APPENDIX G

Bike Ped PER

Preliminary Engineering Report
Mission Bay Improvement Zone Bicycle and Pedestrian Paths

May 31, 2024

Presented To

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Contents

1 INTRODUCTION 1
1.1 Project Overview 1
1.2 Project Location 1
1.3 Project Goals and Objectives 2
2 DATA COLLECTION 3
3 EXISTING CONDITIONS 5
3.1 Existing Multi-Modal Deficiencies 5
3.1.1 West Mission Bay 5
3.1.2 North Shore (Crown Point) 7
3.1.3 Rose Creek and De Anza 9
3.1.4 Robb Field and Dog Beach 13
3.1.5 Quivira Basin 14
3.1.6 South Shores 16
4 PRELIMINARY DESIGN 22
4.1 Project Components 22
4.1.1 Pavement Section, Cross Slopes, and Facility Width 22
4.1.2 Vertical Clearance 24
4.1.3 Existing Utilities 24
4.1.4 Fencing and Pedestrian Railing 25
4.1.5 Retaining Walls and Concrete Barriers 26
4.1.6 Design Standards 26
4.1.7 Water Quality 27
4.1.8 Flood Control/Levee Coordination 32
4.2 Preliminary Drawings 32
4.3 Preliminary Opinion of Probable Construction Cost 32
4.4 Preliminary Project Schedule 35
5 OTHER CONSIDERATIONS AS APPROPRIATE 36
5.1 Feasibility Analysis of Constructability 36
5.1.1 Construction Approach 36
5.1.2 Equipment Needs 37
5.2 Risk Assessment 37
5.2.1 Land Ownership 38
5.2.2 Utilities 38
5.2.3 Existing Soil Data 39
5.2.4 Proximity to Neighbors 40
5.2.5 Environmental Windows 41
5.2.6 Water Quality Concerns 41

5.2.7 Competing Interests 42
5.2.8 Sensitive Habitat 42
5.2.9 Sea Level Rise 42
5.2.10 Permitting 43
5.3 Project Conflict Coordination and Evaluation 43
5.4 Environmental Considerations and Permits 44
5.5 City Professional Standards and Mission Bay Park Masterplan Consistency 46
5.6 ADA and Title 24 48
6 REFERENCES 50

Tables

Table 4-1. Summary of Bike Path DMAs and BMPs 31
Table 4-2. Ocean Beach Bike Path Preliminary Opinion of Probable Construction Cost 33
Table 4-3. Rose Creek Bike Path Preliminary Opinion of Probable Construction Cost 33
Table 4-4. Fiesta Island Causeway Preliminary Opinion of Probable Construction Cost 34
Table 4-5. Robb Field/Gateway Connectivity Path Preliminary Opinion of Probable Construction Cost 34
Table 4-6. Preliminary Opinion of Total Probable Construction Cost for Mission Bay Bicycle and Pedestrian Path Improvements 35
Table 5-1. Environmental Permit Requirements 46
Table 5-2. Inventory of Relevant Standards 47

Figures

Figure 1-1. Vicinity Map 2
Figure 3-1. West Mission Bay 6
Figure 3-2. North Shore (Crown Point) 8
Figure 3-3. Rose Creek & De Anza 10
Figure 3-4. Robb Field and Dog Beach 13
Figure 3-5. Quivira Basin 15
Figure 3-6. South Shores 17
Figure 4-1. San Diego River Trail Enhancement Plan Proposed Section 23

Appendices

A. BICYCLE & PEDESTRIAN PATH EXISTING CONDITIONS EXHIBIT

B. PRELIMINARY DRAWINGS

C. PRELIMINARY PROJECT SCHEDULE

D. DMA AND BMP EXHIBITS

E. RISK ASSESSMENT TABLE

Acronyms/Abbreviations

Acronym/Abbreviation	Definition
ADA	Americans with Disabilities Act
APCD	San Diego Air Pollution Control District
BA	Biological Assessment
BMP	best management practice
BTR	Biological Technical Report
CADD	Computer Aided Drafting and Design
CCC	California Coastal Commission
CDFW	California Department of Fish and Wildlife
CDP	Coastal Development Permit
CWA	Clean Water Act
CY	Cubic Yard
DMA	Drainage Management Areas
EMC	event mean concentration
EPA	U.S. Environmental Protection Agency
ESA	environmentally sensitive area
ESL	environmentally sensitive lands
FY	fiscal year
GIS	geographic information system
HDM	Caltrans Highway Design Manual
LCP	Local Coastal Program
LF	linear foot, linear feet
LS	Lump Sum
MWS	Modular Wetland System
NEPA	National Environmental Policy Act
NGA	National Geospatial-Intelligence Agency
NGVD 29	National Geodetic Vertical Datum of 1929 (same as mean sea level)
NHPA	National Historic Preservation Act of 1966
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NWP	nationwide permits
O&M	operations and maintenance
QA/QC	quality assurance/quality control

Acronym/Abbreviation	Definition
PCC	Portland Cement Concrete
PDP	Priority Development Project
PER	Preliminary Engineering Reports
PEIR	Program Environmental Impact Report
RCB	reinforced concrete box
RCP	reinforced concrete pipe
RGP	Regional General Permit
ROD	Record of Decision
ROW	right-of-way
RTC	real-time control
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SanGIS	San Diego Geographic Information Source
SF	Square Feet
SLR	Sea Level Rise
SWMM	Storm Water Management Model
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WDR	Waste Discharge Requirements
WMA	watershed management area
WMP	watershed master plan

1 Introduction

The City of San Diego Engineering & Capital Projects Department has engaged a consultant team to assist in the preparation of a Program Environmental Impact Report (PEIR) for multiple prioritized improvement projects within the Mission Bay Park Improvement Zone (Improvement Zone). The Improvement Zone includes "those areas encompassed within the boundaries of Mission Bay Park (Park), Oceanfront Walk from the Mission Bay Jetty to Crystal Pier and the adjoining coastal parks…" It also includes portions of Rose Creek, Tecolote Creek, and the San Diego River. The ultimate goal is to improve the conditions of the Improvement Zone for the enjoyment of residents and visitors. As part of the PEIR, Preliminary Engineering Reports (PER) are being prepared for the prioritized improvement projects. The prioritized improvement projects include: Rose Creek Wetland, North Fiesta Island, Tecolote Creek and Fiesta Island Causeway, Leisure Lagoon Marsh (Cudahy Creek), Shoreline Restoration, Habitat Preservation, Bike and Pedestrian Paths, Seawall Restoration, and Deferred Maintenance.

1.1 Project Overview

As stated in the Mission Bay Park - Master Plan Update (City of San Diego 2002), the Park's bicycle and pedestrian paths are among the Park's preferred and most used recreational facilities serving cyclists, in-line roller skaters, skateboarders, strollers, wheelchairs, joggers, and casual walkers. As part of the Mission Bay Park Master Plan (Master Plan) this identifies and recommends improvements to existing bicycle and pedestrian facilities within the Park. One of the improvement areas identified in the Master Plan is the "Completion of Bicycle and Pedestrian Paths and Bridges." This specific improvement includes the completion of bike and pedestrian paths as shown in the Master Plan, sustainable lighting, signage improvements, and surface repair. As a first step toward identifying improvements, a systematic review of the existing facilities was conducted. The approach for this effort and the initial results are discussed in the following sections.

Following review of the existing conditions, four improvement areas were identified for further review and the development of preliminary design: Ocean Beach Bike Path, Rose Creek Bike Path, Fiesta Island Causeway, and Robb Field/Gateway Connectivity Path. Additional information is presented for these four improvements areas within Section 4, Preliminary Design. Cost estimates have been developed (Section 4.3) to determine the approximate cost of the four improvement areas, known as the Mission Bay Bicycle and Pedestrian Path Improvements project.

1.2 Project Location

Mission Bay is located within the City of San Diego, California. See Figure 1-1 for the proposed locations of the bike and pedestrian path improvements.



Figure 1-1. Vicinity Map

1.3 Project Goals and Objectives

The purpose of this study is to provide a preliminary recommendation for improving existing pedestrian and bicycle facilities in order to further encourage a safe alternative public travel within Mission Bay. The preliminary findings consider the following categories of existing bicycle and pedestrian facilities to assess proposed improvements:

- Missing Path Connectivity
- Existing Pavement Conditions
- Wayfinding Signage
- Path Geometry
- Safety/Security

2 Data Collection

The Mission Bay area includes numerous pedestrian and bicycle facilities. Utilizing the SANDAG iCommute interactive regional map website, bicycle facilities (or "bikeways") were identified and classified within the Park. Bikeway facilities in the Mission Bay area are divided into four classifications per Caltrans "A Guide to Bikeway Classification-July 2017". Refer to the Key Map Exhibit (Appendix A) for bikeways within Mission Bay. These four bikeway classifications were utilized as a basis of assessment during the field investigation. Each classification is further defined below:

- Class I (Shared Path, Single Path): Class I bikeways, also known as bike paths or shared-use paths, are facilities with exclusive right-of-way for bicyclists and pedestrians, away from the roadway and with cross flows by motor traffic minimized. Some systems provide separate pedestrian facilities. Class I facilities support both recreational and commuting opportunities. Common applications include along rivers, shorelines, canals, utility rights-of-way, railroad rights-of-way, within school campuses, or within and between parks.

- Class II (Bike Lane, Buffered Bike Lane): Class II bikeways are bike lanes established along streets and are defined by pavement striping and signage to delineate a portion of a roadway for bicycle travel. Bike lanes are one-way facilities, typically striped adjacent to motor traffic travelling in the same direction. Contraflow bike lanes can be provided on one-way streets for bicyclists travelling in the opposite direction.

- Class III (Bike Route): Class III bikeways, or bike routes, designate a preferred route for bicyclists on streets shared with motor traffic not served by dedicated bikeways to provide continuity to the bikeway network. Bike routes are generally not appropriate for roadways with higher motor traffic speeds or volumes. Bike routes are established by placing bike route signs and optional shared roadway markings ("sharrows") along roadways.

- Class IV (Separated Bikeway/Cycle Track): A Class IV separated bikeway, often referred to as a cycle track or protected bike lane, is for the exclusive use of bicycles, physically separated from motor traffic with a vertical feature. The separation may include, but is not limited to, grade separation, flexible posts, inflexible barriers, or on-street parking. Separated bikeways can provide for one-way or two-way travel. By providing physical separation from motor traffic, Class IV bikeways can reduce the level of stress, improve comfort for more types of bicyclists, and contribute to an increase in bicycle volumes and mode share.

RICK staff conducted a field assessment of the existing pedestrian and bicycle facilities within the Park and within the immediate area surrounding the study area. For each area, a description is provided that identifies existing bicycle and pedestrian facility issues and needs that were observed in the field review. Suggested mobility improvements will address current issues and needs and help create opportunities to enhance the surrounding environment for users.

Specific bikeways that were reviewed within the study area are: Mission Bay Bike Path, San Diego River Bikeway, Rose Creek Bike Path, Pacific Beach Pathway, Ocean Beach Bike Path, and Friars Road Bikeway. These facilities are shared with pedestrians (with the exception of the Friars Road Bikeway which is a Class IV bikeway). Additionally, adjacent pedestrian facilities such as sidewalks were observed and recorded. Our field team observed the existing facilities via bicycle, thus providing an assessment from a user's perspective. The field review included written and photo documentation of deficiencies, issues, and needs that were encountered. The assessment identified the following five categories that represent the deficiencies and needs of the existing facilities.

- **Missing Path Connectivity**
  - Areas within the Park that are missing a path for bicyclists and/or pedestrians to travel to/from a certain facility or destination.
- **Existing Pavement Conditions**
  - Poor pavement conditions are characterized by cracking, potholes, rutting, depressions, disintegration, etc.
- **Wayfinding Signage**
  - No wayfinding signage along the existing facilities that direct bicyclists /pedestrians to a destination, or area.
- **Path Geometry**
  - Existing facilities not meeting recognized geometric standards, for example, shared-use paths less than ten feet in width and no shoulders or shoulders less than two feet in width on both sides.
- **Safety/Security**
  - Denotes a safety design concern that may potentially present a safety issue for the user.

3 Existing Conditions

A field assessment of the existing pedestrian and bicycle facilities within the Improvement Zone and the immediate area surrounding the Park was conducted July and August, 2019. For each area of the Park, a description is provided that identifies existing bicycle and pedestrian facility issues and needs that were observed during the field review.

3.1 Existing Multi-Modal Deficiencies

3.1.1 West Mission Bay

The area comprising West Mission Bay spans from Mission Point Park to Santa Clara Point along Mission Beach and also includes Mariner's Point, Ventura Point, Bahia Point, and El Carmel Point. See Figure 1-1 for locations included in West Mission Bay. Below are descriptions of the existing pedestrian and bicycle facility deficiencies within the West Mission Bay area:

Appendix A, Sheet 1 illustrates the existing pedestrian and bikeway deficiencies along this segment of Mission Bay Bike Path adjacent to West Mission Bay Drive, which are also summarized in the list below:

- Lack of wayfinding signage for bicyclists and pedestrians traveling eastbound and westbound on West Mission Bay Drive and entering the Mission Bay Bike Path.
- Lack of wayfinding signage for bicyclists and pedestrians traveling along the Mission Bay Bike Path and crossing West Mission Bay Drive.
- Safety concerns with pedestrians and bicyclists traveling on the temporary shared path due to the narrow path width of approximately five feet. Shared path should be ten feet in width to meet current standards.
- Safety concerns with the narrow sidewalk adjacent to the parking lot south of West Mission Bay Drive. This sidewalk is narrow and bikes ride on the sidewalk instead of continuing on the path to cross West Mission Bay.

<u>El Carmel Place from Mission Bay Bike Path (Bayside Walk)</u>

Field observation revealed that there is no pedestrian connection along El Carmel Place between Mission Bay Bike Path and destinations at El Carmel Point such as the Mission Bay Yacht Club and the San Diego Rowing Club. The lack of pedestrian facilities results in pedestrians walking in the roadway behind parked vehicles.

Appendix A, Sheet 2 illustrates the existing pedestrian facility deficiencies along El Carmel Place from Mission Bay Bike Path, which are also summarized in the list below:

- Missing path connectivity for pedestrians to travel along El Carmel Place from Mission Bay Bike Path to El Carmel Point.
- The lack of sidewalk presents a safety concern for pedestrians that must walk in the roadway behind parked vehicles to travel between Mission Bay Bike Path and El Carmel Point.



Figure 3-1. West Mission Bay

Santa Clara Place from Mission Bay Bike Path (Bayside Walk)

Field observation revealed a gap in pedestrian connectivity along Santa Clara Place between Mission Bay Bike Path and destinations at Santa Clara Point such as Mission Bay Sport Center, Santa Clara Point Recreation Center, and Mission Bay Aquatic Center. An existing sidewalk on the south side Santa Clara Place ends approximately 320 feet east of Mission Bay Bike Path. As a result, pedestrians either walk on the unpaved area or in the roadway with vehicular traffic. The gap in pedestrian connectivity presents a safety concern for pedestrians that may walk in the roadway along Santa Clara Place to access destinations on Santa Clara Point.

Appendix A, Sheet 3 illustrates the existing pedestrian facility deficiencies along Santa Clara Place from Mission Bay Bike Path, which are also summarized in the list below:

- Existing sidewalk ends approximately 320 feet east of Mission Bay Bike Path.
- Missing path connectivity for pedestrians to travel along Santa Clara Place from Mission Bay Bike Path to Santa Clara Point.
- The lack of sidewalk presents a safety concern for pedestrians sharing the roadway with vehicular traffic to travel to Santa Clara Point.

3.1.2 North Shore (Crown Point)

The North Shore area is located along the eastern side of the Crown Point peninsula at the north end of Mission Bay, extending north from the Ingraham Street Bridge to the Kendall-Frost Mission Bay Marsh Reserve along Crown Point Drive. See Figure 1-1 for locations included in North Shore (Crown Point). Below are descriptions of the existing deficiencies of the pedestrian and bicycle facilities within the North Shore area:



Figure 3-2. North Shore (Crown Point)

Crown Point Park to Pacific Beach Drive

The terminus of the Mission Bay Bike Path into the Crown Point Park parking lot lacks wayfinding signage for bicyclists and pedestrians. Local connectivity is not apparent for bicyclists or pedestrians wishing to continue. Field observation revealed that bicyclists and pedestrians continue from the end of the Mission Bay Bike Path through the Crown Point Park parking lot to Corona Oriente Road to access Crown Point Drive. The section of the Crown Point Park parking lot used by pedestrians and bicyclists exhibits poor pavement condition as well and will require rehabilitation.

Bicyclists traveling between the end of the Mission Bay Bike Path and Crown Point Drive ride in the roadway on Corona Oriente Road, while pedestrians may either walk in the roadway or along an unpaved grassy and dirt shoulder that is located on the east side of Corona Oriente Road. Wayfinding signage is missing for pedestrians and bicyclists between Crown Point Park and Crown Point Drive. There is also a lack of signage along Crown Point Drive indicating that this segment is a bike route.

Appendix, Sheet 4 illustrates the existing pedestrian and bicycle deficiencies in the North Shore area between Crown Point Park and Crown Point Drive just south of Pacific Beach Drive, which are also summarized in the list below:

- Existing shared-use path ends with no wayfinding signage for users.
- Existing pavement in the Crown Point Park parking lot is in poor condition between the end of the Mission Bay Bike Path and Corona Oriente Road.

3.1.3 Rose Creek and De Anza

The Rose Creek and De Anza area of Mission Bay extends from Crown Point Drive to Mission Bay Drive in Pacific Beach and includes Rose Creek (that outlets into the bay), Campland on the Bay, De Anza Cove and the De Anza Cove Park. The Rose Creek Bike Path, which extends north beyond the immediate vicinity of Mission Bay, is also included in the study area because it is within the Improvement Zone and provides multi-modal access between Mission Bay and other communities within San Diego.

The existing pedestrian and bicycle network is discontinuous through the Rose Creek and De Anza areas. The primary route for pedestrians and bicyclists through the area is Pacific Beach Drive from Crown Point Drive to the Campland on the Bay entrance, the recently constructed Mike Gotch Memorial Bridge and Bike Path, and short sections of North Mission Bay Drive and De Anza Road. See Figure 1-1 for locations included in Rose Creek De Anza. Below are descriptions of the existing deficiencies of pedestrian and bicycle facilities within the Rose Creek and De Anza areas:

Pacific Beach Drive from Crown Point Drive to Campland on the Bay Entrance

The 800-foot segment of Pacific Beach Drive between Crown Point Drive and Olney Street provides sidewalks on both sides of the street, a Class II bike lane in the eastbound direction, and the westbound direction is a Class III bike route. This segment of Pacific Beach Drive is part of the circuitous Pacific Beach Pathway and is labeled with staggered decorative pavement markings. The only wayfinding signage near this section of Pacific Beach Drive is on northbound Crown Point Drive, which is focused on destinations within the Pacific Beach area. No wayfinding signage is provided along this segment of Pacific Beach Drive to direct pedestrians and bicyclists to the other areas of Mission Bay.

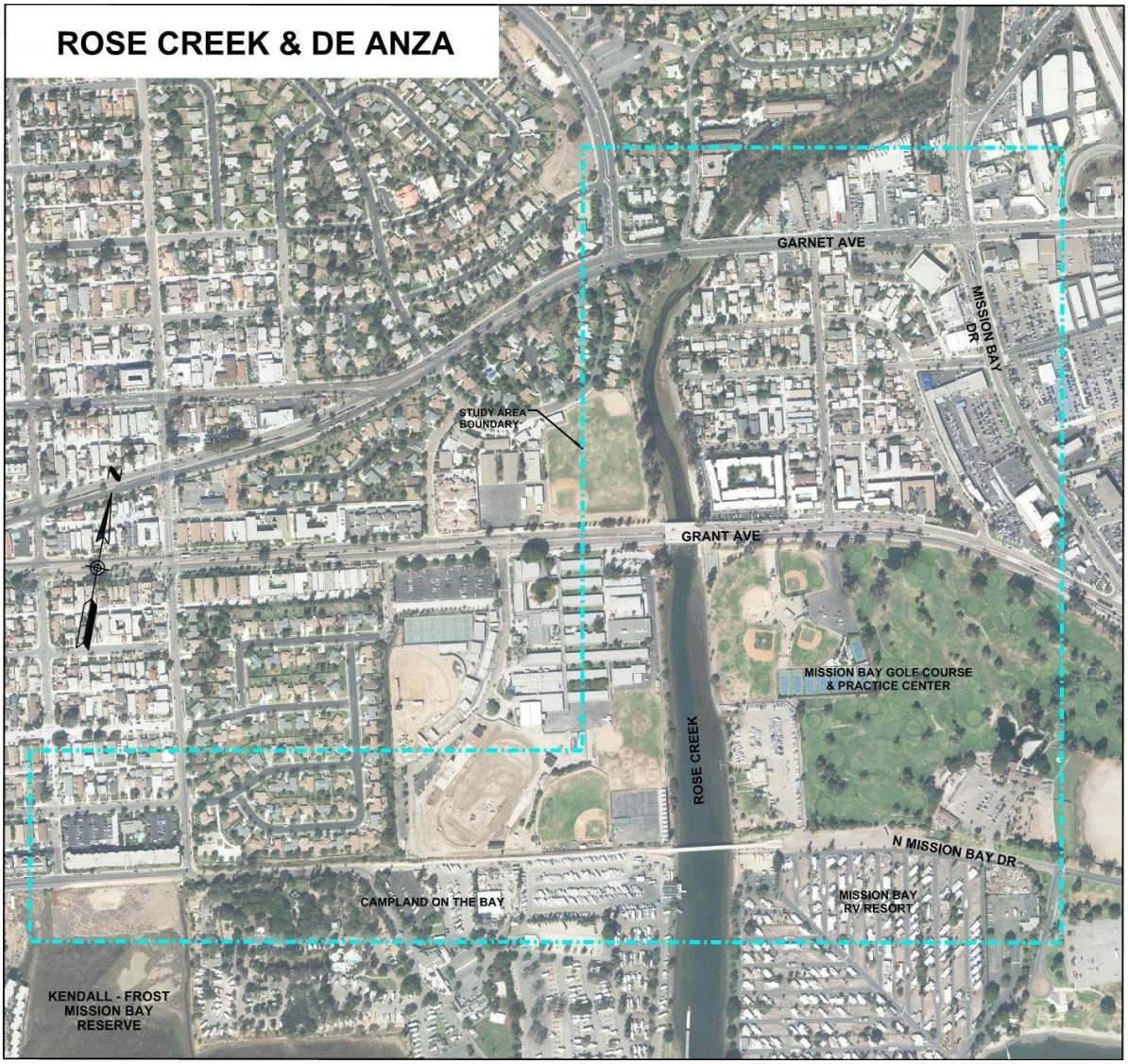


Figure 3-3. Rose Creek & De Anza

Pedestrian and bicycle facilities are not provided along the 850-foot section of Pacific Beach Drive between Olney Street and the Campland on the Bay entrance. Pedestrians must walk either on an uneven grassy slope on the south side of the street, or on a dirt shoulder along the north side of the street that is only accessible when parking demand is low. The north side of the street is typically lined with parked vehicles on weekends, and pedestrians are then forced to walk in the travel lane during these periods. Bicyclists must ride in the street in both directions of travel and need to be cautious of doors opening from the adjacent parked vehicles, or of vehicles pulling out onto the street from the dirt shoulder.

