



Appendix F

WATER QUALITY TECHNICAL REPORT



# WATER QUALITY TECHNICAL REPORT

## San Diego River Trail Qualcomm Stadium Segment



San Diego River Trail – Qualcomm Stadium Segment  
San Diego County  
City of San Diego

**October 20, 2015**

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## 1.0 INTRODUCTION

This Water Quality Technical Report (WQTR) has been developed for the San Diego Association of Governments (SANDAG) in conjunction with the City of San Diego to identify and summarize the permanent storm water management features for the proposed Qualcomm Stadium Segment of the San Diego River Trail.

### 1.1 Project Description

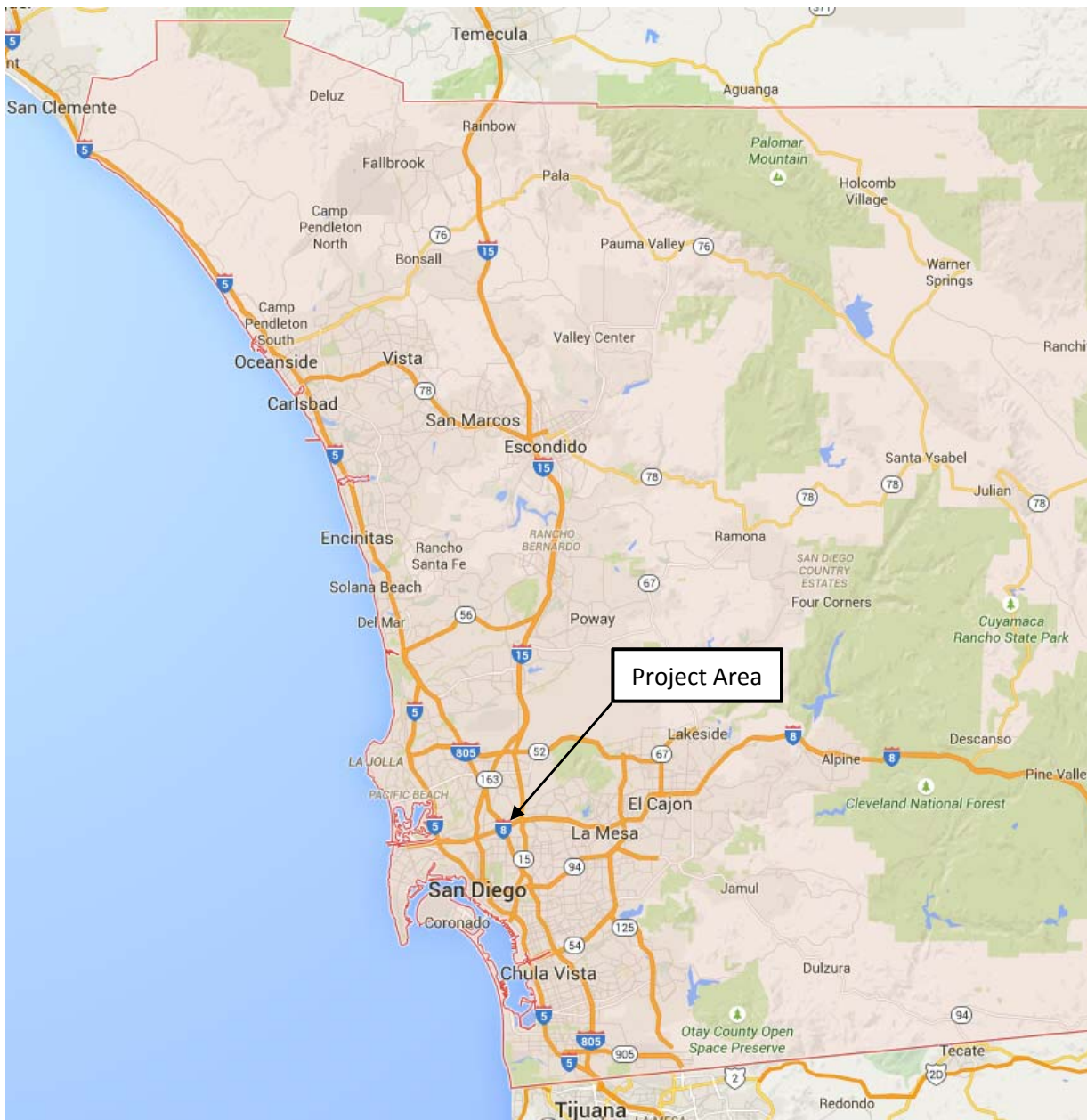
The San Diego Association of Governments (SANDAG) proposes to construct an approximately 0.8-mile segment of the San Diego River Trail (SDRT) through Qualcomm Stadium in the Mission Valley community of the City of San Diego. The proposed Qualcomm Segment of the SDRT would extend eastward from the terminus of Fenton Parkway along a vegetated slope behind the Fenton Marketplace shopping center and through the southern portion of the Qualcomm Stadium parking lot to connect with Rancho Mission Road.

The proposed project is located in a developed area with residential and commercial uses to the west, north, and east. The San Diego River is located adjacent to the proposed trail on the south, with commercial office development on the south side of the river. Most of the trail would occur on existing paved surfaces within the stadium parking lot, which is topographically flat. The western end of the proposed trail would occur on a slope behind the shopping center that contains some dense vegetation. The proposed trail would be constructed as a Class I bikeway, which is a path that provides a separated right-of-way for the exclusive use of people walking and riding bikes.

### 1.2 Vicinity Map

The Qualcomm Stadium Segment of the San Diego River Trail is located in the City of San Diego in the southwestern portion of San Diego County. The project area, shown in the Vicinity Map below, is west of Interstate 15 between Friars Road and Interstate 8, and east of Fenton Parkway. The San Diego River flows westward along the southern edge of Qualcomm Stadium and along the north side of Interstate 8.





### 1.3 Determination of Permanent Best Management Practices Requirements

The City of San Diego’s Storm Water Requirements Applicability Checklist establishes the criteria and requirements for permanent Best Management Practices (BMPs). Projects are identified as one of three categories: Priority, Standard, or Exempt.

The Qualcomm Stadium Segment of the San Diego River Trail is classified as a Standard Development Project (SDP), based on the City of San Diego Storm Water Standards manual (January 2012). Project characteristics that result in the SDP determination can be summarized as follows:

1. The project proposes grading or soil disturbance.
2. Storm water or urban runoff has the potential to contact a portion of the construction area.
3. The project will utilize construction materials that could negatively affect water quality if discharged from the site.
4. The project will disturb less than one acre of erodible material during the construction phase and, therefore, is not subject to California's statewide General NPDES Permit for Storm Water Discharges.

A portion of the project is located within a Water Quality Sensitive Area, as designated by the City of San Diego and depicted in Appendix C of the City of San Diego Storm Water Standards. However, the portion of the project, within the stadium parking lot and the connection to Rancho Mission Road, does not propose any new impervious surfaces. Project improvements within the Water Quality Sensitive Area will be located on existing impervious surfaces and no new impervious surfaces are proposed.

A portion of the project where new impervious surfaces are proposed, between Fenton Parkway and the stadium parking lot, is not within, directly adjacent to, or discharging directly to a Water Quality Sensitive Area. "Directly adjacent" is defined as being situated within 200 feet of the Water Quality Sensitive Area. "Discharging directly to" is defined as outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands. The project's new impervious surfaces do not meet the criteria for "within, directly adjacent to, or discharging directly to a Water Quality Sensitive Area".

A copy of the Storm Water Requirements Applicability Checklist is included in Appendix A of this report. The proposed drainage plan exhibits are included in Appendix B of this report.

## 1.4 Drainage Area Characteristics

According to the Water Quality Control Plan for the San Diego Basin (San Diego Regional Water Quality Control Board (RWQCB)), the Qualcomm Stadium Segment of the San Diego River Trail is located in the Lower San Diego Hydrologic Area (907.1) within the San Diego River Hydrologic Unit, which encompasses approximately 440 square miles in southwest San Diego County and discharges into the Pacific Ocean. The watershed has the highest population of the county's watersheds and contains portions of the cities of San Diego, El Cajon, La Mesa, Poway, and Santee as well as several unincorporated areas. The majority of the watershed is undeveloped, primarily in the eastern portion, but the western portion has predominant land uses that include residential, commercial/industrial, and freeways/roads. Major water bodies in the watershed are the San Diego River, El Capitan Reservoir, San Vicente Reservoir, Lake Murray, Boulder Creek, and the Santee Lakes.

The San Diego River originates in the Cuyamaca Mountains and flows generally west approximately 52 miles to the Pacific Ocean in the community of Ocean Beach. Areas within the watershed including Cleveland National Forest, Mission Trails Regional Park, and the flood plain near Lakeside host several varieties of endangered species such as the arroyo toad, least bell's vireo, and the southwestern pond turtle. The Famosa Slough, near the mouth of the San Diego River, also contains wetlands habitat (Project Clean Water).

