FINAL INITIAL SITE ASSESSMENT REPORT

I-80/Gilman Street Interchange Improvement Project

Caltrans District 04
04-ALA-80-PM 6.38/6.95
EA 04-0A7700 / Project ID 0400020155
May 2018

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MAY 2018

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ACRONYMS

Acronym	Definition
APN	Assessor's Parcel Number
AST	Aboveground Petroleum Storage Tank Facilities - State Water Resources Control Board
ASTM	American Society for Testing and Materials
BAAQMD	Bay Area Air Quality Management District
Bay Trail	San Francisco Bay Trail
bbl	barrel
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
BTMD	City of Berkeley Toxic Management Division
cis-1,2-DCE	cis-1,2-dichloroethylene
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
COC	Constituent of Concern
Cr(VI)	chromium VI, hexavalent chromium
DTSC	Department of Toxic Substances Control
EBMUD	East Bay Municipal Utility District
EBRPD	East Bay Regional Park District
EDR	Environmental Data Resources
EMI	Emissions Inventory Data
EnviroStor	EnviroStor Database - Department of Toxic Substances Control
ESA	Environmental Site Assessment
ESL	Environmental Screening Level
Geotracker	Geotracker Database – State Water Resources Control Board
HVOC	halogenated volatile organic compound
I-80	Interstate 80
ICM	Integrated Corridor Mobility
LUST	leaking underground storage tank
µg/L	microgram(s) per liter
mg/L	milligram(s) per liter
mg/kg	milligram(s) per kilogram
MSL	mean sea level
NEPA	National Environmental Policy Act
NPDES	National Pollutant Discharge Elimination System
PAH	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyls
PCE	tetrachloroethylene
PG&E	Pacific Gas and Electric Company

ppb	parts per billion
ppm	parts per million
PM	post mile
PSC	Pacific Steel Casting Company
ROW	right-of-way
SES	Stellar Environmental Solutions, Inc.
SSP	Standard Special Provision
TBSC	Tom Bates Sports Complex
TCE	trichloroethylene
TMP	Traffic Management Plan
TPH	total petroleum hydrocarbons
TPH-d	total petroleum hydrocarbons as diesel
TPH-g	total petroleum hydrocarbons as gasoline
TPH-mo	total petroleum hydrocarbons as motor oil
TSM	Transportation System Management
UPRR	Union Pacific Railroad
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	underground storage tank
VOC	volatile organic compound
Water Board	Regional Water Quality Control Board, San Francisco Bay Region
WRE	Western Roto Engravers

1.0 INTRODUCTION AND PURPOSE

This report presents the findings of initial site assessment activities performed by Parsons on behalf of the California Department of Transportation (Caltrans), the Alameda County Transportation Commission and the Cities of Berkeley and Albany in support of proposed improvements to the Interstate 80 (I-80)/Gilman Street interchange in Berkeley, California (proposed project) (Figures 1 and 2). The purpose of the initial site assessment activities was to identify any of the following as they pertain to the proposed project:

- Contaminated properties on or adjacent to the project site;
- Historical records of releases adjacent to or on the project site;
- Other environmental issues that might exist on or near the project site; and/or
- Other potential environmental issues that may affect Caltrans, Alameda County Transportation Commission's and City of Berkeley's ability to construct, operate, and maintain the proposed project.

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2.0 PROJECT DESCRIPTION

The project is located in Alameda County at the I-80/Gilman Street interchange in the cities of Berkeley and Albany (Post Miles [PM] 6.38 to 6.95) (Figures 1 and 2). Within the limits of the proposed project, I-80 is a conventional 10-lane freeway with 12-foot-wide lanes and 11-foot-wide shoulders. Gilman Street is a 4-lane major arterial roadway with 11-foot-wide lanes and 6-foot-wide shoulders that passes underneath I-80. The I-80/Gilman Street interchange is a four-lane arterial roadway (Gilman Street), with two lanes in the east/west direction that are intersected with four I-80 on- and off-ramps, West Frontage Road, and Eastshore Highway. The purpose of the project is to:

- simplify and improve navigation mobility, and traffic operations;
- reduce congestion, vehicle queues, and conflicts;
- improve local and regional bicycle connections and pedestrian facilities; and
- improve safety at the I-80/Gilman Street interchange.

Current conditions, along with an overall increase in vehicle traffic, have created poor, confusing, and unsafe operations in the interchange area for vehicles, pedestrians, and bicyclists.

This section describes the proposed action and the project alternatives developed to meet the identified purpose and need of the project, while avoiding or minimizing environmental impacts. The two alternatives include the Roundabout Alternative and the No Build Alternative.

2.1 Project Alternatives

Two project alternatives are proposed for consideration, as described below. One build alternative, the Roundabout Alternative, was developed to meet the identified purpose and need of the project, while avoiding or minimizing environmental impacts. The second alternative is the No Build Alternative. The alternatives will be evaluated based upon project cost, including life cycle costs, vehicle miles traveled and other traffic data, and impacts to the environment, such as community and land use impacts, cultural resources, floodplains, wetlands, greenhouse gas emissions, and special-status species. The general project vicinity is shown in Figure 1; the specific project location is shown in Figure 2.

2.1.1 Roundabout Alternative

The Roundabout Alternative includes the reconfiguration of I-80 ramps and intersections at Gilman Street. The existing non-signalized intersection configuration with stop-controlled ramp termini would be replaced with two hybrid single-lane roundabouts with multilane portions on Gilman Street at the I-80 ramp terminals. The I-80 ramps and frontage road intersections at each ramp intersection would be combined to form a single roundabout intersection on each side of I-80. Gilman Street would be reconstructed on the west from the parking lots at Tom Bates Regional Sports Complex along Gilman Street to the eastern side of the 4th Street intersection. Work would also include reconstruction of West Frontage Road and Eastshore Highway within the project limits. In addition, the northern and southern legs

of the eastern roundabout will be reduced from two lanes to one lane entering the roundabout. The southbound and northbound movements onto Eastshore Highway would instead be made via 2nd Street to Page Street or 2nd Street to Harrison Street.

Improvements associated with installation of the roundabouts would extend approximately 280 feet south on West Frontage Road from the Gilman Street interchange and approximately 250 feet north and 1,010 feet south on Eastshore Highway from the Gilman Street interchange. Work associated with reconfiguration of the eastbound I-80 off-ramp and on-ramp would extend approximately 820 feet south and 280 feet north of the interchange. Work associated with reconfiguration of the westbound I-80 off-ramp and on-ramp would extend approximately 370 feet north and 230 feet south of the interchange. There are no proposed improvements to the freeway mainline. A metering light would be installed on West Frontage Road to regulate the volume of northbound traffic that enters the western roundabout.

The western roundabout intersection would consist of four approaching legs: eastbound and westbound Gilman Street, West Frontage Road, and I-80 westbound off-ramp. The eastern roundabout intersection would include five approaching legs: I-80 eastbound off-ramp, northbound and southbound Eastshore Highway, and eastbound and westbound Gilman Street. A left-turn pocket would be provided on Gilman Street for vehicles traveling eastbound turning onto northbound 2nd Street. Left turns will be restricted from westbound Gilman Street turning onto southbound 2nd Street.

Improvements on 2nd Street north of Gilman Street include reduced crossing distances, new curb ramps, new striping, signing, new pavement, additional landscaping, and new light poles. South of Gilman Street, improvements on 2nd Street include a bulb-out on the southeast corner of the intersection and converting the road to one-lane southbound, while the other lane would be used as a designated parking/loading zone for businesses.

All modified roadways including ramps, frontage roads, and arterials would be improved. Improvements would include mill and overlay of pavement, striping, relocation of drainage inlets, lighting, and signage.

Several operational improvements would be incorporated into the project. A metering signal would be installed on the northbound leg of the western roundabout to limit the volume of traffic that is bypassing the freeway using West Frontage Road. A queue cutting signal will be placed on the eastbound leg of the Union Pacific Railroad (UPRR) crossing at 3rd Street to prevent traffic from extending across the UPRR tracks.

Pedestrian and Bicycle Facilities

A shared-use Class I path consisting of 17-21-foot-wide travel way with a 2-foot-wide shoulder for pedestrians and bicyclists would be constructed on the south side of Gilman Street from 2nd Street to the eastern roundabout. The shared-use path would extend south along Eastshore Highway, where it would then connect to a proposed bicycle/pedestrian overcrossing. The overcrossing would be constructed over I-80, merging into the existing San Francisco Bay Trail (Bay Trail) that runs parallel to West Frontage Road. The at-grade shared-use path would continue on the south side of Gilman Street under I-80 and terminate at the Bay Trail on the west side of the interchange.

The bicycle/pedestrian overcrossing would be similar to the existing bicycle/pedestrian overcrossing over I-80 at University Avenue. The structure would be located south of Gilman Street and have a minimum of three spans with a maximum span length of approximately 230 feet over I-80. The foundations for the pedestrian bridge would be located on 2-foot diameter Cast-In-Drilled-Hole piles 120 feet below the existing ground surface. There would be two staircases incorporated into the overcrossing, one on each side of I-80. They would be approximately 45 feet long with a height of 25 feet to connect to the overcrossing. There would also be retaining walls on the east and west side of the overcrossing; they would be approximately 6 feet tall at the highest point and taper down to existing grade (i.e., zero feet). The maximum depth of the retaining wall piles is expected to be 50 feet below the ground surface.

Improvements would be made along 4th Street to Harrison Street to 5th Street to provide bicycle connectivity between the Codornices Creek Path and the two-way cycle track on Gilman Street. These improvements would consist of painted shared-lane markings, also known as sharrows, on the pavement throughout this corridor. Bicycle signage and pedestrian scale lighting would be constructed as part of the improvements.

Approximately 125 feet of new curb, gutter, and sidewalk beginning at the corner of Harrison Street and 4th Street and ending half-way down the block toward 5th Street would be constructed. Parallel parking would be added along this new section of curb and sidewalk. The bus stop located at the corner of 4th Street and Gilman Street would be removed.

The Roundabout Alternative includes a two-way cycle track on the south side of Gilman Street between the eastern I-80/Gilman Street ramps and 4th Street. The two-way cycle track is separated from vehicle traffic with a 2-foot wide 6-inch curb inside a minimum 3-foot-wide striped buffer and a parking lane in some locations. The addition of the two-way cycle track would require installation of a traffic signal at the intersection of 4th Street and Gilman Street as well as protected corners on the northeast and northwest corners of the intersection. The northern curb line on Gilman Street would also be shifted 2 to 5 feet north. Along Eastshore Highway, the sidewalk, curb, and gutter would be replaced between Page Street and Gilman Street.

West of the I-80/Gilman Street interchange, the existing Bay Trail would be extended approximately 660 feet west along the south side of Gilman Street from its current terminus at the intersection of West Frontage Road and Gilman Street to just beyond Berkeley city limits. The proposed Bay Trail extension would be 10 feet wide, unstriped, with 2-foot-wide unpaved shoulders on either side of the trail. On-street parking would be reduced by approximately 18 spaces at the end of Gilman Street as a result of the new trail extension.

Additional pedestrian and bicycle improvements include upgrading the 3rd Street/UPRR crossing at Gilman Street to accommodate the cycle track. Improvements would include relocating the gate, flashing beacons, addition of gates for the approaching lanes of the cycletrack, installation of medians, and improved striping and signage. All improvements will be approved by the UPRR and the California Public Utilities Commission (CPUC).

Utilities, Landscaping, and Drainage

Existing Pacific Gas & Electric overhead electric lines along Gilman Street, West Frontage Road, and Eastshore Highway would be relocated as part of the Roundabout Alternative. Some of these overhead lines may be placed underground. Minor drainage modifications would also be required to conform to the new roundabout alignment and drainage improvements associated with the two-way cycle track along Gilman Street would also be required. Utility relocations and new drainage systems may require trenching to a depth of approximately 6 feet.

A separation device would be installed underground along Gilman Street to separate trash, mercury, and polychlorinated biphenyls (PCBs). A tidal flap gate would be installed at the existing headwall of the 60-inch reinforced concrete pipe at the west end terminus of Gilman Street. Replacement of the existing headwall and associated rip rap may include in-water work. Work below the ordinary mean high-water mark may be required. Dewatering or a coffer dam may also be required.

New light pole foundations and ramp metering poles would be 2 feet in diameter and would range from 5 to 13 feet deep near the roundabout. An existing East Bay Municipal Utility District (EBMUD) recycled water transmission line would be relocated and extended as part of the project. Approximately 1,100 feet of a new 12-inch recycled water transmission pipeline within Eastshore Highway from Page Street to Gilman Street and approximately 1,050 feet of pipeline within Gilman Street from 2nd Street to the Buchanan Street extension are part of the Roundabout Alternative. The maximum excavations for the pipe trench would be approximately 24 inches wide by 60 inches deep. Approximately 1,100 feet of an existing 10-inch EBMUD recycled water pipeline located within Caltrans right-of-way (ROW) along the eastbound Gilman Street off-ramp shoulder would be abandoned in place or removed. A new City of Berkeley sewer line would be installed underneath Gilman Street beginning at a point east of the Interchange and ending on the west side I-80 at the approximate entrance to the Tom Bates Sports Complex parking lots.

Golden Gate Fields Access

The existing driveway entrance to Golden Gate Fields is located immediately adjacent to the westbound I-80 off-ramp at the end of the curb return on Gilman Street. Construction of the roundabout would expand the ramp intersection to the north and would require relocation of the Golden Gate Fields entrance and exit gate to their stables.

Alternate entrance and exit gate options for Golden Gate Fields were evaluated and discussed with Golden Gate Fields management in a series of meetings.

The Roundabout Alternative would relocate the entrance and exit gate to the Gilman Street Extension. The existing gate would be connected to Golden Gate Fields Access Road allowing for the existing security shed to remain in place. The intersection of Gilman Street Extension with Golden Gate Fields Access Road would be improved, and Gilman Street would be widened to the south to provide space for two – two lane roads separated by a median. The Golden Gate Fields northeast parking lot would be re-sized and re-striped to allow room for the Gilman Street Extension/Golden Gate Fields Access Road intersection. The existing security shed leading to the northeast and northwest parking lots would be moved north and reconstructed with new gates. The Golden Gate Fields northwest parking lot would be

restriped to maximize the parking spaces. Both parking lots would be repaved, restriped, and lighting and landscaping elements would be added. Golden Gate Fields internal access road and the Gilman Street Extension would be repaved and restriped between Gilman Street and the northeast and northwest parking lots. Fifteen new parallel parking spaces would be striped along the Gilman Street access road. There would be no net loss of parking for Golden Gate Fields. The Roundabout Alternative is shown in Figure 3.

Property Acquisitions

Partial acquisitions will be required for ROW from Golden Gate Field, East Bay Regional Park District (EBRPD), and City of Berkeley. Relocation of the driveway would be required from a property located on the south side of Gilman and 2nd Streets. Additionally, a permit to construct from Golden Gate Fields would be required to complete improvements on their property. Temporary Construction Easements (TCEs) would be required for construction equipment storage, staging, and laydown from EBRPD and various property owners along Gilman Street, 4th Street, Harrison Street, and 5th Street.