Appendix A, Sheet 5 illustrates the existing pedestrian and bicycle deficiencies along this segment of Pacific Beach Drive, which are also summarized in the list below:

- Lack of wayfinding signage at the Pacific Beach Drive and Crown Point Drive intersection.

- Lack of pedestrian and bicycle facilities along Pacific Beach Drive from Olney Street to the Campland on the Bay entrance.
- Safety concerns from potential conflicts between parked vehicles and pedestrians/bicyclists along Pacific Beach Drive from Olney Street to Campland on the Bay entrance.
- Lack of wayfinding signage at the western terminus of the Mike Gotch Memorial Bridge and Bike Path.

Mike Gotch Memorial Bridge and Bike Path, North Mission Bay Drive, and De Anza Road

The Class I bike path turns north after the Mike Gotch Memorial Bridge and Path, and a Class III bike route continues east on North Mission Bay Drive. De Anza Road extends south for approximately 600 feet from North Mission Bay Drive to a cul-de-sac where the existing Class I shared-use path along the eastern shore of Mission Bay terminates. There are no pedestrian facilities along North Mission Bay Drive or De Anza Road, and pedestrians must either walk along the adjacent grass area or walk in the street. De Anza Road functions as a Class III bike route although there is no signage indicating so. No wayfinding signage is provided at the end of the existing Class I shared-use path direct pedestrians or bicyclists to a connectivity path or to other areas of Mission Bay.

Appendix A, Sheet 6 illustrates the existing pedestrian and bicycle deficiencies along the segments of the Mike Gotch Memorial Bridge and Bike Path, North Mission Bay Drive and De Anza Road, which are also summarized in the list below:

- Lack of wayfinding signage at the western terminus of North Mission Bay Drive and transition to the Mike Gotch Memorial Bridge and Bike Path.
- Lack of pedestrian facilities along North Mission Bay Drive and De Anza Road.
- Lack of bicycle facilities along De Anza Road to connect to North Mission Bay Drive.
- Lack of wayfinding signage at the end of the existing Class I shared-use path at the De Anza Road cul-de-sac.
- Lack of wayfinding signage at the intersection of North Mission Bay Drive and De Anza Road.
- Missing bike route signage or pavement markings on North Mission Bay Drive and De Anza Road.

Rose Creek Bike Path

The Rose Creek Bike Path is a Class I shared-use path that extends north from the western terminus of North Mission Bay Drive for approximately eight-tenths (0.8) of a mile and ends at Mission Bay Drive at the intersection with Damon Avenue. Damon Avenue is a Class III bike route that provides access to North Santa Fe Street, another Class III bike route that leads to the Class I Rose Canyon Bike Path.

A new Class I bike path known as the Rose Creek Bikeway is currently under construction in conjunction with the Mid-Coast Corridor Transit trolley project. This bikeway will extend from the existing terminus of the Rose Creek Bike Path underneath Mission Bay Drive and I-5 along Rose Creek and the new trolley tracks to the existing southern terminus of the Rose Canyon Bike Path. Once completed, the Rose Creek Bikeway will provide a continuous Class I path between Mission Bay and La Jolla.

The existing Rose Creek Bike Path currently does not provide a comfortable experience for bicyclists or pedestrians. Much of the path is too narrow to allow for two-way bicycle traffic, and the width is as narrow as five to six feet along the section south of Grand Avenue.

The narrow conditions of the path south of Grand Avenue are constrained by chain link fence on both sides of the path, which is exacerbated by a lack of maintenance and overgrown weeds extending out into the path. Overgrown weeds are also an issue in the section north of Garnet Avenue along Rose Creek.

Pavement conditions along the Rose Creek Bike Path are generally poor, particularly south of Grand Avenue where there are numerous cracks and uneven asphalt on the path. There are also uneven pavement conditions at some of the transitions between asphalt and concrete underneath the Grand Avenue and Garnet Avenue bridges.

The existing northern terminus of the Rose Creek Bike Path requires bicyclists to dismount and walk up a short flight of stairs to Mission Bay Drive at the intersection with Damon Avenue. Bicyclists wishing to continue on the Class III bike route on Damon Avenue must cross Mission Bay Drive at the crosswalk.

There is a lack of wayfinding signage at the southern end of the bike path and at the location where the path forks to provide access to Grand Avenue. A wayfinding sign is provided near the crosswalk at the Mission Bay Drive and Damon Avenue intersection to direct users onto Damon Avenue toward the Rose Creek Bikeway two miles to the north; however, the sign is small and is partially obscured by vegetation.

The narrow width, combined with poor pavement conditions, creates a safety concern for pedestrians and bicyclists during the evening hours due to the lack of artificial lighting along the bike path. The lack of lighting is particularly an issue underneath the Grand Avenue and Garnet Avenue bridges and along Rose Creek north of Garnet Avenue where dense vegetation is present along one side of the path.

Appendix A, Sheet 7-8 illustrate the existing deficiencies along the Rose Creek Bike Path, which are also summarized in the list below:

- Poor pavement conditions along much of the path, with numerous cracks and uneven transitions.
- The path has a non-standard width along most sections and too narrow for two-way bicycle traffic, and the path is particularly narrow, less than ten feet, south of Grand Avenue.
- Overgrown weeds and chain link fence exacerbate the narrow width of the bike path.
- Lack of wayfinding signage at the southern terminus of the bike path and where the path forks to provide access to Grand Avenue.
- Inadequate wayfinding signage at the existing northern terminus of the bike path.
- Lack of lighting along the bike path, particularly under bridges and along the creek north of Garnet Avenue.

3.1.4 Robb Field and Dog Beach

The Robb Field and Dog Beach area is located on the south side of the San Diego River near the terminus of the Ocean Beach Bike Path. The Ocean Beach Bike Path, which extends for nearly four miles between Mission Valley and Ocean Beach, is the primary facility for pedestrians and bicyclists in the Robb Field and Dog Beach area. Users can also access the Ocean Beach Bike Path from both the West Mission Bay Drive Bridge and Sunset Cliffs Boulevard Bridge. The Ocean Beach Bike Path is a shared-use Class I bike path with a non-standard width (average width of ten feet). See Figure 1-1 for locations included in Robb Field and Dog Beach. Below are descriptions of the existing deficiencies of the pedestrian and bicycle facilities within the Robb Field and Dog Beach area.

Ocean Beach Bike Path from Dog Beach to Sunset Cliffs Boulevard Bridge

The approximately one-mile segment of the Ocean Beach Bike Path from Dog Beach to the Sunset Cliffs Boulevard Bridge presents d several deficiencies and issues. The shared path narrows to a width of five to six feet along the westerly half-mile between Sunset Cliffs Boulevard Bridge and the terminus at Dog Beach. Additionally, the pavement along this one-mile segment of the Ocean Beach Bike Path is in poor condition and will require rehabilitation.

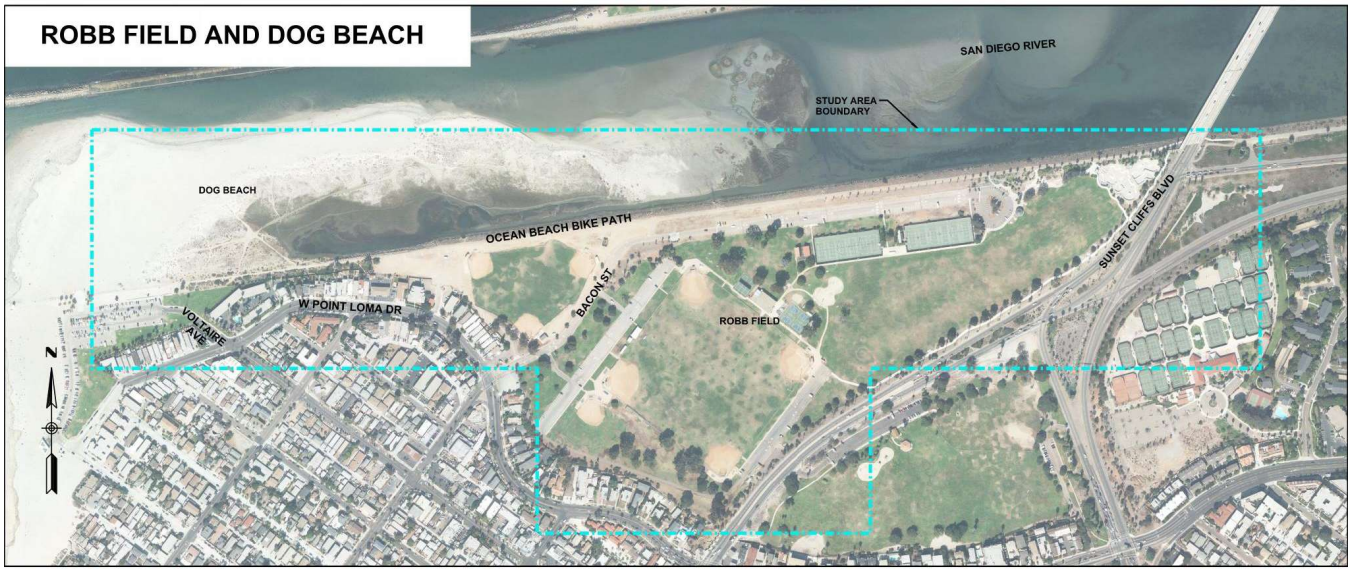


Figure 3-4. Robb Field and Dog Beach

Appendix A, Sheet 9 illustrates the existing deficiencies along the segment of Ocean Beach Bike Path from Dog Beach to Sunset Cliffs Boulevard Bridge, which are also summarized in the list below:

- The segment of the Ocean Beach Bike Path west of Sunset Cliffs Boulevard Bridge has a non-standard width of less than ten feet with no shoulders.
- The existing pavement of the shared-use path exhibits poor condition with warped, cracked, and uneven transitions along the one-mile segment between Sunset Cliffs Boulevard Bridge and Dog Beach.

Connectivity from Robb Field to West Point Loma Boulevard and Sunset Cliffs Boulevard

Connectivity to Robb Field is located adjacent to the signalized intersection of West Point Loma Boulevard and Sunset Cliffs Boulevards. Currently there is an existing ramp that connects cyclists from the Class II facility along Sunset Cliffs Boulevard to Robb Field. However, the ramp abruptly ends and cyclists are forced to traverse on a dirt path to enter the park. Additionally, pedestrians traveling from West Point Loma Boulevard traverse a meandering pedestrian pathway, known as the Gateway Connectivity Path, that leads towards Robb Field. Just like the adjacent bike ramp it too abruptly ends and does not allow pedestrians to safely enter Robb Field. West Point Loma Boulevard has Class II buffered bike lanes.

Appendix A, Sheet 18 illustrates the existing deficiencies from Robb Field to West Point Loma Boulevard and Sunset Cliffs Boulevard, which are also summarized in the list below:

- Missing connectivity for pedestrians and cyclists to enter Robb Field from adjacent facilities along Sunset Cliffs Boulevard and West Point Loma Boulevard.
- The existing ramp is not ADA compliant and too steep for cyclists and pedestrians.

3.1.5 Quivira Basin

The Quivira Basin area of West Mission Bay extends from Hospitality Point Park eastward along Quivira Way and Quivira Road then crosses West Mission Bay Drive. The area continues north along Dana Landing Road then ends at Ingraham Street. The Quivira Basin area is located north of the San Diego River and west Ingraham Street. There are two connecting facilities for pedestrians and bicyclists in the Quivira Basin area. The first is a Class II bike lane that extends eastward along the south side of Quivira Way and the north side of the San Diego River from Hospitality Point Park to the beginning of Old Sea World Drive just west of the Sunset Cliffs Boulevard Bridge. The second facility begins on Old Sea World Drive at Quivira Way and extends east for approximately one-half mile as a Class I shared-use path, then transitions to a Class III bike route where vehicular access is allowed just east of the West Mission Bay Drive Bridge. See Figure 1-1 for locations included in Quivira Basin. Below are descriptions of the existing deficiencies of the pedestrian and bicycle facilities within the Quivira Basin area:

Class I Shared-Use Path from Hospitality Point Park to Sunset Cliffs Boulevard Bridge

The pavement along the half-mile segment of the Class I shared-use path along the north side of the San Diego River between Hospitality Point Park and the Sunset Cliffs Boulevard bridge is in poor condition, particularly on the west end of the path.



Figure 3-5. Quivira Basin

Old Sea World Drive from Sunset Cliffs Boulevard Bridge to West Mission Bay Drive Bridge

The pavement along the Class I shared-use path section of Old Sea World Drive between the Sunset Cliffs Boulevard Bridge and West Mission Bay Drive Bridge is in poor condition in some areas, exhibiting potholes in various locations.

Quivira Way/Quivira Road from Hospitality Point Park to West Mission Bay Drive

Field observations revealed that there is an existing sidewalk along the west side of Quivira Road fronting the Seaforth Marina entrance. No sidewalk or other pedestrian facility is provided along the other lengths of Quivira Way/Quivira Road.

Appendix A, Sheets 10-11 illustrate the existing pedestrian and bicycle deficiencies along or near Quivira Way, which are also summarized in the list below:

- The existing Class I shared-use path pavement near Hospitality Point Park exhibits poor condition with cracks, potholes, and is uneven.
- The Class I shared-use path section of Old Sea World Drive has poor pavement conditions in some areas between the Sunset Cliffs Boulevard Bridge and the West Mission Bay Drive Bridge.

- Lack of pedestrian facilities such as a sidewalk along much of Quivira Way from West Mission Bay Drive to Hospitality Point Park.
- The bike ramp connecting Quivira Way to the Sunset Cliffs Blvd Bridge has poor pavement quality and poor geometry.

Dana Landing Road/Quivira Road from West Mission Bay Drive to Ingraham Street

The West Mission Bay Drive and Dana Landing Road/Quivira Road intersection includes a Class III bike route along Dana Landing Road, and Class II bike lanes along Quivira Road and West Mission Bay Drive northwest of Dana Landing Road/Quivira Road. The primary issue at this intersection is a lack of wayfinding signage for users traveling between the South Shores area and Mission Beach or Ocean Beach. Additionally, there is a lack of sidewalk or other pedestrian facility along Dana Landing Road between West Mission Bay Drive and Ingraham Street, a distance of approximately one half-mile. Pedestrians may opt to use the roadway or the vegetated areas behind the existing curb and gutter to travel along Dana Landing Road between West Mission Bay Drive and Ingraham Street.

Appendix A, Sheets 12-13 illustrate the existing pedestrian and bicycle deficiencies on Dana Landing Road from West Mission Bay Drive to Ingraham Street, which are also summarized in the list below:

- Missing wayfinding signage at the signalized intersection of West Mission Bay Drive and Quivira Road/Dana Landing Road.
- Missing pedestrian facilities such as a sidewalk on Dana Landing Road from West Mission Bay Drive to Ingraham Street that presents a potential safety concern for pedestrians.

3.1.6 South Shores

The South Shores area is located in the southeastern portion of Mission Bay and encompasses most of the area between Ingraham Street and I-5 including Sea World. Sea World occupies more than 50% of the land area within South Shores, and the remaining area includes Perez Cove, South Shores Park, and Tecolote Creek. The existing pedestrian and bicycle network within South Shores is encompassed within the western boundary of Sea World and Dana Landing, north of San Diego River, and west of I-5. Other pedestrian and bicycle facilities are also provided along the San Diego River Channel, and along Friars Road between Sea World Drive and I-5. See Figure 1-1 for locations included in South Shores. Below are descriptions of the existing deficiencies of the pedestrian and bicycle facilities within the South Shores area:

End of Class I Bike Path at Ingraham Street and Perez Cove Way

The two-way Class I bike path that is provided along Sea World Drive and Perez Cove Way ends at the southeast corner of the signalized Ingraham Street and Perez Cove Way intersection. A sidewalk is provided for pedestrians along the north side of Perez Cove Way. The only wayfinding signage at the bike path terminus directs bicyclists either north on Ingraham Street toward “Pacific Beach” or west on Dana Landing Road toward “Mission Beach”. There is no wayfinding signage directing bicyclists toward Ocean Beach from the end of the bike path, and no wayfinding signage is provided for bicyclists who are entering the bike path from either Ingraham Street or Dana Landing Road.

Pedestrians and bicyclists have three directions of travel from the bike path terminus: 1) north onto Ingraham Street, 2) south onto Ingraham Street, or 3) west onto Dana Landing Road. Ingraham Street north of the bike path has Class II bike lanes and sidewalks on both sides of the street. Ingraham Street south of Perez Cove Way and Dana Landing Road has no bike lanes or sidewalks except for a short 100-foot section of sidewalk along the west side of Ingraham Street. Dana Landing Road west of Ingraham Street is provided with "sharrow" pavement markings to identify it as a Class III bike route, but no sidewalks are provided on Dana Landing Road (this issue is described in more detail in the Quivira Basin section 3.1.5).

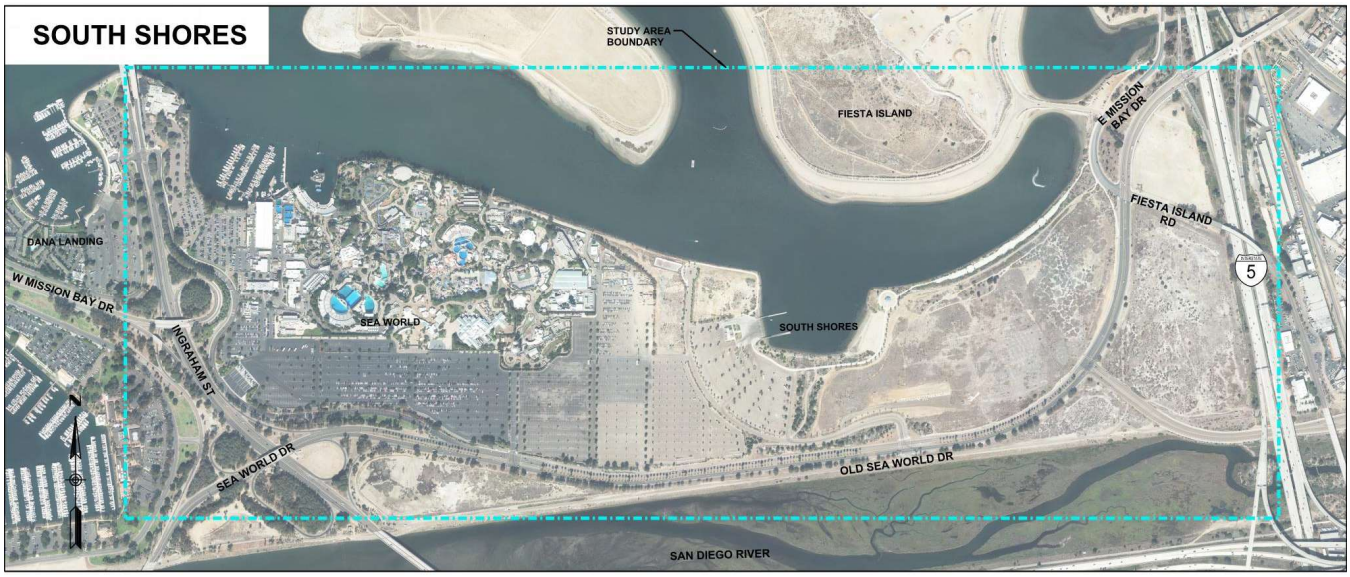


Figure 3-6. South Shores

Bicyclists who are not familiar with Mission Bay may attempt to ride south on Ingraham Street from the end of the bike path, but no bike lanes are provided and Ingraham Street transitions into an auto-centric expressway with on/off ramps for merging and diverging traffic. No signage is provided to discourage bicyclists from entering this section of roadway that presents potentially hazardous and unfavorable conditions for bicyclists.

Appendix A, Sheet 13 illustrates the existing pedestrian and bicycle deficiencies at the end of the existing Class I bike path at the Ingraham Street/Perez Cove Way intersection, which are also summarized in the list below:

- Lack of wayfinding signage toward Ocean Beach from the end of the bike path.
- Lack of wayfinding signage from Ingraham Street and Dana Landing Road for bicyclists and pedestrians entering the bike path or the sidewalk on the opposite side of Perez Cove Way.
- No pedestrian connection from the bike path terminus except to go north on Ingraham Street.
- No bicycle or pedestrian facilities along Ingraham Street south of Perez Cove Way and Dana Landing Road.

- No signage to discourage bicyclists from entering unfavorable roadway conditions on Ingraham Street south of Perez Cove Way and Dana Landing Road.

Sea World Drive-Perez Cove Way Bike Path

The Sea World Drive-Perez Cove Way Bike Path is a Class I facility extending east from Ingraham Street alongside Perez Cove Way and Sea World Drive adjacent to the Sea World parking lot. It connects to the existing Class II bike lane near the southeast corner of Sea World adjacent to South Shores Park. Some sections of the Class I path are provided for shared pedestrian/bicycle use, while other sections split into two separate paths, with one path for pedestrians only and the other path for two-way bicycle traffic.