### 1.4.1 Beneficial Water Uses

Pursuant to the California Water Code Section 13240 and the Clean Water Act (CWA) Section 303, all surface waters and groundwaters in the San Diego region are assigned beneficial uses by the RWQCB in an adopted Basin Plan. The Basin Plan defines beneficial uses as the uses of water necessary for the survival or well-being of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals of mankind. Examples include drinking, swimming, industrial and agricultural water supply, and other support for fresh and saline aquatic habitats. Beneficial uses of the inland surface waters and the groundwater basins must not be threatened by the proposed project.

As listed below, beneficial water uses in the Lower San Diego Hydrologic Area include agricultural supply, contact water recreation, and freshwater and wildlife habitat.

Beneficial Uses	Inland Surface Water	Groundwater	Reservoirs and Lakes	Coastal Waters
Municipal and Domestic Supply	Potential	Existing	Existing	
Agricultural Supply	Existing	Existing		
Industrial Service Supply	Existing	Existing	Existing	
Industrial Process Supply		Existing		
Contact Water Recreation	Existing		Existing	Existing
Non-Contact Water Recreation	Existing		Existing	Existing
Commercial and Sport Fishing				Existing
Preservation of Biological Habitats of Special Significance	Existing			
Estuarine Habitat				Existing
Warm Freshwater Habitat	Existing		Existing	
Cold Freshwater Habitat			Existing	
Wildlife Habitat	Existing		Existing	Existing
Rare, Threatened, or Endangered	Existing			Existing
Hydropower Generation			Existing	
Marine Habitat				Existing
Migration of Aquatic Organisms				Existing
Spawning, Reproduction, and/or Early Development				Existing
Shellfish Harvesting				Existing

Contact uses include, but are not limited to, swimming, wading, water-skiing, diving, surfing, and fishing. Non-contact uses include, but are not limited to, picnicking, sunbathing, hiking,

camping, boating, hunting, sightseeing, and aesthetic enjoyment in conjunction with the above activities.

#### **1.4.2 Impacts to Hydrologic Regime**

The proposed bike path will slightly change the hydrologic regime of the project site. Currently, pre-project runoff flows to the south and west along the Qualcomm Stadium parking lot and into the San Diego River. All proposed runoff would continue to flow to the south and west, but the introduction of new impervious area at the western end of the project area would slightly increase runoff rates. The project proposes to add approximately 7,700 square feet of new impervious surface consisting of paved trail surfacing.

## 2.0 IDENTIFICATION OF POLLUTANTS OF CONCERN

### 2.1 Potential Project Pollutants

The City of San Diego's Storm Water Standards Manual identifies potential project pollutants by various land use categories. The Qualcomm Stadium Segment of the San Diego River Trail is categorized as Streets, Highways, and Freeways land use. Anticipated pollutants for this type of land use include sediments, heavy metals, organic compounds (including petroleum hydrocarbons), trash and debris, oil and grease, bacteria and viruses. The primary pollutants that would be expected from the proposed bike path include minimal amounts of trash and debris. Because the bike path would prohibit vehicle use, sediments, heavy metals, organic compounds, and oil and grease would not be anticipated with the proposed improvements.

Potential pollutants for the Streets, Highways, and Freeways land use category include nutrients and pesticides (if landscaping exists on-site), and oxygen demanding substances (including solvents). However, the project improvements do not include landscaping. Therefore, the potential pollutants for this area will not be altered by the project.

### 2.2 Pollutants of Concern for Receiving Waters

As stated previously, the Qualcomm Stadium Segment of the San Diego River Trail is located in the Lower San Diego Hydrologic Area within the San Diego River Hydrologic Unit. Storm water from the project would flow south and west, eventually reaching the San Diego River south of the proposed project. Flows would eventually drain into the Pacific Ocean.

Section 303(d) of the Federal Clean Water Act requires States to identify and list waters that do not meet water quality standards after applying certain required technology-based effluent limits (impaired water bodies). The list is known as the Section 303(d) list of impaired waters.

Impaired bodies of water downstream from the project include the Famosa Slough and Channel, Pacific Ocean Shoreline (San Diego HU), and the San Diego River (lower). The Famosa Slough and Channel is listed as impaired for eutrophication, likely due to urban runoff and storm water. The Pacific Ocean Shoreline (San Diego HU) is listed as impaired for enterococcus bacteria and total coliform, with a probable source of pathogens from urban runoff and storm water. The San Diego River (lower) is listed as impaired for total dissolved solids, fecal coliform, dissolved oxygen, enterococcus bacteria, nitrogen, phosphorus, and toxicity, likely due to hydromodification, spills/dumping, natural/wildlife, and urban-related runoff/storm water. This data can be found on the Environmental Protection Agency's website at: [http://iaspub.epa.gov/waters10/attains\\_impaired\\_waters.impaired\\_waters\\_list?p\\_state=CA&p\\_cycle=2010](http://iaspub.epa.gov/waters10/attains_impaired_waters.impaired_waters_list?p_state=CA&p_cycle=2010).

### 3.0 HYDROMODIFICATION MANAGEMENT PLAN

The California Regional Water Quality Control Board San Diego Regional Permit Order R9-2007-0001 requires the San Diego Storm Water Copermittees (including the City of San Diego) to implement a Hydromodification Management Plan (HMP). According to the City of San Diego Storm Water Standards, hydromodification refers to changes in a watershed's runoff characteristics resulting from urbanization or other land use changes that result in increased stream flows and sediment transport. In addition, alteration of stream and river channels, installation of dams and water impoundments, and excessive stream-bank and shoreline erosion are also considered hydromodification due to their disruption of natural watershed hydrologic process. HMP refers to the plan implemented by the dischargers so that post-project runoff shall not exceed estimated pre-project rates and/or durations, where increased runoff would result in increased potential for erosion of other adverse impacts to beneficial uses.

The City of San Diego Storm Water Standards require all SDPs to be designed so the discharge of pollutants to the City storm water conveyance system is reduced to the extent practicable and that the project does not cause or contribute to the violation of water quality standards in the receiving waters. Projects not classified as Priority Development Projects in conjunction with the City of San Diego Storm Water Standards are not subject to HMP controls. As stated previously, the Qualcomm Stadium Segment of the San Diego River Trail is categorized as a SDP and is, therefore, exempt from HMP criteria.

However, the project is subject to LID and water quality treatment requirements even though hydromodification flow controls are not required.

## 4.0 STORM WATER BEST MANAGEMENT PRACTICES (BMPs)

The City of San Diego Storm Water Standards Manual requires the implementation of applicable source control and low-impact development BMPs.

### 4.1 Source Control BMPs

Because the project is a SDP, source control BMPs must be incorporated into the design of the project to address anticipated pollutants. Source control BMPs generally refer to land use or site planning practices, or structures which are focused on the prevention of urban runoff pollution. They include permanent structural features incorporated into the project, as well as operational BMPs, which include street sweeping and similar practices, that must be implemented by the site's occupant or user. Source control BMPs are designed to reduce the potential for contamination by controlling it at the source and minimizing the contact between pollutants and urban runoff. The table below provides a summary of the source control BMPs, associated activities, and applicability to the project.

Source Activity	Applicable to Project
Maintenance Bays	No
Vehicle and Equipment Wash Areas	No
Outdoor Processing Areas	No
Retail and Non-Retail Fueling Areas	No
Steep Hillside Landscaping	No
Efficient Irrigation Systems and Landscaping Design	No
Trash Storage Areas	No
Outdoor Material Storage Areas	No
Loading Docks	No
Integrated Pest Management	No
Storm Water Conveyance System Stamping and Signage	Yes
Fire Sprinkler Systems	No
Air Conditioning Condensate	No
Non-Toxic Roofing Materials	No
Other Source Control Requirements	Yes

Sources identified as applicable to the project are discussed in more detail in the following sections. Italicized text is copied from Section 3.1 of the City of San Diego Storm Water Standards.

#### 4.1.1 Storm Water Conveyance System Stamping and Signage

- *Concrete stamping, or approved equivalent method, shall be provided for all storm water conveyance system inlets and catch basins within the project area.*

- *Language associated with the stamping must be satisfactory to the City Engineer. Stamping may also be required in Spanish.*
- *Post signs and prohibitive language which prohibit illegal dumping at trailheads, parks, building entrances and public access points along channels and creeks within the project area.*

There are existing storm drain inlets within the project area adjacent the west end of the proposed bike path. Signs and prohibitive language would be installed at the City of San Diego's request to prohibit illegal dumping at the trailhead and at access points within the project area.

