need to be verified with a water system model analysis and review of fire flow requirements from the California Fire Code and City of Oakland Fire Department.

It is expected that the Market Street and Martin Luther King, Jr. Way connections will require upgrade of the existing water mains to 12" mains from the site to Embarcadero, requiring bore and jack installations where the proposed water lines cross the railroad tracks. Replacing the existing water lines beneath the railroad tracks will provide greater reliability of the water supply to the site, as the condition of the existing pipe infrastructure crossing beneath the railroad tracks is unknown. However, further discussion with EBMUD is required to determine the condition of the existing water infrastructure in this area.

e. Recycled Water

Based on our understanding of the publicly available EBMUD recycled water map, there is an identified recycled main extension that is planned to extend to Alameda via Martin Luther King, Jr. Way and 3rd Street. We understand this project is not in development, and recycled water is not available to the project at this time.

C. Storm Drainage

1. Existing Infrastructure

The Project site has two existing City of Oakland gravity storm drain outfalls draining from Market Street and Martin Luther King Jr. Way. The outfalls discharge approximately halfway between the Embarcadero and southern limit of the existing wharf, where the outfalls meet the shoreline beneath the wharf structure. It is understood that these storm drain mains convey storm water runoff from upland properties and public right of ways within the City of Oakland. Additionally, both of these existing mains convey storm drainage from several catch basins and laterals that collect local drainage within the Project site. It is assumed that existing Howard site storm drain catch basins and local storm drain infrastructure will be removed to facilitate proposed site improvements. It is likely that portions of the site also drain directly to the Oakland Inner Harbor, which was historically acceptable for storm drain discharge. However, Project development will be required to capture proposed storm water and treat it or re-use it prior to discharge into the two existing City of Oakland gravity storm drain mains.

2. Proposed Infrastructure

a. Storm Drain Collection System Improvements

The existing site currently drains to the two existing City of Oakland Storm drain pipes that run through the site. Runoff from the proposed development will also be routed to these existing storm drain pipes. We understand that the Martin Luther King Jr. Way storm drain pipe and outfall may be impacted by the footprint of the new ballpark, and may need to be relocated. Additionally, the Market Street outfall, while maintained in place, may need to be upsized for a segment of the existing onsite storm drain pipe depending on proposed onsite stormwater routing. The project will decrease stormwater runoff below existing conditions and plans to connect to the existing storm drain pipe at multiple locations, possibly upstream of existing onsite connections where the existing line is 21-inches. Depending on the connection point, a section of the existing storm drain pipe may need to be upsized to accommodate this proposed stormwater routing.

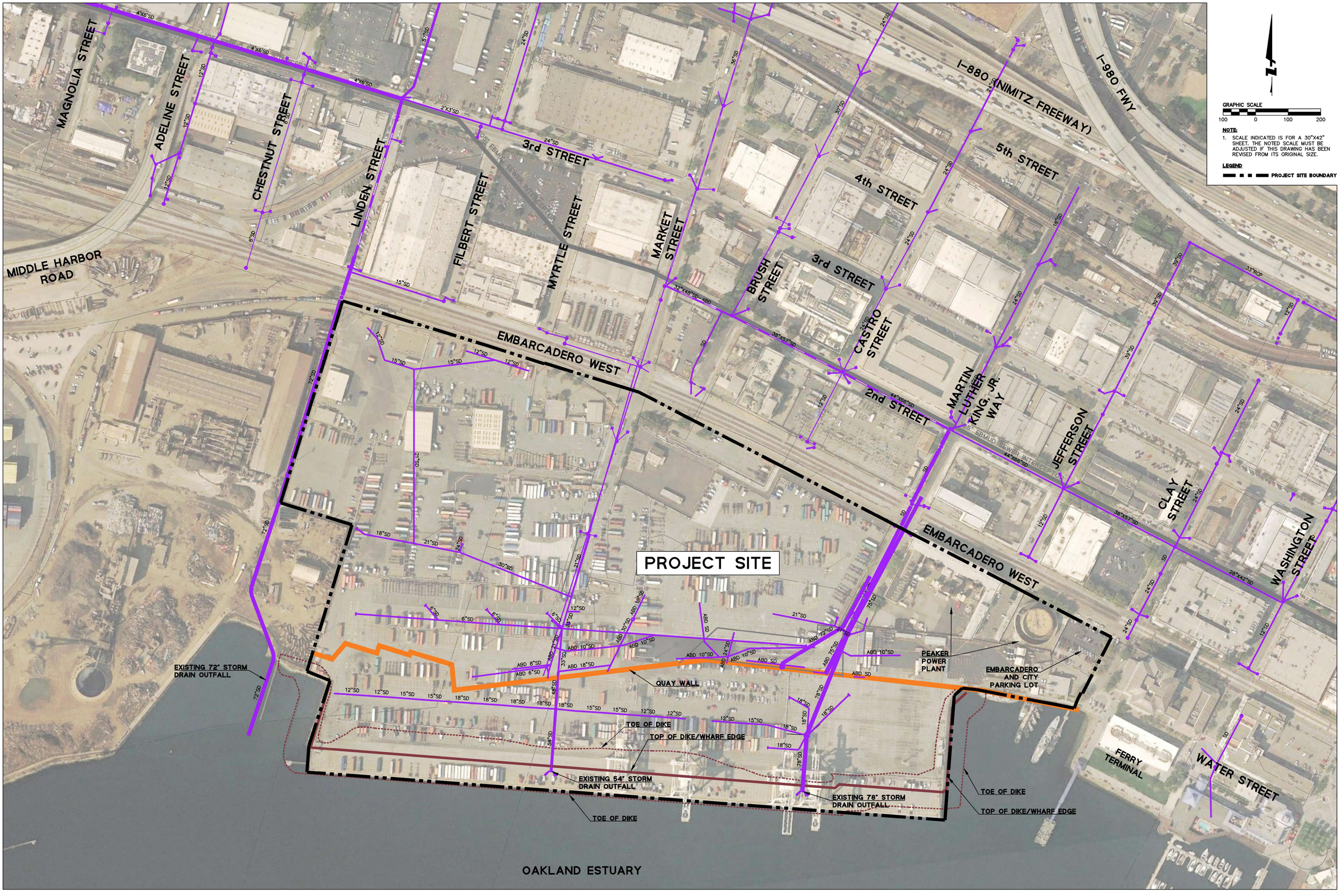
b. Storm Water Treatment Requirements & Strategies