Construction Activities

Construction work for the Roundabout Alternative would be done primarily during daylight hours from 7:00 a.m. to 6:00 p.m.; however, there may be some work during night-time hours to avoid temporary roadway closures for tasks that could interfere with traffic or create safety hazards. Work hours along the internal access road in Golden Gate Field property will be limited to after 10:00 am to 5:00 pm and night work will be restricted within or adjacent to Golden Gate Fields property. Examples of work activities include striping operations, traffic control setup, installation of storm drain crossings, and asphalt pavement mill and overlay.

Temporary lane and ramp closures and detours would occur. It is anticipated that temporary closure of existing bicycle or pedestrian facilities would occur at times and may require temporary rerouting of transit service due to intersection work. A Transportation Management Plan (TMP) would be developed and implemented as part of the project construction planning phase. The TMP would address potential impacts to circulation of all modes of travel (i.e., transit, bicycles, pedestrians, and private vehicles). Roadway and/or pedestrian access to all occupied businesses and respective parking lots would be maintained during project construction. The TMP would include an evaluation of potential impacts because of diverting traffic to alternate routes, and it would also include measures to minimize, avoid, and/or mitigate impacts to alternate routes, such as agreements with local agencies to provide enhanced infrastructure on arterial roads or intersections to deal with detoured traffic. The TMP may provide for contracting with local agencies for traffic personnel, especially for special event traffic through or near the construction zone.

The anticipated construction staging areas available include areas within the existing roadway ROW construction limits. An additional staging area may be required west of the project on Gilman Street in one or two parking lots owned by EBRPD. Staging areas are shown on Figure 3.

The following equipment is anticipated to be used during construction: auger drill rig, backhoe, compactor, concrete pump, crane, dozer, excavator, front end loader, grader, heavy duty dump trucks, jackhammer, vibratory roller, and pavement breaker.

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3.0 METHODS

The footprint of the project encompasses the area that might be disturbed to construct the interchange improvements and might be used for equipment storage and laydown during construction. The boundary of the footprint represents the study area for the initial site assessment and is referred to as the project site in the following discussion (Figures 4 and 5).

The area within the footprint was identified as the "target property" for purposes of the environmental records review. Appropriate search radii as measured from the footprint boundary and applied in accordance with American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments (ESAs) (E1527-13) were used to conduct the records review (e.g., one mile for sites on the National Priorities List, 0.5 miles for leaking underground storage tanks [LUSTs], 0.25 miles for small- and large-quantity hazardous waste generators). The boundaries were extended outward by 0.125 mile (1/8 mile) to account for potential modifications to the project during the design process. Parsons obtained an environmental records review report package from Environmental Data Resources (EDR) on December 4, 2017. Note that the current project footprint was finalized after the EDR research documents were procured. However, the information provided in the EDR documents fully encompasses the ASTM distances required to complete this initial site assessment. The following information provided by EDR was reviewed and is summarized herein as noted:

- An environmental database radius report for the I-80/Gilman Street Interchange Improvements area (Appendix A): The report includes maps and summaries of federal, state, and local regulatory agency environmental database entries for current and historical businesses in the area.
- Historical aerial photographs: Coverage includes aerial photographs from 1939, 1946, 1958, 1968, 1974, 1982, 1993, 1998, 2005, 2009, 2010 and 2012 (Appendix B).
- Historical and current topographic maps: Coverage includes maps from 1895, 1899, 1915, 1947, 1948, 1949, 1959, 1968, 1973, 1980, 1995, 1996, and 2012 (Appendix C).
- City directory abstract (Appendix D): The directory is designed to assist in evaluating potential liability on target properties resulting from past activities spanning 1920 to 2014.
- Sanborn Fire Insurance Map Report (Appendix E): Coverage includes maps from 1903, 1911, 1929, 1950, 1970, and 1980.

A visual survey of the project site was conducted primarily from publicly accessible sidewalks and streets on April 16 and 17, 2018. Areas within the project site were visually inspected where it was safe to do so, and access was not impeded by site operations or the movement of vehicles. Current conditions were observed, looking for potential concerns such as debris piles, leaks or stains, monitoring wells or evidence of ongoing environmental work, chemical storage, poor housekeeping, active underground storage tanks (USTs), aboveground storage tanks (ASTs), or dry cleaners with on-site storage of solvents. Photographs were taken to document site conditions (Appendix F).

Parsons also supplemented the information provided by the sources above with information available from the on-line State of California Water Resources Control Board's (Geotracker) and the California Department of Toxic Substances Control (DTSC) data management system (EnviroStor) databases (geotracker.waterboards.ca.gov, www.envirostor.dtsc.ca.gov/public). Select correspondence and reports containing data were downloaded from the databases and are provided in Appendix G. These databases provide information about such factors as the locations of environmentally related source areas, soil and groundwater sampling, remedial activities in the project vicinity, and other relevant environmental information.

4.0 LAND USE AND GEOLOGICAL SETTING

The project site is on the east side of the San Francisco Bay within the City of Berkeley about 0.25 mile south of the City of Albany (Figures 1 and 2). Adjacent land uses are mostly industrial (e.g., metal forging, casting, welding and machining) and commercial (e.g., equipment and vehicle rentals, horse racing, household waste handling and recycling). Recreational use occurs at the west end of the project site near the Bay at TBSC. The topography within the project site is generally flat with a slight westerly slope toward San Francisco Bay. Elevations range from approximately 4 feet above mean sea level (MSL) near San Francisco Bay to approximately 14 to 15 feet above MSL at the eastern end of the project area around Gilman and 4th Streets.

Information presented on historical maps and in reports of previous environmental investigations conducted in the vicinity of the project site indicate that the area west of the 3rd Street and UPRR mainline tracks is generally underlain by fill, unconsolidated sand, gravel, silt and clay from estuarine and alluvial fan deposits (TRC 2013). Some areas have documented fill (e.g., wood, metal, trash debris) greater than 10 feet bgs. The historical shoreline of San Francisco Bay, which included tidal wetlands, was located west of the alignment of the UPRR tracks approximately along the present-day location of 3rd Street (Appendix C). Bedrock under the project site is categorized as Franciscan Complex, which is a mixture of deep marine sedimentary rocks, volcanic rock, and metamorphic rocks of variable grade at depths of 1,000 feet bgs or more. The closest fault is the Hayward Fault, located approximately 2 miles east of the project site.

The project site lies within the East Bay Plain of the Santa Clara Valley Basin of the San Francisco Bay Hydrologic Region. The groundwater surface is relatively flat across the project site and flow direction and velocity can vary locally as affected by topography, geology and stratigraphy. The general direction of groundwater flow is believed to follow the topography of the project site, flowing in a westerly direction toward the San Francisco Bay. Depth to groundwater in the vicinity of the project site has been reported to vary between approximately 4 feet bgs to approximately 20 feet bgs based on data collected from nearby monitoring wells (Stellar Environmental Solutions, Inc. [SES] 2016, 2017, TRC 2013). The shallower depths have generally been reported at locations nearest San Francisco Bay but can vary at any given location from year to year. At one nearby location, groundwater was reportedly encountered at 35 to 38 feet bgs and rose to 17 feet bgs in 30 minutes (SES 2016). The presence of a clay layer that is acting as a semi-confining unit is suspected at some locations as a possible explanation for this phenomenon. Thus, aquifer conditions are likely variable across the project site from confined to unconfined, depending on the thickness and depth of the subsurface clay layer(s) and other factors.

Rain that falls on the project site is generally collected and transported via the area-wide stormwater system, although some sheet flows may occur in the vicinity of parking lots and open areas located on the west end of the project site. The project site is in an area that has been designated as flood zone B, indicating it falls between the 100-year and 500-year floodplain (Appendix A).

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5.0 RESULTS

5.1 Environmental Records Review

Appendix A contains the EDR Radius Report (2017), which includes a map showing the target property, search radius and the locations of all sites identified in the environmental database search. The EDR Radius Report identifies confirmed release sites as reported by the DTSC, waste disposal and landfill sites as reported by the California Integrated Waste Management Board, LUSTs as reported by the State Water Resources Control Board and others, and sites for which a land use restriction has been recorded. The following is a list of facilities that adjoin the project site for which a confirmed historical release of hazardous materials or waste has been reported or that have had a release to groundwater that reportedly may intersect the project site:

- Former Chevron gas station, 1285 Eastshore Highway
- Golden Gate Fields / TBSC
- Budget /Avis Rent-A-Car, 600 Gilman Street
- Pacific Steel Casting Company (PSC), 1314, 1320, 1328, 1333, 1401, 1415, 1420 and 1421 2nd Street, 1310 3rd Street, 1401 and 1425 Eastshore Highway, 640 Gilman Street, and 648 Page Street
- Terminal Manufacturing Company, 707 Gilman Street
- Dover Sales, 707 Park Way
- Tuttle Galvanizing, 725 Gilman Street
- Berkeley Yamaha, 735 Gilman Street
- Flint Ink Corporation, 750 Gilman Street and 1350 4th Street
- Randy Strong Hand-Blown Glass, 1235 4th Street
- Manasse-Block Tanning Company, 1300 4th Street
- WRE/ColorTech, 1225 6th Street
- Former Hawkins Traffic Safety Supply, 1255 Eastshore Highway
- Green Valley Plant Rental, 1475 Eastshore Highway
- 1 Rental, 1501 Eastshore Highway
- Berkeley Forge and Tool, 1331 Eastshore Highway
- Camelia Street Properties, 1001 Camelia Street
- Skate Park at Harrison Street and 5th Street
- Additional nearby sites listed in Appendix A (most have a “closed” regulatory status)

Brief descriptions of the regulatory status of these sites based on information available on Geotracker and Envirostor is provided below (DTSC and State Water Resources Control Board databases accessed in 2018). The locations of these properties are shown on Figure 4.

In addition to the confirmed historical release sites listed above, the EDR Radius Map Report identifies facilities that use hazardous materials or generate hazardous waste. Facilities listed only as users of hazardous materials or small- or large-quantity generators of hazardous waste represent potential sources of unreported or future releases that could affect properties within the study area. The known releases identified as of December 4, 2017, are provided in Appendix A, which also provides additional information about these sites and a map of their locations in relation to the project site.

Former Chevron gas station, 1285 Eastshore Highway. A Chevron gas station was formerly located on the northeast corner of Eastshore Highway and Gilman Street (EDR 2017). The location is currently paved and used for equipment storage by Red-D-Arc (Appendix F, Photographs 14 and 16). The EDR report indicates that at least four USTs were formerly operated at the site (EDR 2017). Three are identified as 10,000-gallon tanks that contained gasoline, and one is identified as a 1,000-gallon tank that contained waste oil. A site closure letter issued to Chevron USA Products Company by the Regional Water Quality Control Board, San Francisco Bay Region (Water Board) states that six 10,000-gallon gasoline tanks and four 1,000-gallon waste oil tanks were removed from the site. The Water Board's closure letter for the site was issued September 8, 1994. No analytical data for soil or groundwater were provided in the EDR report or Envirostor database. The Geotracker database maintains a site closure petition dated August 25, 1994, which indicates the initial release of 300 to 400 gallons of product from the super-unleaded tank was discovered during an inspection in May 1982. Four groundwater monitoring wells were installed in May 1982. The three USTs were reportedly then replaced in April 1982. All USTs and piping were removed from the site in January 1991; groundwater was encountered at 7 feet bgs. Soil samples collected during the UST removal found total petroleum hydrocarbons as gasoline (TPH-g) at 210 parts per million (ppm), benzene at 0.53 ppm, toluene at 0.81 ppm, xylene at 0.17 ppm, ethylbenzene at 4.4 ppm, and oil and grease at 110 ppm. In February 1991, additional soil was removed from the bottom of the product line trench. The soil sample collected from the trench bottom contained TPH-g at 210 ppm. Soil was sampled in April 1991 from the UST pit wall. TPH-g was detected at 2.3 ppm, and benzene, toluene, ethylbenzene, and xylenes (BTEX) was not detected above the laboratory reporting limits. A total of 100 cubic yards of soil was removed and disposed. Groundwater samples were collected in September 1993 from the four monitoring wells. All compounds were below the laboratory detection limits except some metals, which Chevron attributed to this site and surrounding businesses being constructed over a former landfill which operated prior to 1900. In a letter from May 1994, the East Bay Municipal Utility District stated they located diesel soil contamination just offsite of the Chevron property on Eastshore Highway, but Chevron indicated they never stored or sold diesel fuel at their site, and the case was granted closure in September 1994 (State Water Resources Control Board 2018). Details are listed in Appendix G-1.

Golden Gate Fields/Tom Bates Sports Complex. Golden Gate Fields is a horse racing track straddling both Albany and Berkeley along the shoreline of San Francisco Bay adjacent to the I-80. The track is set on 140 acres, and the facilities include a one-mile track and a course measuring 9/10 of a mile, stalls for 1,420 horses, a main grandstand with seating for

approximately 8,000 customers, a clubhouse with seating for approximately 5,200 customers, a Turf Club with seating for approximately 1,500 customers, and parking for over 8,500 cars.

The fields are bound by the race track to the north, San Francisco Bay to the west, I-80 Freeway to the east, and Gilman Street to the south. No listings for the Golden Gate Fields were provided in the EDR report or Geotracker and Envirostor databases. At the southwest corner of the Golden Gate Fields where westbound Gilman Street turns northward into Gilman Street Extension (adjacent to the west side of, but not within, Golden Gate Fields), the EDR report contains an Emergency Response Notification System listing indicating that in February 2017 a caller reported a mystery sheen in San Francisco Bay (EDR 2017). No other relevant information was provided.

The TBSC is comprised of grass and synthetic turf fields and paved parking lots operated by the City of Berkeley. The sports fields are bound by West Frontage Road to the east, Gilman Street to the north, San Francisco Bay to the west, and an McLaughlin East Shore State Park to the south. The TBSC is included as a part of a larger open case overseen by the Water Board (Case # 01S0587). The site has Verification Monitoring status. The TBSC is part of the Eastshore Park, which comprises 1,300 acres along seven miles of the East Bay shoreline, of which 200 acres are upland areas, and the remainder are tidelands or submerged lands. Eastshore Park extends from Emeryville Crescent in the south to Point Isabel in the north and falls within five cities (Oakland, Emeryville, Berkeley, Albany, and Richmond). The acreage was transferred from Catellus Development Company to the California Department of Parks and Recreation and the EBRPD in 1999 following a two-year escrow period, during which the Water Board oversaw site investigation and cleanup. Cleanup involved excavation of contaminated shallow soil at 17 locations (total of 4,600 cubic yards), which were then backfilled with clean-soil (State Water Resources Control Board 2018).