#### **4.1.2 Other Source Control Requirements**

- *Require implementation and post-construction soil stabilization practices, such as the re-vegetation of construction sites, [as required through the project's regulatory permits]*
- *Provide trash receptacles in areas of high pedestrian traffic.*

The project would implement soil stabilization measures in compliance with the project's regulatory permits. The proposed project may also include trash receptacles at various locations along the length of the bike path, which would adhere to City of San Diego standards and include attached lids to prevent rainfall intrusion. The project would meet all applicable source control guidelines shown above.

## **4.2 Low-Impact Development BMPs**

According to the City of San Diego Storm Water Standards, the Qualcomm Stadium Segment of the San Diego River Trail is subject to low-impact development (LID) design standards. Projects subject to SDP requirements must implement applicable source control BMPs as well as LID design practices. The objectives of LID BMP requirements are to detain and filter runoff using natural features. Additionally, according to the City of San Diego Storm Water Standards, storm water retention for storm water reuse, although potentially beneficial, is not specifically required as part of the LID requirements. Suitable LID facilities are those that retain, reuse, or promote evapotranspiration of storm water.

### **4.2.1 Optimize the Site Layout**

Optimization of the project site layout is achieved by preserving natural drainage features and minimizing paving. The Qualcomm Stadium Segment of the San Diego River Trail would use the minimum width for the traveled way as stated in Caltrans Highway Design Manual (HDM), Chapter 1000. The proposed bike path alignment is optimized by aligning the majority of the path along existing paved surfaces, maximizing distance from the river at the western end of the path, and using retaining structures at various points along the bike path to reduce imported borrow and minimize encroachment into riparian areas along the San Diego River.

### **4.2.2 Minimize Impervious Footprint**

The western segment of the proposed bike path would be constructed according to engineering standards mandated by the Caltrans HDM, which states that the minimum paved width of travel way for a two-way bike path is 14 feet, including 10-foot traveled way and 2-foot shoulders



adjacent to the traveled way. Due to these required standards, the bike path width and its corresponding impervious area are minimized to the greatest extent practicable. The proposed project improvements would increase the impervious area by approximately 7,700 square feet or 0.18 acre.

The remainder of the path would be aligned along existing paved surfaces through the Qualcomm Stadium parking lot.

#### **4.2.3 Disperse Runoff to Adjacent Landscaping**

Drainage from the various areas within the project footprint would be directed to various storm drains and controls. At the western end of the project area, a new culvert connection from the proposed bike path to the existing open channel adjacent the recycling center would be constructed. The culvert would drain into a proposed bioretention basin adjacent the open channel. The open channel currently drains southward into the San Diego River via two parallel culverts.

The western segment of the proposed bike path would be constructed to drain all storm water off the pavement and into an adjacent 2.5-foot wide bioswale. The bioswale would be connected to the proposed bioretention basin utilizing a series of drainage inlets and underground culverts. The remainder of the bike path through the Qualcomm Stadium parking lot would be constructed on existing impervious surfaces and generally would not alter existing runoff conditions.

#### **4.2.4 Construction Considerations**

Soil compaction would be minimized as much as possible for areas of the project site designated for storm water treatment. This meets the objectives of the City of San Diego Storm Water Standards for LID design methods.

#### **4.2.5 Additional Considerations**

All proposed slopes would be stabilized with hydroseed or equivalent erosion control measures in accordance with the approved project design. Runoff would be conveyed away from the tops of slopes throughout the project. Energy dissipation devices would be placed, if necessary, at locations where storm water flows may cause erosion or other damage to reduce the potential for impacts to receiving waters.

### **4.3 Construction BMPs**

During construction, standard construction BMPs such as desilting basins, silt fences, sand bags, gravel bags, fiber rolls, and other erosion control measures may be employed consistent with the NPDES Storm Water Pollution Prevention Plan (SWPPP). The objectives of the SWPPP are listed below.

- Identify all pollutant sources, including sources of sediment that may affect the water quality of storm water discharges associated with construction activity from the construction site.

- Identify non-storm water discharges.
- Identify, construct, implement in accordance with a time schedule, and maintain BMPs to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the construction site during construction.

Regular inspection of all construction BMPs shall occur by a qualified person specifically trained in storm water pollution prevention site management and storm water BMPs, including the installation and maintenance of sediment and erosion control measures. The objectives of the regular inspections are to ensure the owner/contractor takes full responsibility for managing storm water pollution caused by the project site's construction activities and that storm water BMPs are properly documented, implemented, and functioning effectively, to identify maintenance and repair needs, and to ensure that project proponents implement site-specific storm water pollution prevention plans. Inspections shall occur as detailed in the project SWPPP, which will be completed prior to construction.

## **5.0 OPERATION AND MAINTENANCE OF STORM WATER CONTROL MEASURES**

The Applicant will install and maintain the storm water control measures and BMPs associated with the project during construction. The City of San Diego will take over operation and maintenance after the completion of construction.

The source control and LID BMP for the project requiring permanent maintenance is the bioretention basin. The following sections discuss inspection and maintenance criteria and activities for the project BMPs requiring permanent maintenance.

### **5.1 Bioswale and Bioretention Basin**

Routine maintenance of the proposed bioswale and bioretention basin would include removal and disposal of sediment, litter, debris, and other accumulated materials. Inspection of the bioswale and basin should include monitoring accumulation of sediment, litter, and debris at the inlets, culverts, and basin outlet, as well as the presence of any standing water which could indicate a clog in the culverts or the basin outlet. If the drain components are found to be clogged, action must be taken to ensure proper functioning of the bioswale and bioretention basin.

The Owner should ensure the implementation and funding of the maintenance for the permanent BMPs on the project site.

## 6.0 GEOLOGIC INVESTIGATION REPORT

The purpose of the *San Diego River Trail Qualcomm Stadium Segment Draft Geotechnical Desktop Study*, prepared by Allied Geotechnical Engineers, Inc. (July 31, 2015), was to evaluate potential major geologic issues and constraints which could impact the proposed bike path alignment. The study is summarized in the following sections.

### 6.1 Geologic Conditions

The project alignment is located within the Peninsular Ranges geomorphic province, a north-south oriented mountain range which extends from the southern edge of the Los Angeles Basin into Baja California, Mexico. The alignment is situated within the San Diego Embayment, a deep sedimentary-filled basin which is underlain at depth by the basement rock complex. The sedimentary formations consist of nearly flat-lying to gently southwest dipping, marine and non-marine sediments.

Based on a review of the cross-sections and logs of test borings prepared for the design of the North Mission Valley Interceptor Sewer (NMVIS) in the project vicinity, it appears that the entire project alignment is underlain by man-made fill of variable thickness ranging from approximately 10 feet to over 20 feet. Beginning during World War II, sand and gravel mining operations stripped away most of the natural deposits along the river, down to below the groundwater table. These areas have since been refilled for later development. The composition of the fill materials encountered in the SDGC borings and test borings performed for the Mission Valley West Light Rail Transit (LRT) Extension (1999) includes a wide range of materials from silt to gravels and cobbles. Documentation regarding the source and original placement of the fill materials is not available.

The fill materials are underlain by Quaternary alluvial deposits. The alluvium consists of channel, floodplain, and estuary deposits laid down by the San Diego River. These deposits have been disturbed by mining in many places. Based on a review of the Mission Valley West LRT Extension test borings, the depth of the alluvium along the project alignment is estimated to be on the order of 50 feet below the ground surface (bgs) or greater.

Given the proximity of the project alignment to the San Diego River, shallow to near-surface groundwater is anticipated along proposed project alignment. The SDGC borings reportedly encountered groundwater at an approximate depth varying from 9 to 15 feet bgs. These depths correspond to elevations of 38 feet to 42 feet mean sea level. The project alignment is also located within the 100-year flood zone.

### 6.2 Geologic Hazards

San Diego County is located in a seismically active area, typical of the southern California region. The project alignment is likely to experience moderate to severe ground shaking in response to a local or more distant large magnitude earthquake occurring during the expected life span of the proposed project.

The project alignment is subject to moderate to severe ground shaking in response to a major earthquake occurring on the RCFZ or on one of the major regional active faults. The closest active regional faults to the project alignment with recurring magnitude 4.0 and greater earthquakes are the Coronado Bank, the Vallecitos-San Miguel, and the Elsinore fault zones. Other more distant, active regional faults that are considered potential sources of seismic activity include the offshore located San Diego Trough and San Clemente fault zones and some of the faults in Imperial Valley, which include the San Jacinto and San Andreas fault zones.

Seven known active faults have been identified within a search radius of 50 miles from the project alignment. The major seismic hazard affecting the project alignment would be seismic-induced ground shaking. The alignment will likely be subject to moderate to severe ground shaking in response to a local or more distant large magnitude earthquake occurring during the life of the proposed project. For project design purposes, the RCFZ shall be considered as the dominant seismic source.