Developments are subject to the requirements of the Clean Water Act through the National Pollutant Discharge Elimination System (NPDES) Municipal Regional Storm

Water Permit (MRP) issued to the Alameda County Clean Water Program (ACCWP) by the San Francisco Bay Regional Water Quality Control Board (RWQCB). Provision C.3 of the MRP is the section of the permit containing storm water pollution management requirements for new development and redevelopment projects. Provision C.3 requires treatment of storm water prior to discharge into the municipal storm drain system. Developments with over 10,000 square feet of impervious surfaces are required to treat storm water discharge. Storm water treatment requirements can be met through on site storm water reuse, infiltration or bio-retention treatment areas.

A combination of treatment measures including minimizing impervious surfaces, incorporation of storm water reuse into the project design, incorporation of source control measures, landscape based treatment, site design measures, grading, permeable pavements or capture and re-use systems will be considered for this Project. The final layout and type of treatment will depend on the site plan, grading, landscape designs and building systems.

The required storm water treatment area for the impervious runoff from the Project site will be located within the streets, parks and development areas near the source of the runoff. Each development parcel will be responsible for treating the required storm water treatment volume within the parcel, to treat the required flow and volume as defined by the MRP provision C.3. The ballpark and surrounding walkways, landscape and ancillary development will meet provision C.3 through either capture and re-use, landscape based treatment, bio-retention or flow through planters. The grass field is anticipated to meet the standard for a self-treating area because it is a permeable surface on grade. The parks and open space within the development will be treated in landscape-based treatment areas within, or adjacent to, the footprint of the parks and open space. The streets within the development will also be treated with landscape-based treatment in the adjacent streetscape and open space areas. Permeable materials may be utilized to offset the treatment requirements.



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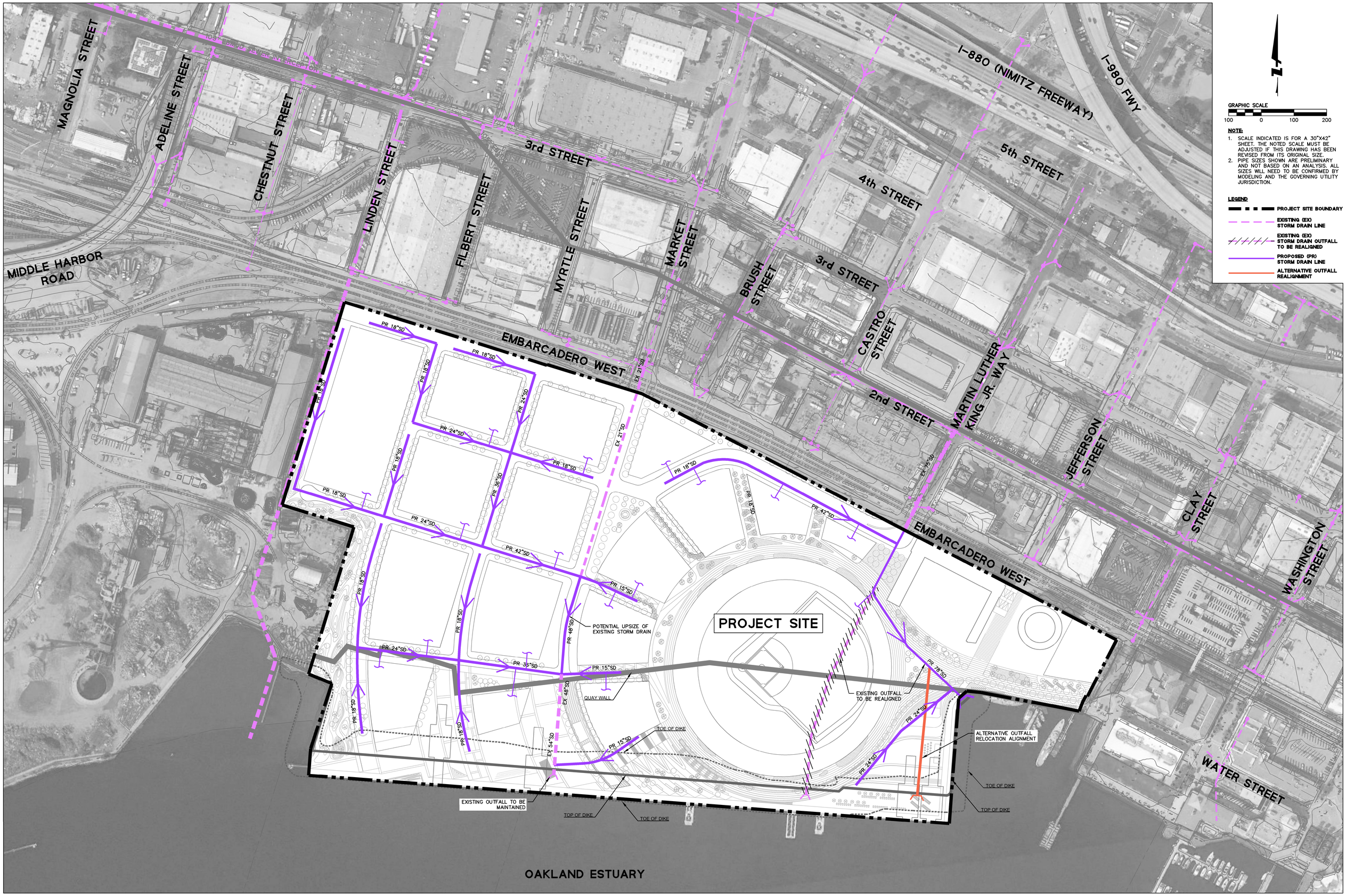
EXISTING STORM DRAIN INFRASTRUCTURE