The sections of the Class I path for shared-use is standard width and is striped for two-way pedestrian/bicycle traffic. The sections of the Class I path that are designated for two-way bicycle traffic are approximately 8 feet in width, and no center striping is provided to separate bicyclists in each direction of travel. There are also a few horizontal curves that, combined with the adjacent lush vegetation, obstruct sight distance for bicyclists traveling through this area.

Immediately beyond the eastern limit of the Sea World Drive-Perez Cove Way Bike Path, the path narrows to an unstriped shared-use Class I path and intersects with another Class I path that begins on the opposite side of South Shores Parkway. Users can either cross South Shores Parkway and proceed north on a Class I path or continue east on a Class I path. There is no wayfinding signage to inform pedestrians and bicyclists destinations from this point.

Appendix A, Sheets 13-15 illustrate the existing conditions and the pedestrian and bicycle deficiencies along the Sea World Drive-Perez Cove Way Bike Path, which are also summarized in the list below:

- Narrow width and no centerline striping on some sections of the Class I path designated for two-way bicycle traffic only, with horizontal sight distance concerns.
- Lack of wayfinding signage at the eastern end of the Sea World Drive-Perez Cove Way Bike Path where it intersects with other Class I paths.

Old Sea World Drive

Old Sea World Drive, located on the north levee of the San Diego River, transitions from a Class I shared-use path west of the West Mission Bay Drive Bridge to a Class III bike route east of West Mission Bay Drive Bridge, where vehicular access is allowed. Old Sea World Drive extends eastward to Friars Road, but transitions back to a Class I shared-use path approximately 450 feet west of Friars Road.

Field observation revealed poor pavement conditions with numerous areas of uneven pavement and potholes along the segment of Old Sea World Drive between the West Mission Bay Drive Bridge and South Shores Parkway. The segment of Old Sea World Drive between South Shores Parkway and Friars Road was being repaved at the time of the field observation, so no deficiencies were identified on that segment. The off-ramp shoulder from West Mission Bay Drive to Sea World Drive is striped as a Class II facility.

Appendix A, Sheets 14-15 illustrate the existing conditions and the bikeway deficiencies along Old Sea World Drive, which are also summarized in the list below:

- Poor pavement conditions with numerous areas of uneven pavement and potholes.
- Improvements in connectivity would include a pedestrian path and a two-way bike path from West Mission Bay Drive to Sea World Drive.
- Wayfinding is necessary between West Mission Bay Drive and Sea World Drive to direct users around the lack of bike and pedestrian facilities of West Mission Bay Drive.

South Shores Park Area

The primary pedestrian and bicycle route through the South Shores Park area is the Class I connector path between the Sea World Drive-Perez Cove Way Bike Path and the East Mission Bay Bike Path. There is also a Class I connector path alongside South Shores Parkway to Sea World Drive where pedestrians and bicyclists can access Old Sea World Drive, which varies from a Class I path to a Class III bike route.

The primary deficiency in the South Shores Park area is the lack of wayfinding signage at the multiple intersections of Class I paths in the area. Path users who are not familiar with these paths may not know which path leads toward Mission Valley and which path leads toward East Mission Bay and Fiesta Island.

The north end of the previously mentioned connector path intersects with the primary Class I path that extends to East Mission Bay. This primary Class I path continues west of the connector path for approximately 600 feet and ends at the South Shores Park boat dock. There is no signage to indicate that the Class I path ends a short distance west of the connector path.

The end of the Class I path at the South Shores Park boat dock does not have an ADA curb ramp, and bicyclists must ride off the curb at the end of the path. The path continues on the north side of the boat dock but also lacks an ADA curb ramp where the path starts up again. This path wraps around the shoreline for approximately 1,000 feet and terminates at the South Shores Parkway cul-de-sac north of the boat dock. Again, there is a lack of signage to indicate that this path is not continuous.

Appendix A, Sheet 15 illustrates the existing conditions and the pedestrian and bicycle deficiencies in the South Shores Park area, which are also summarized in the list below:

- Lack of wayfinding signage where the Class I path along South Shores Parkway intersects with the connector path to the Class I path that heads to East Mission Bay.
- Lack of wayfinding signage at the north end of the connector path where it intersects with the Class I path that is the primary route toward East Mission Bay.
- No signage to indicate that the Class I path going west to the South Shores Park boat dock does not continue.
- Lack of an ADA curb ramp for users to exit where the path ends on the south side of the boat dock, and the lack of an ADA curb ramp where the path starts up again on the north side of the boat dock.

Sea World Drive, Friars Road, and East Mission Bay Drive Area

There are two primary routes for pedestrians and bicyclists in the area near Sea World Drive, Friars Road and East Mission Bay Drive. The first route is the Class I path along the Mission Bay shoreline that extends to East Mission Bay Drive near Fiesta Island Road, and the second route is Old Sea World Drive located on the north levee of San Diego River, which transitions to a Class I path and connects to the Friars Road Class IV cycle track just west of I-5.

The primary deficiency in this area is the lack of bicycle connectivity between the west end of the Friars Road Class IV cycle track at Sea World Drive and the Class I path along East Mission Bay Drive near the intersection with Sea World Drive. Bicyclists proceeding east from the Friars Road Class IV cycle track to the Class I path on East Mission Bay Drive must ride in the Class II bike lane along Sea World Drive, then cross two travel lanes and ride in the northbound left turn lanes onto East Mission Bay Drive. This maneuver into the northbound left turn lanes may not be possible during peak traffic periods and may require walking the bike across Sea World Drive at the crosswalk. Less experienced bicyclists may not feel comfortable crossing vehicle lanes to make this connection.

The Class I path along East Mission Bay Drive continues south from the intersection with Sea World Drive and ends abruptly approximately 300 feet south of the intersection. There is no signage to indicate that the Class I path does not continue along Sea World Drive. A dirt path continues west along the north-west side of Sea World Drive beyond where the Class I path pavement ends, which can be utilized by pedestrians or bicyclists with all-terrain tires (i.e. mountain bikes).

The Class IV cycle track along Friars Road provides a bicycle connection between Mission Bay and Mission Valley. However, as previously mentioned, there is a lack of connectivity for bicyclists between the west end of the Friars Road bike path and the Class I path near East Mission Bay Drive. A second issue with the Friars Road Class IV cycle track is the poor pavement condition between Sea World Drive and Napa Street on the east side of the I-5 overcrossing, although only the section west of I-5 is within Mission Bay Park. Much of the pavement west of I-5 is uneven with numerous cracks, buckling of the pavement, and weeds growing between the cracks.

The South Shores area transitions to East Mission Bay near Fiesta Island Road, from where a Class I path continues north along East Mission Bay. Fiesta Island Road west of East Mission Bay Drive is built on a narrow isthmus connecting Fiesta Island to the East Mission Bay area and provides vehicular and bicycle access to Fiesta Island. Fiesta Island Road is designated as a Class III bike route, but there is no path or sidewalk for pedestrians between East Mission Bay Drive and Fiesta Island. There is a narrow dirt shoulder along the south side of Fiesta Island Causeway, but no shoulder is provided on the north side and pedestrians must walk in the road.

Appendix A, Sheets 16-17 illustrate the existing conditions and the pedestrian and bicycle deficiencies in the Sea World Drive/Friars Road/East Mission Bay Drive Area, which are also summarized in the list below:

- Lack of bicycle connectivity between the end of the Friars Road Class IV cycle track at Sea World Drive and the Class I path along East Mission Bay Drive near the intersection with Sea World Drive.

- Lack of signage on the Class I path along East Mission Bay Drive in the southbound direction to indicate that the path ends 300 feet south of the intersection with Sea World Drive.
- Poor pavement conditions on the Friars Road Class IV cycle track between Sea World Drive and the I-5 overcrossing.
- Lack of a path or sidewalk for pedestrians on Fiesta Island Road between East Mission Bay Drive and Fiesta Island.
- Lack of wayfinding signage at confluence of Class I path from South Shores and Class I path along East Mission Bay Drive.

4 Preliminary Design

As discussed in Section 3, existing conditions on various bike and pedestrian facility segments within the Mission Bay Park Improvement Zone do not meet current design standards or need maintenance. After further review of the existing conditions summary presented in Section 3, the design team has identified improvement areas recommended for further development. The four improvement areas chosen for preliminary design are the Ocean Beach Bike Path, Rose Creek Bike Path, Fiesta Island Causeway, and the Robb Field/Gateway Connectivity Path and are presented in Appendix B. The improvements proposed within these areas include pavement replacement, widening of existing bike paths, installation of retaining walls, concrete barriers, and added pedestrian railing for the safety of the users. Further enhancements could include the removal and replacement of portions of existing fencing.

4.1 Project Components

The following sections summarize the proposed improvements to the project study areas. The following improvement components are discussed as they apply to areas of the Ocean Beach Bike Path, Rose Creek Bike Path, Fiesta Island Causeway, and Robb Field/Gateway Connectivity Path.

4.1.1 Pavement Section, Cross Slopes, and Facility Width

Pavement improvements are a main design component proposed in all four focus areas. Existing areas of sub-standard pavement are recommended to be removed and replaced. Utilizing previous bike projects of similar size, a pavement section of 3" asphalt concrete over 9" crushed aggregate base will be utilized for the preliminary design of the travel way. A pavement section of 6" Portland cement concrete (PCC) over 18" crushed aggregate base will be used in areas with longitudinal slopes greater than 5%, undercrossing bridges, and directly adjacent to major roadways. This pavement section has been conservatively assumed using similar bike projects of the same size and magnitude. A final recommended pavement shall be provided by the geotechnical engineer during final design.

To align with guidelines in the San Diego Street Design Manual and California Department of Transportation (Caltrans) Highway Design Manual (HDM), where feasible, shared use pathways will have a minimum 16-foot width (typical 12-foot traveled way, with two 2-foot shoulders).

Ocean Beach Bike Path

The Ocean Beach Bike Path includes the removal and replacement of the existing bike path pavement due to sub-standard widths and poor pavement conditions. The path will have a 2 percent cross-slope and 16-foot width (10-foot bike path, and two 2- and 4-foot shoulders), consistent with the preliminary design recommendations outlined in the San Diego River Trail Enhancement Plan (San Diego River Trail Project). The typical section for this project is shown below. According to the proposed trail section in the San Diego River Trail Project a pavement section of 3" asphalt concrete over 9" crushed aggregate base will be used on the bicycle path and decomposed granite on the shoulders. The Ocean Beach Bike Path should be designed in coordination with the San Diego River Trail Project to have matched connectivity points. This includes the connection from the OB Bike Path to the eastbound bike path as users exit from the Sunset Cliffs Blvd Bridge. The Preliminary Drawings show this connection as was recommended in the San Diego River Trail Enhancement Plan. The Ocean Beach Bike Path is not intended to interfere with any of the design recommendations outlined in the San Diego River Trail Project.

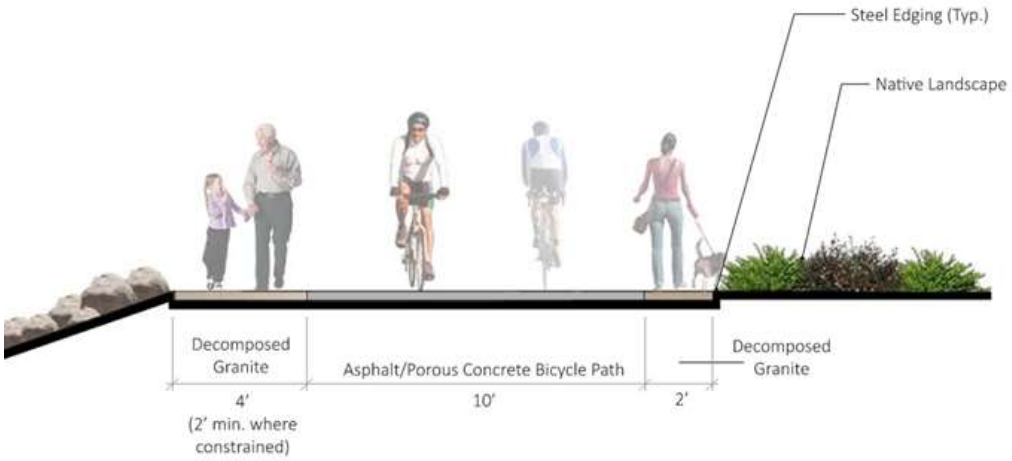


Figure 4-1. San Diego River Trail Enhancement Plan Proposed Section

A 1-ft hinge was proposed atop the levees at the Ocean Beach Bike Path due to the vertical drop from the top of slope to the toe of the levee, up to 12 ft in height. Additional information on the levee design is provided in section 4.1.8.

Rose Creek Bike Path

The Rose Creek Bike Path requires the removal and replacement of the existing bike path. The existing non-standard bike path needs to be replaced and widened due to poor pavement conditions. The path will be 16-feet wide with a 2% cross-slope. The Rose Creek Bike Path alignment follows the existing bike path alignment to minimize impacts to the adjacent properties. An alternative alignment may be desirable if the San Diego Mission Bay Boat and Ski Club leasehold and use is not continued. There would likely be environmental permitting needs for the grading to daylight slope for the pathway into Rose Creek.

Rose Creek improvements are consistent with exhibit PB-5 of the Pacific Beach portion of the City of San Diego Pedestrian Master Plan (City of San Diego 2006). The Master Plan recommends widening the Rose Creek Bike Path and providing lighting. The Master Plan similarly discusses widening the trail access and providing connection to De Anza Cove / Mission Bay Park.

Fiesta Island Causeway

The Fiesta Island Causeway includes separate trails for pedestrians and bicyclists. Cross Section I (see sheet 22 of Appendix B) includes 6-foot bike lanes on either side of the roadway and a 16-foot multi-use trail, all of which will have a 2 percent maximum cross-slope and will be asphalt concrete. Section K only includes a 6-foot bike path with a 2 percent maximum cross-slope using PCC. Cross Section J also includes a 6-foot bike path and a 16-foot multi-use trail with a 2 percent cross-slope using PCC. Section J cuts across an existing dirt parking lot. The pathway should include one or more crosswalks to allow beach access from the parking lot.

The Fiesta Island Causeway improvements are shown in accordance with the Mission Bay Park Master Plan – Fiesta Island Mission Bay Master Plan Amendment (City of San Diego 2021), including widening of the causeway to provide a pedestrian and a multi-use path adjacent to the roadway. The improvements are not in conflict with the Fiesta Island Mobility Assessment. Planned improvements as part of this document for

Fiesta Island Road along the causeway include two bike lanes and two travel lanes, a concrete barrier, and fill on the north side of the causeway for a multi-use trail. No widths are specified in Cross Section E of the Mobility Assessment.

The Fiesta Island Amendment includes an alternative for a roundabout at Fiesta Island Road, which may conflict with the improvements of this PER. Additionally, the Tecolote Creek Wetland Restoration and Fiesta Island Causeway PER shows improvements to the wetland areas, which may conflict with the improvements of this PER. Further coordination between the two projects will be required to evaluate and minimize conflict.

Robb Field/Gateway Connectivity Path

The Robb Field/Gateway Connectivity Path includes a meandering 12-foot bike path that connects to the existing Class II bike path on Sunset Cliffs Boulevard at Robb Field. Additionally, to connect the existing Gateway Connectivity pedestrian walkway at West Point Loma Boulevard, a proposed 5-foot pedestrian path will be located adjacent to the proposed bike path connecting both bike and pedestrian facilities to Robb Field.

To improve connectivity, a relatively straight pathway is proposed from the Gateway Connectivity Path, extending northeast to the end of the parking lot west of Sunset Cliffs Boulevard for access to Rob Field. This improvement is consistent with exhibit OB-7 of the Ocean Beach portion of the City of San Diego Pedestrian Master Plan (City of San Diego 2006). Lighting is recommended along the bike/ped path to Robb field.

4.1.2 Vertical Clearance

Of the four improvement areas noted above, only the Rose Creek Bike Path has vertical clearance issues.

Rose Creek Bike Path

The proposed Rose Creek Bike Path design provides the minimum vertical clearance of 8 feet, per HDM 1003.1(3), between the bike path and the Garnet Avenue Bridge and Grand Avenue Bridge. The existing Rose Creek Bike Path will need to be lowered in order to provide the minimum vertical clearance between the existing bridge soffit and proposed bike path.

4.1.3 Existing Utilities

All proposed improvement areas require excavation. While excavating, it is important to protect the existing utilities in place. Utility information was obtained from SanGIS, published by the City of San Diego Public Utilities Department and SANDAG. It is anticipated that none of the utilities that are within the boundaries of this project will be significantly affected except as noted below.

Ocean Beach Bike Path

There are various utilities that cross the Ocean Beach bike path. These include both storm drain and sewer systems. It is anticipated that these facilities will not be impacted by the proposed improvements to the bike path.

Rose Creek Bike Path

There are a few existing storm drain systems that outlet into Rose Creek within the limits of the existing Rose Creek Bike Path. These systems will need to be extended to accommodate a wider bike facility. Along the

existing path near Garnet Avenue, there is a grouted metal water pipe in the rip rap which will need to be protected in place. Additionally, sewer and water facilities cross the bike path, and it is anticipated these facilities will not be impacted by the proposed improvements.

Fiesta Island Causeway

Along the Fiesta Island Causeway there is an existing 15" sewer and 10" water line within the roadway limits. It is anticipated that these existing utilities will not be affected by the improvements on the north side of the roadway. However, should the entire causeway be reconstructed to accommodate tidal flows then the existing utilities will need to be considered as part of the design.

Robb Field/Gateway Connectivity Path

There is a sewer facility within the Robb Field/Gateway Connectivity project limits, and it is not anticipated to be affected by the project. However, an existing utility cabinet and pull box will need to be relocated. There is an existing street light directly adjacent to the connection of the proposed bike path to southbound Sunset Cliffs Blvd. This street light may need to be braced during construction.

4.1.4 Fencing and Pedestrian Railing

Fencing and pedestrian railing will be included to separate pedestrians and vehicles in various locations thereby increasing user safety. The Ocean Beach Bike Path improvements does not propose pedestrian railing or fencing.

Rose Creek Bike Path

The proposed Rose Creek Bike Path improvements will remove and replace the existing chain link fence along the east and west side of the path. Any existing chain link fence in which the path disturbs will be replaced. There are segments of the bike path that will remove and replace existing pedestrian railing under the two bridges in conjunction with the path widening. Additional protective pedestrian railing will be added between Garnet Avenue and Mission Bay Drive along Rose Creek Bike path due to steep slopes on western portion of path.

Fiesta Island Causeway

The Fiesta Island Causeway improvements propose to install a pedestrian railing on the north side of the causeway between the walkway and the bay.

Robb Field/Gateway Connectivity Path

The Robb Field/Gateway Connectivity Path will include the removal of an existing chain link fence and installation of a new chain link fence along the toe of the slope of the proposed grading. There is existing chain link fencing adjacent to the project area that will remain. Lastly, the Robb Field/Gateway Connectivity Path will also include the removal of pedestrian railing and the placement of new pedestrian railing.

4.1.5 Retaining Walls and Concrete Barriers

Retaining walls are proposed at both the Rose Creek Bike Path and Fiesta Island Causeway. Concrete barriers are only proposed at the Fiesta Island Causeway . Using these protective barriers can create a safer environment and also allows a variety of users to continue using these bike paths. Retaining walls or concrete barriers are not proposed for the Ocean Beach Bike Path and the Robb Field/Gateway Connectivity Path improvements. Additional, retaining walls may be required for the Rose Creek Bike Path pending further geotechnical retaining wall and allowable fill slope recommendations adjacent to Rose Creek.

Rose Creek Bike Path

Rose Creek improvements include a proposed gravity retaining wall per City of San Diego Standard Drawing C-09. This will allow the proposed grading to catch existing ground at a 2:1 slope and limit impacts to adjacent properties to the east of the pathway.

Fiesta Island Causeway

Fiesta Island Causeway improvements include a masonry retaining wall with a mounted pedestrian railing on the north side of the causeway. Additionally, a concrete barrier (i.e. K-Railing) will be installed to separate the shared-use trail and roadway.

4.1.6 Design Standards

The four improvement areas will be designed according to the standards in the HDM (Caltrans 2020), City of San Diego Street Design Manual, and the Americans with Disabilities Act (ADA) Standards for Accessible Design (Department of Justice 2010). Potential conflicts with standards are noted below.

Ocean Beach Path

No ADA issues anticipated. Tie-ins with existing pathways were evaluated for ADA compliance and the preliminary drawings show the improvement limits necessary to meet ADA-required grades.

Rose Creek Bike Path

Existing stairs at the northern terminus of the Rose Creek Bike Path at Mission Bay Drive will remain as is. ADA accessibility will not be possible at this location. ADA access may be potentially located east of the terminus of Rose Creek Bike path along the future Rose Canyon Bike that is currently in construction.

Other tie-ins with existing pathways were evaluated for ADA compliance and the preliminary drawings show the improvement limits necessary to meet ADA-required grades. Side streets that intersect the Rose Creek bike path such as Magnolia Avenue and Figueroa Blvd will require ADA curb ramps and bike ramps to connect the streets to the pathways.

The curvature of the Rose Creek Bike path has a 90-100 ft minimum radius proposed to meet HDM standards. Sharp corners are proposed to be removed, with impacts to adjacent properties displayed in the preliminary drawings.

Fiesta Island Causeway

No ADA or other design issues anticipated. Tie-ins with existing pathways were evaluated for ADA compliance and the preliminary drawings show the improvement limits necessary to meet ADA-required grades.

Robb Field/Gateway Connectivity Path

The maximum proposed longitudinal slope of the connectivity path is 5% to comply with ADA standards.

The bike and pedestrian path geometry at Robb Field is proposed to connect into the existing gateway with intent of reducing grading, project impact, and sharp curve radii to the maximum extent practicable. The curvature of the path has a 100 ft minimum radius proposed to meet HDM standards. Grading impacts are displayed in the preliminary drawings.