Based on a review of the logs of the borings performed for the NMVIS, it appears that the fill materials have low to moderate liquefaction potential, whereas the alluvial deposits have low to high potential for liquefaction. Liquefaction phenomena along the project alignment most likely would manifest itself as local ground subsidence and settlement.

The project alignment is located within the 100-year flood plain. Seasonal flooding caused by overflows of Murphy Canyon Creek and/or San Diego River from heavy rainfall events should be anticipated.

### **6.3 Construction Considerations**

The proposed retaining walls will be designed using the Caltrans Standard Plans (2010 Edition) for Type 1 and Type 5 retaining walls. The wall heights have not been determined at the time of the preparation of this report. However, it is anticipated that maximum height of the proposed retaining wall is on the order of eight feet. It is recommended that the wall foundations be supported on properly compacted filled ground.

Construction of the elevated portion of the bikeway at the eastern terminus and along the slope between IKEA and the trolley line at the western terminus of the project alignment may require the construction of fill slopes. The new fill slopes are anticipated to be less than six feet in height and have a slope gradient of 2:1 (horizontal: vertical) or flatter.

Proposed excavations for the subject project are anticipated to be less than five feet in depth and, under normal conditions, are not expected to extend below the groundwater table. Therefore, the need for dewatering of foundation and trenched excavations made during construction is not anticipated.

The project alignment is located adjacent to the San Diego River and subject to seasonal flooding and high groundwater level. In the event that project construction is performed during a wet season, the use of shallow well points in combination with sump pumps may be required to keep the project excavations dry.

The retaining walls that will be constructed on the slope between IKEA and the trolley line at the western terminus of the project alignment may be located over the 78-inch diameter City of San Diego NMVIS. Considering the dimension and age of the sewer pipeline, further analysis should be performed to evaluate the loading impact from the retaining wall foundations on the existing sewer pipeline.

#### **6.4 Geologic Investigation Report Conclusion**

The findings of the desktop study are based on a cursory evaluation of readily available information, which is generally very limited and contains data gaps in many areas. Therefore, additional geotechnical studies are recommended to be performed for final design of the proposed project. Subsurface field exploration for the subject project should, at a minimum, include the performance of soil borings or test pits in the area of the proposed retaining walls.

## 7.0 CONCLUSION

The Qualcomm Stadium Segment of the San Diego River Trail is located in the Lower San Diego Hydrologic Area (907.1) within the San Diego River Hydrologic Unit.

The primary pollutants with the potential to be produced from the proposed bike path include trash and debris. Because the bike path would prohibit vehicle use, sediments, heavy metals, organic compounds, and oil and grease would not be anticipated with the proposed improvements.

The project is classified as a SDP, based on the City of San Diego Storm Water Standards manual (January 2012). A portion of the project is located within a Water Quality Sensitive Area, as designated by the City of San Diego and depicted in Appendix C of the City of San Diego Storm Water Standards. However, this portion of the project, within the stadium parking lot and the connection to Rancho Mission Road, does not propose any new impervious surfaces.

The City of San Diego Storm Water Standards require all SDPs to be designed so the discharge of pollutants to the City of San Diego storm water conveyance system is reduced to the extent practicable and that the project does not cause or contribute to the violation of water quality standards in the receiving waters.

New impervious surfaces of the proposed bike path would be constructed to drain all storm water off of new pavement surfaces into an adjacent 2.5-foot wide bioswale. The bioswale would be connected to a proposed bioretention basin utilizing a series of drainage inlets and underground culverts. The remainder of the bike path through the Qualcomm Stadium parking lot would be constructed on existing impervious surfaces and generally would not alter existing runoff conditions.

# **APPENDIX A**

Storm Water Requirements Applicability Checklist





City of San Diego  
 Development Services  
 1222 First Ave., MS-302  
 San Diego, CA 92101  
 (619) 446-5000

THE CITY OF SAN DIEGO

# Storm Water Requirements Applicability Checklist

FORM  
**DS-560**  
 JANUARY 2011

Project Address:	Project Number (for City Use Only):
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**SECTION 1. Permanent Storm Water BMP Requirements:**

Additional information for determining the requirements is found in the [Storm Water Standards Manual](#).

**Part A: Determine if Exempt from Permanent Storm Water BMP Requirements.**

Projects that are considered maintenance, or are otherwise not categorized as “development projects” or “redevelopment projects” according to the Storm Water Standards manual are not required to install permanent storm water BMPs. **If “Yes” is checked for any line in Part A, proceed to Part C and check the box labeled “Exempt Project.” If “No” is checked for all of the lines, continue to Part B.**

1. The project is not a Development Project as defined in the [Storm Water Standards Manual](#): for example habitat restoration projects, and construction inside an existing building.  Yes  No
2. The project is only the construction of underground or overhead linear utilities.  Yes  No
3. The project qualifies as routine maintenance (replaces or renews existing surface materials because of failed or deteriorating condition). This includes roof replacement, pavement spot repairs and resurfacing treatments such as asphalt overlay or slurry seal, and replacement of damaged pavement.  Yes  No
4. The project only installs sidewalks, bike lanes, or pedestrian ramps on an existing road, and does not change sheet flow condition to a concentrated flow condition.  Yes  No

**Part B: Determine if Subject to Priority Development Project Requirements.**

Projects that match one of the definitions below are subject to additional requirements including preparation of a Water Quality Technical Report.

**If “Yes” is checked for any line in Part B, proceed to Part C and check the box labeled “Priority Development Project.” If “No” is checked for all of the lines, continue to Part C and check the box labeled “Standard Development Project.”**

1. **Residential development of 10 or more units.**  Yes  No
2. **Commercial development and similar non-residential development greater than one acre.** Hospitals; laboratories and other medical facilities; educational institutions; recreational facilities; municipal facilities; commercial nurseries; multi-apartment buildings; car wash facilities; mini-malls and other business complexes; shopping malls; hotels; office buildings; public warehouses; automotive dealerships; and other light industrial facilities.  Yes  No
3. **Heavy industrial development greater than one acre.** Manufacturing plants, food processing plants, metal working facilities, printing plants, and fleet storage areas.  Yes  No
4. **Automotive repair shop.** Facilities categorized in any one of Standard Industrial Classification (SIC) codes 5013, 5014, 5541, 7532-7534, or 7536-7539.  Yes  No
5. **Restaurant.** Facilities that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption (SIC code 5812), and where the land area for development is greater than 5,000 square feet.  Yes  No
6. **Hillside development greater than 5,000 square feet.** Development that creates 5,000 square feet of impervious surface and is located in an area with known erosive soil conditions and where the development will grade on any natural slope that is twenty-five percent or greater.  Yes  No
7. **Water Quality Sensitive Area.** Development located within, directly adjacent to, or discharging directly to a Water Quality Sensitive Area (as depicted in Appendix C) in which the project either creates 2,500 square feet of impervious surface on a proposed project site or increases the area of imperviousness of a proposed project site to 10% or more of its naturally occurring condition. “Directly adjacent” is defined as being situated within 200 feet of the Water Quality Sensitive Area. “Discharging directly to” is defined as outflow from a drainage conveyance system that is composed entirely of flows from the subject development or redevelopment site, and not commingled with flows from adjacent lands.  Yes  No
8. **Parking lot with a minimum area of 5,000 square feet or a minimum of 15 parking spaces** and potential exposure to urban runoff (unless it meets the exclusion for parking lot reconfiguration on line 11).  Yes  No

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Upon request, this information is available in alternative formats for persons with disabilities.