The footprint of the project work area for the proposed improvements to the I-80/Gilman Street interchange are only within a small portion of the Berkeley North Basin section of the Eastshore Park properties subject to verification monitoring. The footprint of the project work area for the proposed improvements to the I-80/Gilman Street interchange include a paved driveway and parking lot in the northwest quadrant of the TBSC and a paved parking area on the southern edge of the TBSC. Four areas within Berkeley North Basin (Areas C, D, E, F) were subject to soil excavation and capping in 1998. Since soil removal activities were completed, the areas have been subject to periodic inspections. Annual inspections of the areas are mandated by Water Board Orders 97-069 and 98-072. The inspection documents can be found on the Geotracker (ID #'s SL0600164054, SL20219837 and T10000001990). During the most recent inspection of the Berkeley North Basin site conducted by SES in December 2016 (SES 2017), no negative erosional pattern was observed in the meadow or shoreline areas. As can be seen in Photographs 61 and 62 of Attachment D of the inspection report (see Appendix G-2) the capped area appeared more overgrown with grass since 2015. These capped areas were almost entirely vegetated compared to the historical photographs, which attests to the success of the desired revegetation of these areas. Much of the area brush was cleared, and trees appeared recently trimmed and well maintained with minimal litter. No environmental issues of concern were identified during the inspection, and no

additional action was recommended at that time. Appendix G-2 contains several figures depicting the Berkeley North Basin remediation and risk management area.

The EDR report lists the Santa Fe Pacific Berkeley Landfill, owned by the EBRPD, as a Solid Waste Disposal Site within the TBSC footprint (EDR 2017). No other relevant information is provided.

Budget / Avis Rent a Car, 600 Gilman Street. The Budget Rent-A-Car facility is at the southwest corner of Gilman and 2nd Streets (Photograph 36, Appendix F). This property is within the project footprint (see Figure 2). The facility is reported to have formerly had a fuel dispensing operation (TRC 2013, Integral Consulting, Inc. 2014). Three USTs were removed in 1989, and one was removed in 2014. The USTs removed in 1989 included one 10,000-gallon unleaded gasoline UST, a 10,000-gallon diesel UST, and a 550-gallon used oil UST. Closure of these USTs was approved by the City of Berkeley Toxics Management Division (BTMD) in May 1999. Shortly after the three USTs were removed in 1989, a new 8,000-gallon UST was installed. This UST was removed in February 2014 (Integral 2014). During the removal of this tank, petroleum hydrocarbons in the gasoline and diesel ranges were detected in soil and groundwater samples collected from excavations; benzene and other volatile organic compounds (VOCs) were detected in some samples as well (Appendix G-3 contains a summary table of the analytical results associated with the tank removal). The petroleum hydrocarbon concentrations were reportedly comparable to those observed in the 1990s subsequent to removal of the three former USTs in 1989. The BTMD issued a closure letter for the UST removal in April 2015.

Pacific Steel Casting Company, 1314, 1320, 1328, 1333, 1401, 1415, 1420 and 1421 2nd Street, 1310 3rd Street, 1401 and 1425 Eastshore Highway, 640 Gilman Street, and 648 Page Street. PSC is a complex of buildings and other facilities, comprising approximately 8.3 acres, located on multiple parcels within the block bound by Gilman Street, Page Street, Eastshore Highway and 2nd Street (Photographs 17, 18, 21, 34 and 35 in Appendix F). The northwest portion of the property at 1314 2nd Street is within the project footprint (see Figure 2). Information contained in a Phase II ESA provides the following information about historical and current site uses (TRC 2013, Appendix G-4):

> *Prior to development, the Site was predominantly marshland. Previous reports indicated that the Site had been developed and used for numerous commercial and industrial purposes since at least the early 1900's. Past activity that has occurred on the Site includes operations associated with a foundry, machine shop, printing shop, wood works, furniture manufacturing, tannery, flour mill, gas station, chemical works, de-tinning works and an auto wrecking yard. Steel casting manufacturing activities by Pacific Steel at the Site was first established at Plant I in 1934. Additional portions of the Site were later acquired and established by Pacific Steel in the 1970's. Plant II began operations in 1975 and Plant III began operations in 1981. Primary operations at the Warehouse and Storage Yard include shipping, receiving and storage of materials. A storage shed containing hazardous and non-hazardous materials is located at the southwest corner of the Storage Yard. Steel casting manufacturing activities do not occur at the Warehouse and Storage Yard. Property immediately adjacent to the south of Plant II is currently being leased by Pacific Steel and is primarily used for Plant II outdoor storage purposes.*

> *Current metal casting manufacturing operations at the Site involve melting of scrap metal by natural gas-fired furnaces. Slag is skimmed off before molten metal is poured into molds, which are made up of a mixture of sand and binders (resins), phenols, and/or clay. The metal castings are then removed from their molds after cooling and the mold material is reused to the extent possible. The metal castings are cleaned and finished by grinding and welding processes as needed. Finished products are temporarily stored and/or prepared for shipment.*

As described in the Phase II ESA report, at least four USTs were formerly located on the properties (see Appendix G-4 for a map depicting the former locations of the USTs):

- A 2,000-gallon gasoline tank was located approximately 50 feet south of the intersection of Gilman and 3rd Streets,
- A 1,000-gallon tank and a 2,000-gallon tank were located on the south side of 2nd Street about mid-block between Gilman and Page Streets, and
- A 4,000-gallon tank was located approximately 25 feet north of the intersection of Eastshore Highway and Page Street.

The tanks were removed in the 1990s. Groundwater monitoring wells associated with the tanks were reportedly removed and abandoned in 1998. Excavation and offsite disposal of approximately 742 cubic yards of gasoline-impacted soil and approximately 60,000 gallons of impacted groundwater from the former UST area occurred in the 1990s (Appendix G-4). The tank removals received closure from the BTMD and the Water Board in 1998 and 1999, respectively. The former UST excavation area is approximately 75 feet north of Page Street on the west side of the PSC property, and it extended west from the PSC property onto the sidewalk and slightly into Frontage Road (this small area is within the project footprint). The excavation reached no deeper than about 5.5 feet bgs due to the presence of groundwater (Appendix G-4).

Data collected during the Phase II ESA found petroleum hydrocarbons in the diesel, gasoline and motor oil ranges in groundwater (see Appendix G-4 for a map depicting the soil and groundwater sample results). The highest petroleum hydrocarbon concentrations in groundwater were observed in a sample collected from a heating/industrial oil storage area located on the southeast corner of Gilman and 2nd Streets (170,000 micrograms/liter [µg/L] diesel, 20,000 µg/L motor oil, and 700 µg/L gasoline). The highest concentrations of petroleum hydrocarbons in soil were also detected in this area (5,500 milligrams per kilogram [mg/kg] diesel). Concentrations of several metals, including cobalt, lead and copper were greater than Environmental Screening Levels (ESLs) as established by the Water Board in one or more samples (see tabulated analytical results in Appendix G-4). The Phase II ESA concluded that the most significant on-site impacts of TPH were found in the area of boring SB17 where an apparent former oil storage area was located. This area is depicted within the PSC property at the southeast corner of Gilman Street and 2nd Street (Appendix G-4).

The BTMD has indicated that PSC is scheduled to close the foundry and associated property at the five parcels on the subject site. These include Plants 1, 2 and 3; Warehouse 1; and a small Storage Yard south of Plant 3. The closure process began in early 2018, with reduced production (Appendix G-4). Total plant closure is currently forecast to be completed by

September 30, 2018. PSC has submitted a Closure Work Plan, dated March 2, 2018 (Atwell 2018), which details how PSC will cease operation, clean existing equipment and structures, sell or salvage the equipment, and recycle (scrap) materials that are not salvageable. The work plan has reportedly not yet been implemented. The BTMD Lead Inspector for the PSC facility closure is Ms. Carrie Estadt (510-981-7469).

Terminal Manufacturing Company, 707 Gilman Street. Terminal Manufacturing Company is north of Gilman Street and east of 3rd Street (UPRR tracks), outside the project footprint. The facility is a metal fabricator and machine shop for the design and manufacture of vacuum and pressure vessels, truck tanks and food processing equipment (SES 2016). The property was formerly used by a trucking company that operated four USTs along the western side of the property. The tanks were reportedly used to store waste oil (two 2,000-gallon tanks), diesel in the kerosene range (one 4,000-gallon tank), and gasoline (one 2,000-gallon tank). The tanks were removed in 1999. Drilling and sampling occurred in January 2001 to investigate the potential impact of the former USTs to site soil and groundwater (SES 2016). Soil samples showed TPH-g and total petroleum hydrocarbons as diesel (TPH-d) at concentrations exceeding 1,000 mg/kg in UST Pit #1 and Sump #4 (sample B3) at 5 feet bgs and exceeding 100 mg/kg detected in soil at locations B5 and in UST Pits #3 and #4 at 5 feet bgs. The hydrocarbon concentrations dropped significantly to below ESLs at 10 feet bgs in those locations. Between Sumps #1 and #2, gasoline and diesel concentrations exceeded 100 mg/kg at 10 feet bgs and were substantially reduced at the 5-foot depth. Most of the TPH-d results were identified as kerosene-range hydrocarbon. Various VOCs were detected in soil from UST Pits #1 and #3 at 5 feet bgs. Free-floating hydrocarbon product was reported on water at Sump #4 and UST Pit #3, and sheen was reported in UST Pit #4 and in samples from boreholes B9 and B8. Laboratory results of grab-groundwater samples showed TPH-d concentrations (kerosene pattern) exceeding 100 milligrams per liter (mg/L) in Sump #4 (B3), UST Pits #3 and #4, and sample B9 located between Sumps #1 and #2. The 2001 investigation analyzed polycyclic aromatic hydrocarbons (PAHs) and the metals (chromium, copper, lead, nickel and cadmium) in three soil samples having the highest TPH (samples C1-5 and C3-5 collected at 5 feet bgs and B9-10 collected at 10 feet bgs) showed no PAHs or naphthalene in excess of the commercial or utility worker applicable regulatory thresholds. None of the metals were detected in excess of applicable ESLs (SES 2016).

An investigation of soil, groundwater and indoor air was conducted in 2015 and 2016 (SES 2016; see Appendix G-5 for figures depicting locations of former tanks and recent soil, groundwater and indoor air analytical results). The 2015 and 2016 investigation report (SES 2016) stated that petroleum hydrocarbons (gasoline, diesel and motor oil ranges) and tetrachloroethylene (PCE) were detected in groundwater at concentrations exceeding their respective ESLs for commercial sites as established by the Water Board. The highest concentrations were detected in borings advanced along the western boundary of the facility adjacent to the UPRR tracks. PCE, but not petroleum hydrocarbons, was detected at concentrations greater than ESLs in monitoring well MW-16, which is an offsite well on the sidewalk adjacent to 707 Gilman Street, associated with the WRE/ColorTech facility (1225 6th Street). The SES report states that the majority of residual hydrocarbon contamination is in the soil horizon from 3 to 7 feet bgs and in underlying groundwater. The highest petroleum

hydrocarbon concentrations detected during the investigation were located near the former USTs.

The potential source of PCE is stated ambiguously in the report. The report states that the "investigation eliminated the possibility of an offsite source thus the PCE is assumed to have leaked from the former Site USTs and have passed entirely through the subsurface soil into underlying groundwater associated with high total petroleum hydrocarbons [TPH] in the vicinity of the former USTs." But the report also notes that "Less probable is the liklihood [sic] that the PCE originated from the immediately adjacent properties; the railroad to the west or the landscape supply facility to the east." The report seems to conclude that the source of PCE is likely located on the property, but other sources in the area cannot be eliminated entirely.

The report states that a Kinder Morgan gas line runs parallel to the UPRR tracks, 5 feet west of the western boundary of the facility. Paint markings on the pavement during the site reconnaissance on April 16 and 17, 2018, were observed trending parallel to the east and west sides of the UPRR tracks (Photograph 31, Appendix F).

The Water Board sent a Transmittal of Closure Letter for the site to Terminal Manufacturing Company on September 12, 2016, regarding petroleum contaminated soil and groundwater. A separate Site Cleanup Program case has been opened for PCE (Case No. 01S0773).

Dover Sales, 707 Park Way. The Dover Sales facility is 350 feet north of Gilman Street and immediately north of the Terminal Manufacturing Company property on the north side of Park Way. There were reportedly seven USTs: three 550-gallon, one 2,000-gallon, two 4,000-gallon and one 6,000-gallon (contents not stated) (EDR 2017). Dover Sales is also listed as having the address of 1220 4th Street, where Precision Technical Coating operates (Appendix G-6). Information posted on the Envirostor (2018) website states:

> *Seven underground storage tanks (USTs) were removed from the site. The USTs contained toluene, methyl ethyl ketone (2-butanone), xylenes, mineral spirits (paint-related materials), lactol spirits (petroleum naphtha), special naphtholite 66/3, and a mixture of these chemicals. Hydrocarbons were discovered in soil and groundwater during tank removal, and three monitoring wells were installed on March 30, 1990. Analysis of soil samples collected during the groundwater monitoring well installation indicated up to 1,800 parts per million (ppm) toluene, 24 ppm ethylbenzene, 77 ppm xylenes and 3.6 ppm chlorobenzene. Annual groundwater monitoring had been conducted since 1990 and the City of Berkeley received all reports. In general, groundwater concentration levels had dropped: toluene (21,000 ppb [parts per billion] in 1990 to 25 ppb in 2001), benzene (610 ppb in 1990 to 15 ppb in 2001), ethylbenzene (310 ppb in 1990 to 1.3 ppb in 2001), total xylenes (420 ppb in 1990 to 9.8 ppb in 2001), and TPH gas (370,000 ppb in 1990 to 310 ppb in 2001).*

According to an April 1984 letter, DHS inspected the site and determined the cleanup, which began in January 1984, had been completed. About 26 cubic yards of contaminated soil were removed (Envirostor 2018). The EDR report indicated hydrocarbon solvents had been detected in soil in 1984, including toluene, vinyl chloride, 1-butanol, benzene, and xylenes. In 2002, the DTSC referred the investigation and monitoring oversight to the City of Berkeley.

The Precision Technical Coating operation at 1220 4th Street is on the Emissions Inventory Data (EMI) list and maintains an active National Pollutant Discharge Elimination System (NPDES) permit (EDR 2017).

No additional analytical data for soil or groundwater were provided in the EDR report or the Geotracker and Envirostor databases.

Tuttle Galvanizing, 725 Gilman Street. The Tuttle Galvanizing facility was formerly located on the northwest corner of Gilman and 4th Streets. The buildings at the property are presently occupied by a home garden shop (A&G Home and Garden) and furniture business (Teak Me Home). The Geotracker database (State Water Resources Control Board 2018) indicates an environmental case (Water Board Case #01S0388) was opened on the property in July 1994, and the case was closed in 2000 (Appendix G-7). A letter on Geotracker indicates that groundwater beneath the property is affected by a plume of hexavalent chromium that reportedly originates at the WRE/ColorTech property (Gribi Associates 2004). See WRE/ColorTech discussion below for further details. No additional relevant information was provided in the EDR Radius Map and EDR Geocheck Report (2017).