4.1.7 Water Quality

The City of San Diego's Storm Water Standards (2018) was referenced to determine the pollutant control obligations associated with the project improvements. The City of San Diego's Storm Water Standards allow for the routine replacement of damaged pavement, including full depth replacement, if the sole purpose is to repair the damaged pavement. Projects that create and/or replace (with exception of routine replacement) 2,500 square feet or more of impervious surface (collectively over the entire project site) and discharging directly to an Environmentally Sensitive Area (ESA) are required to implement pollutant control measures in accordance with the City of San Diego's Storm Water Standards. For projects that do not discharge directly to an ESA and that create and/or replace (with exception of routine replacement) 5,000 square feet or more of impervious surface (collectively over the entire project site), the City of San Diego's Storm Water Standards require the implementation of appropriate pollutant control measures. Of the four proposed bike paths, only a portion of the Rose Creek Bike Path discharges directly to an ESA, as Rose Creek contains wetland along portions of its banks and Rose Creek is an ESA. Please note that the City of San Diego's Storm Water Standards states that projects may be exempted from implementing structural pollutant control measures if the project is a new or retrofit paved sidewalk, bicycle lane, or trail if the project is either: (1) designed to be hydraulically disconnected from paved streets or roads, or (2) if the project is designed and constructed to direct storm water runoff to adjacent vegetated areas or other non-erodible permeable areas. Of the four paths the Ocean Beach Path and the Robb Field path are designed to be hydraulically disconnected from paved streets and roads, therefore these two paths are exempt of structural pollutant control requirements. The four improvement areas, in total, includes approximately 160,056 square feet of new impervious area (replacement of the existing pavement is considered maintenance and thus this value is the difference between the existing and proposed impervious project areas).

In general, water quality best management practices (BMPs) would be implemented, where feasible. For areas where water quality BMPs may not be feasible, water quality treatment swap is used with areas within the Bicycle and Pedestrian Path Project where additional water quality will be provided beyond that required. BMP selection and placement follows the guidance of the City of San Diego's Storm Water Standards. The BMPs proposed consist of biofiltration. Biofiltration basins were prioritized to be implemented, where feasible. In the case of the Fiesta Island Causeway, there is limited feasibility for the installation of a water quality BMP and thus a water quality treatment swap is proposed (existing parking lot impervious area treated within Ocean Beach Bike Path).

Ocean Beach Path

Although the Ocean Beach Path is exempt from structural pollutant control and hydromodification requirements, BMPs are proposed for this path to help improve water quality in downstream water bodies and also provide treatment swap water quality credits for other project locations. The Ocean Beach Path consists of four drainage management areas (DMAs), with two BMPs proposed to treat the proposed path improvements:

- BMP No. 1 – Biofiltration basin
- BMP No. 2 – Biofiltration basin

The DMA tributary to BMP No. 1 (DMA No. 2) is 2.04 acres. In the existing condition, this DMA contains approximately 49,718 square feet of impervious path and existing parking lot. In the proposed condition the path within the DMA is replaced and widened, adding approximately 5,752 square feet of new impervious area.

The DMA tributary to BMP No. 2 (DMA No. 3) is 2.7 acres. In the existing condition, this DMA contains approximately 74,393 square feet of impervious paths, sidewalks and AC parking lots. In the proposed condition the path within the DMA is replaced and widened, adding approximately 3,085 square feet of new impervious area. The BMP footprint of the proposed biofiltration basin is 0.04 acres (1,880 square feet). The proposed biofiltration basin (BMP No. 2) would collect low flow storm water runoff, treat it, then discharge the treated runoff to an existing storm drain eventually discharging into the San Diego River. In total, the impervious area treated by BMP No. 2 is approximately 77,478 square feet. Since the areas that are impervious in the existing condition do not need to be treated, as they are considered full depth replacement of damaged pavement, and the existing parking lot is outside of the project scope and treated in order to offset on-site project areas, BMP No. 2 treats an additional 74,393 square feet of impervious area more than necessary.

It should be noted that DMAs 1 and 4 do not have a BMP associated with them. Due to site constraints of space, as the Ocean Beach Path is bound by the San Diego River on the north and existing facilities (beaches, houses, and a skate park) on the south, it is not feasible for BMPs to be implemented for portions of the path. The newly added impervious areas for these three DMAs totals approximately 29,283 square feet. However, the two BMPs proposed as part of the Ocean Beach Bike Path treat an additional 124,111 square feet of impervious area more than necessary. Since the additional impervious area treated, more than necessary, by the proposed BMPs it is anticipated that the overall water quality of the Mission Bay Improvement Zone will improve as a result of the Ocean Beach Bike Path.

The two BMPs (BMP No. 1 and BMP No. 2) are the basis for a majority of all the water quality credits generated to offset the treatment for areas where no structural BMPs are provided.

Rose Creek Bike Path

The Rose Creek Path consists of eight DMAs, with one BMP proposed to treat a portion of the proposed path improvements:

- BMP No. 1 – Biofiltration basin

The DMA tributary to BMP No. 1 (DMA No. 2) is 0.6 acres. In the existing condition, this DMA contains approximately 10,460 square feet of impervious path. In the proposed condition the path is replaced and widened, adding approximately 5,029 square feet of new impervious area. The BMP footprint of the proposed biofiltration basin is 0.01 acres (460 square feet). The proposed biofiltration basin would collect low flow storm water runoff, treat it, then discharge the treated runoff directly into Rose Creek. In total, the impervious area treated by BMP No. 1 is approximately 10,460 square feet. Since the areas that are impervious in the existing condition do not need to be treated, as they are considered full depth replacement of damaged pavement, BMP No. 1 treats an additional 5,431 square feet of impervious area more than necessary.

The remaining DMAs (1, 3, 4, 5, 6, 7, and 8) do not have a BMP associated with them. Due to site constraints of space, as the Rose Creek Path is bound by Rose Creek on the west and private properties on the east, it is not feasible for BMPs to be implemented for these portions of the path. The newly added impervious areas for these seven DMAs totals approximately 28,511 square feet. However, BMP No. 1 treats an additional 5,431 square feet of impervious area more than necessary and the Ocean Beach Path biofiltration BMPs provide significant water quality credits to offset the remain areas to be treated as discussed previously. Additionally, a separate project, included as part of the Mission Bay Park PEIR, proposes wetland improvements within Rose Creek which helps improve water quality as well. Although portions of the Rose Creek Path are not directly treated by BMPs, it is anticipated that the overall water quality of Mission Bay will improve in combination with the Rose Creek Wetland Improvements included in the Mission Bay Park PEIR.

Fiesta Island Causeway

The Fiesta Island Causeway consists of two DMAs, with a treatment swap proposed utilizing water quality credits generated from the Ocean Beach Path design:

- BMP No. 1 – Proprietary compact biofiltration basin (Modular Wetland System)
- BMP No. 2 – Impervious area dispersion
- BMP No. 3 – Impervious area dispersion

DMA No. 1 encompasses the widening of the Fiesta Island Causeway, along with the construction of the multi-use path that connects the east limit of the causeway to the existing footpath to the northeast. The improvements and widening result in 24,610 square feet of additional impervious area. The constraints within the causeway footprint and the proximity to the bay adjacent to the bike path limit feasibility for the installation of structural BMPs in the vicinity. As such, a treatment swap is proposed with the BMPs within the Ocean Beach Path for the additional 24,610 square feet of impervious area proposed.

Similarly, the south eastern bike path proposed to connect the southern bike lane of the causeway to the existing path to the east will utilize water quality credits generated in the Ocean Beach Path to treat the 1,494 square feed of new impervious area. Overall, the water quality of Mission Bay will improve as a result of the bike path improvements as demonstrated on

Table 4-1 that shows that the combine bike path projects will treat a greater area than the new impervious area proposed.

Robb Field/Gateway Connectivity Path

Robb Field/Gateway Connectivity Path is exempt from structural pollutant control and hydromodification requirements, and due to site constraints, BMPs are not proposed for this path The Robb Field/Gateway Path consists of two DMAs.

DMA No. 1 is 0.89 acres. This DMA is the larger of the two and covers the majority of the Robb Field/Gateway Connectivity Path Improvements. In the existing condition, this DMA contains approximately 352 square feet of impervious path. In the proposed condition the path is extended, and new impervious pathways are added, combining for a total of approximately 17,493 square feet of new impervious area. DMA No. 2 is 0.01 acres. This DMA covers a small, separated sidewalk improvement included as part of this path. In the existing condition, this DMA contains no impervious areas. Therefore DMA No. 2 is all new impervious area. All of the proposed impervious areas are to be treated via water quality credits generated from the Ocean Beach Path

A summary of the four bike paths including: their DMAs, their BMPs, existing impervious area, new impervious area, and net water quality benefits is provided in Table 4-1 below.

Table 4-1. Summary of Bike Path DMAs and BMPs

Bike Path	DMA	DMA Area (sf)	BMP	Existing Impervious Area (sf)	New Impervious Area (sf)	Total Impervious Area Treated (sf)	Net Water Quality Benefit (sf)
Ocean Beach	1	44,664	-	20,368	24,296	0	-24,296
	2	88,717	Biofiltration Basin	49,718	5,752	55,470	49,718
	3	117,571	Biofiltration Basin	74,393	3,085	77,478	74,393
	4	13,097	-	8,109	4,987	0	-4,987
Total Net Water Quality Benefit for Ocean Beach Bike Path							94,827
Rose Creek	1	8,947	-	4,416	4,531	0	-4,531
	2	26,322	Biofiltration Basin	5,431	5,029	10,460	5,431
	3	4,600	-	1,714	2,886	0	-2,886
	4	4,680	-	3,216	1,464	0	-1,464
	5	3,517	-	1,767	1,750	0	-1,750
	6	9,411	-	3,731	5,679	0	-5,679
	7	11,158	-	6,500	4,658	0	-4,658
	8	13,946	-	6,403	7,543	0	-7,543
Total Net Water Quality Benefit for Rose Creek Bike Path							-23,080
Fiesta Island Cause-way	1	25,237	-	627	24,610	0	-24,610
	2	1,494	-	0	1,494	0	-1,494
Total Net Water Quality Benefit for Fiesta Island Causeway							-26,103
Robb Field	1	38,923	-	0	17,493	0	-17,493
	2	169	-	0	169	0	0
Total Net Water Quality Benefit for Robb Field/Gateway Connectivity Path							-17,493
Total Net Water Quality Benefit for All Bike and Pedestrian Path Projects							**28,151**

4.1.8 Flood Control/Levee Coordination

A portion of the Ocean Beach Bike Path runs atop a certified levee prism, as such there are requirements per the United States Army Corps of Engineers (USACE). Based on a preliminary meeting held on August 25, 2022, with the USACE, a 408 permit will be required for this levee prism. The permitting process is expected to take approximately one (1) year to complete. Additionally, USACE staff will review each individual Section 408 permission request to determine National Environmental Policy Act (NEPA) compliance needs.

The improvements to this levee hold the hinge of the flood control portion so as to not negatively impact the capacity of the channel. Only pavement widening and sliver grading to the south toe of the levee is proposed to preclude adverse impact to levee functionality and capacity. See Figure 4-2 below for the Ocean Beach Bike Path levee cross-section that is referenced.

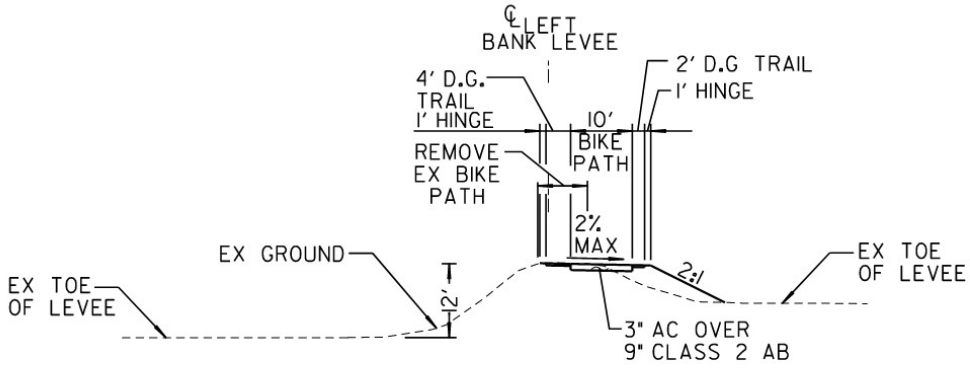


Figure 4-2. Ocean Beach Bike Path Levee

4.2 Preliminary Drawings

A set of draft preliminary drawings of the Mission Bay Bicycle and Pedestrian Path Improvements associated with the project study areas can be found in Appendix B. Drawings are currently in draft phase and are not for construction. These drawings include the project components and design criteria as stated in Section 0.

4.3 Preliminary Opinion of Probable Construction Cost

To determine an opinion of probable costs for these preliminary designs, unit costs were derived from the City of San Diego Unit Price List (2024) and similar project cost estimates. The cost estimate for construction of the preliminary design of the Ocean Beach Bike Path, Rose Creek Bike Path, Fiesta Island Causeway, and Robb Field/Gateway Connectivity Path are categorized by line item and quantity as shown in the tables below. A summary table of the total cost of the Mission Bay Bicycle and Pedestrian Path Improvements is also provided.

Table 4-2. Ocean Beach Bike Path Preliminary Opinion of Probable Construction Cost

Item	Unit	Quantity Total	Unit Price	Cost
Clearing and Grubbing	LS	1	$40,100	$40,100
Import Borrow	CY	360	$45	$16,200
Pavement Demolition & Removal	SF	46,550	$10	$465,500
Asphalt Concrete	SF	50325	$20	$1,006,500
Aggregate Base	TON	1000	$97	$97,000
Decomposed Granite (Stabilized)	SF	3000	$4	$12,000
Curb Ramp	EA	2	$7,000	$14,000
Signing and Striping	LS	1	$15,800	$15,800
Water Quality BMPs & Storm Drain	LS	1	$600,000	$600,000
Subtotal Construction Cost				*$2,267,100*
Contingency (50% of Total Construction Cost)				*$1,133,550*
Total Construction Cost				**$3,400,650**
Planning and Design (40% of Construction Cost)				$1,360,260
Environmental Permitting (5% of Construction Cost)				$170,033
Total Cost				**$4,930,943**

Table 4-3. Rose Creek Bike Path Preliminary Opinion of Probable Construction Cost

Item	Unit	Quantity Total	Unit Price	Cost
Clearing and Grubbing	LS	1	$38,000	$38,000
Import Borrow	CY	1560	$45	$70,200
Pavement Demolition & Removal	SF	19,570	$10	$195,700
Asphalt Concrete	SF	57801	$20	$1,156,020
PCC	SF	10503	$12	$126,036
Aggregate Base	TON	2505	$97	$242,985
Signing and Striping	LS	1	$15,500	$15,500
Pedestrian Protective Railing	LF	740	$290	$214,600
Chain Link Fence	LF	2,360	$260	$613,600
Curb Ramp	EA	1	$7,000	$7,000
Gravity Retaining Wall	SF	800	$92	$73,600
Water Quality BMPs & Storm Drain	LS	1	$80,000	$80,000
Subtotal Construction Cost				*$2,833,241*
Contingency (50% of Total Construction Cost)				*$1,416,621*
Total Construction Cost				**$4,249,862**
Planning and Design (40% of Construction Cost)				$1,699,945
Environmental Permitting (5% of Construction Cost)				$212,493
Total Cost				**$6,162,299**

Table 4-4. Fiesta Island Causeway Preliminary Opinion of Probable Construction Cost

Item	Unit	Quantity Total	Unit Price	Cost
Clearing and Grubbing	LS	1	$41,300	$41,300
Import Borrow	CY	200	$45	$9,000
Pavement Demolition & Removal	SF	300	$10	$3,000
Asphalt Concrete	SF	13435	$20	$268,700
PCC	SF	13390	$12	$160,680
Aggregate Base	TON	805	$97	$78,085
Roadway Pavement	LS	1	$19,000	$19,000
Signing and Striping	LS	1	$4,000	$4,000
Temporary K-Barrier	LF	500	$25	$12,500
Masonry Retaining Wall	SF	4,930	$70	$345,100
Pedestrian Protective Railing	LF	985	$290	$285,650
Signing & Striping	LS	1	$4,000	$4,000
Water Quality BMPs	LS	1	$106,888	$106,888
Subtotal Construction Cost				*$1,337,903*
Contingency (50% of Total Construction Cost)				*$668,952*
Total Construction Cost				**$2,006,855**
Planning and Design (40% of Construction Cost)				$802,742
Environmental Permitting (5% of Construction Cost)				$100,343
Total Cost				**$2,909,939**

Table 4-5. Robb Field/Gateway Connectivity Path Preliminary Opinion of Probable Construction Cost

Item	Unit	Quantity Total	Unit Price	Cost
Clearing and Grubbing	LS	1	$9,600	$9,600
Import Borrow	CY	460	$45	$20,700
Pavement Demolition & Removal	SF	400	$10	$4,000
PCC	SF	12140	$12	$145,680
Aggregate Base	TON	485	$97	$47,045
Signing and Striping	LS	1	$3,100	$3,100
Pedestrian Protective Railing	LF	1770	$290	$513,300
Chain Link Fence	LF	425	$260	$110,500
Curb Ramp	EA	2	$7,000	$14,000
Water Quality BMPs	LS	1	$72,800	$72,800
Subtotal Construction Cost				*$940,725*
Contingency (50% of Total Construction Cost)				*$470,363*
Total Construction Cost				**$1,411,088**
Planning and Design (40% of Construction Cost)				$564,435
Environmental Permitting (5% of Construction Cost)				$70,554
Total Cost				**$2,046,077**

Table 4-6. Preliminary Opinion of Total Probable Construction Cost for Mission Bay Bicycle and Pedestrian Path Improvements

Location	Cost
Ocean Beach Bike Path	$4,931,000
Rose Creek Bike Path	$6,162,300
Fiesta Island Causeway	$2,910,000
Robb Field/Gateway Connectivity Path	$2,046,100
Total Cost	**$16,049,400**

Location	Cost
Ocean Beach Bike Path	$4,931,000
Rose Creek Bike Path	$6,162,300
Fiesta Island Causeway	$2,910,000
Robb Field/Gateway Connectivity Path	$2,046,100
Total Cost	**$16,049,400**

4.4 Preliminary Project Schedule

A preliminary project schedule of the Ocean Beach Bike Path, Rose Creek Bike Path, Fiesta Island Causeway, and Robb Field/Gateway Connectivity Path can be found in Appendix C.

5 Other Considerations As Appropriate

5.1 Feasibility Analysis of Constructability

This section presents information about construction such as the approach and equipment needs. Each subject is discussed below.

5.1.1 Construction Approach

Three of the four proposed project sites will need to consider rerouting existing users during construction, as discussed below.

Ocean Beach Bike Path

From the east end of the Ocean Beach Bike Path at Sunset Cliffs Boulevard pedestrians can travel the concrete sidewalk along the south side of Robb Field to the Gateway Connection at the intersection of Sunset Cliffs Boulevard and West Point Loma Boulevard. This requires a short section of travel within a parking lot, which is not favorable, or on the dirt/grass adjacent to the parking lot. Pedestrians would then travel west along West Point Loma Boulevard until they reached the beach.

Cyclists can travel along the Class II bike lane on Sunset Cliffs Boulevard to West Point Loma Boulevard, a Class III bike route with "sharrows" to reach the beach.

Rose Creek Bike Path

Due to the length of Rose Creek Bike Path, and the lack of convenient bicycle and pedestrian alternatives on the adjacent streets, the project is proposed to be phased.

Phase 1 is the section from the Mike Gotch Memorial Bridge and Path to the Grand Avenue Bridge. A possible detour for path users is to travel west along the Mike Gotch Memorial Bridge and Path to the intersection of Pacific Beach Drive and Olney Street, then traveling north on Olney Street (which has a sidewalk, and no posted bicycle facilities) to Grand Avenue. The user would travel east on Grand Avenue (which has a Class II bike lane and sidewalks) to the signalized intersection at Figueroa Boulevard, and proceed west to the Grand Avenue Bridge, utilizing the ramp to the Rose Creek Bike Path leading north.

Phase 2 is the section from the Grand Avenue Bridge to the Garnet Avenue Bridge. A possible detour for path users is to travel east on Grand Avenue (which has Class II bike lanes and sidewalks) to the intersection with Figueroa Boulevard. The user will then travel north on Figueroa Boulevard, west on Magnolia Avenue, and north on Bond Street (which have sidewalks, and no posted bicycle facilities) to Garnet Avenue. The Rose Creek Bike Path is accessed via a ramp a short distance to the west.

Phase 3 is the section from the Garnet Avenue Bridge to the terminus at Mission Bay Drive. A possible detour for path users is to travel west on Garnet Avenue, north on Pico Street, east on Bluffside Avenue and south on Mission Bay Drive to the terminus of the Rose Creek Bike Path. All of these streets have sidewalks, except Mission Bay Drive. None of these streets have posted bicycle facilities.

Fiesta Island Causeway

The retaining wall will be the first item of construction – which can be constructed outside of the existing bicycle, pedestrian, and vehicular travel ways. The new pavement section can be constructed in an accelerated fashion in approximately five days. During that time bicycle access to the island will be restricted at night, and open during the day with the use of a flagger due to the limited paved width available.

Robb Field/Gateway Connectivity Path

The project does not require rerouting existing users as this is a new access point to the area.

5.1.2 Equipment Needs

The construction activities at the four project study areas (Ocean Beach Bike Path, Rose Creek Bike Path, Fiesta Island Causeway, and Robb Field/Gateway Connectivity Path) are anticipated to be similar and utilize similar equipment types with similar sizes. Excavation equipment anticipated to be used includes skid steer loaders and small track-type excavators. This type of equipment is commonly utilized for the removal of existing pavement and minor excavation for new storm drain pipes and other underground facilities, such as retaining wall footings. Larger loading and hauling equipment, such as rubber tire loaders and on-highway dump trucks, would be used for the import and export of materiel, for example, old pavement, excess dirt material, and new paving materials such as crushed aggregate base. Paving equipment, such as asphalt concrete paving machines, steel wheeled rollers, on on-highway dump trucks would bring asphalt concrete on site for use as new pavement. Concrete transit mixers would be used to bring fresh concrete on site for use with curb ramps, curb and gutter, sidewalk, retaining walls, storm water facilities, and other similar infrastructure. Concrete pumps could also be used for areas inaccessible by the concrete transit mixers.