HOWARD TERMINAL

12/13/19

EX11.0



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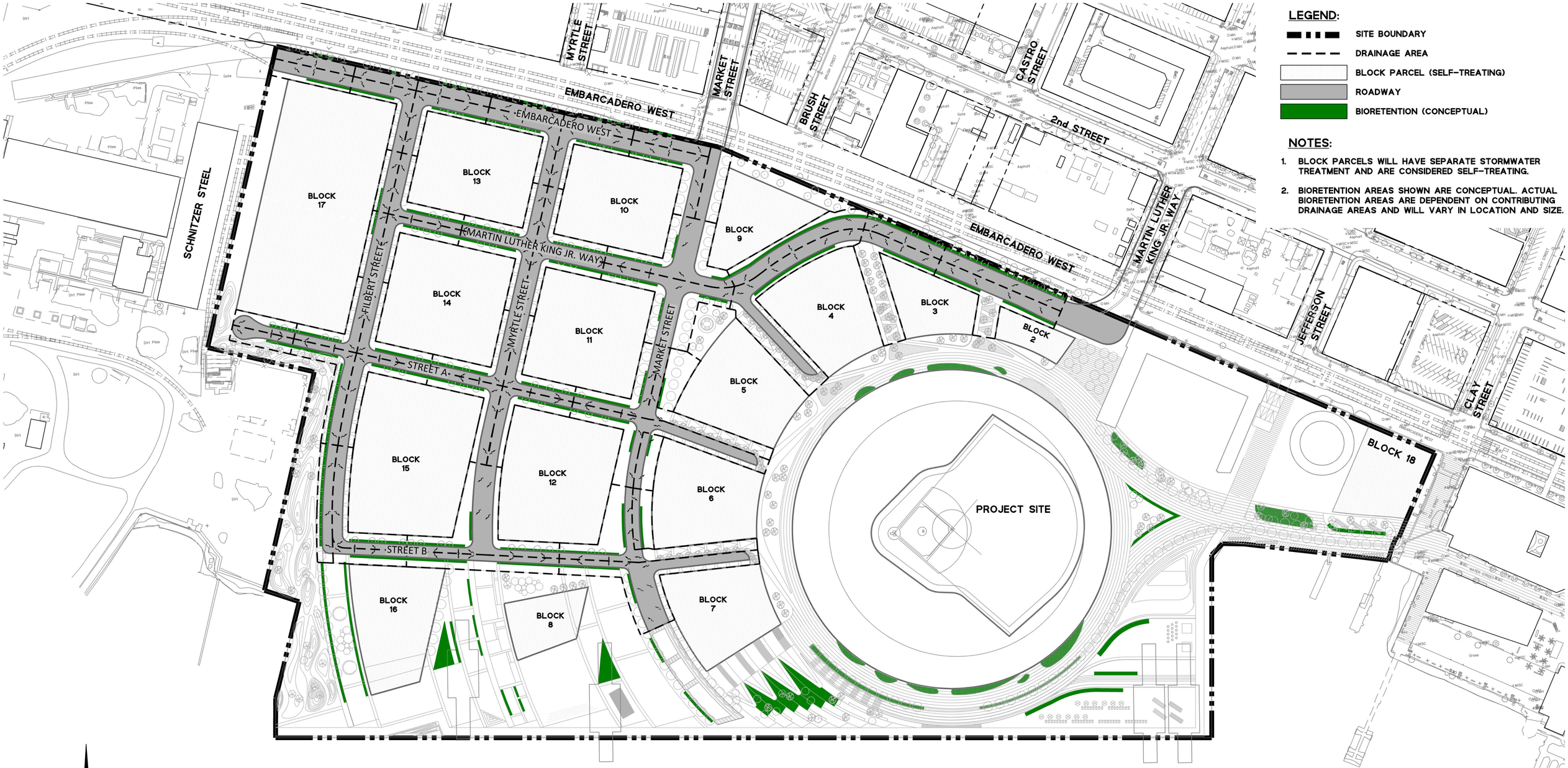
PROPOSED STORM DRAIN INFRASTRUCTURE

HOWARD TERMINAL

12/13/19

EX11.1



LEGEND:

- SITE BOUNDARY
- DRAINAGE AREA
- BLOCK PARCEL (SELF-TREATING)
- ROADWAY
- BIORETENTION (CONCEPTUAL)

NOTES:

1. BLOCK PARCELS WILL HAVE SEPARATE STORMWATER TREATMENT AND ARE CONSIDERED SELF-TREATING.
2. BIORETENTION AREAS SHOWN ARE CONCEPTUAL. ACTUAL BIORETENTION AREAS ARE DEPENDENT ON CONTRIBUTING DRAINAGE AREAS AND WILL VARY IN LOCATION AND SIZE.