Berkeley Yamaha, 735 Gilman Street. Berkeley Yamaha is on the northeast corner of the intersection of Gilman and 4th Streets. The EDR report indicates that the facility formerly operated at least one UST (EDR 2017). The EDR report indicates that the tank contained gasoline. A leak was reported during removal of the UST in June 1997 with the oversight of Alameda County (Water Board Case #01-2388). According to the EDR report, the case was subsequently closed in October 1998. No analytical data for soil or groundwater were provided in the EDR report or the Geotracker and Envirostor databases (Appendix G-8).

Flint Ink Corporation, 750 Gilman Street and 1350 4th Street. Flint Ink Corporation is listed at two addresses in the EDR Report (2017). 750 Gilman Street is adjacent to the project site on the southeast corner of the intersection of Gilman and 4th Streets. 1350 4th Street is approximately 350 feet south of the project site at the northwest corner of Camelia and 4th Streets. Regarding the 1350 4th Street address, the EDR Report states:

> *Soil and groundwater primarily impacted by releases of kerosene and diesel-range petroleum hydrocarbons presumed released from above and underground storage tank systems. Residual impacts are inaccessible and proposed to remain in below landmarked buildings and structures. Land use convenant [sic] restricts residential use. Covenant requires implementation of soil management plan whenever excavation is performed at the site. Covenant requires remediation of soils when landmarked structures are removed or any other subsurface interruption. Annual report of any activation of the site management plan (subsurface disruptions) is required to be maintained at the facility.*

The status of the 750 Gillman Street address in the Envirostor database indicates that the site is inactive and needs evaluation. A two-page Phase I ESA checklist from 1997 on the Envirostor website noted on page 2 that *"No, further investigation is not necessary to determine the existence, nature, and/or extent of contamination at the facility."*

Regarding the environmental history at 1350 4th Street, the Geotracker website (2018) states:

Flint Ink operated as a black ink manufacturing facility between 1900 through 2004. The area has been in heavy industrial use for over 100 years and other recognized sources of contamination are nearby. When operations ceased in 2004, the property contained buildings, aboveground and underground storage tanks (ASTs and USTs), and related infrastructure. Surface spills of diesel, motor oil and kerosene were present near the ASTs, and at least 3 of the 7 identified USTs may have leaked or been overfilled. Primary source removal in 2005 and 2006 included demolition of all ASTs, associated pipes, and any affected infrastructure; closure in place by City of Berkeley Toxics Management Department of two potentially leaking USTs which are under slabs and structural elements of historic buildings; removal of one leaking 300-gallon UST; removal of four intact USTs; and discovery and closure of two deep process water wells. Secondary source removal included excavation and removal of 19,000 tons of impacted soil and replacement with clean fill; and removal and disposal of approximately 370,000 gallons of groundwater. A ground water monitoring program with 13 wells was established that tests for total petroleum hydrocarbons (TPH) and volatile organic compound (VOCs). VOCs are currently present in groundwater in the northeast corner of the site. A No Further Action/Closure Letter for the ASTs and UST releases was issued for the property located at 1350 4th Street, a portion of the former Flint Ink facility.

A groundwater sampling plan from 2010 and groundwater monitoring data collected in December 2014 were available on the Geotracker website for the two addresses (Nova Abatement and Constructions Services, Inc. 2010, TRC 2010, Geotracker 2018). Groundwater collected in 2014 from monitoring well MW-3 at 750 Gilman Street contained detectable concentrations of petroleum hydrocarbons as diesel and kerosene and VOCs, including benzene and vinyl chloride. MW-1 historically contained chlorinated solvents (see Appendix G-9 for 2014 sample results, a summary of historical results before 2010, and maps showing the location of the monitoring wells on the properties). Monitoring wells MW-5 and MW-6, which are located along the 4th Street sidewalk between the two properties, contained detectable petroleum hydrocarbon concentrations in the diesel and kerosene ranges. The sample from well MW-1 was “non-detect” for petroleum hydrocarbons in 2014.

A City of Berkeley letter dated November 3, 2011 (Geotracker 2018) states “City of Berkeley, Toxics Management Division (BTMD) is prepared to conclude site remedial activities at the former Flint Ink property located at 1350 4th Street. The BTMD is satisfied that the corrective measures have been completed in accordance with the approved Corrective Action Plan. Corrective actions are documented in a Corrective Action Completion Report, URS Corporation, January 12, 2007. The site use and remediation history are summarized on the attached ‘Case Closure Summary’ dated November 2, 2011.”

“The mostly petroleum hydrocarbon sources and related impacts to soils and groundwater were removed to the extent practicable, and site-specific cleanup goals were met for the accessible areas. Residual soil and groundwater impacts exceeding the corrective action goal of 1,000 mg/kg in soils and 1 mg/L in groundwater remains in areas immediately adjacent to structural elements, buildings with historic landmark status, offsite, and public right of way areas. Excavation and dewatering activities in these areas are further subject to the terms of the Land Use Covenant and long-term management plan.”

"The residual impacts were evaluated through risk assessment and found to not represent a threat to the environment or human health. Environmental reports and other documents related to the investigation and corrective actions are available on GeoTracker, http://geotracker.swrcb.ca.gov, and files available at BTMD's offices."

The Water Board provided a letter dated December 1, 2011 (Geotracker 2018), which stated "uniform underground storage tank closure letter and the site closure summary for the property located at 1350 4th Street in Berkeley, California. No further action related to releases from above-ground tanks and underground tanks at this property is required. Please be aware that a related property at 750 Gilman Street has the same case number and remains open."

During the site reconnaissance on April 16 and 17, 2018, the open unpaved storage yard on the east side of the property contained materials and work vehicles (Photograph 32, Appendix F).

Randy Strong Hand-Blown Glass, 1235 4th Street. The Randy Strong Hand-Blown Glass property is on the east side of 4th Street approximately 200 feet north of Gilman Street. A document posted on the Geotracker (2018) website indicates that a 550-gallon gasoline UST and approximately 20 cubic yards of impacted soil were removed from the site in March 1996. Some residual petroleum hydrocarbons remained in the soil and groundwater after the tank was removed (Water Board 1999, see Appendix G-10 for a table of analytical results obtained during the tank removal). No additional analytical data for soil or groundwater were provided in the EDR report or Geotracker and Envirostor databases. The Water Board issued a closure letter for the UST in June 1999.

Manasse-Block Tanning Company, 1300 4th Street. The Manasse-Block Tanning Company was a complex of buildings located on the southwest corner of the intersection Gilman and 4th Streets. The facility operated as a tannery from 1905 until 1986. It is currently a complex of offices, retail space and live-work units. The Water Board's Transmittal of the Closure Letter and Summary, dated March 1998, indicated that a 10,000-gallon fuel oil tank was removed in 1987, and a 1,000-gallon fuel oil tank was "closed - in place." Reportedly 200 cubic yards of soil and 5,200 gallons of "oil/water mixture" were removed from the site during the work. A Risk-Based Corrective Action risk assessment was completed, and no risks greater than 10^{-6} were identified for residual fuel oil left in place. The City of Berkeley's Site Closure Summary indicated "Fuel Oil – also 40,560 mg/kg TPH identified below building foundation – left in place." The Summary Report referenced a Technical Report for Site Investigation, dated December 20, 1997, but that report was not found on Geotracker or Envirostor. The site received regulatory closure in March 1998 (Appendix G-11).

WRE/ColorTech, 1225 6th Street. The Western Roto Engravers (WRE)/ColorTech facility is approximately 400 feet east of the northeastern terminus of the project site. The facility reportedly uses chrome, nickel, and copper plating in manufacturing processes (SES 2017). Chromate, nickel, and copper solutions—as well as degreasers, acids, and other chemicals including solvents—have been used as part of the plating and engraving process. Voluntary investigation and remediation at WRE/ColorTech has been ongoing since 1990 with oversight by the BTMD and the Water Board, which since 2014 has had oversight responsibility for site investigations, remediation and monitoring. Source removal and remediation activities have

been implemented. Recent groundwater information on the Geotracker database is a 2018 annual groundwater monitoring report that indicates a plume of chromium compounds dissolved in groundwater extends in a southwesterly direction from the facility to the project site (SES 2018, see Appendix G-12 for figure depicting extent of groundwater contamination). The plume consists of a mixture of chromium III (Cr III or trivalent chromium) and hexavalent chromium (Cr[VI]). In 2015, Cr(VI) was detected at a concentration of 140 µg/L in one of the facility's offsite monitoring wells (MW-16) located at the southeast corner of the Terminal Manufacturing Company facility (707 Gilman Street), slightly more than 500 feet east of the eastern edge of the project Site along Gilman Street. Based on that detection and other information, the 10 µg/L Cr(VI) concentration contour of the Cr(VI) plume is depicted in the report to lie southeast of this well (and extends west of the UPRR tracks but not to 2nd Street), although the leading edge of the plume has not been definitively identified. The depth to groundwater in MW-16 during the February 2018 gauging event was 4.00 feet below the top of well casing.

The Water Board issued a Workplan Approval letter, dated September 8, 2017, which conditionally approved a work plan dated May 29, 2017. The plan addressed the portion of the WRE/ColorTech dissolved Cr(VI) plume near the Harrison Street Berkeley Skateboard Park. The skate park is located at the northwest corner of Harrison Street and 5th Street. The work plan proposed injecting a Cr(VI) reducing agent upgradient of the skate park via several injection points along 5th and Harrison Streets to intercept and treat impacted water prior to any contact with below-grade skate park structures. The interim remediation implementation schedule proposed completing injection activities in July 2017, followed by three consecutive months of monitoring to determine effectiveness. The 2017 groundwater report stated that the downgradient guard well MW-14, located approximately 1,200 feet downgradient of the source area, has shown non-detectable results of total chromium and Cr(VI) since monitoring was initiated at that location in 2013 (Geotracker 2018).

Geotracker maintains a Hexavalent Chromium Chemical Reductant Injection Corrective Action Report for 1225 6th Street (Stellar 2018), which documented the implementation of a groundwater corrective action chemical reductant injection to reduce Cr(VI) from the WRE/ColorTech facility. The WRE/ColorTech chromium plume reportedly (Stellar 2018) originates on 6th Street, approximately midway between Gilman and Harrison Streets (Figure 2). Its northern lateral edge is known to extend to groundwater underflowing the City of Berkeley Skateboard Park at Harrison and 5th Streets (Figures 3 and 4, Appendix G-12). Since the Berkeley Skateboard Park was constructed in 2000, groundwater has infiltrated the deeper bowls of the Skateboard Park on three occasions during high rainfall years. This has occurred because the bowls have been constructed below the high groundwater elevation and construction allows groundwater to infiltrate the skate park through expansion cracks and other features. Based on post-injection groundwater monitoring results, the calcium polysulfide injections (a total of 4,620 gallons with mix water) in the vicinity of the skate park effectively reduced Cr(VI) concentrations in groundwater migrating toward the park by 90% or more. When last sampled in January 2018, Cr(VI) concentrations were 25 µg/L in upgradient well MW-20, 160 µg/L in upgradient well MW-22, and 240 µg/L in crossgradient monitoring well MW-12. At the time that groundwater last infiltrated into the Berkeley Skateboard Park,

the highest groundwater concentration of Cr(VI) was 610 µg/L at well MW-22, compared to the 14 µg/L or less Cr(VI) reported in water (which may have been a combination of groundwater and some surface water) ponded within the skate park bowl. Based on this attenuation and with the groundwater Cr(VI) reduction provided by the calcium polysulfide injections, any water collecting in the Berkeley Skateboard Park in the future would be expected to have Cr(VI) concentrations below the specified Water Quality Objective of 10 µg/L (see Appendix G-12 for documents related to hexavalent chromium concentrations observed in groundwater at the property).

Former Hawkins Traffic Safety Supply, 1255 Eastshore Highway. This case was opened with the Water Board on November 1, 2017 (Geotracker 2018). The site is a 1.1-acre lot with a warehouse that is located along the frontage road (Eastshore Hwy) of I-80 just north of the Gilman Street exit. The warehouse was occupied by the Hawkins Traffic Safety Supply Company from 1943 through 2017. Former site operations included screen printing and powder coating traffic signs and unspecified "treatment of aluminum." Reported wastes generated from former site operations included inorganic solid waste, liquid corrosive waste, sludge containing Cr(VI), and electroplating waste.

A Phase I ESA dated September 1, 2013 (Geotracker 2018) prepared by International Geologic, LLC determined the area of the subject property in west Berkeley is underlain by artificial fill, much of which is municipal waste or fill from other unknown or undocumented sources dumped in the area between Albany and Emeryville as late as the 1980s. According to Mr. Geoff Fiedler of the BTMD, debris of all kinds including metal, concrete, roofing materials, wood and various other waste materials was present during grading work conducted during construction of the adjoining Public Storage facility to the north and across Harrison Street in the 1990s. This type of material is likely to be present in the upper 5 feet of the subsurface beneath the subject property and would likely lead to additional expenses if excavation were part of possible property redevelopment. This is considered a historical recognized environmental condition and is a Business Environmental Risk.

The Phase I ESA also found that since the property at 1255 Eastshore Highway is located west of San Pablo Avenue, the BTMD considers that it is in an “Environmental Management Area.” The function of this designation is to require potential buyers and developers of properties within this area to complete environmental due diligence because the historical operations, particularly industrial and manufacturing ones, within the designated Environmental Management Area may have contaminated the subsurface environment. Permit applicants owning properties located in this area could encounter health and environmental concerns during construction involving underground excavation or dewatering. The BTMD requires a review of potential environmental impacts, at the applicant’s expense, for large developments or redevelopments. This status would not affect the property if it were to continue in its current use. BTMD involvement would only be expected in the case of plans that require excavation or dewatering.

Adjacent land uses are predominantly commercial/industrial, with Public Storage to the north and industrial welding supply to the south, a waste transfer station across 2nd Street, and a foundry to the south across Gilman Street. The site is 1,200 feet east of San Francisco Bay.

Weatherford BMW reportedly plans to lease the property and develop the site for automobile sales or repairs. As site redevelopment activities commenced, “the odor of what appeared to be old weathered lacquer thinner or paint thinner was moderately strong in the trench” that was being dug. A shallow (2 feet bgs or shallower) soil sampling event from a trench in October 2017 established that shallow soil contained the following: TPH-d at 1,500 ppm; TPH as motor oil (TPH-mo) at 420 ppm; TPH-g at 6,300 ppm; xylenes at 65 ppm; and naphthalene at 46 ppm. Based on these data, the Water Board and City of Berkeley have required a work plan for site assessment be submitted by May 27, 2018. Shallow soil sampling from several trenches within the subject property was conducted by PIERS Environmental Services in November 2017 (State Water Resources Control Board 2018). The soil beneath the concrete slab and about four inches of fill consisted of clayey silt. Although not obvious, this was a compacted fill material that overlay a layer of “junk” fill. Groundwater was generally encountered at depths of approximately 3.5 feet to 4 feet bgs, just above contact with the “junk” fill. The “junk” fill material included wood fibers, gravel, coherent pieces of wood, broken glass and ceramics, peat-like material, and metal debris.