The suite of equipment needed to perform construction of the four project study areas is estimated to be:

- Skid steer loader
- Track-type excavator
- Rubber tire loader
- On-highway dump truck
- Asphalt concrete paving machine
- Steel wheeled rollers
- Concrete transit mixer
- Concrete pump

5.2 Risk Assessment

This section explores the variety of potential risks associated with this type of project to help shed light on the potential future challenges that may be encountered. By documenting the risks, and developing an understanding of common challenges, future pitfalls may be avoided or minimized to achieve the best possible outcome. The potential risks are summarized below.

A Risk Assessment Table for each of the four project study areas containing the information from the risk assessment is provided in Appendix E.

The Risk Assessment Tables were prepared based on three criteria: (1) probability of each risk occurring, (2) the potential impacts to cost, and (3) the potential impacts to time until project completion. Each risk was given a value of either very low, low, moderate, or high for each of the three risk assessment criteria. Additionally, a strategy and response action for each risk was determined.

5.2.1 Land Ownership

Ocean Beach Bike Path

The existing path is located on property that is owned and maintained by the City of San Diego. As such, there are no known land ownership conflicts that may present risk to this project.

Rose Creek Bike Path

The existing path is located on property that is owned and maintained by the City of San Diego. However, there are two locations where the geometry of the existing path is insufficient to meet geometric standards, and a horizontal curve has been added (see Appendix B, sheet 13). Right-of-way acquisition is required from two adjacent properties, owned by San Diego Mission Bay Boat & Ski Club and Mission Bay Golf Course. Mission Bay Golf Course is owned by the City of San Diego, and the acquisition is not expected to pose a risk to the project. There is a risk of schedule delays in the acquisition from San Diego Mission Bay Boat & Ski Club, which may be mitigated by allowing a long lead time in processing.

Fiesta Island Causeway

The path is located on property that is owned and maintained by the City of San Diego. As such, there are no known land ownership conflicts that may present risk to this project.

Robb Field/Gateway Connectivity Path

The path is located on property that is owned and maintained by the City of San Diego. As such, there are no known land ownership conflicts that may present risk to this project.

5.2.2 Utilities

The contractor will be required to take precautionary measures to protect existing utilities or structures located at the work site. It is the contractor's responsibility to contact the owners of sewer, gas and electric, communication, water, and storm drain utilities or structures prior to any excavation for verification and location of utilities and notification of commencement of work.

Ocean Beach Bike Path

A review of existing utilities was performed utilizing data from SanGIS, published by the City of San Diego Public Utilities Department and SANDAG. Storm drain and sewer utilities were found within the project footprint. It is anticipated that these facilities will not be impacted by the improvements to the bike path. However, coordinating with the utility owners early in the design process to confirm the horizontal and vertical location will reduce risk of schedule and cost delays due to possible conflicts.

Rose Creek Bike Path

A review of existing utilities was performed utilizing data from SanGIS, published by the City of San Diego Public Utilities Department and SANDAG. Storm drain, sewer, and water utilities were found within the project footprint. There are several storm drain pipes that outlet in Rose Creek which will require modification to accommodate the proposed project. There is a 24" RCP at the Grand Avenue bridge that will need to be extended past the limits of grading. It is anticipated that the remainder of the facilities will not be impacted by the improvements. Coordinating with the utility owners early in the design process to confirm the horizontal and vertical location will reduce risk of schedule and cost delays due to possible conflicts.

Fiesta Island Causeway

A review of existing utilities was performed utilizing data from SanGIS, published by the City of San Diego Public Utilities Department and SANDAG. Water and sewer utilities were found adjacent to the project footprint. It is anticipated that these facilities will not be impacted by the proposed improvements. However, coordinating with the utility owners early in the design process to confirm the horizontal and vertical location will reduce risk of schedule and cost delays due to possible conflicts.

Robb Field/Gateway Connectivity Path

A review of existing utilities was performed utilizing data from SanGIS, published by the City of San Diego Public Utilities Department and SANDAG. Sewer facilities, a utility cabinet, and pull box were found within the project footprint. The utility cabinet and pull box will require modification to accommodate the proposed project. It is anticipated that the sewer facilities will not be impacted by the improvements to the bike path. Coordinating with the utility owners early in the design process to confirm the horizontal and vertical location, and coordinate relocations, will reduce risk of schedule and cost delays due to possible conflicts.

5.2.3 Existing Soil Data

Ocean Beach Bike Path

Site specific geotechnical investigation has not been explored at this time. Further geotechnical investigations may be required to design the pavement and water quality features. If compromised or contaminated soils are discovered on the site, mitigation will be required which will delay the schedule, and increase costs.

Rose Creek Bike Path

Site specific geotechnical investigation has not been explored at this time. Further geotechnical investigations may be required to design the pavement and water quality features. Retaining walls may be required to allow the existing path to be widened. Site specific geotechnical analysis will be required for each of the proposed retaining walls. Foundation materials may require removal and recompaction or replacement prior to construction of the retaining walls. If compromised or contaminated soils are discovered on the site, mitigation will be required which may delay the schedule, and increase costs.

Fiesta Island Causeway

Site specific geotechnical investigation has not been explored at this time. Further geotechnical investigations may be required to design the pavement and water quality features. Retaining wall design will require site-specific geotechnical analysis. The wall must be constructed on competent materials that are not subject to subsidence or liquefaction. If competent materials are not available at the wall site, then a deep foundation

system consisting of steel or concrete piles may be required. A deep foundation system will increase the project cost and construction duration and has the potential to result in unanticipated challenges during the construction phase. If compromised or contaminated soils are discovered on the site, mitigation will be required which may delay the schedule, and increase costs.

Robb Field/Gateway Connectivity Path

Site specific geotechnical investigation has not been explored at this time. Further geotechnical investigations may be required to design the water quality features and retaining wall. If compromised or contaminated soils are discovered on the site, mitigation will be required which will delay the schedule, and increase costs.

5.2.4 Proximity to Neighbors

Ocean Beach Bike Path

The Ocean Beach Bike Path is adjacent to the San Diego River to the north, Ocean Beach and Dog Beach to the west, Robb Field, residences, and a hotel to the south, and Sunset Cliffs Boulevard to the east. Noise impacts have the potential to disrupt the residences, hotel, users of the beach areas, and the natural habitat of the San Diego River. The preliminary project schedule is approximately two months and construction activities are anticipated to occur during daytime hours, therefore mitigation for noise impacts is not expected to be necessary. It is not anticipated that the project would cause traffic impacts.

Rose Creek Bike Path

The Rose Creek Bike Path is adjacent to Rose Creek to the west and north, San Diego Mission Bay Boat & Ski Club, Pacific Beach Tennis Club, Rob McEvoy Youth Fields (baseball and soccer), residences, and commercial facilities to the east and south. Noise impacts have the potential to disrupt the residences, sport facilities, commercial businesses, and the natural habitat of Rose Creek. The preliminary project schedule is approximately four months and construction activities are anticipated to occur during daytime hours. Working hours could be limited if noise impacts require mitigation, for example, prohibiting construction in the morning, evening, and nighttime hours and on weekends. These mitigations will likely increase schedule time and project cost. It is not anticipated that the project would cause traffic impacts.

Fiesta Island Causeway

The Fiesta Island Causeway is adjacent to Mission Bay to the north and south, Fiesta Island to the west, and East Mission Bay Drive to the east. Construction may impact traffic on Fiesta Island and East Mission Bay Drive as well as the pedestrian and bicycle facilities on East Mission Bay Drive. Noise impacts have the potential to disrupt visitors to the park. The traffic and noise impacts would be mitigated by limiting the project to off-season months (September to May), and weekdays only.

Robb Field/Gateway Connectivity Path

The Robb Field/Gateway Connectivity Path is adjacent to Sunset Cliffs Boulevard to the east, West Point Loma Boulevard to the south, residences to the west, and Robb Field to the North. Noise impacts have the potential to disrupt the residences. The preliminary project schedule is approximately two months and construction activities are anticipated to occur during daytime hours, therefore mitigation for noise impacts is not expected to be necessary. It is not anticipated that the project would cause traffic impacts.

5.2.5 Environmental Windows

Environmental constraints of endangered bird nesting seasons require that certain elements of the overall project construction be phased or timed for all four project study areas. This "project schedule" is an important part of the permits, and engineering contract documents (plans, specifications, and estimates for contractor bidding), as well as assurances to the resource agencies that the project will be implemented without incurring unanticipated incidental impacts. The project is based on assuming breeding restrictions will be in effect and limit construction from February/March to September 1st. Further biological surveys will need to be conducted to identify the specific nesting seasons at each location based on specific bird species.

5.2.6 Water Quality Concerns

Ocean Beach Bike Path

It is anticipated the project will be classified as Priority Development Project (PDP) Exempt due to the project being a paved trail that is hydraulically disconnected from paved streets or roads. This classification exempts the project from structural pollutant control and hydromodification management requirements. If the project is determined to be PDP, the design and construction costs may increase due to additional water quality measures. The exempt status can also be obtained by directing storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas.

Rose Creek Bike Path

It is anticipated the project will be classified as PDP and will require structural pollutant control and hydromodification management. Due to site constraints, the project will not be able to meet all the water quality requirements, however a net water quality benefit is anticipated from other bicycle and pedestrian projects to offset the impacts from this project. This risk can be mitigated with early coordination with the permitting agencies.

Fiesta Island Causeway

It is anticipated the project will be classified as PDP and will require structural pollutant control and hydromodification management. There are three DMAs at the project site. One DMA will drain to a Modular Wetland System, and the other two will have impervious area dispersion that will mimic the natural drainage characteristics of the site. These three BMPs will treat the runoff from the site which will satisfy the requirements.

Robb Field/Gateway Connectivity Path

It is anticipated the project will be classified as Priority Development Project (PDP) Exempt due to the project being a trail or sidewalk that is hydraulically disconnected from paved streets or roads. This classification exempts the project from structural pollutant control and hydromodification management requirements. If the project is determined to be PDP, the design and construction costs may increase due to additional water quality measures. The exempt status can also be obtained by directing storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas.

5.2.7 Competing Interests

Ocean Beach Bike Path

There are no anticipated competing interests on this project. The project will not significantly alter the area, only widening the path, and replacing poor pavement.

Rose Creek Bike Path

The existing Rose Creek Bike Path includes a variety of non-standard design features, however, the ability to improve the facility is heavily constrained by the environmentally sensitive Rose Creek channel and adjacent residential and commercial properties. Design for the improved facility should be developed to provide the required geometric standards while minimizing impacts to environmental resources and private property. A careful and thorough final design effort will be required to maximize the trail's value and benefit to users while minimizing or eliminating environmental and right-of-way impacts to the maximum extent practicable.

Fiesta Island Causeway

The project is proposed to provide improved access for bicycles and pedestrians to Fiesta Island, however, an increase in paved areas could potentially result in impacts to water quality. Design for the project will include the implementation of water quality features such as a Modular Wetland System and impervious dispersion areas that will minimize or eliminate the potential impacts to water quality.

Robb Field/Gateway Connectivity Path

The proposed project is designed to minimize the competing interest between providing circulation access to bicycles and pedestrians and the environmental impacts of increasing impervious surface by adding water quality features such as impervious dispersion areas.

5.2.8 Sensitive Habitat

No research of existing habitat maps has been conducted for the project study areas. It will be necessary to conduct thorough research of sensitive habitats within each project area. As a result of earthwork activities, the presence of archeological resources, paleontological resources, rare plant species, and/or rare or endangered wildlife may be encountered requiring avoidance or mitigation.

5.2.9 Sea Level Rise

Sea Level Rise (SLR) is defined as the increase in the level of the world's oceans. Two SLR projections (3.6 feet and 7.0 feet) are estimated by the Year 2100. These thresholds represent the 17% probability and 0.5% probability scenarios under a high emissions scenario and are driven by coastal flooding that is expected to increase (progress inland) with a 100-year storm event in conjunction with SLR. There is a low probability that SLR could exceed 7.0 feet by the end of the century. (OPC 2018) All analyses have been referenced to the NGVD 29 datum. The potential effects of SLR on each bike path project are discussed below:

Ocean Beach Bike Path

The lowest elevation of the Ocean Beach Bike Path is at the west end and is approximately 13 feet above sea level, therefore SLR is not anticipated to be a risk to the project in the future.

Rose Creek Bike Path

The lowest elevation of the Rose Creek Bike Path is at the south end and is approximately 9 feet above sea level, therefore SLR is not anticipated to be a risk to the project in the future.

Fiesta Island Causeway

The lowest elevation of the Fiesta Island Causeway is in the middle of the causeway and is approximately 7 feet above sea level, therefore SLR is not anticipated to be a likely risk to the project in the future.

Robb Field/Gateway Connectivity Path

The lowest elevation of the Robb Field/Gateway Connectivity Path is approximately 14 feet above sea level, therefore SLR is not anticipated to be a risk to the project in the future.

5.2.10 Permitting

As a result of the need to receive approval from multiple resource permitting agencies, the possibility of project delays during approval could occur which would result in an increased project schedule or require unanticipated mitigation. See section 5.4. The possibility of these delays can be reduced by starting the permitting process as early as feasible.

5.3 Project Conflict Coordination and Evaluation

Some of the existing bicycle and pedestrian facilities' deficiencies described in Section 3 may be resolved or improved by future City of San Diego projects. Further coordination with these projects will be needed to implement the bicycle and pedestrian improvements. A list of these projects and improvement descriptions is below:

- ReWild Mission Bay
    - Proposes to improve the existing Kendall-Frost Mission Bay Reserve. This includes a proposed bike and pedestrian path.
- City of San Diego Department of Engineering & Capital Projects: Street Paving within Mission Bay Park
    - Overlay Resurfacing
    - Slurry Resurfacing
- Magnolia Avenue
    - Proposed bicycle boulevard project to provide a connection between Rose Creek Bike Path and Mission Bay Drive. This includes the reconstruction of the existing ramp from the adjacent cul-de-sac on Magnolia Avenue to Rose Creek Bike Path
- Garnet Avenue
    - Proposed Class II bike lanes and Class I shared-use path on both sides of Garnet Avenue from Rose Creek Bike Path to Mission Bay Drive.
- Damon Avenue
    - Proposed improvement from existing Class III bike route to a Class IV cycle track.

- De Anza Cove
    - Proposed Class I shared-use waterfront path to traverse the outer perimeter of the southern portion of De Anza Cove.
- Tecolote Creek Wetland Restoration & Fiesta Island Causeway Tidal Culverts
    - Proposed improvement to Fiesta Island Causeway to increase tidal circulation in the waters adjoining it. Current design options include adding culverts under the causeway or installing a bridge.

5.4 Environmental Considerations and Permits

Environmental permits required to construct the four study areas (Ocean Beach Bike Path, Rose Creek Bike Path, Fiesta Island Causeway, and Robb Field/Gateway Connectivity Path) are summarized in, but not limited to Table 5-1. As a part of the Mission Bay Park Master Plan (City of San Diego 2002), the City is seeking to streamline state and federal resource agency approval for all future projects, including Bike and Pedestrian Paths. This work includes but is not limited to preparation and submission of applications for regulatory permits to the U.S. Army Corps of Engineers (USACE), pursuant to Section 404 of the federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act; California Regional Water Quality Control Board (RWQCB), pursuant Section 401 of the federal CWA; and California Department of Fish and Wildlife (CDFW), pursuant to the California Fish and Game Code (Section 1600). Additionally, permitting support and strategy for CCC pursuant to the California Coastal Act and Coastal Zone Management Act is in progress.

Pursuit of USACE Section 404 CWA programmatic permit is anticipated to be applied for as a Regional General Permit (RGP) to authorize the implementation of multiple projects within Mission Bay. An RGP can authorize a category or categories of activities, such as the Mission Bay Park Improvements, in a specific geographical region for activities that are similar in nature and cause only minimal individual and cumulative environmental impacts.

A portion of the Ocean Beach Bike Path runs atop a certified levee prism, as such there are requirements per the USACE. The USACE Section 408 Program allows another party, such as a local government, company or individual to alter or occupy a USACE Civil Works project. This is pursuant to Section 14 of the Rivers and Harbos Act of 1899, as amended and codified in 33 USC 408 (Section 408). The permitting process is expected to take approximately one (1) year to complete.

USACE staff will review each individual Section 408 permission request to determine National Environmental Policy Act (NEPA) compliance needs. The National Environmental Policy Act (NEPA) requires that every Federal agency consider the effects of Federal actions on the quality of the human environment, and to consider alternatives to those actions. Based on this, a NEPA permit will likely be required.
In pursuit of a U.S. Fish and Wildlife Service (USFW) Programmatic Biological Opinion, a Biological Assessment (BA), which is a modified version of a Biological Technical Report (BTR), is required in accordance with Section 7 of the Endangered Species Act (ESA). The BA is focused on project impacts on and restoration benefits for California least tern, western snowy plover, and other federally listed species, including marine species, which have the potential to occur within the project area.

In pursuit of a RWQCB programmatic 401 Water Quality Certification, an application will be required as well as RWQCB issued General Waste Discharge Requirements (WDRs) for authorization of Mission Bay Park Improvements.

Resource agency-imposed restrictions play a strong role in construction costs and duration. During discussions with resource agencies, permit restrictions will be negotiated, including but not limited to:

- Hours of Operations
- Noise Control
- Light Control
- Dust Control
- Fueling
- Site Access
- Storage and Staging
- Impacts to Habitat and Sensitive Species

Regarding the above topics, the City should strive for the following in order to maintain flexibility of construction methods:

- 6-day work weeks
- Hours of operation from 7AM to 6PM with occasional night work, as necessary
- Fueling and equipment maintenance permitted on-site
- Wide environmental window
    - The timing of construction in sensitive areas may also be affected by the patterns of nesting and breeding birds. Typically, the nesting season window is mid-February through early-September, which coincides with a large portion of the dry season. However, it may be argued that minimal sensitive habitat is present at all project sites, due to the high level of shoreline development in Mission Bay.
- Flexible construction access and staging areas.
    - Multiple construction access and staging areas allow various approaches to be conceived by contractors to increase competition during bidding.
    - Staging areas within or close in proximity to the construction area reduces construction duration and cost.

Table 5-1. Environmental Permit Requirements

Agency	Permit
Federal	
U.S. Army Corps of Engineers (USACE)	Permit under Section 404 of the Clean Water Act, 33 USC Section 1344 Section 10 of the River and Harbors Act of 1899, 33 USC Section 403 Issue Record of Decision (ROD) Fish and Wildlife Coordination Act, 16 USC Sections 661-666 Permit under Section 408 established in Section 14 of the Rivers and Harbos Act of 1899, as amended, and codified in 33 USC 408 (Section 408)
National Marine Fisheries Service (NMFS)	Magnuson-Stevens Fishery Conservation and Management Act, as amended 1996 (Public Law 104-267)
State Historic Preservation Officer/Tribal Historic Preservation Office	National Historic Preservation Act of 1966 (NHPA), Section 106 Consultation with SHPO/THPO (36 CFR Part 800)
U.S. Fish and Wildlife Service (USFW)	Endangered Species Act, 16 USC Sections 1531-1544 Section 7 Consultation with the federal lead agency (i.e. USACE) Programmatic Biological Opinion
State	
California Coastal Commission (CCC)	Coastal Development Permit Consistency Certification, Section 30600(a) of the California Coastal Act, or Waiver of Federal Consistency Provisions
California Department of Fish and Wildlife (CDFW)	Streambed Alteration Agreement, Section 1602 of the California Fish and Game Code California Endangered Species Act Section 2081 Incidental Take Permit
Regional Water Quality Control Board (RWQCB)	Water Quality Certification under Section 401 of the Clean Water Act
Regional/Local	
San Diego Air Pollution Control District (APCD)	Authority to Construct/Permit to Operate for any dredge

5.5 City Professional Standards and Mission Bay Park Masterplan Consistency

The development, design, and permitting of Ocean Beach Bike Path, Rose Creek Bike Path, Fiesta Island Causeway, and Robb Field/Gateway Connectivity Path shall comply with City of San Diego standards and well as the Mission Bay Park Master Plan (City of San Diego 2002). Standards, potential conflicts, and solutions is shown below in Table 5-2.