9. **Street, road, highway, or freeway.** New paved surface in excess of 5,000 square feet used for the transportation of automobiles, trucks, motorcycles, and other vehicles (unless it meets the exclusion for road reconfiguration on line 11).  Yes  No
10. **Retail Gasoline Outlet (RGO)** that is: (a) 5,000 square feet or more or (b) has a projected Average Daily Traffic (ADT) of 100 or more vehicles per day.  Yes  No
11. **Significant Redevelopment;** project installs and/or replaces 5,000 square feet or more of impervious surface and the existing site meets at least one of the categories above. The project is not considered Significant Redevelopment if reconfiguring an existing road or parking lot without a change to the footprint of an existing developed road or parking lot. The existing footprint is defined as the outside curb or the outside edge of pavement when there is no curb.  Yes  No
12. **Other Pollutant Generating Project.** Any other project not covered in the categories above, that disturbs one acre or more and is not excluded by the criteria below.  Yes  No
- Projects creating less than 5,000 sf of impervious surface and where added landscaping does not require regular use of pesticides and fertilizers, such as slope stabilization using native plants. Calculation of the square footage of impervious surface need not include linear pathways that are for infrequent vehicle use, such as emergency maintenance access or bicycle pedestrian use, if they are built with pervious surfaces or if they sheet flow to surrounding pervious surfaces.*

**Part C: Select the appropriate category based on the outcome of Parts A & B.**

1. If "Yes" is checked for any line in Part A, then check this box. Continue to Section 2.  Exempt Project
2. If "No" is checked for all lines in Part A, and Part B, then check this box. Continue to Section 2.  Standard Development Project
3. If "No" is checked for all lines in Part A, and "Yes" is checked for at least one of the lines in Part B, then check this box. Continue to Section 2. See the Storm Water Standards Manual for guidance on determining if Hydromodification Management Plan requirements apply.  Priority Development Project

**SECTION 2. Construction Storm Water BMP Requirements:**  
**For all projects, complete Part D. If "Yes" is checked for any line in Part D, then continue to Part E.**

**Part D: Determine Construction Phase Storm Water Requirements.**

1. Is the project subject to California's statewide General NPDES Permit for Storm Water Discharges Associated with Construction Activities? (See State Water Resources Control Board [Order No. 2009-0009-DWQ](#) for rules on enrollment)  Yes  No
2. Does the project propose grading or soil disturbance?  Yes  No
3. Would storm water or urban runoff have the potential to contact any portion of the construction area, including washing and staging areas?  Yes  No
4. Would the project use any construction materials that could negatively affect water quality if discharged from the site (such as, paints, solvents, concrete, and stucco)?  Yes  No
5. Check this box if "Yes" is checked for line 1. Continue to Part E.  SWPPP Required
6. Check this box if "No" is checked for line 1, and "Yes" is checked for any line 2-4. Continue to Part E.  WPCP Required
7. Check this box if "No" is checked for all lines 1-4. Part E does not apply.  No Document Required

**Part E: Determine Construction Site Priority**

This prioritization must be completed with this form, noted on the plans, and included in the SWPPP or WPCP. The City reserves the right to adjust the priority of the projects both before and during construction. [Note: The construction priority does NOT change construction BMP requirements that apply to projects; rather, it determines the frequency of inspections that will be conducted by City staff.]

- 1. High Priority**  
 a) Projects where the site is 50 acres or more and grading will occur during the wet season  
 b) Projects 1 acre or more and tributary to an impaired water body for sediment (e.g., Peñasquitos watershed)  
 c) Projects 1 acre or more within or directly adjacent to or discharging directly to a coastal lagoon or other receiving water within a Water Quality Sensitive Area.  
 d) Projects subject to phased grading or advanced treatment requirements.
- 2 Medium Priority.** Projects 1 acre or more but not subject to a high priority designation.
- 3 Low Priority.** Projects requiring a Water Pollution Control Plan but not subject to a medium or high priority designation.

Name of Owner or Agent (Please Print):

Title:

Signature:

Date:

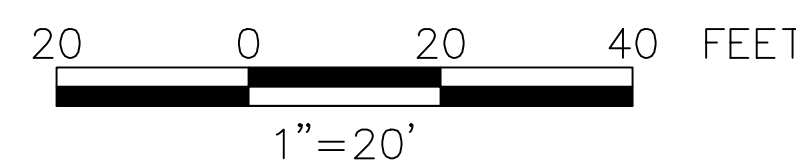
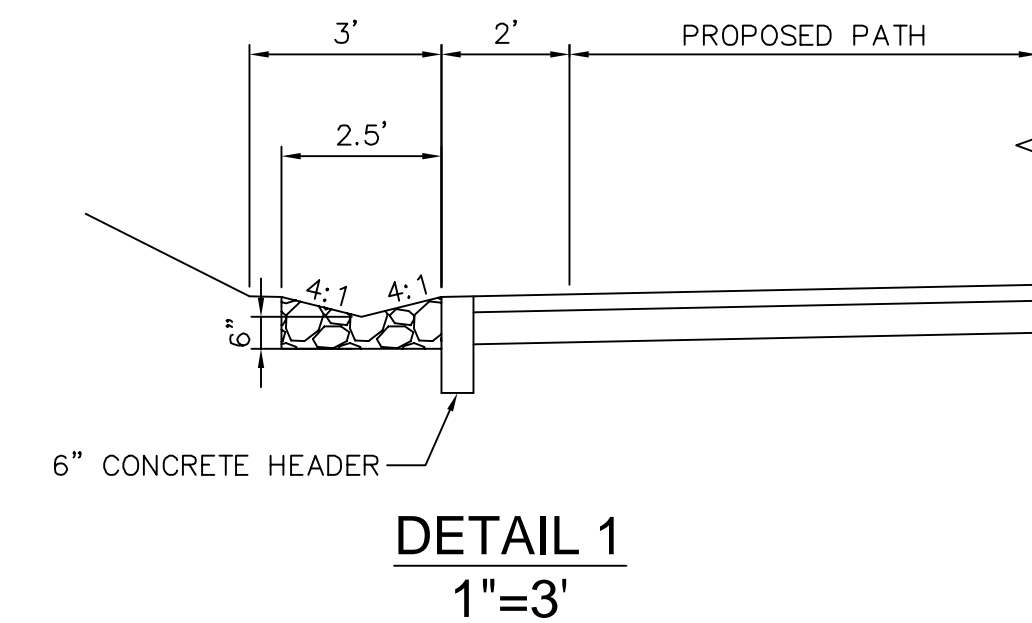
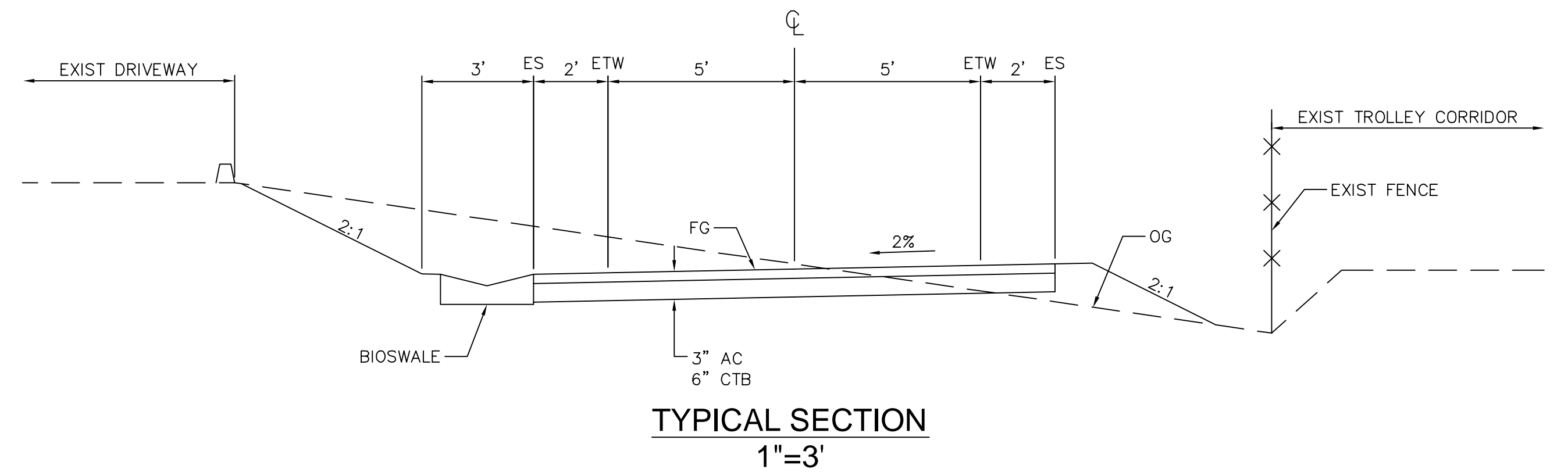
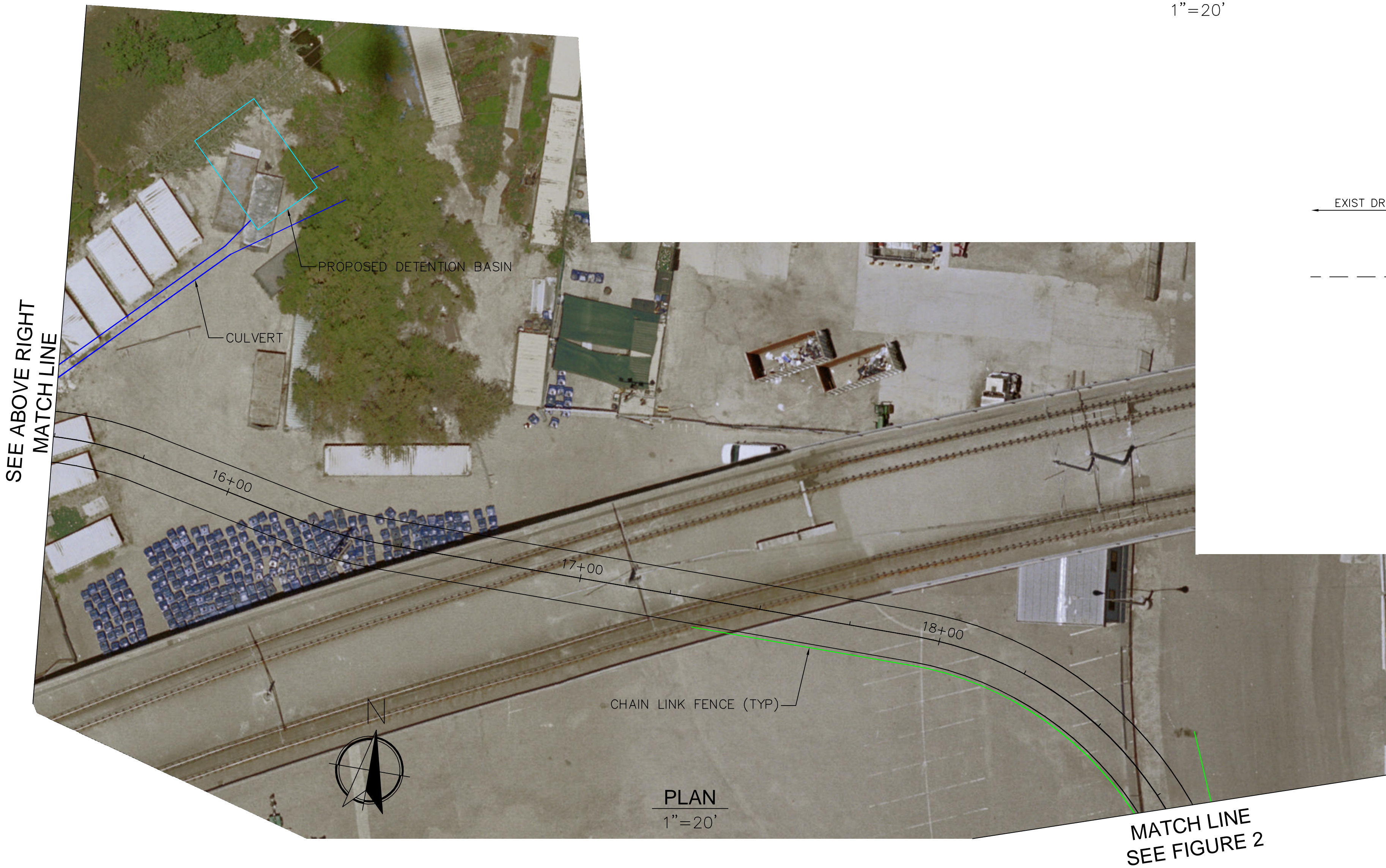
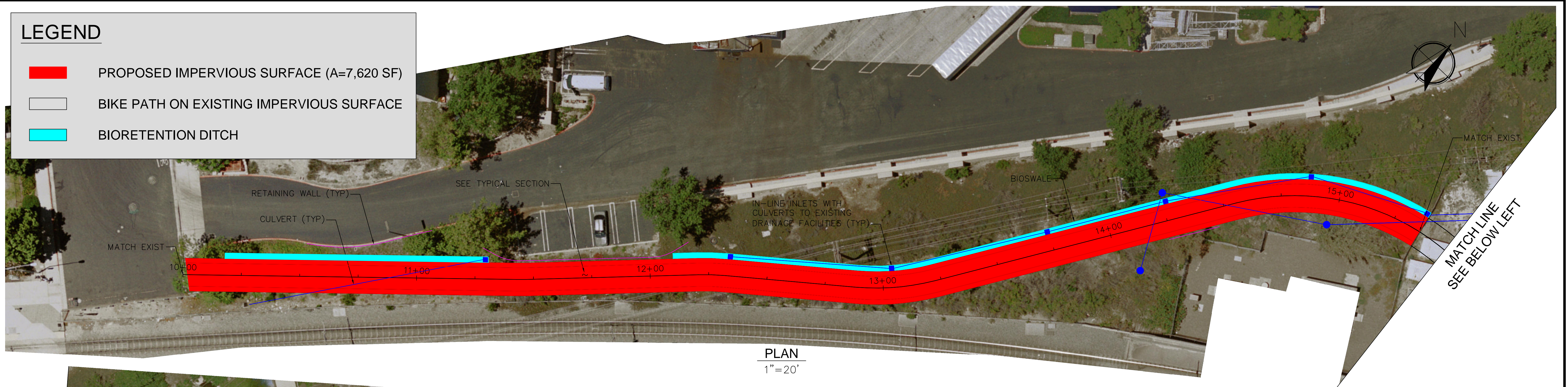
## **APPENDIX B**