GRAPHIC SCALE
80 0 80 160

SUMMARY OF ONSITE SURFACES

SURFACE	EXISTING	PROPOSED
IMPERVIOUS	57 AC (100%)	51 AC (90%)
PERVIOUS	0 AC (0%)	6 AC (10%)
TOTAL	57 AC (100%)	57 AC (100%)

TREATMENT AREA (4% OF IMPERVIOUS) = 2 AC

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PRELIMINARY STORMWATER TREATMENT PLAN

HOWARD TERMINAL

12/13/19

EX11.2

MARTIN LUTHER KING JR. WAY

EMBARCADERO

EXISTING BUILDING

A

EXISTING OUTFALL TO BE REALIGNED

HOWARD TERMINAL

PR 78"SD

ALTERNATIVE OUTFALL RELOCATION ALIGNMENT SEE EXHIBIT 11.1 FOR CONTINUATION

N

GRAPHIC SCALE

30 0 30 60

NOTE:

1. SCALE INDICATED IS FOR A 30"X42" SHEET. THE NOTED SCALE MUST BE ADJUSTED IF THIS DRAWING HAS BEEN REVISED FROM ITS ORIGINAL SIZE.
2. PIPE SIZES SHOWN ARE PRELIMINARY AND NOT BASED ON AN ANALYSIS. ALL SIZES WILL NEED TO BE CONFIRMED BY MODELING AND THE GOVERNING UTILITY JURISDICTION.

LEGEND

- SITE BOUNDARY
- EXISTING (EX) STORM DRAIN LINE
- PROPOSED (PR) STORM DRAIN OUTFALL

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PROPOSED STORM DRAIN OUTFALL

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10/14/19

EX11.3

GRAPHIC SCALE

5 0 5 10

NOTE:

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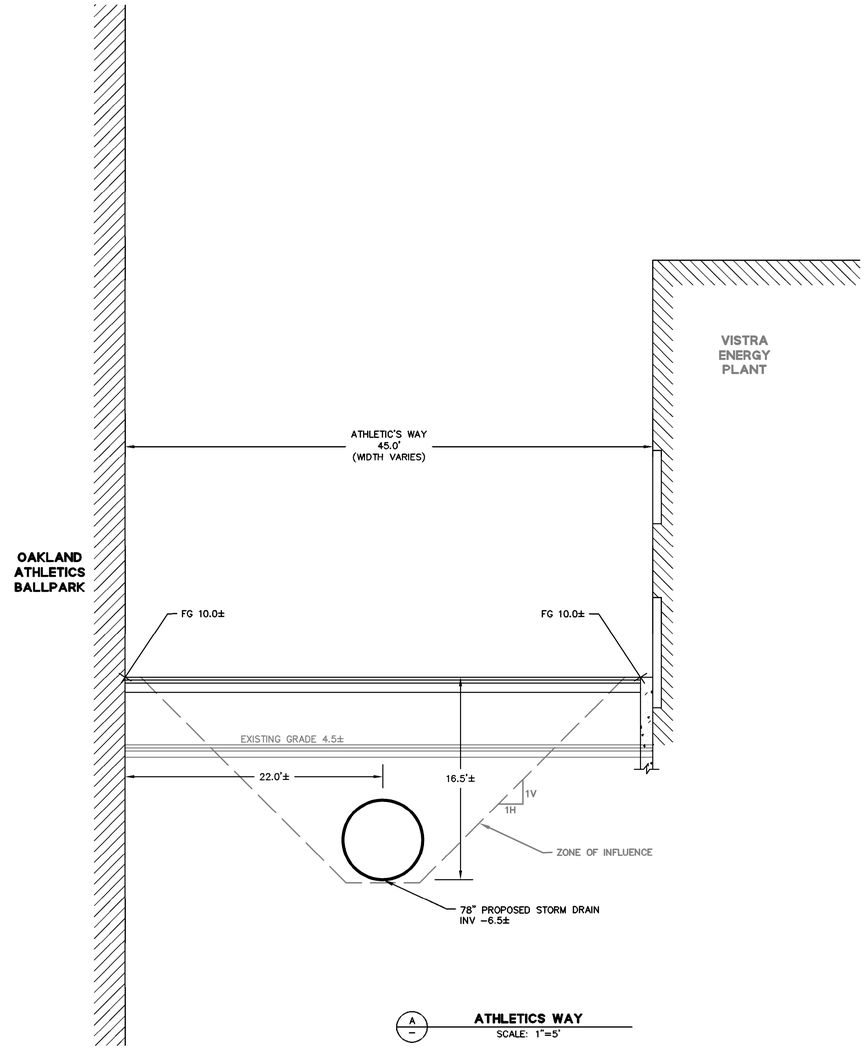
2. PIPE SIZES SHOWN ARE PRELIMINARY AND NOT BASED ON AN ANALYSIS. ALL SIZES WILL NEED TO BE CONFIRMED BY MODELING AND THE GOVERNING UTILITY JURISDICTION.
3. ELEVATIONS SHOWN ARE BASED ON THE CITY OF OAKLAND DATUM.