Table 5-2. Inventory of Relevant Standards

Source	Standards and Recommendations	Compliance/ Potential Conflict	Implementation/ Solution
Mission Bay Park Master Plan	The Plan addresses vehicular parking, transit, bicycle and pedestrian improvements with the aim of making efficient use of the regional roadway and transit network while minimizing the impact of cars in the Park. The Plan also promotes the expansion of the pedestrian and bicycle pathways around the Park.	Bicycle and Pedestrian Paths preliminary design is developed with the general goal of improving the non-vehicular circulation of the Park.	**Improvements** Bicycle and Pedestrian Paths
	The turf and beach areas along the Park's shorelines support the most intensive public recreational activity in Mission Bay. These areas draw users from throughout the San Diego region. With the County's population on the rise, the capacity of the park to accommodate this activity must be commensurately increased.	Bicycle and Pedestrian Paths preliminary design is developed with the general goal of improving or maintaining public recreational activity through circulation and access.	**Improvements** Bicycle and Pedestrian Paths
Mission Bay Park Master Plan (Continued)	Page 120 - The Park should be viewed as a key destination of the regional system of recreational paths. To this end, studies should be conducted to determine the feasibility of connecting the Park's bikeways and pedestrian paths to the regional network, particularly along Rose Creek Canyon to San Clemente Canyon and across I-5 to Clairemont Boulevard.	Bicycle and Pedestrian Paths design is developed with the goal of connecting the regional bicycle network to the Park.	**Improvements** Rose Creek Bike Path

Source	Standards and Recommendations	Compliance/ Potential Conflict	Implementation/ Solution
2018 City CADD Standards	The City uses Bentley MicroStation as its basic CADD graphics engine, for engineering design and drawing production, if approved by the City, Design Consultants may use other industry standard CADD systems, such as AutoCAD, to produce hard copy or PDF files which can be transmitted appropriately to the Project Managers as submittals. However, for compatibility reasons, all electronic CADD file submittals must be created in MicroStation or approved CADD system using City specified seed files that will be uploaded into the City's CADD file management system and shall conform to the requirements set forth in these standards (https://www.sandiego.gov/publicworks/edocref/drawings).	Submit final electronic CADD files in MicroStation.	No conflict.
City Street Design Manual	Project plans to comply with The City of San Diego Street Design Manual where feasible. The manual identifies a 16 ft width for a Class I multi-use path, with 2 ft shoulders on each side of a 12 ft path. The existing levees at Ocean Beach are less than the minimum bike path width. US Army Corps of Engineers permitting may affect ability to provide a 16 ft path at this location.	Project plans to comply with City standards.	No conflict at this time.
City Stormwater Guidelines	Project plans to comply with The City of San Diego Storm Water Standards and the MS4 Permit.	Project plans to comply with City standards.	No conflict.
California Department of Transportation (Caltrans) Highway Design Manual (HDM)	Project plans to comply with the Caltrans Highway Design Manual where possible. The manual identifies a minimum paved width of 10 feet, minimum shoulder of 2 ft, 2:1 minimum side slope, 90 ft minimum radius (100 ft where superelevated), and 8 ft minimum vertical clearance. Pathways under bridges may pose difficulty maintaining adequate vertical clearance if the existing pathway grade cannot be lowered. Minimum curve radii may be difficult to comply with in areas with limited right-of-way and other horizontal constraints.	Project plans to comply with City standards.	No conflict at this time.

5.6 ADA and Title 24

The Americans with Disabilities Act of 1990 is a civil rights law prohibiting discrimination against individuals with disabilities. The Bicycle and Pedestrian Paths project will comply with all Federal ADA requirements. Title

24 is a California Building Standards Code establishing requirements for “energy conservation, green design, construction and maintenance, fire and life safety, and accessibility” of a building’s “structural, mechanical, electrical, and plumbing systems.” No buildings are proposed as a part of the Bicycle and Pedestrian Paths project and, therefore, Title 24 requirements are not applicable.

6 References

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A. Bicycle & Pedestrian Path Existing Conditions Exhibit



LEGEND

- PEDESTRIAN PATH
- SHARED PATH (CLASS I)
- TWO–WAY BIKE PATH (CLASS I)
- BIKE LANE (CLASS II)
- BIKE ROUTE (CLASS III)
- SEPARATED BIKEWAY/CYCLE TRACK (CLASS IV)
- IMPROVEMENT ZONE BOUNDARY
- MISSING CONNECTIVITY PATH
- SHEET LIMITS
- (#) SHEET NUMBER

N

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KEY MAP
BICYCLE & PEDESTRIAN PATH
EXISTING CONDITIONS EXHIBIT

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SEE SHEET 2

BAYSIDE WALK

SANTA BARBARA COVE

MISSION BAY BIKE PATH

BAHIA POINT

GLEASON ROAD

VENTURA COVE

VENTURA POINT

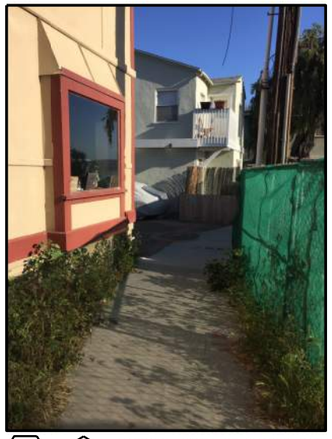
WEST MISSION BAY DRIVE

MARINER'S WAY

BONITA COVE

MISSING SIGNAGE 5 6

NARROW SIDEWALK 7 8 THAT SHOULD BE WIDENED. BIKES WILL RIDE ON STREET VERSUS CONTINUING ON THE PATH TO CROSS WEST MISSION BAY.



2 3 NARROW WIDTH OF SHARED PATH FOR CYCLISTS AND PEDESTRIANS (LOOKING NORTH)



4 LACK OF WAYFINDING SIGNAGE (LOOKING WEST)



7 8 NARROW WIDTH OF SHARED PATH FOR CYCLISTS AND PEDESTRIANS (LOOKING NORTH)



1 LACK OF WAYFINDING SIGNAGE (LOOKING WEST)

LEGEND

- SHARED PATH (CLASS I)
- BIKE LANE (CLASS II)
- IMPROVEMENT ZONE BOUNDARY

DEFICIENCIES/ISSUES

- X MISSING SIGNAGE
- X INADEQUATE GEOMETRY
- X SAFETY/SECURITY

N

0 150 300 450

SCALE 1" = 150'

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WEST MISSION BAY BICYCLE & PEDESTRIAN PATH EXISTING CONDITIONS EXHIBIT

SHEET 1 OF 18

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MISSION BOULEVARD

BAYSIDE WALK (MISSION BAY BIKE PATH)

SEE SHEET 1

SEE SHEET 3

SANTA BARBARA COVE

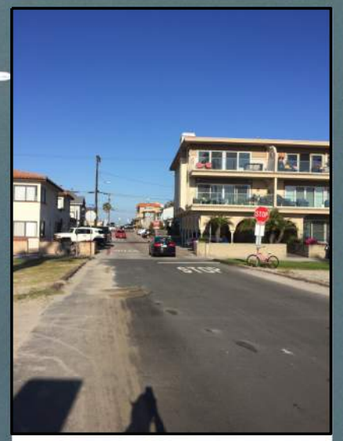
SAN JUAN COVE

EL CARMEL PLACE

EL CARMEL POINT

MISSION BAY YACHT CLUB

SAN DIEGO ROWING CLUB



1 MISSING CONNECTIVITY FOR PEDESTRIANS TO TRAVEL FROM BAYSIDE WALK TO EL CARMEL POINT (LOOKING WEST)



2 LACK OF PEDESTRIAN FACILITES SUCH AS A SIDEWALK PRESENTS A SAFETY CONCERN (LOOKING EAST)

LEGEND

- SHARED PATH (CLASS I)
- IMPROVEMENT ZONE BOUNDARY
- MISSING CONNECTIVITY PATH

DEFICIENCIES/ISSUES

- X MISSING CONNECTIVITY
- X SAFETY/SECURITY

N

0 150 300 450

SCALE 1" = 150'

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WEST MISSION BAY BICYCLE & PEDESTRIAN PATH EXISTING CONDITIONS EXHIBIT

SHEET 2 OF 18

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MISSION BOULEVARD

BAYSIDE WALK (MISSION BAY BIKE PATH)

SEE SHEET 2

SAN JUAN COVE

SANTA CLARA PLACE

CONNECTIVITY FOR PEDESTRIANS AND CYCLISTS FROM BAYSIDE WALK

SAIL BAY

MISSION BAY AQUATIC CENTER

SANTA CLARA POINT RECREATION CENTER

MISSION BAY SPORTCENTER

SANTA CLARA POINT



1 EXISTING PEDESTRIAN PATH DEAD ENDS (LOOKING EAST)



2 3 NO PEDESTRIAN FACILITY ON THE NORTH SIDE OF SANTA CLARA PLACE THEREFORE CYCLISTS AND PEDESTRIANS MUST USE ROADWAY (LOOKING WEST)

LEGEND

- SHARED PATH (CLASS I)
- IMPROVEMENT ZONE BOUNDARY
- MISSING CONNECTIVITY PATH
- EXISTING SIDEWALK

DEFICIENCIES/ISSUES

- (X) MISSING CONNECTIVITY
- X SAFETY/SECURITY

N

0 150 300 450

SCALE 1" = 150'

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WEST MISSION BAY BICYCLE & PEDESTRIAN PATH EXISTING CONDITIONS EXHIBIT

SHEET 3 OF 18

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1 SHARED PATH ENDS AT CROWN POINT PARK WITH NO WAYFINDING SIGNAGE (LOOKING EAST)



2 PAVEMENT IN POOR CONDITION (LOOKING WEST)

LEGEND

- SHARED PATH (CLASS I)
- BIKE LANE (CLASS II)
- BIKE ROUTE (CLASS III)
- IMPROVEMENT ZONE BOUNDARY
- MISSING CONNECTIVITY PATH

DEFICIENCIES/ISSUES

- X — POOR PAVEMENT CONDITIONS
- (X) — MISSING SIGNAGE

0 150 300 450

SCALE 1" = 150'

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NORTH SHORE (CROWN POINT) BICYCLE & PEDESTRIAN PATH EXISTING CONDITIONS EXHIBIT

SHEET 4 OF 18

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OLIVER AVENUE

NOYES STREET

PACIFIC BEACH DRIVE
("PB" PATHWAY)

OLINEY STREET

FOUTZ AVENUE

LEE STREET

MIKE GOTCH MEMORIAL BIKE PATH

SEE SHEET 4

CROWN POINT DRIVE

KENDALL–FROST MISSION BAY
MARSH RESERVE

CAMPLAND

SEE SHEET 6



1 MISSING WAYFINDING SIGNAGE FOR CYCLISTS TRAVELING WESTBOUND ON PACIFIC BEACH DRIVE (LOOKING WEST)



2 3 MISSING CONNECTIVITY, NO SIDEWALK ON SOUTH SIDE OF PACIFIC BEACH DRIVE AND PEDESTRIAN/CYCLISTS MUST USE ROADWAY (LOOKING WEST)



4 MISSING WAYFINDING SIGNAGE TO DIRECT CYCLISTS TO THE APPROPRIATE DESTINATION (LOOKING WEST)

LEGEND

- SHARED PATH (CLASS I)
- BIKE LANE (CLASS II)
- BIKE ROUTE (CLASS III)
- IMPROVEMENT ZONE BOUNDARY
- MISSING CONNECTIVITY PATH

DEFICIENCIES/ISSUES

- X MISSING CONNECTIVITY
- X MISSING SIGNAGE
- X SAFETY/SECURITY

N

0 150 300 450

SCALE 1" = 150'

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ROSE CREEK
BICYCLE & PEDESTRIAN PATH
EXISTING CONDITIONS EXHIBIT
SHEET 5 OF 18

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SEE SHEET 7

SEE SHEET 5

MIKE GOTCH MEMORIAL BIKE PATH

MIKE GOTCH MEMORIAL BRIDGE

ROSE CREEK BIKE PATH

ROSE CREEK

MISSION BAY GOLF COURSE

NORTH MISSION BAY DRIVE

DE ANZA ROAD

END OF BIKE PATH

DE ANZA COVE

4 5 MISSING BIKE ROUTE SIGNAGE OR PAVEMENT MARKING

1

2

3

4



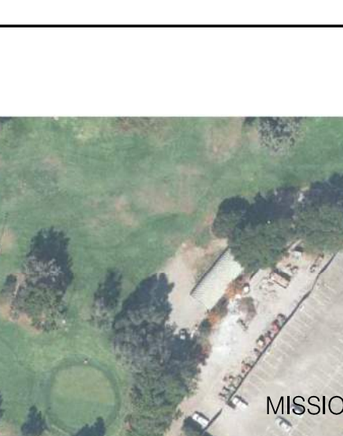
1 NO WAYFINDING SIGNAGE TO DIRECT CYCLISTS AND PEDESTRIANS TO THE APPROPRIATE DESTINATION (LOOKING WEST)



2 NO SIDEWALK ON NORTH MISSION BAY DRIVE OR DE ANZA ROAD (EITHER SIDE) (LOOKING EAST)



3 SHARED-USE PATH ENDS WITH NO WAYFINDING SIGNAGE TO DIRECT CYCLISTS AND PEDESTRIANS TO THE APPROPRIATE DESTINATION (LOOKING EAST)



4 NO SIDEWALK ON EITHER SIDE OF DE ANZA ROAD (LOOKING SOUTH)

LEGEND

- SHARED PATH (CLASS I)
- BIKE ROUTE (CLASS III)
- IMPROVEMENT ZONE BOUNDARY
- MISSING CONNECTIVITY PATH

DEFICIENCIES/ISSUES

- X MISSING CONNECTIVITY
- X MISSING SIGNAGE

N

0 150 300 450

SCALE 1" = 150'

DE ANZA BICYCLE & PEDESTRIAN PATH EXISTING CONDITIONS EXHIBIT

SHEET 6 OF 18

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ROSE CREEK

ROSE CREEK BIKE PATH

INADEQUATE GEOMETRY (HORIZONTAL CURVES)

1 2 3 4

NO LIGHTING UNDER BRIDGE POSES SAFETY/SECURITY CONCERN

5

6 NO WAYFINDING SIGNAGE

GRAND AVENUE

HORNBLEND STREET

MAGNOLIA AVENUE

FIGUEROA BOULEVARD

BOND STREET

SEE SHEET 6

SEE SHEET 8

INADEQUATE GEOMETRY (HORIZONTAL CURVES)



1 2 3 EXISTING PAVEMENT IN POOR CONDITION AND SHARED BIKE PATH IS NARROW IN WIDTH (LOOKING SOUTH)



4 MISSING SIGNAGE AT FORK ON BIKE PATH (LOOKING NORTH)

LEGEND

- SHARED PATH (CLASS I)
- BIKE LANE (CLASS II)
- IMPROVEMENT ZONE BOUNDARY

DEFICIENCIES/ISSUES

- X POOR PAVEMENT CONDITIONS
- X MISSING SIGNAGE
- X INADEQUATE GEOMETRY
- X SAFETY/SECURITY

0 150 300 450

SCALE 1" = 150'

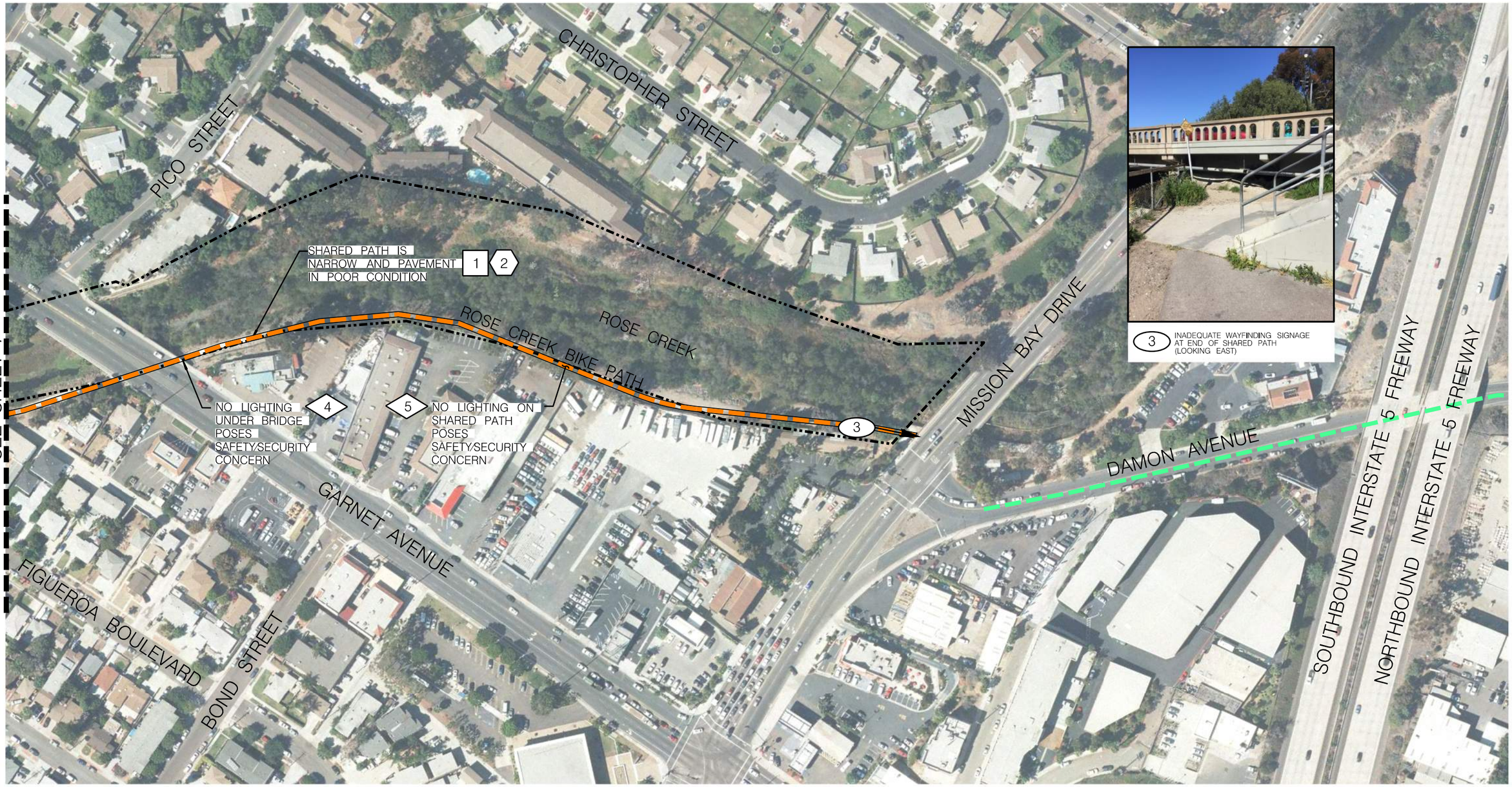
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ROSE CREEK BICYCLE & PEDESTRIAN PATH EXISTING CONDITIONS EXHIBIT

SHEET 7 OF 18

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3 INADEQUATE WAYFINDING SIGNAGE AT END OF SHARED PATH (LOOKING EAST)

LEGEND

- SHARED PATH (CLASS I)
- BIKE ROUTE (CLASS III)
- IMPROVEMENT ZONE BOUNDARY

DEFICIENCIES/ISSUES

- X — POOR PAVEMENT CONDITIONS
- X — MISSING SIGNAGE
- X — INADEQUATE GEOMETRY
- X — SAFETY/SECURITY

N

0 150 300 450

SCALE 1" = 150'

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ROSE CREEK BICYCLE & PEDESTRIAN PATH EXISTING CONDITIONS EXHIBIT

SHEET 8 OF 18

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DOG BEACH

SAN DIEGO RIVER

OCEAN BEACH BIKE PATH

1

2

WEST POINT LOMA BOULEVARD

VOLTAIRE STREET

ABBOTT STREET

LOTUS STREET

ROBB FIELD



1 NARROW WIDTH OF SHARED-USE PATH WITH NO SHOULDERS (LOOKING WEST)



2 PAVEMENT FOR SHARED-USE PATH IS IN POOR CONDITION (LOOKING EAST)

LEGEND

- SHARED PATH (CLASS I)
- BIKE ROUTE (CLASS III)
- IMPROVEMENT ZONE BOUNDARY

DEFICIENCIES/ISSUES

- X POOR PAVEMENT CONDITIONS
- X INADEQUATE GEOMETRY

N

0 150 300 450

SCALE 1" = 150'

ROBB FIELD /DOG BEACH BICYCLE & PEDESTRIAN PATH EXISTING CONDITIONS EXHIBIT

SHEET 9 OF 18

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31-MAY-2024 08:52 knguyen

MISSION BAY

QUIVIRA BASIN



1 SHARED–USE PATH PAVEMENT IN POOR CONDITION (LOOKING WEST)

HOSPITALITY POINT PARK

QUIVIRA WAY

SEE SHEET 11

1

SAN DIEGO RIVER

N

0 150 300 450

SCALE 1" = 150'

LEGEND

SHARED PATH (CLASS I)

BIKE LANE (CLASS II)

DEFICIENCIES/ISSUES

X POOR PAVEMENT CONDITIONS

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QUIVIRA BASIN
BICYCLE & PEDESTRIAN PATH
EXISTING CONDITIONS EXHIBIT
SHEET 10 OF 18

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31–MAY–2024 08:53 knguyen

SEE SHEET 12

QUIVIRA BASIN



1 MISSING SIDEWALK ALONG QUIVIRA WAY (LOOKING SOUTH)



2 POOR PAVEMENT CONDITION (LOOKING WEST)



3 4 POOR PAVEMENT CONDITION (LOOKING NORTH)

INGRAHAM STREET

SEA WORLD DRIVE

SEE SHEET 10

QUIVIRA WAY

SHARED PATH HAS POOR GEOMETRY AND POOR PAVEMENT CONDITIONS 3 4

OLD SEA WORLD DRIVE 2

SUNSET CLIFFS BOULEVARD BRIDGE

SAN DIEGO RIVER

LEGEND

- PEDESTRIAN PATH
- SHARED PATH (CLASS I)
- BIKE LANE (CLASS II)
- BIKE ROUTE (CLASS III)

DEFICIENCIES/ISSUES

- (X) MISSING CONNECTIVITY
- [X] POOR PAVEMENT CONDITIONS
- (X) INADEQUATE GEOMETRY

N

0 150 300 450

SCALE 1" = 150'

RICK ENGINEERING COMPANY

QUIVIRA BASIN
BICYCLE & PEDESTRIAN PATH
EXISTING CONDITIONS EXHIBIT
SHEET 11 OF 18

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31-MAY-2024 08:54 knguyen

SEE SHEET 13

INGRAHAM STREET

DANA LANDING ROAD

1 MISSING WAYFINDING SIGNAGE

MISSING PEDESTRIAN FACILITIES 3

4

WEST MISSION BAY DRIVE

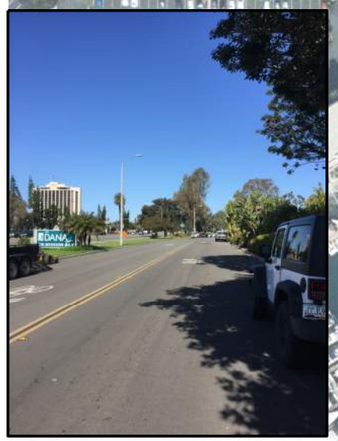
MISSING WAYFINDING SIGNAGE 2

QUIVIRA ROAD

SEE SHEET 11

SEA FORTH MARINA

QUIVIRA BASIN



4 MISSING SIDEWALK ALONG DANA LANDING ROAD (LOOKING WEST)

LEGEND

- BIKE LANE (CLASS II)
- BIKE ROUTE (CLASS III)