San Diego River Trail – Qualcomm Stadium Segment Proposed Drainage Exhibits



**LEGEND**

- PROPOSED IMPERVIOUS SURFACE (A=7,620 SF)
- BIKE PATH ON EXISTING IMPERVIOUS SURFACE
- BIORETENTION DITCH

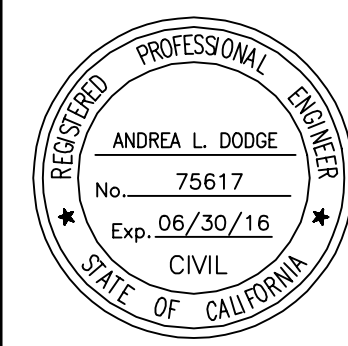


**SAN DIEGO RIVER TRAIL  
QUALCOMM STADIUM SEGMENT**

CITY OF SAN DIEGO, CALIFORNIA <small>Development Service Department</small>				I.O. NO. _____ PROJECT NO. _____
FOR CITY ENGINEER		DATE		V.T.M. _____
DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	QIC			
AS-BUILTS				XXXX-XXXX NAD83 COORDINATES
CONTRACTOR				XXX-XXXX LAMBERT COORDINATES
CONTRACTOR		DATE STARTED		FIGURE 1
INSPECTOR		DATE COMPLETED		

CONSTRUCTION CHANGE TABLE				
CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.	PROJECT NO.

0 1/2 1  
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



DESIGNED BY: A. DODGE, DATE: xx/xx  
 DRAWN BY: A. RIVERA, DATE: xx/xx  
 CHECKED BY: K. BRADBURY, DATE: xx/xx  
 SANDAG PRJ ENG: S. VANCE, DATE: xx/xx