A — ATHLETICS WAY
SCALE: 1"=5'

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ATHLETICS WAY - PRELIMINARY CROSS SECTION

HOWARD TERMINAL

10/14/19

EX11.4

D. Gas and Electric (PG&E)

Gas and electric service in the City of Oakland is provided by Pacific Gas and Electric (PG&E), the owner and operator of the systems. Electric service is transmitted through overhead and underground distribution/transmission lines in the Project area. Existing gas and electrical distribution within the Project site is presented in the following exhibits.

1. Electric Infrastructure

a. Existing Electrical Distribution System

Electrical distribution is currently provided above and below ground within the streets adjacent to the project site. The site currently has both overhead and underground 12-kilovolt (kV) service within Embarcadero road on the northern limits of the project.

b. Proposed Electrical Distribution System

It is assumed that the existing 12-kV electric service adjacent to the site will serve as the primary source of power to the stadium. The Project electrical engineer has also suggested that the Project request an additional 12-kV service from PG&E so that the cost and feasibility of redundant power from PG&E can be evaluated. PG&E has stated that the substation serving the Project site is reliable. They will provide reliability statistics once a PG&E application is received for the Project site. The following exhibits show the known existing electrical infrastructure, as well as the one option for proposed electrical infrastructure in the vicinity of the site. Electric service points of connection and onsite joint trench layout will need to be determined by a dry utility consultant.

2. Gas Infrastructure

a. Existing Gas Distribution System

As noted in Section 2, a PG&E high pressure limiting station is located adjacent to the site. This facility is serviced by two separate high pressure transmission lines that feed from Market Street (20" and 16" pipes) and Castro Street (30" and 24" pipes). Local gas distribution is provided by 2-inch gas service from Embarcadero at Jefferson Street that currently services the existing property owned by Dynergy. Services are also provided to the project site from the existing PG&E pressure limiting station.

b. Proposed Gas Distribution System

PG&E currently has plans to relocate the existing pressure limiting station to a site at the corner of 3rd Street and Market Street. Based on correspondence with PG&E, this new pressure limiting facility is currently in the design phase. Once the pressure limiting station is relocated, that portion of the site could be included as part of the overall site

development. Additionally, it appears that the existing gas transmission lines that currently enter the site from Market Street and Castro Street could be abandoned or removed south of 3rd Street, as they would become redundant; however, we understand that some of the below grade infrastructure is planned to remain. BKF has reached out to PG&E to confirm this assumption, and will continue to refine what infrastructure will remain and what can be identified for removal. Relocation of the PG&E pressure limiting station is shown conceptually on the following exhibits.

Gas service will need to be extended to the site from the local distribution mains. Potential connection points identified include Martin Luther King Jr. Way and Market Street. We assume that gas will be located in a joint trench in the proposed public right of ways within the development. See gas and electric load estimation calculation from Meyers+, under separate cover.

3. Communication (AT&T and Comcast)

a. Existing & Proposed Infrastructure

AT&T and Comcast currently provide communication services in the vicinity of the Project site. AT&T has a fiber-optic line located on 2nd Street that serves a Sprint facility at 2nd Street and Brush Street, as shown on the Brush Street exhibit, 10.0. Comcast also has a fiber-optic line located within UPRR right-of-way on Embarcadero that is currently leased by AT&T. There is no known fiber-optic within the site based on information provided by AT&T. However, record drawings do indicate that the site is served with telephone lines. It is assumed that both AT&T and Comcast would serve the proposed site development within a future joint trench in the public right of way. Communications service points of connection and onsite joint trench layout will need to be determined by a dry utility consultant.



GRAPHIC SCALE
100 0 100 200

NOTE:
1. SCALE INDICATED IS FOR A 30"X42" SHEET. THE NOTED SCALE MUST BE ADJUSTED IF THIS DRAWING HAS BEEN REVISED FROM ITS ORIGINAL SIZE.