Maximum concentrations of TPH-d (15,000 ppb), TPH-mo (9,300 ppb), and TPH-g (19,000 ppb) were reported in groundwater samples, as well as other (BTEX and VOC) compounds. Maximum concentrations of TPH-g (61,000 ppm), TPH-d (5,100 ppm), and other compounds were detected in soil. The PIERS Environmental Services Report of Soil and Groundwater Investigation, dated December 8, 2017, concluded “apparent paint or lacquer thinner contamination in groundwater” is present beneath the property, and “the extent is relatively well defined to the southwest, south and southeast, but undefined in other directions.” PIERS Environmental Services indicated the compounds detected in soil did not correlate well with the concentrations found in groundwater. They concluded there may be impacts contributed or sourced from off the subject property, and that “further delineation of the groundwater contamination should be completed.” An addendum to the above report, dated December 21, 2017, documented the trench excavation and subsequent soil sampling conducted during removal of soil around the former boring B1 area (area of highest TPH concentrations) to define the lateral and vertical extent of impacted soil in this area. The Water Board correspondence dated January 23, 2017 (Geotracker 2018) stated the following regarding review of the PIERS report dated December 8, 2017:

1. The groundwater sampling approach did not allow for collection of static water levels and determination of groundwater flow direction.
2. The nature and extent of soil, groundwater and soil vapor contamination are not adequately defined horizontally and vertically – several borings terminated in soils with concentrations of Constituents of Concern (COCs) exceeding Water Board Tier 1 Environmental Screening Levels (ESLs).
3. Specific borings that were not deep enough to define the vertical extent of COCs were B1, B3, B4, B6.
4. Soil borings need to extend into unimpacted soils, or depths where concentrations of COCs do not exceed ESLs.

5. Testing for metals in soils and groundwater has not been completed, to address these potential COCs.
6. Confirmation sampling was not performed at the base and sides of excavations to demonstrate source removal.

Appendix G-13 contains relevant figure and data tables from the trench sampling event, a Phase I ESA report dated September 1, 2013, and the soil and groundwater investigation report.

Green Valley Plant Rental, 1475 Eastshore Highway. This property is bound by Eastshore Highway to the west, 2nd Street to the east, and Jones Street to the south. This property is approximately 200 feet south of Page Street, which is the southeast end of the interchange improvement project footprint. Geotracker (2018) contains one document, a Site Closure Summary stamped "received" in March 1995, that indicated one 1,000-gallon gasoline, one 550-gallon diesel, one 280-gallon waste oil, and one 550-gallon waste oil tank were removed on February 4, 1987. Total extractable hydrocarbons were reportedly detected in soil at 3,500 ppm prior to excavation of 5 to 6 feet of soil, after which the concentration was reportedly "less than 100 ppm." This case (RB Case: 01-0059) was closed on April 6, 1995. No other relevant information was provided. The EDR Geocheck Report lists this property address under Green Valley Plant Rental and also under Hertz Equipment Rental. The EDR California Hazardous Material Incident Reporting System database (EDR 2017) indicates a diesel spill occurred at the property on January 19, 2016. The only other relevant information provided was "RP states driver was filling tank, valve on tank failed, causing the release out of the emergency vent. Clean up is in progress, boom has been supplied. Contractor cleanup crew is enroute." A Geotracker case summary is provided in Appendix G-14.

1 Rental, 1501 Eastshore Highway. This property is at the southeast corner of Eastshore Highway and Jones Street. The western edge of this property is approximately 400 feet southeast of the southeast corner of the TBSC driveway in the interchange improvement project footprint. An Underground Tank Removal Report (Geotracker 2018) dated November 10, 1989 by Aqua Science Engineers, Inc. (Aqua 1989) indicates one 1,000-gallon gasoline UST and one 550-gallon diesel UST were removed from the property on August 30, 1989. A case was opened based on soil sampling that occurred after the UST removals. The most recently document found in Geotracker was a second Notice of Violation letter from the City of Berkeley Emergency and Toxics Management Department, dated June 15, 1993, that requested a work plan for subsurface investigation be submitted (but no subsequent documents are present on Geotracker). The case was reported closed as of April 3, 2000 (Geotracker 2018). Information associated with this site is provided in Appendix G-15.

Berkeley Forge and Tool, 1331 Eastshore Highway. This property is several hundred feet south of Gilman Street between Eastshore Highway and 2nd Street. The adjacent property at 1330 2nd Street has the same business name. The subject business and addresses do not appear in the Geotracker or Envirostor databases. The 1331 Eastshore Highway address appears in the EDR Geocheck Report and is listed under several databases the presence of one 7,500-gallon regular unleaded fuel, one 1,000-gallon diesel fuel, and one 1,500-gallon

diesel fuel UST, and one 1,320-gallon AST were indicated. Most of these were documented as being onsite during the 1990s (EDR 2017 and Appendix G-16).

Camelia Street Properties (Former Perc-Serv, Inc), 1001 Camelia Street. This property is greater than 1,000 feet east from the intersection of Gilman Street and 4th Street (upgradient with respect to groundwater flow from the project site). The subject business is outside the EDR Geocheck Report area but is listed in the Geotracker database as an active site, with a former large UST removal containing VOC contaminants including PCE, trichloroethylene (TCE), and cis-1,2- dichloroethylene (cis-1,2-DCE). According to the Geotracker database (State Water Resources Control Board 2018), "The Site is developed with a rectangular brick building that covers more than half of a city block bound by Camelia Street on the south, Ninth Street on the west, and Tenth Street on the east. A Canada Dry bottling plant occupied the site from its initial development until 1978. The southern half of the site building was occupied by Perc-Serv, Inc., a wholesale laundry and dry-cleaning supply business, from 1978 to 1983. In 1985, the site building was renovated to its current use as a multi-tenant retail, office, and warehouse. Permits for the 1955 installation and 1978 removal of a 7,500-gal UST have been found. Gasoline constituents associated with the former UST include benzene, a recognized carcinogen. Soil and groundwater samples from the loading dock area on the west side of the Site showed elevated levels of some halogenated volatile organic compounds (HVOCs), indicating, primarily, PCE, TCE and cis-1,2-dichloroethylene (c-1,2-DCE). HVOC impacted groundwater is present out to approximately one block west-southwest from the Site to Eighth Street and does not appear to extend south to a predominantly a residential neighborhood." The wells related to this site are still periodically gauged, sampled and reported on. Details for this site are provided in Appendix G-17.

Skate Park at Harrison Street and 5th Street. A Soil and Groundwater Investigation Report, dated July 9, 1997 (Ogden 1997), indicated the property at the northwest corner of Harrison Street and 5th Street was occupied by a steel manufacturing facility from about 1910/1920 through the 1960s. From 1964 to 1971, the vacant area and buildings were leased to an automobile dismantling operation. From 1989 to 1991, most of the vacant land was used for a wood waste receiving, processing, and composting operation. Two fuel USTs were previously present at the property; these were reportedly abandoned in place in about 1964 and removed in March 1986. The report concluded that some residual soil and groundwater contamination was present at the site, but the levels did not warrant further environmental investigation at that time. A voluntary cleanup agreement termination letter dated March 12, 2001, indicated the presence of widespread (offsite source) Cr(VI) contamination in groundwater (Appendix G-18).

Berkeley Gilman Street Watershed. The 60-inch-diameter concrete Berkeley Gilman Watershed Outfall is present at the western terminus of Gilman Street (southern end of Gillman Street Extension). The concrete outfall discharges urban runoff into the San Francisco Bay. The runoff has been documented to contain PCBs and mercury. Details regarding the plans that the City of Berkeley has for this discharge are discussed in Section 5.2, and the watershed is depicted in Appendix G-19.

Additional Nearby Sites. EDR contains a listing for "Caltrans Berkeley" as being a Resource Conservation and Recovery Act small quantity generator (EDR 2017). The site link icon in the report indicates the location on Gilman Street directly beneath the I-80 Freeway; however, the listing states the location is on I-80 somewhere between Gilman Street and Ashby Avenue, which is almost two miles south of Gilman Street. No other relevant information is provided.

A list of other nearby environmentally related sites of potential concern were evaluated using the resources readily available to research historical information. Based on the research, these sites were generally found to be farther away from the project footprint. Many of the sites have been designated as closed by the regulatory agency, and the potential for environmental impact is less than for the specific sites listed above. The list of these other sites and a brief summary of each is provided in Appendix G-20.

5.2 Historical Aerial Photography, Topographic Maps, Sanborn Maps, and Visual Survey

This section describes the historical development and present-day built environment within the project site based on historical aerial photographs (Appendix B), United States Geological Survey (USGS) historical topographic maps (Appendix C), historical city directories (Appendix D), Sanborn Maps (Appendix E), and the visual site reconnaissance conducted on April 16 and 17, 2018 (Appendix F). The site reconnaissance was conducted by walking and taking photographs in publicly accessible areas. Information about the history and development of the project site is presented generally from west to east within the project footprint.

West of Eastshore Highway. The area within the project site west of the I-80/Gilman Street interchange is occupied by the TBSC, paved and gravel parking lots, and Gilman Street Extension, adjacent to the west side of the stable area of the Golden Gate Fields horse racing facility (Photographs 1 through 10 in Appendix F). According to the Golden Gate Fields website, the horse racing track opened in 1941 (Golden Gate Fields 2018). Its initial operations were truncated by World War II, during which the facility was reportedly used as a naval amphibious landing craft base. Horse racing recommenced in 1946 and has continued until the present. The TBSC was opened in September 2008. Prior to development as playing fields, the land was used by Golden Gate Fields for storage and parking (East Bay Times 2008).

Historical topographic maps produced by the USGS in 1895, 1899, and 1915 depict the project site in the vicinity of the present-day horse race track and sports complex as wetlands (Appendix C). At the time, the edge of the wetlands adjoining San Francisco Bay is depicted as being approximately along present-day 2nd Street. Second Street is first depicted in the 1915 topographic map. By 1929, the area west of 2nd Street appears to have been filled because the 1929 Sanborn Map depicts the edge of the wetlands adjoining San Francisco Bay west of present-day I-80 (not yet constructed in 1929), near the southern entrance to the stable area for Golden Gate Fields (Appendix E). As shown on the 1939 historical aerial photograph, the area occupied by Golden Gate Fields had been filled by that year and contained several smaller unidentified structures and dirt roads throughout. The area occupied by the TBSC and parking lots was still wetlands or submerged land (Appendix B).

The 1946 aerial photograph depicts all wetlands and submerged areas within the project site as filled (Appendix B).

Based on the available USGS maps and aerial photographs, the land presently occupied by I-80 was filled by 1939 but remained vacant through the 1940s. The land is shown as vacant on a 1950 Sanborn Map. The first evidence of I-80, which was constructed in the project area in the mid-1950s, is on a 1958 aerial photograph. Frontage roads are visible in their present-day locations to the west and east of the highway. The frontage road located east of I-80 is Eastshore Highway, which was formerly part of US 40 (Appendix C). Eastshore Highway was constructed in the late 1930s and provided an approach to the Bay Bridge. The street is visible in the 1939 aerial photograph in more or less its present location (some modification to the intersection with Gilman Street was made when I-80 was constructed).

The 60-inch-diameter concrete Gilman Watershed Outfall is present at the western terminus of Gilman Street (southern end of Gillman Street Extension) where it turns north/northwest adjacent to the west side of Golden Gate Fields (Photograph 9 in Appendix F). The concrete outfall discharges into the San Francisco Bay, and is completely covered during high tide and exposed during low tide (Photograph 9 in Appendix F). The Gilman Watershed (approximately 250 acres) that contributes to the Gilman outfall is primarily designated as Old Industrial with some Old Urban by the City of Berkeley.

The Regional Water Quality Control Board requires cities to generally reduce PCBs and mercury in urban runoff going into the Bay. Assumed PCB and mercury yields in the Gilman Watershed are based on historical land use, which contains a high percentage of Old Industrial designated parcels. It is therefore a high priority watershed for capturing sediment to reduce the assumed loads of PCBs and mercury that would flow into the Bay. There is a current recommendation to install a separation device adjacent to Gilman Street upstream of the outfall. The separation device location is currently proposed along the north side of the TBSC northern soccer field, on the south side of Gilman Street, west of West Frontage Road (Figure 2). As a note, the City of Berkeley is not treating a known, defined plume in this area.

Eastshore Highway to 2nd Street, North of Gilman Street. The block bound by Eastshore Highway, Gilman Street, 2nd Street and Harrison Street was wetland in 1915 and vacant (possibly agricultural) until at least 1939, based on its appearance in the 1939 aerial photograph. By 1946, buildings are visible along Eastshore Highway, Gilman Street and 2nd Street adjacent to the project site. Sanborn Maps from 1950 indicate that a “gas and oil” facility (likely a gas station based on the facility’s configuration and city directories in Appendix D) was present on the corner of Gilman Street and Eastshore Highway (noted as 1285 Eastshore Highway), and a “mach[ine] shop & welding” facility was present on the corner of Gilman and 2nd Streets. Structures listed with uses including “spray paint booth,” “metal wkg,” and “industrial equipt. rental” indicate the type of facilities that were present. These former operations are depicted at these properties on the 1970 and 1980 Sanborn Maps. In 1980, the facility at the corner of Gilman and 2nd Streets (1285 Eastshore Highway) is identified as a “fill’g sta.” This is the location of the former Chevron gas station. The property is currently (in 2018) used for equipment storage by Red-D-Arc, Welderentals (635 Gilman Street), which occupies the buildings at the corner of Gilman and 2nd Streets (Photographs 22 and 23 in

Appendix F). One approximately 500-gallon diesel fuel AST with a fuel dispenser was observed (from the sidewalk) on the subject property during the site reconnaissance on April 17, 2018. Parsons reviewed documents maintained by the BTMD for 1285 Eastshore Highway and 635 Gilman Street on April 18, 2018. The records indicated that more than 10 million cubic feet of gases are listed in the inventory for the 2017 hazardous materials business plan, with no violations noted. The 2017 spill prevention, control and countermeasure documentation listed a petroleum AST with 1,625 gallons, a used oil tank, and used aerosol cans that were noted as disposed of/collected in a 55-gallon drum. A Hazardous Materials Inspection Report dated September 26, 2017, indicates diesel fuel and lead acid batteries are stored on the 1285 Eastshore Highway property (listed Facility Name as Verizon Wireless), with no violations listed.