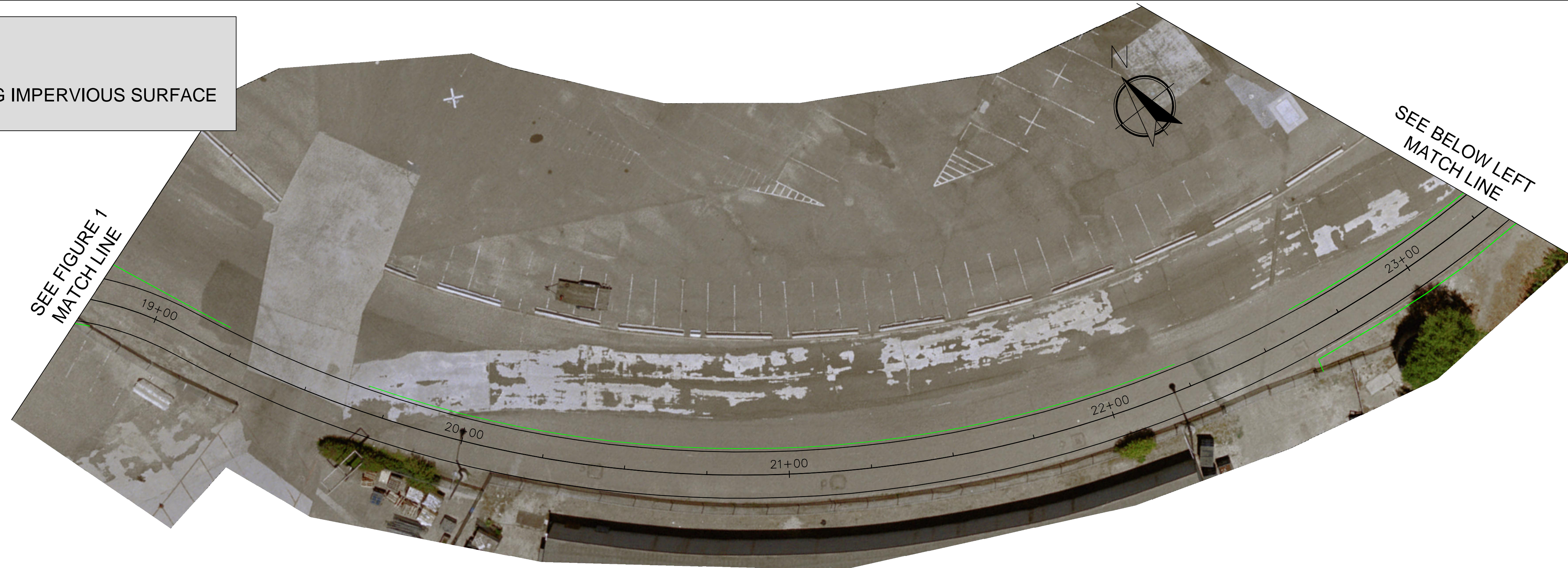


SCALE: AS SHOWN  
 CONTRACT NO. 5001914  
 DRAWING NO. \_\_\_\_\_  
 SHEET NO. \_\_\_\_\_

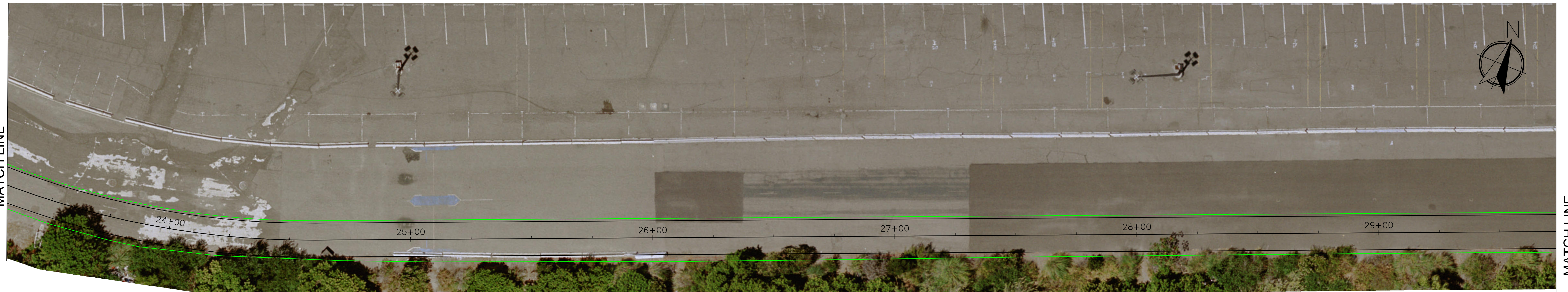


**LEGEND**

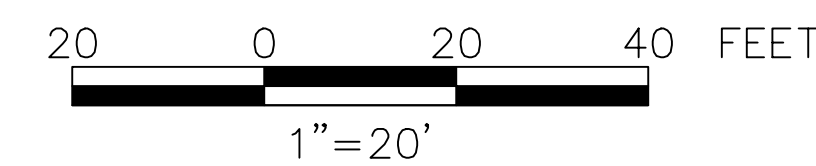
 BIKE PATH ON EXISTING IMPERVIOUS SURFACE



PLAN  
1"=20'



PLAN  
1"=20'



**SAN DIEGO RIVER TRAIL  
QUALCOMM STADIUM SEGMENT**

CITY OF SAN DIEGO, CALIFORNIA  
Development Service Department

I.O. NO. \_\_\_\_\_  
PROJECT NO. \_\_\_\_\_

FOR CITY ENGINEER	DATE	V.T.M.
DESCRIPTION	BY	APPROVED
ORIGINAL	QIC	

XXXX-XXXX  
NAD83 COORDINATES

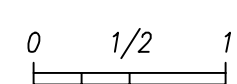
AS-BUILTS

XXX-XXXX  
LAMBERT COORDINATES

CONTRACTOR	DATE STARTED
INSPECTOR	DATE COMPLETED

**FIGURE 2**

CONSTRUCTION CHANGE TABLE				
CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.	PROJECT NO.



IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



Quality Infrastructure Corporation  
7777 Alvarado Road, Suite 606  
La Mesa, CA 91942  
619-741-9400  
www.qualityinfrastructure.com



DESIGNED BY	DATE
A. DODGE	xx/xx
DRAWN BY	
A. RIVERA	xx/xx
CHECKED BY	
K. BRADBURY	xx/xx
SANDAG PRJ ENG	
S. VANCE	xx/xx

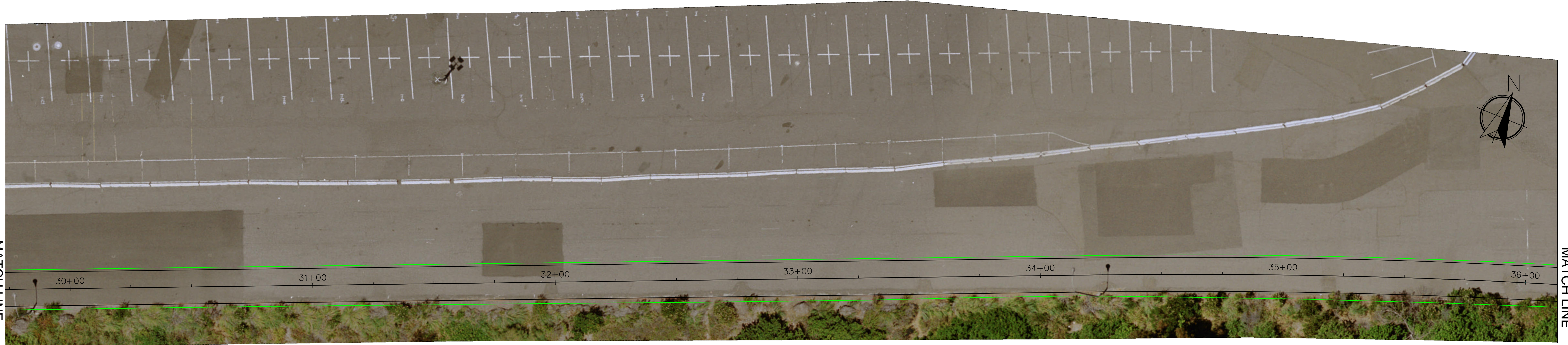


SCALE:  
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CONTRACT NO.  
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DRAWING NO.  
SHEET NO.



**LEGEND**

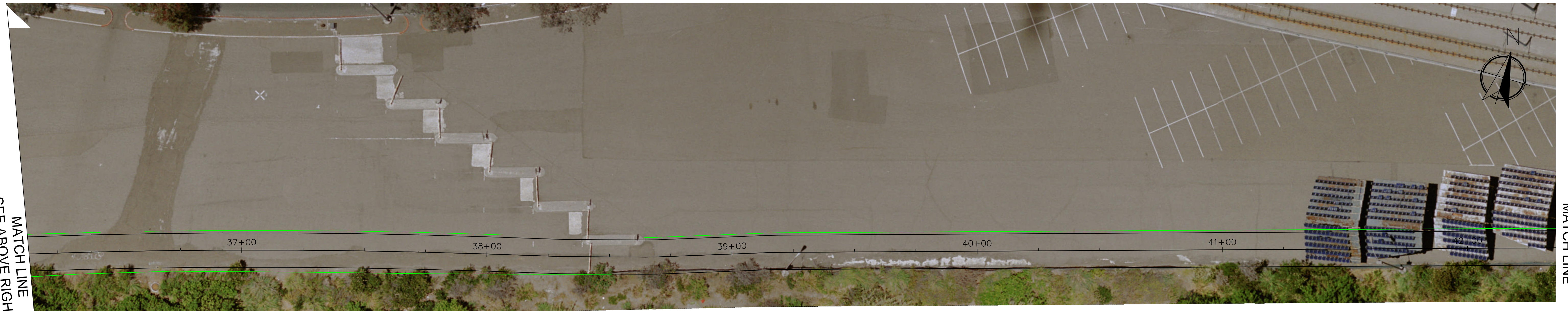
 BIKE PATH ON EXISTING IMPERVIOUS SURFACE



PLAN  
1"=20'

MATCH LINE  
SEE FIGURE 2

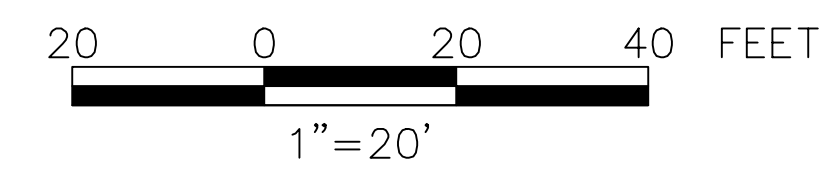
MATCH LINE  
SEE BELOW LEFT



PLAN  
1"=20'

MATCH LINE  
SEE ABOVE RIGHT

MATCH LINE  
SEE FIGURE 4



**SAN DIEGO RIVER TRAIL  
QUALCOMM STADIUM SEGMENT**

CITY OF SAN DIEGO, CALIFORNIA  
Development Service Department

I.O. NO. \_\_\_\_\_  
PROJECT NO. \_\_\_\_\_

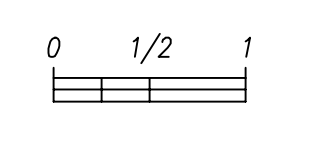
FOR CITY ENGINEER		DATE	
DESCRIPTION	BY	APPROVED	DATE FILMED
ORIGINAL	QIC		
AS-BUILTS			

V.T.M. \_\_\_\_\_  
XXXX-XXXX  
NAD83 COORDINATES  
XXX-XXXX  
LAMBERT COORDINATES

CONTRACTOR \_\_\_\_\_ DATE STARTED \_\_\_\_\_  
INSPECTOR \_\_\_\_\_ DATE COMPLETED \_\_\_\_\_

**FIGURE 3**

CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.	PROJECT NO.