LEGEND
- PROJECT SITE BOUNDARY
- EXISTING (EX) GAS (G) LINE

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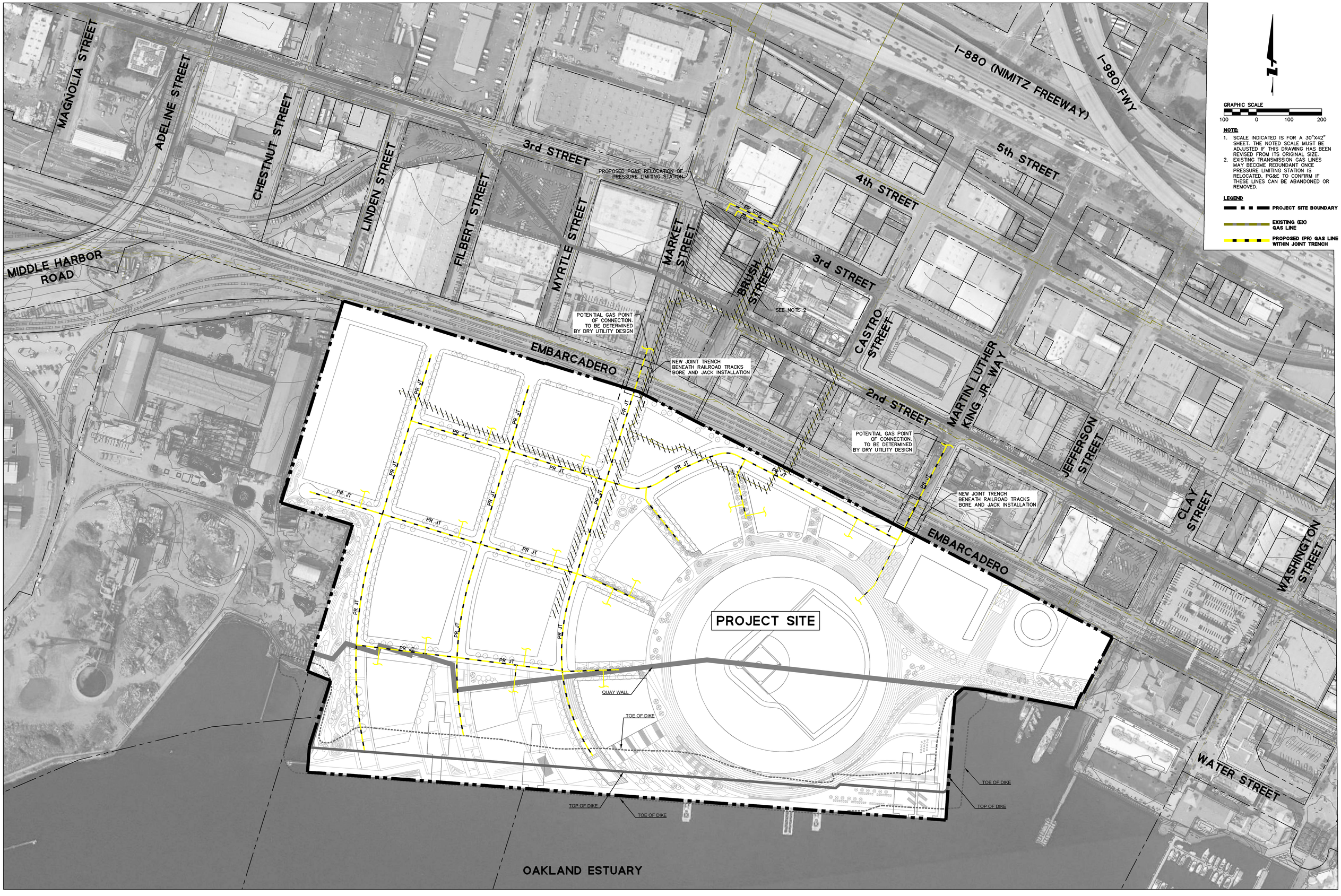
EXISTING GAS INFRASTRUCTURE

HOWARD TERMINAL

12/13/19

EX12.0



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PROPOSED GAS INFRASTRUCTURE

HOWARD TERMINAL

12/13/19

EX12.1



GRAPHIC SCALE
100 0 100 200

NOTE:
1. SCALE INDICATED IS FOR A 30"X42" SHEET. THE NOTED SCALE MUST BE ADJUSTED IF THIS DRAWING HAS BEEN REVISED FROM ITS ORIGINAL SIZE.

LEGEND
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- EXISTING (EX) ELECTRICAL LINE

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EXISTING ELECTRICAL INFRASTRUCTURE

HOWARD TERMINAL

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EX13.0



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PROPOSED ELECTRICAL INFRASTRUCTURE

HOWARD TERMINAL

12/13/19

EX13.1



GRAPHIC SCALE
100 0 100 200

NOTE:
1. SCALE INDICATED IS FOR A 30"X42" SHEET. THE NOTED SCALE MUST BE ADJUSTED IF THIS DRAWING HAS BEEN REVISED FROM ITS ORIGINAL SIZE.