The property at 1255 Eastshore Highway (former Hawkins Traffic Safety Supply) is currently (2018) undergoing renovation (Photographs 29 and 30 in Appendix F). In 2017, a weathered lacquer or paint thinner odor was noticed when subsurface soil was encountered and exposed during trench renovation work. This resulted in soil and groundwater sampling. The site is a 1.1-acre lot with a warehouse located between Eastshore Highway (frontage road) and 2nd Street. The warehouse had been occupied by the Hawkins Traffic Safety Supply Company since 1943. Site operations included screen printing and powder coating traffic signs and unspecified "treatment of aluminum." Reported wastes generated from site operations included inorganic solid waste, liquid corrosive waste, sludge containing Cr(VI), and electroplating waste. The site is underlain by fill material consisting of various debris (wood, concrete and soil). Adjacent land uses are predominantly commercial - industrial with Public Storage to the north and industrial welding supply to the south, a waste transfer station across 2nd Street, and a foundry to the south across Gilman Street. The site is 1,200 feet east of San Francisco Bay, and there are no water supply wells located within one mile (Geotracker 2018).

Eastshore Highway to 2nd Street, South of Gilman Street. This block is bound by Eastshore Highway, Gilman Street, 2nd Street and Page Street (Photographs 13 and 17 through 21 in Appendix F). The area was wetlands until at least 1915. The first evidence of development in this block is depicted on the 1929 Sanborn Map. Most of the southern third of the block that adjoins Camelia Street is occupied by buildings labeled “Berkeley Steel Construction Co.,” and a steel foundry fronting 2nd Street with an address of 1328 2nd Street. The property is currently (in 2018) occupied by Berkeley Forge and Tool (Photograph 17 in Appendix F). Although the 1929 Sanborn Map does not provide coverage of the northern portion of the block, the part that is shown is vacant. The southeast corner of Camelia Street and Eastshore Highway (labeled as “1st Street Unopened”), which is adjacent to the project site, is occupied by “Berkeley Steel Co. Airplane Factory” and the southwest corner of Camelia and 2nd Streets is occupied by a small building labeled “Berkeley Flour Mill: Flour Milling & Apple Paring.” The southern half of the block south of Camelia Street (to Page Street) is occupied by a residential dwelling, and the remainder is labeled as “Marsh.”

By 1939, at least one additional building can be seen fronting 2nd Street north of Berkeley Steel Construction Co. The building, labeled Berkeley Flour Mill in the 1929 Sanborn Map, is visible south of Camelia Street. Another structure fronting 2nd Street appears south of the Berkeley Flour Mill. A building is present on the southeast corner of Eastshore Highway and

Camelia Street. The remainder of the block south of Camelia Street appears to be unpaved and undeveloped land, as is the northern third of the block bound by Eastshore Highway, Gilman Street, 2nd Street and Camelia Street.

By 1946, all land between Eastshore Highway, Gilman Street, 2nd Street and Camelia Street was occupied with structures. The northern half of the block south of Camelia Street between Eastshore Highway and 2nd Street is occupied by a commercial or industrial type structure. The southern half of that block is unoccupied. On the southeast corner of Gilman Street and Eastshore Highway, the 1950 Sanborn Map shows an "oil & gas" facility, which was most likely a gasoline service station. The suspected former gas service station at Gilman Street and Eastshore Highway is now partly a PSC property (identified as Plant 1 at 1316 2nd Street; see figure in Appendix G-4) and partly within the roadway for Eastshore Highway. PSC spans the block between 2nd Street and Eastshore Highway and is adjacent to the project site on Eastshore Highway. The area immediately south of Camelia Street is occupied by a Berkeley Steel Construction Co. building. The remainder of the block is labeled "Marsh." On the southeast corner of Gilman Street and 2nd Street, the 1950 Sanborn Map shows a "General Petroleum Corpn" which contains one structure labeled "Oil W. Ho." (interpreted as oil warehouse) and 17 tanks labeled "gasoline" and "oil." The project site continues to the southern edge of the block, on the south side of Page Street.

As depicted on Sanborn Maps from 1970 and 1980, Berkeley Steel Construction Co. and PSC are present at their same locations between Gilman and Camelia Streets as shown in the 1950 Sanborn Map (Appendix E). By 1980, the area immediately south of Berkeley Steel Construction Co. is labeled PSC. The remainder of the block south of PSC is not clearly labeled, and there is only partial Sanborn coverage of this area. Aerial photographs after 1980 show what appears to be a vacant lot or an area used for equipment and vehicle storage. The property currently appears to be used for storage by PSC.

Second Street to UPRR, North of Gilman Street. The property adjacent to the east of the project site in this area is presently occupied by the Berkeley Recycling Center (669 Gilman Street), which is bound by Gilman Street, 2nd Street, and the UPRR and extends north to the Berkeley-Albany border (Photographs 21 to 25 in Appendix F). This historical discussion focuses on the southern portion of the facility located adjacent to Gilman Street and south of Harrison Street, if the street were to extend from the east and west into the project area. The entire area appears undeveloped on topographic maps until 1899. Sanborn Maps depict a "[Lu]mber & Furniture Mfg. Co." on the southern portion of the site in 1903. The "Pacific Coast Lumber & Furniture Co.," which is described as not in operation at the time of the survey, is located at the site in 1911. On a 1929 Sanborn Map, the buildings and appurtenances appear to still be present, but the site is described as vacant. No facilities are shown on the southern part of the site on the 1950 Sanborn Map. The area adjacent to Gilman Street is depicted as vacant in 1970 and 1980, with a designation in 1980 that the yard is being used for steel parts storage.

Aerial photographs from 1939 and 1946 show the area had no buildings, and the site was being used for equipment or vehicle storage. North of the vehicle storage appears to be an unknown industrial operation. A liquid pit on the eastern portion appears to be part of a larger

operation adjacent to the east. By 1946, a building or cluster of buildings is visible on the northern half of area. There is no Sanborn Map coverage of this area to indicate what type of business or structures were present at that time. Buildings are visible in this area until the present day, although they appear to have been reconfigured between 1982 and 1993 based on evidence in aerial photographs. The website for the Berkeley Recycling Center, which is operated by the non-profit Community Conservation Centers, indicates that the facility at 669 Gilman Street was built in 1982 (Community Conservation Centers 2018). The center is a materials processing facility that accepts recyclables for buyback and drop-off. During the site reconnaissance on April 17, 2018, trash odors were noted from the sidewalk, and berms/waddles were present along much of the perimeter of the property to prevent runoff from the recycling facility flowing onto the adjacent sidewalk and street. During the site reconnaissance, new paint markings were observed delineating the trend of a subsurface Kinder Morgan gas line along the west side of the UPRR.

Second Street to UPRR, South of Gilman Street. The block is bound by Gilman Street, 2nd Street, Page Street and the UPRR. The properties adjacent to the project site in this area are presently occupied by PSC (1331 2nd Street). Streets are shown in their present-day configuration in the 1895 and 1899 topographic maps, but the area is depicted as vacant, except for one structure on the east side of the block between Page and Camelia Streets. Multiple buildings are visible within the block on the 1915 topographic map, and subsequent maps depict the area as generally urbanized.

The 1903 and 1911 Sanborn Maps show small buildings or vacant lots within the block. Most of the buildings are labeled as residential dwellings. There is a vacant tannery operation at the property at the southwest corner of Camelia and the UPRR (3rd Street). In 1929, the buildings adjacent to the project site on Gilman Street are still residential, but a large property located mid-block between Gilman and Camelia Streets is identified as “Woolenius Tile Co.” The “Morton Furniture Mf’g Co.” is present at the southwest corner of Camelia and the UPRR (3rd Street). By 1950, the northern half of the block adjacent to Gilman Street is occupied by the “General Petroleum Corp’n.” At least 17 tanks and an oil warehouse are shown on the property. The area is presently occupied by facilities operated by PSC (1331 2nd Street). In 1970 and 1980, buildings and facilities within this area on the north end of the block are labeled “Solvent Mixing & Fill’g,” “Drum Storage Yard,” and “Industrial Oil Blends.” At the southwest corner of the UPRR and Camelia Street is the “Venetian Blind Wood Products Co.” Sanborn Map coverage does not extend far enough south of this area to discern what structures or operations were present adjacent to the south of the Venetian Blinds property. During the site reconnaissance on April 17, 2018, new paint markings were observed delineating the trend of a Kinder Morgan gas line along the west side of the UPRR.

A file review of available BTMD files was conducted on April 18, 2018. at the City of Berkeley, Toxics Management Division. Files were reviewed for the numerous numeric addresses for the PSC. A review of these documents indicates that PSC has been the subject of numerous and ongoing violations since the 1970s. These are related to odor nuisance complaints (a result of process-related air emissions) and resulted in local agency enforcement orders against PSC. Documents indicate many chemicals have been used by the business for many years, including flammable, combustible and corrosive liquids such as 1,-chloro-4

(trifluoromethyl)-benzene, heptane, petroleum distillates, waste gasoline, diesel fuel. Solids such as no bake paste and friable asbestos have also been used. Various USTs are documented to have been present on the PSC property. Records indicate that PSC operations resulted in an unleaded UST leak in the 1990s which resulted in more than 15,000 gallons of fuel-impacted groundwater being treated. The former UST was located on the property at Plant No. 2 (1333 2nd Street), approximately 60 feet north of Page Street along Eastshore Highway. Photographs of the area during the site reconnaissance on April 16 and 17, 2018, are provided in Appendix F (Photographs 17, 18, 21, 34 and 35).

UPRR to 4th Street, North of Gilman Street. The block is bound by Gilman Street, UPRR, 4th Street and Harrison Street (Photograph 28 in Appendix F). The properties adjacent to the project site in this area are presently occupied by Terminal Manufacturing Company (707 Gilman Street) and a landscaping supply store and furniture store (725 Gilman Street). On the 1903, 1911 and 1929 Sanborn Maps, the block is depicted as vacant lots, residences or hotels. In 1950, a “Galvanizing & Metal Shop” is located on the northwest corner of Gilman and 4th Streets. This is likely to be the facility with an address at that location formerly known as Tuttle Galvanizing (725 Gilman Street). The property adjacent to the west of the galvanizing and metal shop (shown as 701 Gilman Street in the 1950 Sanborn Map) is depicted as vacant in 1950. In 1970 and 1980, the property at 707 Gilman Street (formerly listed as 701 Gilman Street) is identified as a “Truck Body Fact’y.” Today, 725 Gilman Street remains a metal shop. Dover Sales at 707 Park Way is shown as an empty lot on the 1929 Sanborn Map, and is labeled with as a paint manufacturing facility in the 1970 and 1980 Sanborn Maps.

A building at 725 Gilman Street is seen in the 1939 (earliest provided by EDR) aerial photograph and is present in subsequent aerial photographs until the present, although it has changed slightly in size and configuration over the years. A building is first shown at 707 Gilman Street in 1968.

UPRR to 4th Street, South of Gilman Street. The block is bound by Gilman Street, UPRR, 4th Street and Page Street. The properties adjacent to the project site in this area are presently (in 2018) occupied by a restaurant, offices, commercial businesses, residential units and a parking lot. The former Manasse-Block Tanning Company was in this block at 1300 4th Street. On the 1903 Sanborn Map, the northern portion of the block adjacent to Gilman Street contains a residential dwelling and a hotel. The “California Ink Co.” occupies much of the southern half of the block. In 1911, the properties adjacent to Gilman Street contain residential dwellings. “Manasse-Block Tanning Co.” is indicated on the parcels farther south. The “California Ink Co.” is located south of the tannery. In 1929, the properties on Gilman Street are shown as residential, the tannery has expanded slightly northward, and the ink company is in its previous location. By 1950, the residences are no longer noted, and a facility at the corner Gilman and 5th Streets is labeled “Solvent & Die W Ho.” This facility appears to be part of the tannery. In 1950, the California Ink Company was also operating west across 4th Street; on the block between Gilman Street and Camelia Street. One of the properties contains one 2,000-barrel (bbl) and one 5,000-bbl lubricating oil tanks, and one 3,000-bbl fuel oil tank. In 1950, the block between Camelia Street and Page Street between the UPRR and 4th Street are occupied with residential dwellings.

Aerial photographs confirm that much of the two blocks were developed by 1939. Some changes have occurred along Gilman Street over the years, but many buildings in the block appear largely as they were in the early and mid-20th century.

East of 4th Street, North of Gilman Street. The block is bound by Gilman Street, 4th Street, Harrison Street and 5th Street. The property nearest the project site in this area is presently occupied by Berkeley Yamaha (735 Gilman Street). Although the street grid is depicted on the 1895 USGS topographic map, no development is shown within this block until the 1929 Sanborn Map. In 1929, a machine shop is shown located on the northwest corner of Gilman and 5th Streets. By 1947, the entire block is depicted as urbanized on the USGS topographic maps. Based on aerial photographs and Sanborn Maps, the lot on the northeast corner of Gilman and 4th Streets that is near the project site was developed between 1950 and 1958. The property is undeveloped in the 1950 Sanborn Map (operated by Berkeley Yamaha in 2018). A steel polishing operation is listed at 1229 4th Street. Most of the remainder of the block was developed by the 1950s.

East of 4th Street, South of Gilman Street. The block is bound by Gilman Street, 4th Street, Page Street and 5th Street. The property nearest the project site in this area is presently occupied by a commercial printer (The Ligature) and, until recently, a supplier of wood products (The Woodbank). One of the properties is identified as part of the Flint Ink Corporation site (750 Gilman Street) in the EDR Report (2017), which is discussed in greater detail above.

The street grid is depicted in this area on the 1895 USGS topographic map, but no development is shown within the northern third of the northern of the two blocks through at least 1929, as depicted on either the USGS topographic or Sanborn Maps. In 1929, the California Ink Co. is present on the southern portion of the block (between Gilman Street and 4th Street), and several aboveground storage tanks are depicted in mid-block east of 4th Street about 200 feet south of Gilman Street. The four 3,000- to 9,000-gallon tanks are depicted as containing fuel oil and lubricating oil. At least one tank is still visible at this location in the 1993 aerial photograph. In 1929, only residential dwellings are present on the block south of Camelia Street between 4th and 5th Streets.

In the 1939 and 1946 aerial photographs, the northern third of the block between Gilman Street and Camelia Street appears to have structures on it or was being used for equipment or materials storage. The block to the south is depicted as containing residential dwellings. By 1947, the USGS topographic maps depict the entire block as urbanized. Buildings are clearly visible in the 1958 and 1968 aerial photographs, and they first appear in their current configuration in the 1982 aerial photograph. The buildings are labeled “W. Ho.” on 1950 and 1970 Sanborn Maps and as “Tenneco Chemicals Inc. Cal. Ink Div’n” in 1980. Two solvent tanks are depicted on the 1970 and 1980 Sanborn Maps on the property in mid-block on the south side of Gilman Street about 100 feet east of 4th Street. The buildings on this property are presently occupied by the commercial printer, The Ligature. The block to the south is occupied by a small machine shop, several other small business structures, and residential dwellings.