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DESIGNED BY A. DODGE xx/xx  
DRAWN BY A. RIVERA xx/xx  
CHECKED BY K. BRADBURY xx/xx  
SANDAG PRJ ENG S. VANCE xx/xx

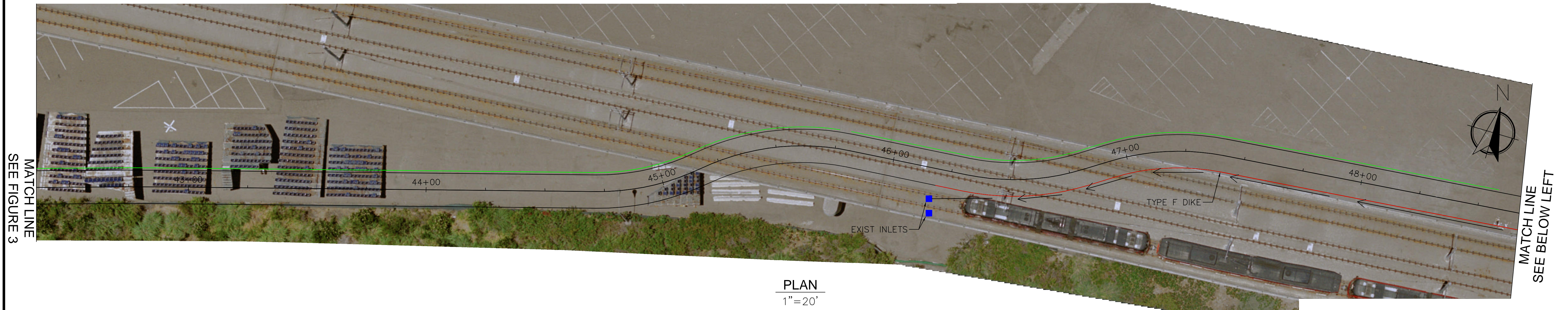


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SHEET NO. \_\_\_\_\_

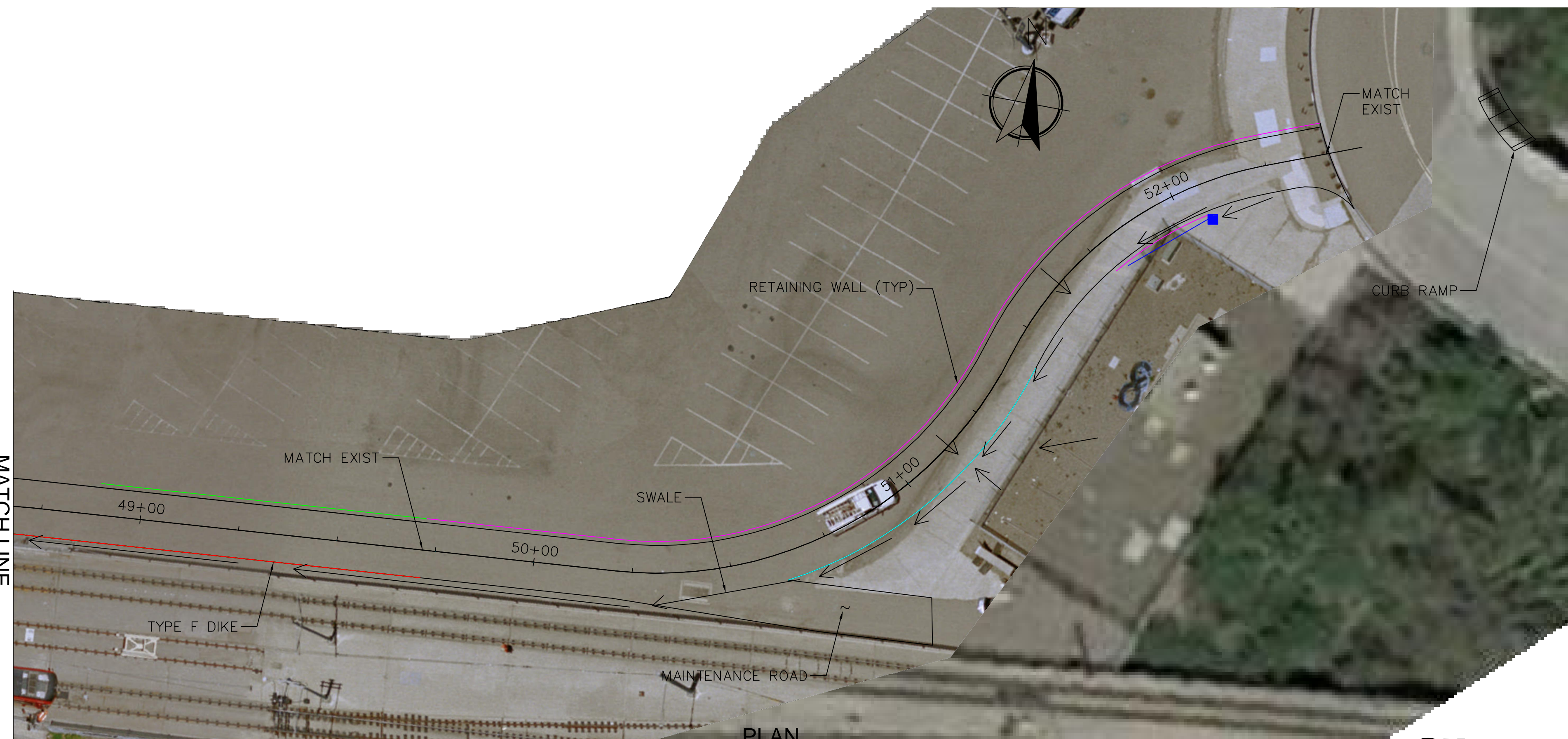


**LEGEND**

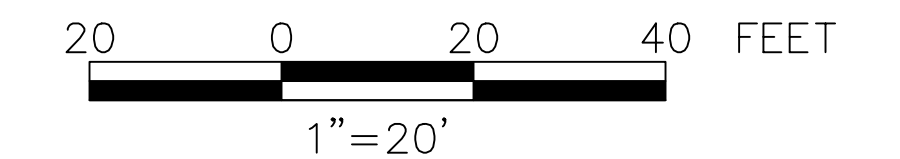
 BIKE PATH ON EXISTING IMPERVIOUS SURFACE



PLAN  
1" = 20'



PLAN  
1" = 20'



**SAN DIEGO RIVER TRAIL  
QUALCOMM STADIUM SEGMENT**

CITY OF SAN DIEGO, CALIFORNIA  
Development Service Department

I.O. NO. \_\_\_\_\_  
PROJECT NO. \_\_\_\_\_

FOR CITY ENGINEER		DATE		V.T.M.	
DESCRIPTION	BY	APPROVED	DATE	FILMED	
ORIGINAL	QIC				XXXX-XXXX NAD83 COORDINATES
AS-BUILTS					XXX-XXXX LAMBERT COORDINATES
CONTRACTOR		DATE STARTED		FIGURE 4	
INSPECTOR		DATE COMPLETED			



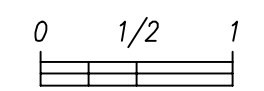
SCALE:  
AS SHOWN

CONTRACT NO.  
5001914

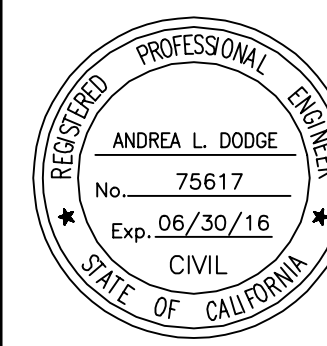
DRAWING NO.

SHEET NO.

CONSTRUCTION CHANGE TABLE				
CHANGE	DATE	EFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.	PROJECT NO.



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DATE xx/xx