DEFICIENCIES/ISSUES

- X MISSING CONNECTIVITY
- X MISSING SIGNAGE
- X SAFETY/SECURITY

0 150 300 450

SCALE 1" = 150'

QUIVIRA BASIN
BICYCLE & PEDESTRIAN PATH
EXISTING CONDITIONS EXHIBIT
SHEET 12 OF 18

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31-MAY-2024 08:55 knguyen

PEREZ COVE

SEA WORLD

PEREZ COVE WAY

INGRAHAM STREET

DANA LANDING ROAD

QUIVIRA BASIN

MISSING PEDESTRIAN FACILITIES 2

WEST MISSION BAY DRIVE

WEST MISSION BAY DRIVE

1



1 SHARED PATH ENDS WITH INADEQUATE WAYFINDING SIGNAGE (LOOKING WEST)

SEE SHEET 14

SEE SHEET 12

LEGEND

- PEDESTRIAN PATH
- SHARED PATH (CLASS I)
- TWO-WAY BIKE PATH (CLASS I)
- BIKE LANE (CLASS II)
- BIKE ROUTE (CLASS III)

DEFICIENCIES/ISSUES

- X MISSING SIGNAGE
- X SAFETY/SECURITY

0 150 300 450

SCALE 1" = 150'

RICK ENGINEERING COMPANY

SOUTH SHORES & QUIVIRA BASIN BICYCLE & PEDESTRIAN PATH EXISTING CONDITIONS EXHIBIT

SHEET 13 OF 18

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31-MAY-2024 08:55 knguyen

SEA WORLD

PEREZ COVE WAY

SEA WORLD DRIVE

SEA WORLD WAY



3 EXISTING RAMP IS UNSAFE TO BE SHARED BY BOTH PEDESTRIANS AND BICYCLISTS (LOOKING WEST)



1 SEGMENTS ALONG SEA WORLD DRIVE 2-WAY BIKE PATH WITH NO CENTERLINE STRIPING AND NARROW WIDTH (LOOKING WEST)

SEE SHEET 13

SEE SHEET 15

WEST MISSION BAY DRIVE

MISSING WAYFINDING SIGNAGE 4



2 POOR PAVEMENT CONDITIONS (LOOKING WEST)

SHOULD OFFER PEDESTRIAN PATH AND TWO-WAY BIKE PATH IMPROVEMENTS TO THE WEST MISSION BAY TO PEREZ COVE CONNECTIONS AROUND THE SEA WORLD DRIVE RAMP

OLD SEA WORLD DRIVE

3

1

2

LEGEND

- PEDESTRIAN PATH
- SHARED PATH (CLASS I)
- TWO-WAY BIKE PATH (CLASS I)
- BIKE LANE (CLASS II)
- BIKE ROUTE (CLASS III)
- MISSING CONNECTIVITY PATH

DEFICIENCIES/ISSUES

- X — INADEQUATE GEOMETRY
- X — POOR PAVEMENT CONDITIONS
- X — MISSING SIGNAGE

N

0 150 300 450

SCALE 1" = 150'

SOUTH SHORES BICYCLE & PEDESTRIAN PATH EXISTING CONDITIONS EXHIBIT

SHEET 14 OF 18

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31-MAY-2024 08:57 knguyen



1 SHARED USE PATH BEGINS. MISSING ADA CURB/BIKE RAMP TO ENTER FACILITY (LOOKING NORTH)



2 SHARED USE PATH ENDS. MISSING ADA CURB/BIKE RAMP TO EXIT FACILITY (LOOKING NORTH)



3 NO PROPER SIGNAGE TO DIRECT WHICH WAY BIKE PATH CONTINUES (LOOKING WEST)



4 UNEVEN PAVEMENT WITH NUMEROUS POTHOLES (LOOKING WEST)

SEE SHEET 14

SEE SHEET 16

SOUTH SHORES

SOUTH SHORES PARK

SOUTH SHORES PARKWAY

SEA WORLD

SEA WORLD DRIVE

OLD SEA WORLD DRIVE

MISSING WAYFINDING SIGNAGE 5

1 2 3 4

N

LEGEND

- PEDESTRIAN PATH
- SHARED PATH (CLASS I)
- TWO-WAY BIKE PATH (CLASS I)
- BIKE LANE (CLASS II)

0 150 300 450

SCALE 1" = 150'

DEFICIENCIES/ISSUES

- (X) MISSING CONNECTIVITY
- (X) MISSING SIGNAGE
- [X] POOR PAVEMENT CONDITIONS

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SOUTH SHORES BICYCLE & PEDESTRIAN PATH EXISTING CONDITIONS EXHIBIT

SHEET 15 OF 18

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31-MAY-2024 08:59 knguyen

SEE SHEET 17

SEE SHEET 15

1 CONNECTIVITY MISSING FOR CYCLISTS TO TRAVEL BETWEEN EXISTING BIKE PATHS ON SEA WORLD DRIVE, FRIARS ROAD, AND EAST MISSION BAY DRIVE

SEA WORLD DRIVE

MISSING WAYFINDING SIGNAGE

2

FRIARS ROAD

OLD SEA WORLD DRIVE



2 FRIARS ROAD CYCLE TRACK PAVEMENT IN POOR CONDITION (LOOKING SOUTH)

N

0 150 300 450

SCALE 1" = 150'

LEGEND

- SHARED PATH (CLASS I)
- BIKE LANE (CLASS II)
- SEPARATED BIKEWAY/CYCLE TRACK (CLASS IV)
- MISSING CONNECTIVITY PATH

DEFICIENCIES/ISSUES

- (X) MISSING CONNECTIVITY
- [X] POOR PAVEMENT CONDITIONS

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SOUTH SHORES BICYCLE & PEDESTRIAN PATH EXISTING CONDITIONS EXHIBIT SHEET 16 OF 18

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31-MAY-2024 09:00 knguyen



1 2 3 PEDESTRIAN AND CYCLIST ACCESS TO FIESTA ISLAND VIA FIESTA ISLAND ROAD (LOOKING WEST)

4 EXISTING PAVED PATH ENDS WITH NO ADVANCE SIGNAGE (LOOKING SOUTH)

LEGEND

- SHARED PATH (CLASS I)
- BIKE LANE (CLASS II)
- BIKE ROUTE (CLASS III)
- IMPROVEMENT ZONE BOUNDARY
- MISSING CONNECTIVITY PATH

DEFICIENCIES/ISSUES

- X MISSING CONNECTIVITY
- X MISSING SIGNAGE
- X INADEQUATE GEOMETRY
- X SAFETY/SECURITY

N

0 150 300 450

SCALE 1" = 150'

RICK ENGINEERING COMPANY™

SOUTH SHORES BICYCLE & PEDESTRIAN PATH EXISTING CONDITIONS EXHIBIT SHEET 17 OF 18

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31-MAY-2024 09:00 knguyen



1 MISSING CONNECTIVITY FOR PEDESTRIANS AND CYCLISTS TO AND FROM ROBB FIELD TO SUNSET CLIFFS BOULEVARD AND WEST POINT LOMA BOULEVARD (LOOKING NORTHEAST)



2 EXISTING RAMP FOR PEDESTRIANS AND CYCLISTS IS NOT ADA COMPLIANT AND POSES SAFETY CONCERN (LOOKING SOUTH)

ROBB FIELD

SUNSET CLIFFS BOULEVARD

DUSTY RHODES PARK

DOG PARK

WEST POINT LOMA BOULEVARD

NIMITZ BOULEVARD

LEGEND

- PEDESTRIAN PATH
- SHARED PATH (CLASS I)
- BIKE LANE (CLASS II)
- BIKE ROUTE (CLASS III)
- IMPROVEMENT ZONE BOUNDARY
- MISSING CONNECTIVITY PATH

DEFICIENCIES/ISSUES

- X MISSING CONNECTIVITY
- X SAFETY/SECURITY

N

0 150 300 450

SCALE 1" = 150'

RICK ENGINEERING COMPANY

ROBB FIELD
BICYCLE & PEDESTRIAN PATH
EXISTING CONDITIONS EXHIBIT
SHEET 18 OF 18

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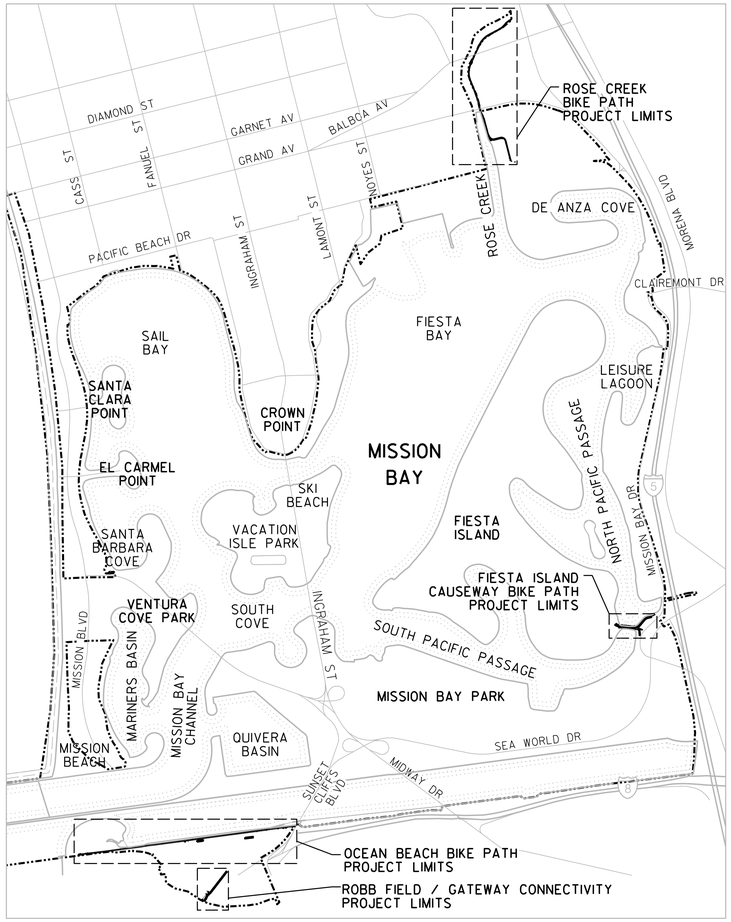
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B. Preliminary Drawings

MISSION BAY BICYCLE AND PEDESTRIAN PATH IMPROVEMENTS

SHEET INDEX

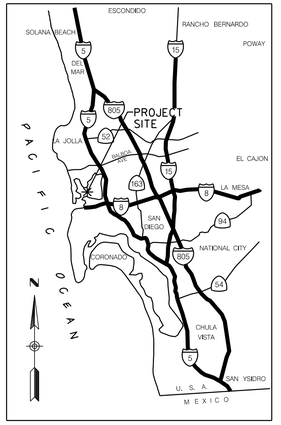
SHEET NO.	DISCIPLINE CODE	TITLE	LIMITS
1	G-1	COVER SHEET	
2	G-2	KEY MAP	
3	C-1	OCEAN BEACH BIKE PATH	STA 10+00 TO STA 15+00
4	C-2	OCEAN BEACH BIKE PATH	STA 15+00 TO STA 20+00
5	C-3	OCEAN BEACH BIKE PATH	STA 20+00 TO STA 25+00
6	C-4	OCEAN BEACH BIKE PATH	STA 25+00 TO STA 30+00
7	C-5	OCEAN BEACH BIKE PATH	STA 30+00 TO STA 35+00
8	C-6	OCEAN BEACH BIKE PATH	STA 35+00 TO STA 40+00
9	C-7	OCEAN BEACH BIKE PATH	STA 40+00 TO STA 45+00
10	C-8	OCEAN BEACH BIKE PATH	STA 45+00 TO STA 50+00
11	C-9	OCEAN BEACH BIKE PATH	STA 50+00 TO STA 55+00
12	C-10	OCEAN BEACH BIKE PATH	STA 55+00 TO END
13	C-11	ROSE CREEK BIKE PATH	STA 10+00 TO STA 14+00
14	C-12	ROSE CREEK BIKE PATH	STA 14+00 TO STA 20+00
15	C-13	ROSE CREEK BIKE PATH	STA 20+00 TO STA 25+00
16	C-14	ROSE CREEK BIKE PATH	STA 25+00 TO STA 30+00
17	C-15	ROSE CREEK BIKE PATH	STA 30+00 TO STA 35+00
18	C-16	ROSE CREEK BIKE PATH	STA 35+00 TO STA 40+00
19	C-17	ROSE CREEK BIKE PATH	STA 40+00 TO STA 45+00
20	C-18	ROSE CREEK BIKE PATH	STA 45+00 TO STA 50+00
21	C-19	ROSE CREEK BIKE PATH	STA 50+00 TO END
22	C-20	FIESTA ISLAND CAUSEWAY BIKE PATH	
23	C-21	ROBB FIELD / GATEWAY CONNECTIVITY	



KEY MAP

WORK TO BE DONE

THE IMPROVEMENTS CONSIST OF BICYCLE AND PEDESTRIAN PATH WIDENING, CONCRETE WORK, PAVEMENT ADDITIONS, AND MINOR GRADING.



VICINITY MAP
NOT TO SCALE

LEGEND

IMPROVEMENTS	STANDARD DRAWINGS
MAJOR CONTOUR	
MINOR CONTOUR	
DAYLIGHT	
AC PAVEMENT	
PCC PAVEMENT	
DISPERSION AREA	
BIOFILTRATION BASIN	
DETECTABLE WARNING TILES	SDG-131
CHAIN LINK FENCE	SDM-112
PEDESTRIAN PROTECTIVE RAILING	SDM-115
IMPROVEMENT ZONE BOUNDARY	
SIGN	
WING TYPE HEADWALL	D-34
CATCH BASIN	SDD-119, D-29
CLEANOUT	D-09
STORM DRAIN	SDD-110, D-61,

EXISTING STRUCTURES

EX STORM DRAIN
EX MAJOR CONTOUR
EX MINOR CONTOUR
EX CONCRETE
EX WATER
EX SEWER
EX FENCE
EX RAILING
EX TREE
EX SIGN

DISCIPLINE CODE

G GENERAL
C CIVIL

FIELD DATA

BENCHMARK: BRASS PLUG AT THE SE CURB RETURN AT CROWN POINT DR AND INGRAHAM ST ELEV.= 34.518, NGVD29

FIELD NOTES: N/A

BASIS OF BEARINGS / COORDINATES:
GPS 157 TO 154: N23° 40'56"W, HD 10,592.61FT
CCS 83 ZONE 6, NAD83 (EPOCH 1991.35)

DATUM: MEAN SEA LEVEL, (NVGD29)

REFERENCES: ROS 14492

ABBREVIATIONS

AB	AGGREGATE BASE
AC	ASBESTOS CEMENT PIPE ASPHALT CONCRETE
CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
C.O.	CLEANOUT
CONC	CONCRETE
CSP	CALTRANS STANDARD PLANS
CY	CUBIC YARD
DG, D.G.	DECOMPOSED GRANITE
DI	DUCTILE IRON
EL, ELEV.	ELEVATION
EX, EXIST	EXISTING
FG	FINISH GRADE
FT	FEET
HORIZ.	HORIZONTAL
MAX	MAXIMUM
MIN	MINIMUM
MOD	MODIFIED
NTS	NOT TO SCALE
PCC	PORTLAND CEMENT CONCRETE
PROP	PROPOSED
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
SD	STORM DRAIN
SHLDR	SHIOULDER
STL	STEEL
SWR	SEWER
TG	TOP OF GRATE
TYP	TYPICAL
UNK	UNKNOWN
VERT.	VERTICAL
VC	VITRIFIED CLAY PIPE
WTR	WATER

CONSTRUCTION CHANGE / ADDENDUM			
CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.

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

The City of SAN DIEGO
Engineering & Capital Projects

RICK
619-291-0707
rickengineering.com
5620 FRIARS ROAD
SAN DIEGO, CA 92110
SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

G-1

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN
PATH IMPROVEMENTS

COVER SHEET

SPEC. NO.

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 1 OF 23 SHEETS

WBS

APPROVED:
FOR CITY ENGINEER ____ DATE
PRINT NAME ____ RCE#

SUBMITTED BY:
PROJECT MANAGER

CHECKED BY:
PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

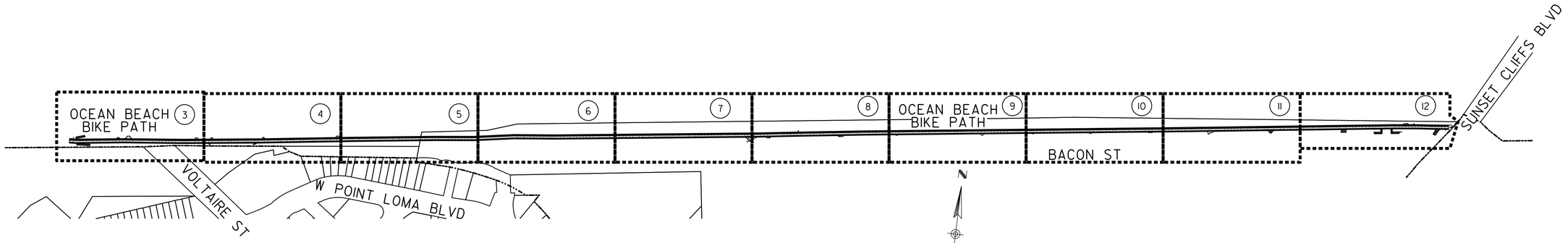
226-1701
CCS27 COORDINATE

1866-6261
CCS83 COORDINATE

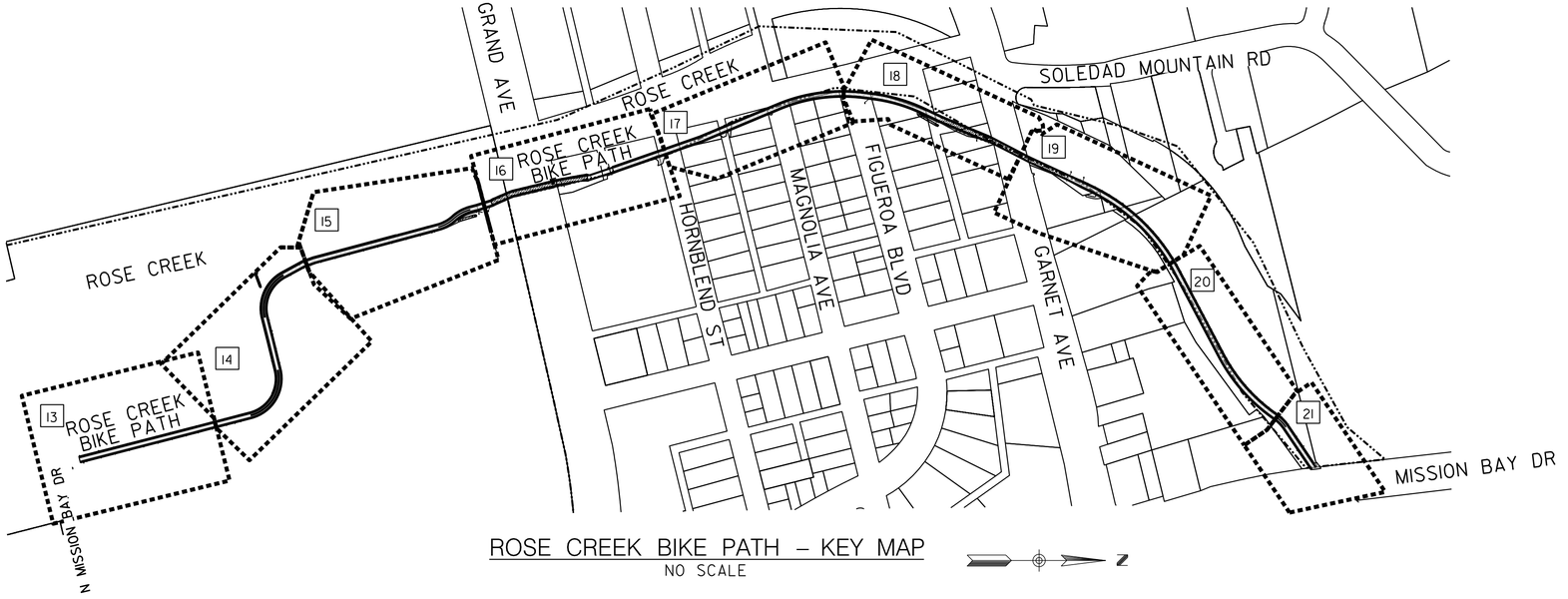
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CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

PRELIMINARY
NOT FOR CONSTRUCTION

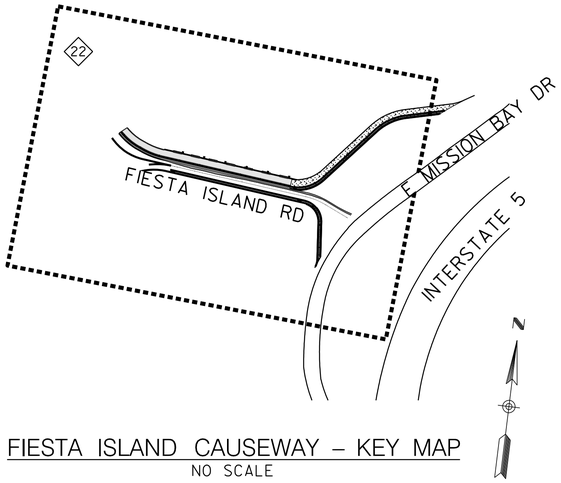


OCEAN BEACH BIKE PATH – KEY MAP
NO SCALE

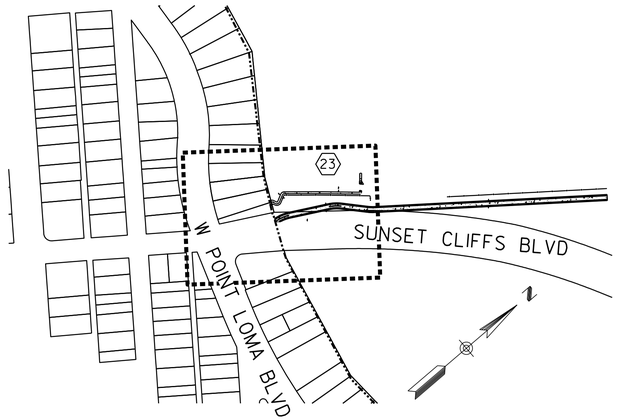


ROSE CREEK BIKE PATH – KEY MAP
NO SCALE

LEGEND	SYMBOL
PROPOSED IMPROVEMENT SHEETS	
IMPROVEMENT ZONE BOUNDARY	
OCEAN BEACH BIKE PATH PLANS	XX
ROSE CREEK BIKE PATH PLANS	XX
FIESTA ISLAND CAUSEWAY PLANS	XX
ROBB FIELD/GATEWAY CONNECTIVITY PLANS	XX