Potential Sources of Environmental Concern. Aerially deposited lead from vehicle emissions and lead-based paint that has weathered from older painted structures are potential sources of lead contamination along roadways in the project area. Leaded gasoline was used as a vehicle fuel in the United States from the 1920s until the 1980s. Although lead is no longer used in gasoline formulations, lead emissions from vehicles are a recognized source of contamination in soil along roads. Because the Eastshore Highway and I-80 are travelled heavily and commercial services have been present in the area since the 1920s, there is a high potential that lead is present at concentrations greater than naturally occurring levels in soil along the road shoulders where soil is or has been exposed (Photographs 2 through 4, 11, 12, 15 and 17 in Appendix F). Buildings near the roadway have been present in some locations since the early 20th century. Where older buildings (pre-1980s) are upgradient and near the roadway, lead-contaminated runoff may have flowed into swales and ditches present along the roadways. Surface and near-surface soils adjacent to the roadways have the potential to contain elevated concentrations of lead ranging from background up to several thousand mg/kg, particularly near the intersection of I-80 and Gilman Street where vehicles stop, idle and accelerate.

Industrial facilities located adjacent to or nearby the project site include foundries, machine and metal-working shops, tanneries, and chemicals manufacturers or handlers (ink and printing facilities). Metals contamination associated with historical air emissions and stormwater runoff from these facilities could be present in soil. Facilities within the project area have reported concentrations of metals in soil above ambient background. For example, copper and lead were elevated in some samples collected at PSC (TRC 2013; see Appendix G-4 for tabulated data). Metals associated with historical releases may be present in soil within the project site.

Bridges built between approximately 1950 and 1982 may contain asbestos in features such as expansion joints, girders, and joints at the abutments. A concrete bridge comprises the Gilman Street undercrossing of I-80 (Photographs 11 through 15 in Appendix F). Expansion and abutment joints were observed from the public ROW during the site survey but were not inspected closely due to difficult access (fencing, homeless encampments, and traffic). The compounds in the joints may be asbestos-containing materials. Caltrans SSP 14-11.02 includes guidance for when asbestos is discovered on the work site (2015a).

Environmental releases may have occurred within the UPRR mainline ROW (Photograph 25 in Appendix F) or the abandoned segment of railroad track that runs down 2nd Street (Photographs 21, 35 and 36 in Appendix F). Chemicals or hazardous materials may have previously leaked or spilled from tanks or cars transported by the railroad. Releases may also have occurred due to failure or breakage of brake lines or other equipment over the many years that the rail line has been in use. Railroads used chemicals to control vegetation growth and burrowing animals that could undermine the railroad tracks, residues of these chemicals might persist. One report reviewed during this investigation noted that a Kinder Morgan pipeline runs parallel to the rail line through the project site (SES 2016). Historical leaks from the pipeline are a potential source of contamination within the project site.

Lead chromate is a yellow pigment that was used in “safety yellow” colored traffic striping for many years. Only recently was this hazardous pigment replaced with lead-free and chromium-free yellow substitute pigments (Caltrans 2011). Yellow thermoplastic containing lead chromate has been used as recently as 2004. According to Caltrans guidelines, “lead chromate containing yellow striping materials may contain ~ 20,000 ppm of lead and ~ 5,000 ppm of hexavalent chromium...” Yellow thermoplastic and yellow paint may produce toxic fumes when heated. The debris produced when this older yellow striping was ground from the pavement might meet the definition of a hazardous waste, unless it is substantially diluted with the underlying paving material, as in the case where extensive pavement milling is being done. Caltrans SSP 14-11.12 (2015b) includes instructions for removal and disposal of yellow striping containing lead chromate. Yellow traffic striping and thermoplastic paint were observed in the project area during the site reconnaissance (various photographs in Appendix F).

The area west of 2nd Street is largely built on artificial fill that was obtained from undocumented sources and deposited in the early 20th century. The fill might contain metals, petroleum hydrocarbons, or other compounds and materials associated with historical industrial practices of the time.

6.0 IMPACTS AND RECOMMENDATIONS

Aerially Deposited Lead and Industrial Emissions of Metals. Impacts from lead and other metals contamination in the soil may have been caused by aerially deposited lead from vehicle or other historical air emissions and stormwater runoff from industrial facilities. These impacts could occur where construction or maintenance of the roadway involves disturbing or exposing surface soils adjacent to the existing roadway. Direct contact with contaminated soil and subsequent hand to mouth activities (e.g., smoking, drinking or eating) could result in the inadvertent ingestion of contaminated soil. Construction or maintenance activities could produce dust, which could expose workers to lead via inhalation. Caltrans SSP 14-11.09 (2015c) provides specifications for handling and managing material containing hazardous waste concentrations of aerially deposited lead when there is minimal disturbance.

Aerially deposited lead near roadways and historical releases of metals from industrial facilities may also be addressed by the following:

- It is recommended that the soil sampling plan for the preliminary site investigation to be conducted during the design phase include a strategy for assessing the concentrations of metals associated with historical industrial releases in the project area. To address the multiple potential sources and potential transport mechanisms (air emissions and stormwater flows), the sampling plan should develop a statistical approach to characterizing the project site where surface and subsurface soils would be disturbed during construction.
- It is recommended that soil samples be collected and analyzed for lead during the preliminary site investigation in areas near roadways or painted structures where surface soil would be disturbed. Areas of focus should include swales, ditches and other low areas where runoff may have carried lead contaminated particles from either aerially deposited vehicle emissions or the weathering of painted structures.

Asbestos Containing Materials. Impacts from suspect asbestos containing materials could occur if the I-80 overcrossing of Gilman Street requires modification and if asbestos containing materials were used in constructing the structure. However, no modifications to the I-80 overcrossing of Gilman Street would occur as the project is currently designed. The Bay Area Air Quality Management District (BAAQMD) requires an asbestos survey and notification prior to demolition or renovation of bridges. In addition, the United States Environmental Protection Agency (USEPA) requires that the concrete of bridges to be demolished and other typically more suspect components such as bridge rail shims and conduit be screened for asbestos. An asbestos survey was not within the scope of this initial site assessment.

- In the event that the Gilman Street undercrossing of I-80 would be modified by the project or any portion of the concrete structure be demolished, it is recommended that a survey of the bridge for asbestos containing material be conducted prior to any repair or maintenance to protect worker safety and to meet the BAAQMD and USEPA requirements.

Yellow Thermoplastic and Yellow Paint. Yellow thermoplastic and yellow paint are present on streets within the project site and may produce toxic fumes when heated during demolition or repaving activities. The debris produced when this older yellow striping is ground from the pavement might meet the definition of hazardous waste. It is recommended that Caltrans specification SSP 14-11.12 (2015b) be included in contractor specifications and implemented during construction.

Historical Chemical Releases from Industrial Activities. Contamination by petroleum hydrocarbons is widely reported in the project area, and many facilities formerly operated USTs and ASTs for fuel, solvent, or ink storage. Properties located adjacent to the project site with historical leaking USTs include the former Chevron gas station (1235 Eastshore Highway); Budget Rent A Car (600 Gilman Street); PSC (addresses on 2nd Street and Eastshore Highway); Terminal Manufacturing Company (707 Gilman Street); Manasse-Block Tanning Company (1300 4th Street); Berkeley Yamaha (735 Gilman Street); and Flint Ink Corporation (750 Gillman Street). Many other sites with historical leaking USTs are located nearby. Although many sites have been closed by the state or local lead agency in accordance with regulatory laws and other requirements, environmental records indicate that contamination often remains in soil and groundwater. For example, the site remedial activities at the former Flint Ink property at 1350 4th Street (as previously discussed in this document), satisfied the corrective action requirements and received case closure. The closure related document indicated, “The mostly petroleum hydrocarbon sources and related impacts to soils and groundwater were removed to the extent practicable, and site-specific cleanup goals were met for the accessible areas. Residual soil and groundwater impacts exceeding the corrective action goal of 1,000 mg/kg in soils and 1 mg/L in groundwater remains in areas immediately adjacent to structural elements, buildings with historic landmark status, offsite, and public right of way areas.”

Contamination of groundwater by chlorinated solvents has been reported as well (e.g., PCE at Terminal Manufacturing Company [707 Gilman Street] and several chlorinated solvents at Flint Ink Corporation [750 Gilman Street]). The source of the contamination is not always clear and may originate from more than one location. A plume of Cr(VI) that is believed to originate on the WRE/ColorTech property (1225 6th Street) reportedly intersects the northeast portion of the project site between the UPRR and 5th Street and Harrison and Gillman Streets.

Impacts from historical releases of chemicals from USTs or other sources to soil or groundwater in the project site vicinity could occur if contaminated media are encountered during project implementation. Activities that might result in impacts include excavating or trenching to install light pole foundations; relocating curbs, utilities and drainage systems; building foundations for retaining walls and piles for the pedestrian bridge overcrossing of I-80; constructing the roundabout features; landscaping; and installing the tidal flap gate and separation device. Groundwater is first encountered generally at depths of 4 to 20 feet near the project site and is likely to be encountered during installation or relocation of these utilities, systems and structures.

Recommendations to address historical leaks from USTs and other historical releases from industrial facilities are listed below.

- Because hydrocarbon and chlorinated solvent contamination in groundwater is widespread in the project area, it is recommended that soil samples and groundwater samples, if appropriate, be collected and analyzed for petroleum hydrocarbons and chlorinated solvents as part of the preliminary site investigation conducted during the design phase of the project for any location where project activities include subsurface work that would make contact with soils in the capillary fringe or encounter groundwater.
- If subsurface activities would disturb only unsaturated shallow soil above the capillary fringe in an area adjacent to a property with a historical leaking UST (i.e., not encounter groundwater), soil and groundwater data for the property should be reviewed during the design phase of the project. This information should be considered to determine whether an intrusive investigation, such as collecting and analyzing soil samples, is warranted as part of a preliminary site investigation.
- The City of Berkeley has indicated that PSC, which has been in operation for more than 80 years, is slated for closure/decommissioning in mid-2018. Prior to subsurface/intrusive activities adjacent to the PSC properties, it is recommended that the BTMD and the lead environmental agency (undetermined as of April 26, 2018) be consulted regarding the up-to-date soil and remediation efforts specifically related to the plant closure activities. The BTMD Lead Inspector for the PSC facility closure is Ms. Carrie Estadt (510-981-7469).
- It is recommended that the lead agency for the WRE/ColorTech site (currently the Water Board) be contacted as part of the preliminary site investigation to determine the most current extent of Cr(VI)-impacted subsurface media in the project vicinity, the site's current status, and whether intrusive investigation, such as the collection of groundwater or soil samples, is warranted.
- It is recommended that the lead agency for the Terminal Manufacturing Company site (currently the Water Board) be contacted as part of the preliminary site investigation to determine the extent of PCE contamination in the project vicinity, the site's current status, and whether intrusive investigation, such as the collection of groundwater or soil samples, is warranted.

Spills and Releases Associated with Historical Railroad Usage. Impacts from historical releases of chemicals to soil or groundwater associated with railroad usage in the project site vicinity could occur if contaminated media are encountered during excavations or trenching to install light pole foundations, install or relocate utilities, or landscaping.

- If soil would be disturbed in the vicinity of the UPRR ROW or the abandoned railroad spur located near the centerline of 2nd Street, the sampling plan for the preliminary site investigation should consider the collection and analysis of soil samples for chemicals that may have been used or spilled, including metals, petroleum hydrocarbons, VOCs, PAHs, pesticides and herbicides.

Partial Property Acquisitions and Easements. Specific recommendations for properties that would be partially acquired in fee or by easement are as follows:

- *Golden Gate Fields Acquisition (Assessor's Parcel Number [APN]: 60-2535-1)*. The project site within the Golden Gate Fields property consists of fill that was placed there in the early 20th century, and the property is in proximity to I-80. It is recommended that soil be sampled within the approximately 0.1-acre acquisition and analyzed for petroleum hydrocarbons, PAHs and metals. Attention should be paid to landscaped areas that have not historically been covered by pavement and any low-lying areas, such as ditches or swales.
- *Tom Bates Regional Sports Complex Partial Acquisition (APN: 60-2529-1-3)*. The project site within the sports complex property consists of fill that was placed there in the early 20th century, and the property is in proximity to I-80. It is recommended that soil be sampled within the approximately 0.45-acre acquisition area and analyzed for petroleum hydrocarbons, PAHs and metals, particularly lead. Attention should be paid to non-paved, low-lying areas, such as ditches or swales.

The following measures are recommended to generally address the potential to encounter hazardous waste during construction:

- If soil, groundwater or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (for example, identified by odor or visual staining), or if any USTs, abandoned drums or other hazardous materials or wastes are encountered, work shall cease in the vicinity of the suspect material, the area shall be secured as necessary, and all appropriate measures shall be taken to protect human health and the environment. Appropriate measures shall include notification of regulatory agency(ies), such as the Water Board, DTSC, BTMD, and Alameda County Department of Environmental Health, and the various regulatory agencies' laws, regulations and policies shall be followed.
- Soil generated by construction activities shall be stockpiled onsite in a secure and safe manner. All contaminated soils determined to be hazardous or non-hazardous waste shall be adequately profiled (sampled and analyzed) prior to acceptable reuse or disposal at an appropriate offsite facility. Specific sampling, handling and transport procedures for reuse or disposal shall be in accordance with applicable local, state and federal agency requirements, particularly the Water Board, DTSC, BTMD, and Alameda County Department of Environmental Health. Additionally, waste characterization soil samples should be analyzed as required by the accepting landfill.
- Groundwater pumped from the subsurface shall be contained onsite in a secure and safe manner, sampled and analyzed as needed prior to treatment and disposal/discharge to ensure environmental and health issues are resolved pursuant to applicable local, state and federal laws, regulations and policies.
- Material from structures that are removed or modified during the project will be handled and disposed of in accordance with all local, state, and federal requirements.

7.0 LIMITATIONS

To achieve the project-specific objectives, Parsons was required to base conclusions on the best information available during the period of investigation and within the limits prescribed by the Alameda County Transportation Commission, Caltrans and other project stakeholders.

No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. Therefore, Parsons cannot guarantee the investigations completely defined the degree or extent of any contamination by hazardous or otherwise harmful substances described in the report or its absolute absence. Professional judgment was exercised in gathering and analyzing all information obtained, and the usual care, thoroughness, and competence of the environmental profession are always employed.

Parsons' reports are not a legal opinion. Only legal counsel retained by the Alameda County Transportation Commission and/or Caltrans is competent to determine the legal implications for the Alameda County Transportation Commission and/or Caltrans regarding any information or conclusions in a report.

Parsons is not responsible for any effect upon the legal rights, obligations, or liabilities of any party or for any effect on the finance-ability, marketability, or value of the property investigated in any study; or for the occurrence or non-occurrence of any transaction involving the property.