LEGEND
- PROJECT SITE BOUNDARY
- EXISTING (EX) COMMUNICATIONS LINE

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EXISTING COMMUNICATIONS INFRASTRUCTURE

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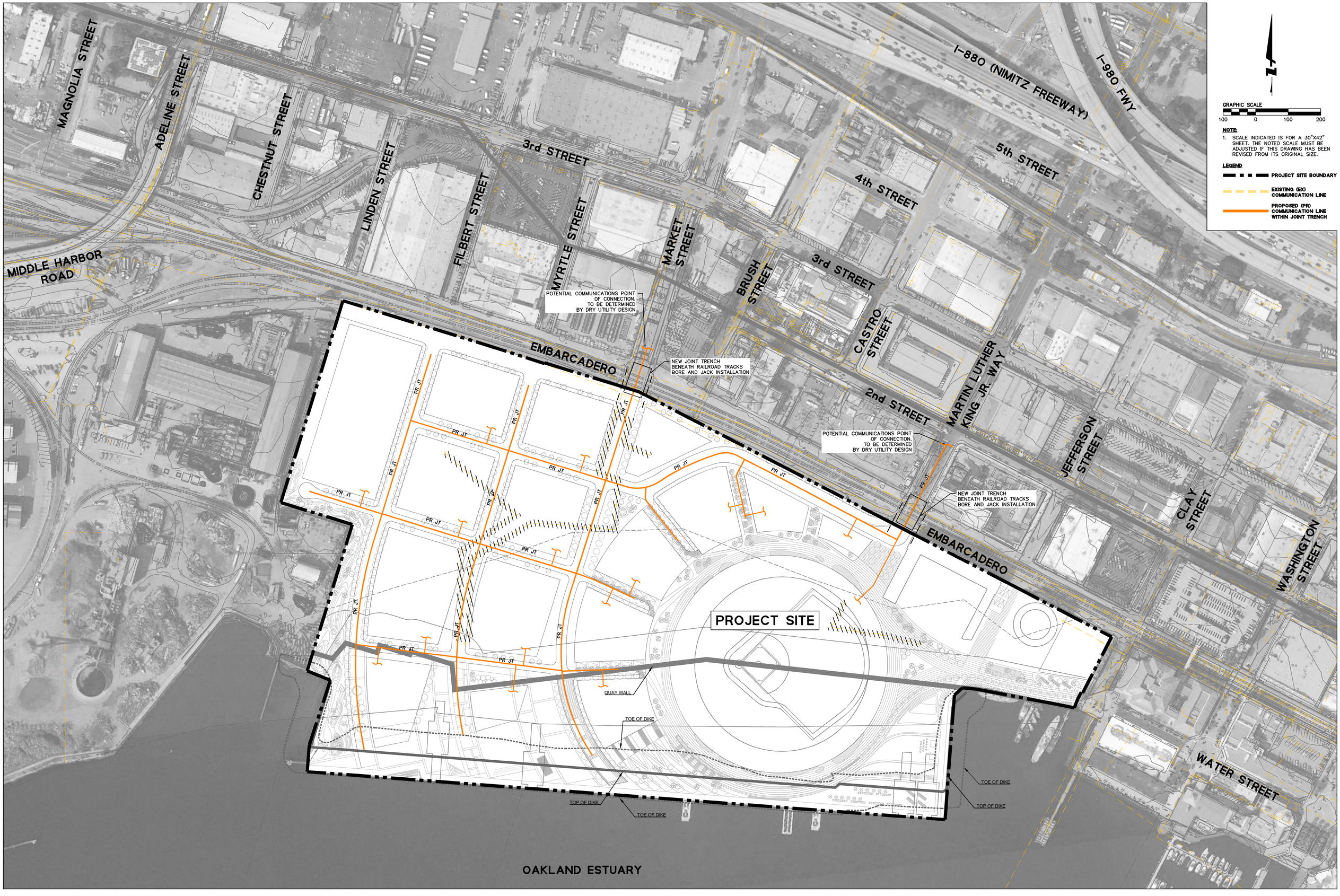
12/13/19

EX14.0



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PROPOSED COMMUNICATION INFRASTRUCTURE