The report, inclusive of all interpretations and conclusions stated therein, is based upon data collected during site review of the referenced published documents cited and selected site visits. The report is intended for the sole use of the Alameda County Transportation Commission and only for the purposes stated, within a reasonable time from the date of issuance. This report is not intended or represented to be suitable for reuse by the Alameda County Transportation Commission or others on extension of the project or on any other project. Any reuse without specific written verification or adoption by Parsons will be at the Alameda County Transportation Commission's sole risk and without liability or legal exposure to Parsons, and the Alameda County Transportation Commission shall indemnify, defend and hold harmless Parsons from all claims, damages, losses and expenses including attorney's fees arising out of or resulting therefrom. Any such verification or adoption shall entitle Parsons to further compensation at rates to be agreed upon by the Alameda County Transportation Commission and Parsons.

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FIGURES

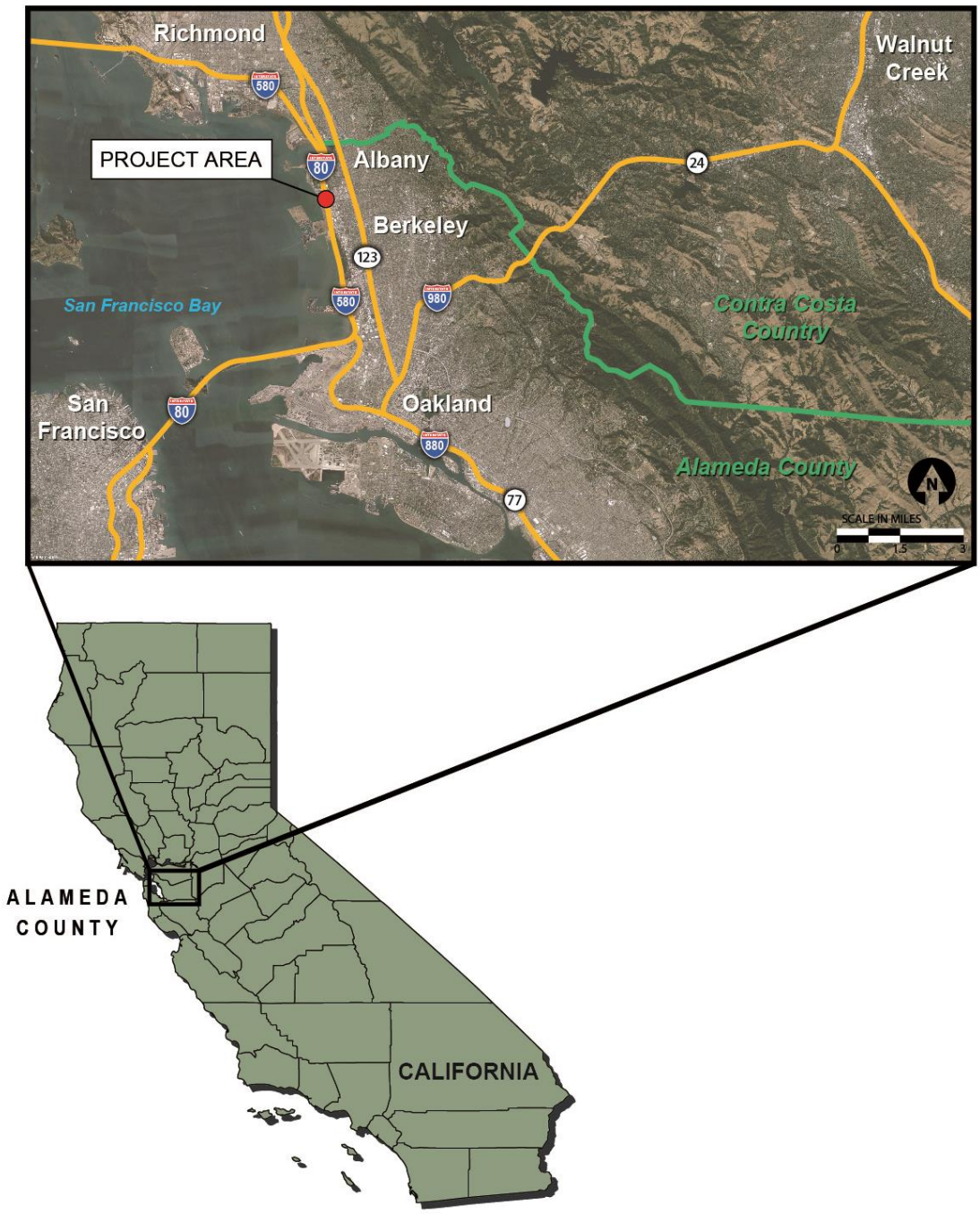

Figure 1: Project Vicinity

Figure 2: Project Location

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
04	ALA	80	6.38–6.95		--

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — R. S. PIMENTEL — No. C46102 — Exp. 12-31-18 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

PARSONS
555 12TH ST, STE 1850
OAKLAND, CA 94607

ALAMEDA CTC
1111 BROADWAY #800
OAKLAND, CA 94607

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

CONSULTANT FUNCTIONAL SUPERVISOR: RODNEY PIMENTEL

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

DATE PLOTTED => 7/24/2018
TIME PLOTTED => 3:16:48 PM

LAST REVISION 00-00-00

BORDER LAST REVISED 7/2/2010

USERNAME => P009501A
DGN FILE => Layout 100 scale - Gilman Project Overview.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0000

PROJECT NUMBER & PHASE 04000201551

Figure 3: Roundabout Alternative

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Figure 4: Site Identifier Map

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APPENDIX A
EDR Database Report

(CD-ROM)

CD Containing
Appendix A
Included

APPENDIX B
EDR Historical Aerial Photos (CD-ROM)

CD Containing
Appendix B
Included

APPENDIX C
EDR Historical Topographical Maps (CD-ROM)

CD Containing
Appendix C
Included

APPENDIX D
EDR City Directory Image Report (CD-ROM)

CD Containing
Appendix D
Included

APPENDIX E
EDR Certified Sanborn® Report (CD-ROM)

CD Containing
Appendix E
Included

APPENDIX F
Photographic Log

FINAL INITIAL SITE ASSESSMENT REPORT
INTERSTATE 80/GILMAN STREET INTERCHANGE IMPROVEMENT PROJECT

Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvement Project

Photograph 1

Address: Gilman Street, west of westbound I-80 off-ramp

Date: 04/16/2018

Description: Entry to Golden Gate Fields stables

View direction: northwest

Photograph 2

Address: West Frontage Road, south of Gilman Street

Date: 04/16/2018

Description: Bike path (San Francisco Bay Trail) located between Tom Bates Regional Sports Complex and West Frontage Road

View direction: north

Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvement Project

Photograph 3

Address: Bike path and West Frontage Road, south of Gilman Street

Date: 04/16/2018

Description: Approximate location of proposed bicycle/pedestrian overcrossing of I-80

View direction: south

Photograph 4

Address: Eastshore Highway and I-80 Gilman Street exit, south of Gilman Street

Date: : 04/16/2018

Description: Approximate location of proposed bicycle/pedestrian overcrossing of I-80

View direction: north

Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvement Project

Photograph 5

Address: Golden Gate Fields lower parking lot south of Turf Club, and road leading to upper parking lot

Date: 04/16/2018

Description: Area for proposed repaving and restriping of parking lot and added lighting and landscaping

View direction: north

Photograph 6

Address: Golden Gate Fields Parking Lot A adjacent to southwest side of the racetrack.

Date: : 04/16/2018

Description: In area slated for proposed repaving and restriping of parking lot and added lighting and landscaping

View direction: south

Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvement Project

Photograph 7

Address: Gilman Street south of Golden Gate Fields, north of the Tom Bates turf fields

Date: 04/16/2018

Description: Viewing area of proposed hydrodynamic separator

View direction: east

Photograph 8

Address: Tom Bates Sports Complex northern parking lot

Date: 04/16/2018

Description: Proposed project staging area

View direction: west

Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvement Project

Photograph 9

Address: Western terminus of Gilman Street, southwest of Golden Gate Fields, northwest of the Tom Bates turf fields

Date: 04/16/2018

Description: Outfall (during low tide) from Gilman watershed into San Francisco Bay.

View direction: east

Photograph 10

Address: Buchanan Street Extension north of Gilman Street.

Date: 04/16/2018

Description: Proposed Bay Trail Extension work area

View direction: north

Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvement Project

Photograph 11

Address: Intersection of West Frontage Road, I-80 westbound on-ramp and Gilman Street

Date: 04/16/2018

Description: Electrical control boxes in median strip between roadways, in area of utility pole relocations

View direction: south

Photograph 12

Address: Westbound I-80 off-ramp at Gilman Street

Date: 04/17/2018

Description: Roadways and median strips adjacent to Golden Gate Fields

View direction: south

Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvement Project

Photograph 13

Address: I-80 Overcrossing

Date: 04/17/2018

Description: Homeless encampment under southern side of I-80 Gilman Street overcrossing, near proposed multi-use path

View direction: west

Photograph 14

Address: Intersection of Eastshore Highway and Gilman Street, east of I-80

Date: 04/17/2018

Description: Proposed roundabout, multi-use path and drainage work area

View direction: north

Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvement Project

Photograph 15

Address: Eastbound I-80 on-ramp at Gilman Street

Date: 04/17/2018

Description: Roadways and crosswalk between I-80 and Eastshore Highway

View direction: northwest

Photograph 16

Address: Eastshore Highway north of Gilman Street

Date: 04/17/2018

Description: Former Chevron gas station site (1285 Eastshore Highway, right foreground), Red-D-Arc equipment storage and Red-D-Arc (635 Gilman, background)

View direction: north

Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvement Project

Photograph 17

Address: 1331 Eastshore Highway

Date: 05/24/2016

Description: Berkeley Forge and Tool (arrow) with Pacific Steel Casting Company in background

View direction: north

Photograph 18

Address: Eastshore Highway adjacent to and north of Page Street

Date: 04/17/2017

Description: Materials and equipment storage on corner, Pacific Steel Casting Company manufacturing facility

View direction: north

Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvement Project

Photograph 19

Address: Property east of Eastshore Highway, north of Page Street

Date: 04/17/2018

Description: Materials and chemical tote storage.

View direction: northeast

Photograph 20

Address: 2nd Street, south of Page Street

Date: 04/17/2018

Description: Poor conditions

View direction: south

Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvements Project

Photograph 21

Address: 2nd Street north of Page Street

Date: 04/17/2018

Description: Pacific Steel Casting Company Plant 2 on west side, abandoned railroad spur north/south on east side of 2nd Street

View direction: southwest

Photograph 22

Address: Intersection of Gilman Street and 2nd Street

Date: 04/17/2018

Description: Red-D-Arc/AirGas /NESCO (635 Gilman Street, northwest corner) and Berkeley Recycling / Solid Waste Management Center (1235 2nd Street, northeast corner)

View direction: northwest

Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvement Project

Photograph 23

Address: 2nd Street, at Gilman Street, viewing toward 3rd Street//UPRR

Date: 04/17/2017

Description: Berkeley Recycling / Solid Waste Management Center building in background

View direction: east

Photograph 24

Address: 1235 2nd Street

Date: 04/17/2017

Description: Berkeley Recycling / Solid Waste Management Center

View direction: east

Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvement Project

Photograph 25

Address: 707 Gilman Street

Date: 04/17/2018

Description: Terminal Manufacturing Company and Union Pacific Railroad mainline crossing

View direction: northeast

Photograph 26

Address: 5th Street

Date: 04/16/2018

Description: Northeastern extent of project footprint (Gabe Cataflo Fields to the right, beyond parked cars)

View direction: south/southwest

Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvement Project

Photograph 27

Address: 5th Street, north of Harrison Street

Date: 04/16/2018

Description: Northeastern extent of project footprint (Gabe Cataflo Fields to the left in background)

View direction: north

Photograph 28

Address: 4th Street and Gilman Street

Date: 04/17/2018

Description: Intersection for proposed bus stop removal and traffic signal at protected intersection

View direction: west

Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvement Project

Photograph 29

Address: 1255 Eastshore Highway, south of Harrison Street

Date: 04/17/2018

Description: Northwest edge of subject property, currently undergoing improvements

View direction: west

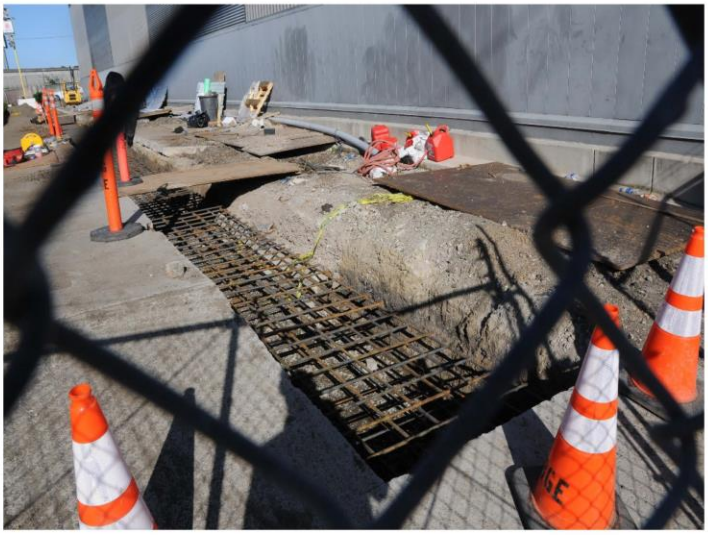
Photograph 30

Address: 1255 Eastshore Highway, south of Harrison Street

Date: 04/17/2018

Description: Northwest edge of subject property, currently undergoing improvements

View direction: west



Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvement Project

Photograph 31

Address: UPRR tracks (3rd Street) and Gilman Street

Date: 04/17/2018

Description: Marked Kinder Morgan fuel line along west side of UPRR tracks

View direction: south

Photograph 32

Address: 1350 4th Street, north of Camelia Street

Date: 04/17/2018

Description: Open storage lot for 1350 4th Street operations

View direction: west/northwest

Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvement Project

Photograph 33

Address: 1225 6th Street

Date: 04/17/2018

Description: WRE/Colortech west side of property

View direction: north

Photograph 34

Address: 1316 Eastshore Highway, south of Gilman Street

Date: 04/17/2018

Description: Pacific Steel casting conducting operations

View direction: east

Photographic Log
Initial Site Assessment Final Report
I-80/Gilman Street Interchange Improvement Project

Photograph 35

Address: Intersection of Page Street and 2nd Street

Date: 04/17/2018

Description: Abandoned rail tracks trending on 2nd Street.

View direction: north

Photograph 36

Address: 600 Gilman Street, south side of Gilman Street, west of 2nd Street

Date: 04/17/2018

Description: Current Budget Rent-a-Car facility

View direction: west

APPENDIX G
Selected Historical Environmental Releases Site Maps and Data (CD-ROM)

CD Containing
Appendix G
Included