HOWARD TERMINAL

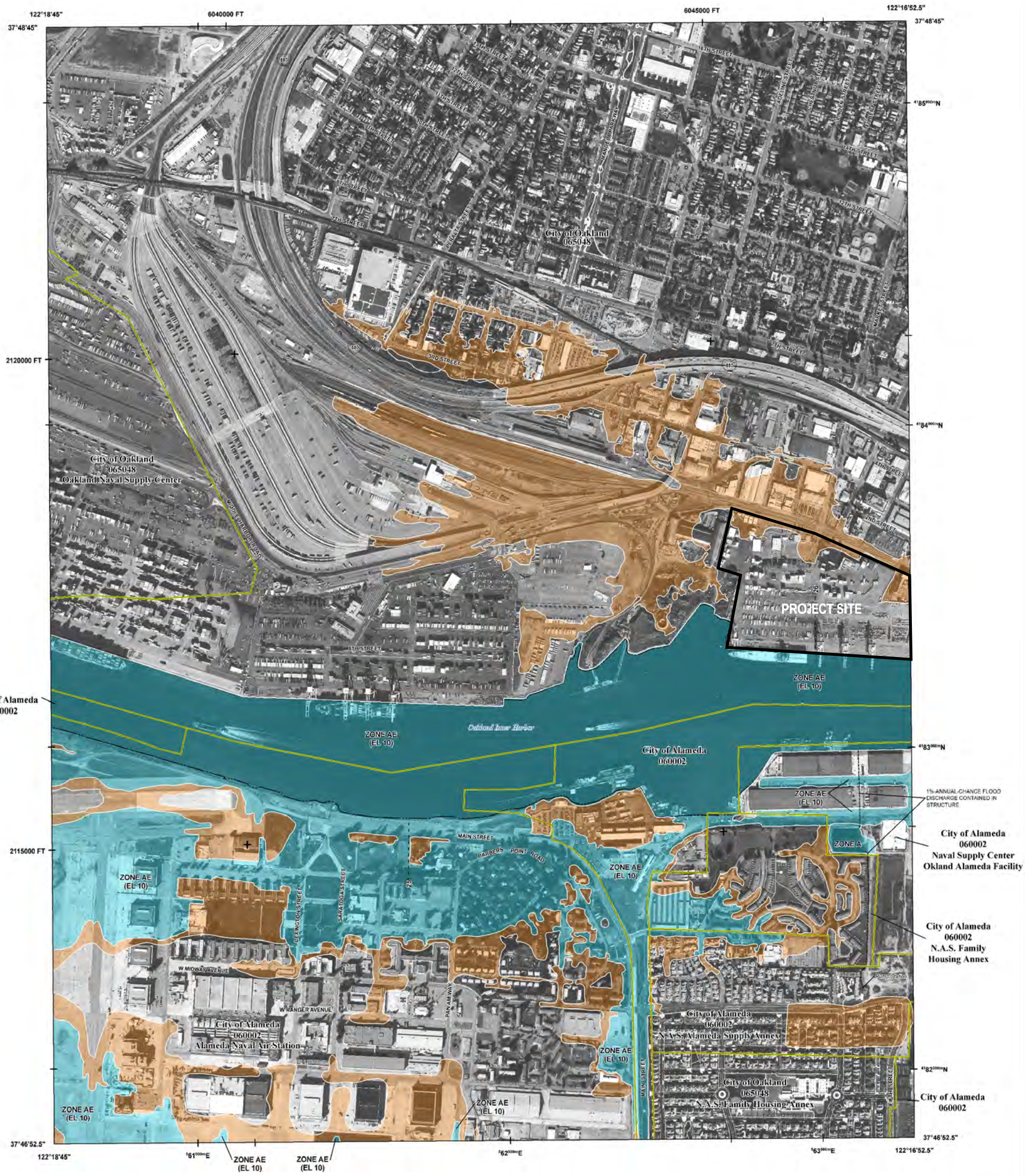
12/13/19

EX14.1

4. FLOODING CONSIDERATIONS

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) number 06001C0066H (panel 66 of 725), effective date December 21, 2018, the majority of the Project site is located outside of the 100-year flood zone, in Zone X, an area of minimal flood hazard. Zone X is defined as areas outside the 0.2% annual chance flood, with flooding depths less than 1 foot. The project site is directly adjacent to the Oakland Inner Harbor, which is designated as Flood Zone AE, with a flood elevation of approximately 10 (NAVD 88 datum) on the FEMA maps. The Flood Insurance Study (FIS) notes an elevation of 9.7 at this location, which is elevation 3.93 on City of Oakland datum (COD), (approximately 5.77 feet elevation difference). Flood Zone AE at elevation 3.93 (COD) is approximately the elevation of the lowest existing site portions of the project site (3.6 on the eastern side of the site, 3.8 on the western side of the site, 4.8 on the northern side and 7.5 on the southern side of the site). The proposed structures on the site will be built higher than the existing flood zone shown on the current FIRM.

A portion of the site along the eastern boundary is within Special Flood Hazard Area (SFHA) Flood Zone AE (elevation 10, NAVD 88 datum). This area includes a portion of Jefferson Street and the area south of the Oakland Power Plant and Clay and Embarcadero lot parcels. The project is not proposing to construct any buildings within this area so there is no action required to comply with FEMA under the project baseline scenario. Under the Peaker Power Plant variant conditions, the existing finished floor elevation of the Peaker Power Plant would need to be surveyed to verify that it is above the base flood elevation.



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT

HTTP://MSC.FEMA.GOV

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) *Zone A,V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS

- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES

- E 18.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 Coastal Transect
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary

NOTES TO USERS

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA MAP (1-877-336-2627) or visit the FEMA Map Service Center website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website or by calling the FEMA Map Information eXchange.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was derived from Coastal California LiDAR and Digital Imagery dated 2011. USDA NAIP 2012 imagery is used in areas not covered by the Coastal California imagery.

SCALE

Map Projection:
Universal Transverse Mercator Zone 10N; North American Datum 1983;
Western Hemisphere; Vertical Datum: NAVD 88

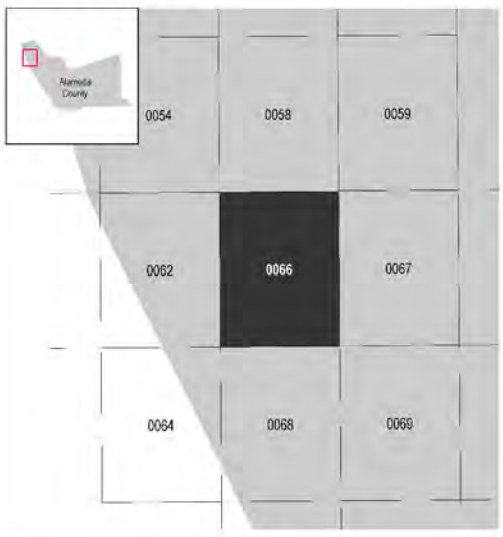
N

1 inch = 500 feet 1:6,000

0 250 500 750 1,000 2,000 Feet

0 125 250 500 Meters

PANEL LOCATOR



FEMA

National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM

FLOOD INSURANCE RATE MAP

ALAMEDA COUNTY, CALIFORNIA
and Incorporated Areas

PANEL 66 OF 725

FEMA

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALAMEDA, CITY OF	060002	0066	H
OAKLAND, CITY OF	065048	0066	H

VERSION NUMBER
2.3.2.0

MAP NUMBER
06001C0066H

MAP REVISED
DECEMBER 21, 2018

5. SEA LEVEL RISE CONSIDERATIONS

The Project site will be graded to accommodate the Federal Emergency Management Agency (FEMA) flood elevation of 3.8 feet (City of Oakland Datum). The proposed buildings will be set above the base flood elevation. Sea level rise is also a consideration in setting site elevations because the Project is within the Bay Conservation and Development Commission (BCDC) jurisdiction 100-foot shoreline band. Site building elevations are anticipated to be set at elevation 10 (City of Oakland datum), and site roadway and park elevations will range from elevation 7 at the existing wharf edge, and elevation 9 to 4.5 at the roadways, where the site will match the building pads, as well as conform to the existing conditions at the perimeter.

The development will accommodate the 2050 sea level rise projections for the roadways and open space areas, and the 2100 sea level rise projections for proposed buildings and the ballpark. We understand that according to the Oakland Sea Level Rise Roadmap, Figure 1: Sea Level Rise for the year 2050 is 11 inches at the "most likely" level, to 24 inches at the upper range, and for the year 2100 is 36 inches at the "most likely" level, to 66 inches at the upper range. According to the State of California Sea Level Rise Guidance document, the Sea Level Rise for the year 2050 in the Medium-High Risk Aversion is 1.9 feet, and 6.9 feet for the year 2100.