FIESTA ISLAND CAUSEWAY – KEY MAP
NO SCALE



ROBB FIELD/GATEWAY CONNECTIVITY – KEY MAP
NO SCALE

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G-2

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN
PATH IMPROVEMENTS

KEY MAP

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 2 OF 23 SHEETS

WBS

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DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

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1866-6261
CCS83 COORDINATE

CONTRACTOR
INSPECTOR
DATE STARTED
DATE COMPLETED

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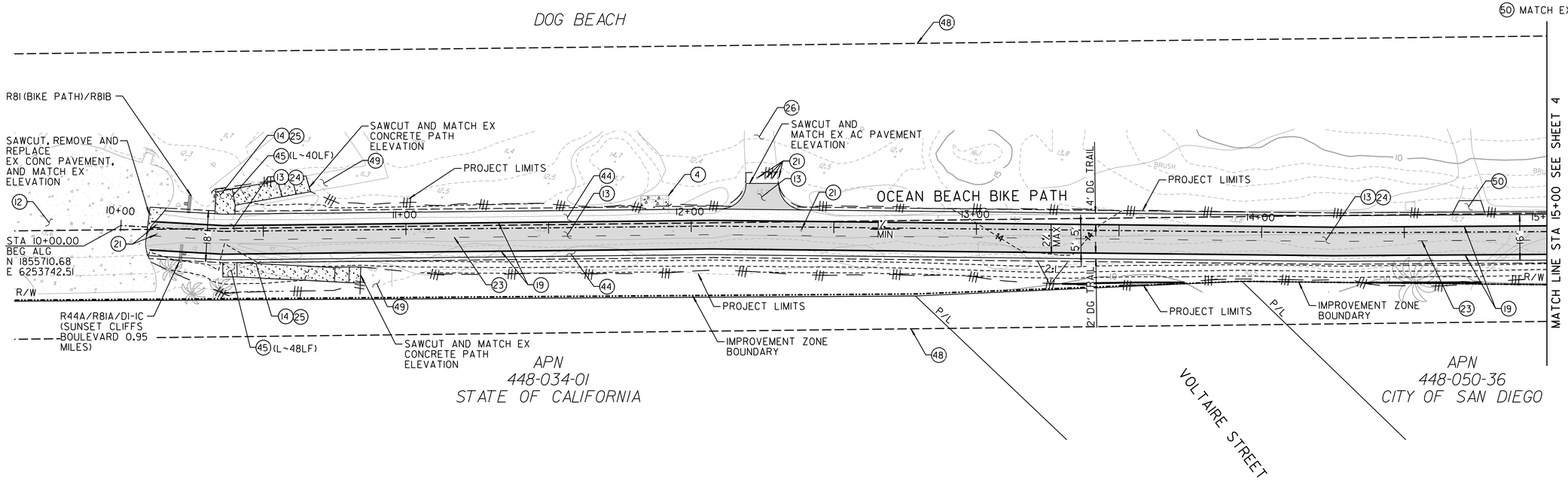
KEY MAP

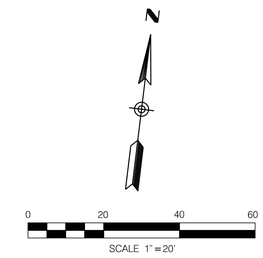
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04-JUN-2024 07:50 HREBELLO

CONSTRUCTION NOTES

(4) REMOVE AND RELOCATE EX BENCH AND CONCRETE PAD
(12) PROTECT EX CONCRETE PAVEMENT
(13) PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
(14) PROPOSED PCC PAVEMENT (6" PCC OVER 18" CLASS AB)
(19) PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
(21) REMOVE AND DISPOSE EX BOLLARDS
(23) PROPOSED MOD DETAIL 1 PER CSP A20A (3' STRIPE @ 9' SPACING)
(24) REMOVE EX AC BIKE PATH
(25) REMOVE EX PCC BIKE PATH
(26) PROTECT EX AC PAVEMENT
(44) CONSTRUCT 4" DG TRAIL
(45) CONSTRUCT PEDESTRIAN RAMP AND PROTECTIVE RAILING PER SDM-115
(48) EXISTING LIMITS OF LEVEE PRISM PER CITY OF SAN DIEGO
(49) PROTECT EX PCC PATH
(50) MATCH EXISTING TRAIL GRADE





OCEAN BEACH BIKE PATH

C-1

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN
PATH IMPROVEMENTS
OCEAN BEACH BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 3 OF 23 SHEETS

WBS

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ORIGINAL	RICK			

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1866-6261 CCS83 COORDINATE
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INSPECTOR
DATE STARTED
DATE COMPLETED

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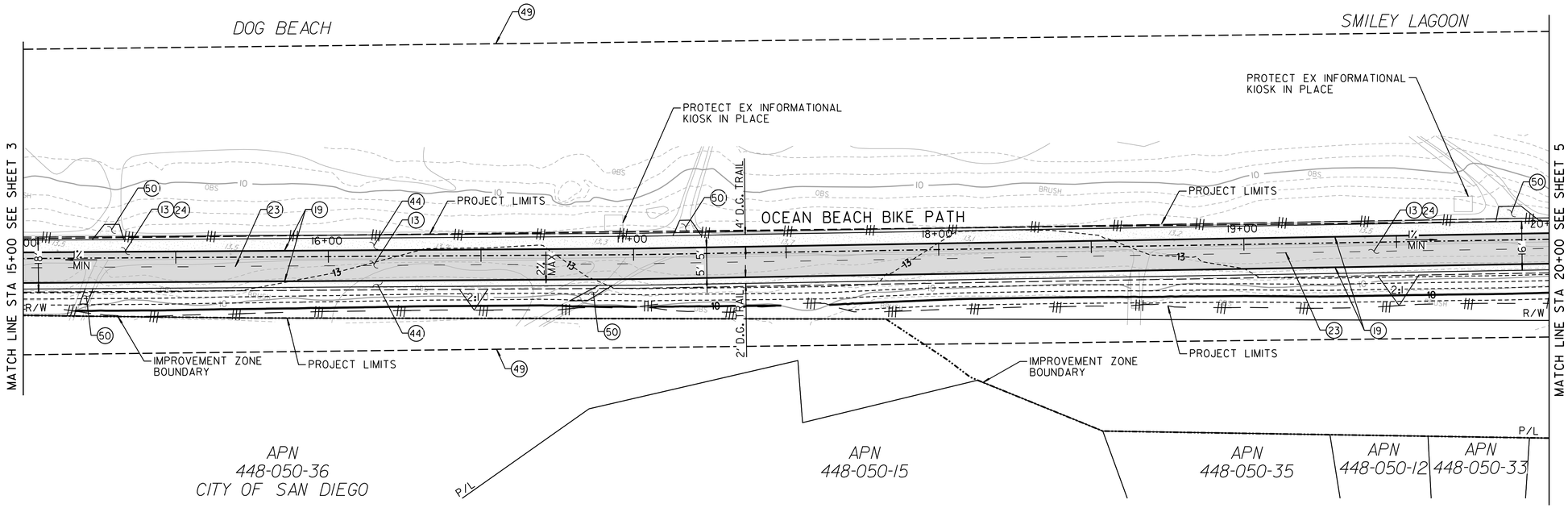
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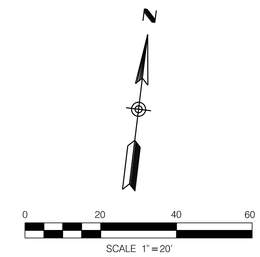
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04-JUN-2024 07:50 HREBELLO

OCEAN BEACH BIKE PATH

CONSTRUCTION NOTES

(13) PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
(19) PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
(23) PROPOSED MOD DETAIL I PER CSP A20A (3' STRIPE @ 9' SPACING)
(24) REMOVE EX AC BIKE PATH
(44) CONSTRUCT 4" D.G. TRAIL
(48) EXISTING LIMITS OF LEVEE PRISM PER CITY OF SAN DIEGO
(50) MATCH EXISTING TRAIL GRADE





C–2

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN
PATH IMPROVEMENTS
OCEAN BEACH BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
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SHEET 4 OF 23 SHEETS

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DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

226–1701 CCS27 COORDINATE

1866–6261 CCS83 COORDINATE

CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED

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RICK
SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

619-291-0707
rickengineering.com

5620 FRIARS ROAD
SAN DIEGO, CA 92110

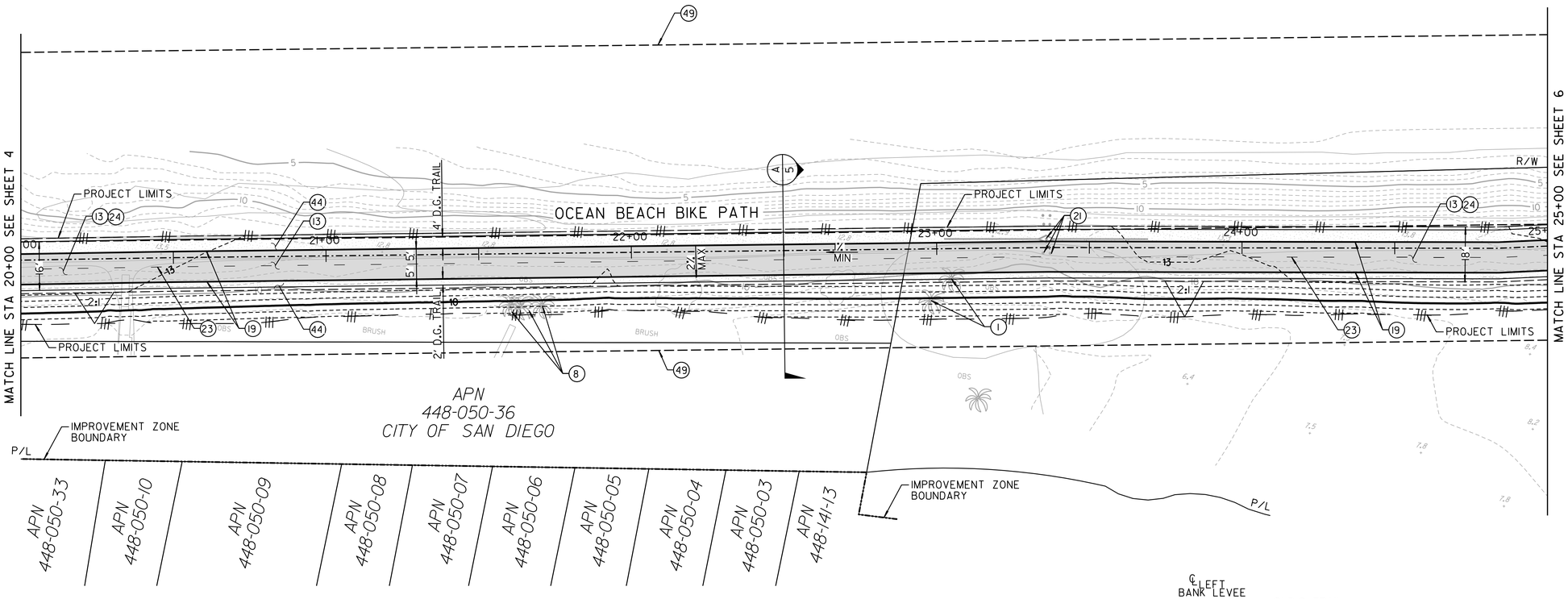
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04–JUN–2024 07:50 HREBELLO

OCEAN BEACH BIKE PATH

CONSTRUCTION NOTES

(1) REMOVE EX TREE
(8) PROTECT EX TREE IN PLACE
(13) PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
(19) PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
(21) REMOVE AND DISPOSE EX BOLLARDS
(23) PROPOSED MOD DETAIL I PER CSP A20A (3' STRIPE @ 9' SPACING)
(24) REMOVE EX AC BIKE PATH
(36) PROPOSED DISPERSION AREA, REPLACE 6" OF TOP SOIL WITH AMENDED SOIL
(44) CONSTRUCT 4' D.G. TRAIL
(48) EXISTING LIMITS OF LEVEE PRISM PER CITY OF SAN DIEGO



C-3

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN PATH IMPROVEMENTS
OCEAN BEACH BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 5 OF 23 SHEETS

WBS

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226-1701 CCS27 COORDINATE

1866-6261 CCS83 COORDINATE

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INSPECTOR — DATE COMPLETED

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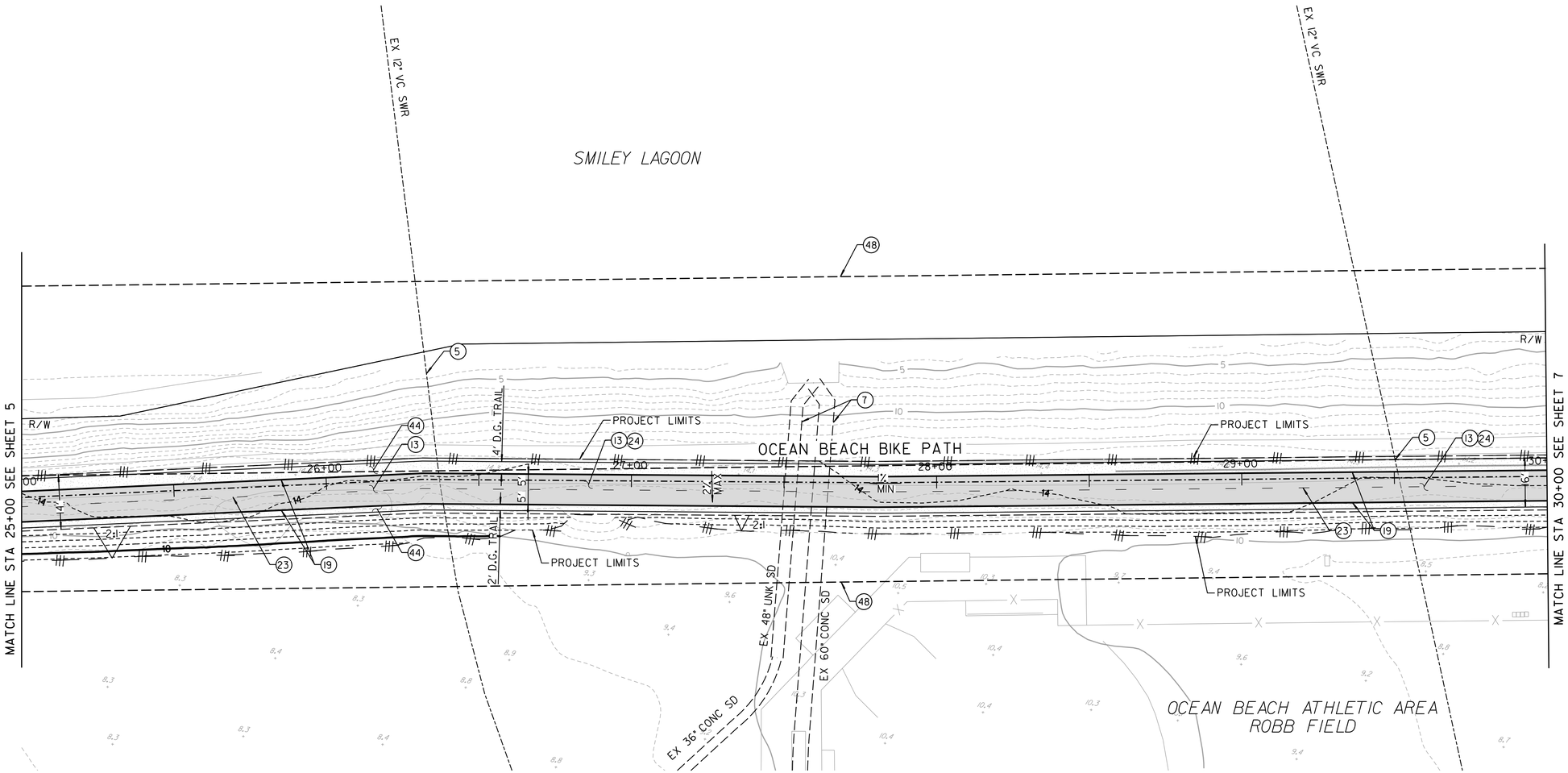
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SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

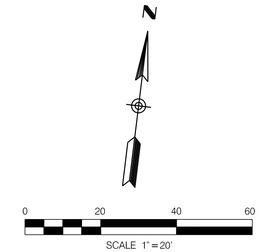
619-291-0707
rickengineering.com

5620 FRIARS ROAD
SAN DIEGO, CA 92110

OCEAN BEACH BIKE PATH

CONSTRUCTION NOTES
- (5) PROTECT EX SEWER IN PLACE
- (7) PROTECT EX STORM DRAIN IN PLACE
- (13) PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
- (19) PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
- (23) PROPOSED MOD DETAIL I PER CSP A20A (3' STRIPE @ 9' SPACING)
- (24) REMOVE EX AC BIKE PATH
- (44) CONSTRUCT 4' D.G. TRAIL
- (48) EXISTING LIMITS OF LEVEE PRISM PER CITY OF SAN DIEGO





C–4

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN
PATH IMPROVEMENTS
OCEAN BEACH BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 6 OF 23 SHEETS

WBS

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PRINT NAME — RCE#

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CHECKED BY: PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

226–1701 CCS27 COORDINATE
1866–6261 CCS83 COORDINATE

CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED

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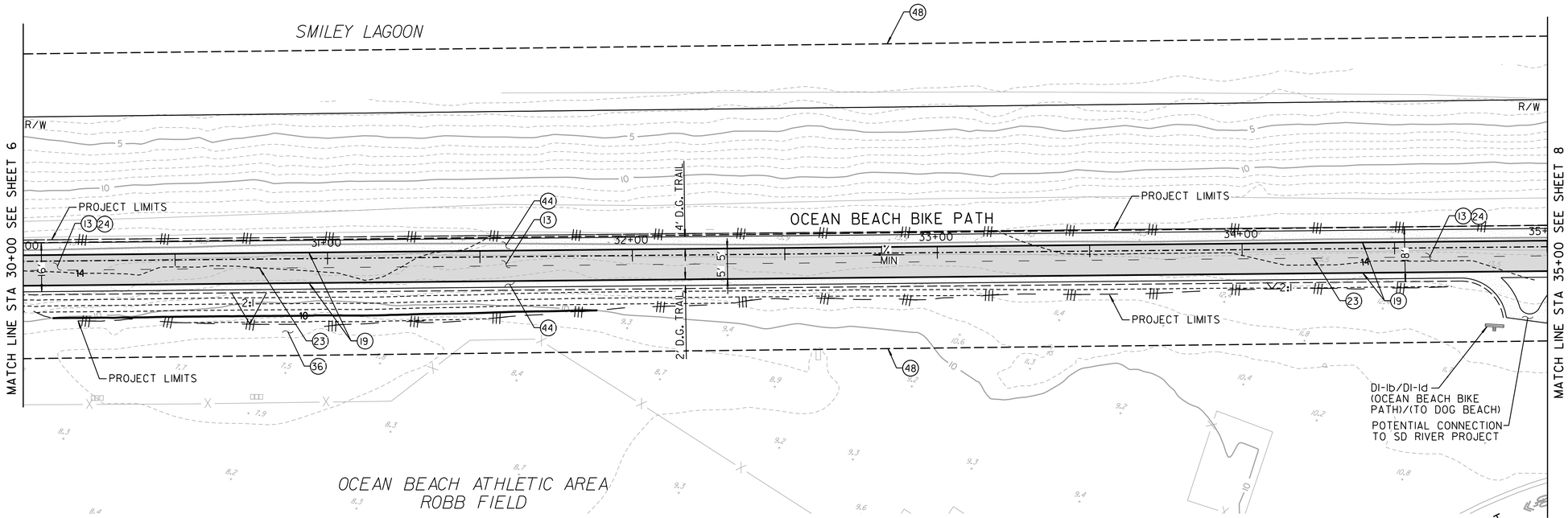
RICK
619-291-0707
rickengineering.com
5620 FRIARS ROAD
SAN DIEGO, CA 92110
SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

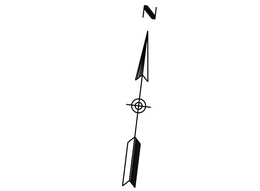
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04–JUN–2024 07:50 HREBELLO

CONSTRUCTION NOTES

(13) PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
(19) PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
(23) PROPOSED MOD DETAIL I PER CSP A20A (3' STRIPE @ 9' SPACING)
(24) REMOVE EX AC BIKE PATH
(36) PROPOSED DISPERSION AREA, REPLACE 6" OF TOP SOIL WITH AMENDED SOIL
(44) CONSTRUCT 4" D.G. TRAIL
(48) EXISTING LIMITS OF LEVEE PRISM PER CITY OF SAN DIEGO





OCEAN BEACH BIKE PATH

C–5

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN
PATH IMPROVEMENTS
OCEAN BEACH BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 7 OF 23 SHEETS

WBS

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DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

226–1701 CCS27 COORDINATE
1866–6261 CCS83 COORDINATE

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INSPECTOR
DATE STARTED
DATE COMPLETED

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SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

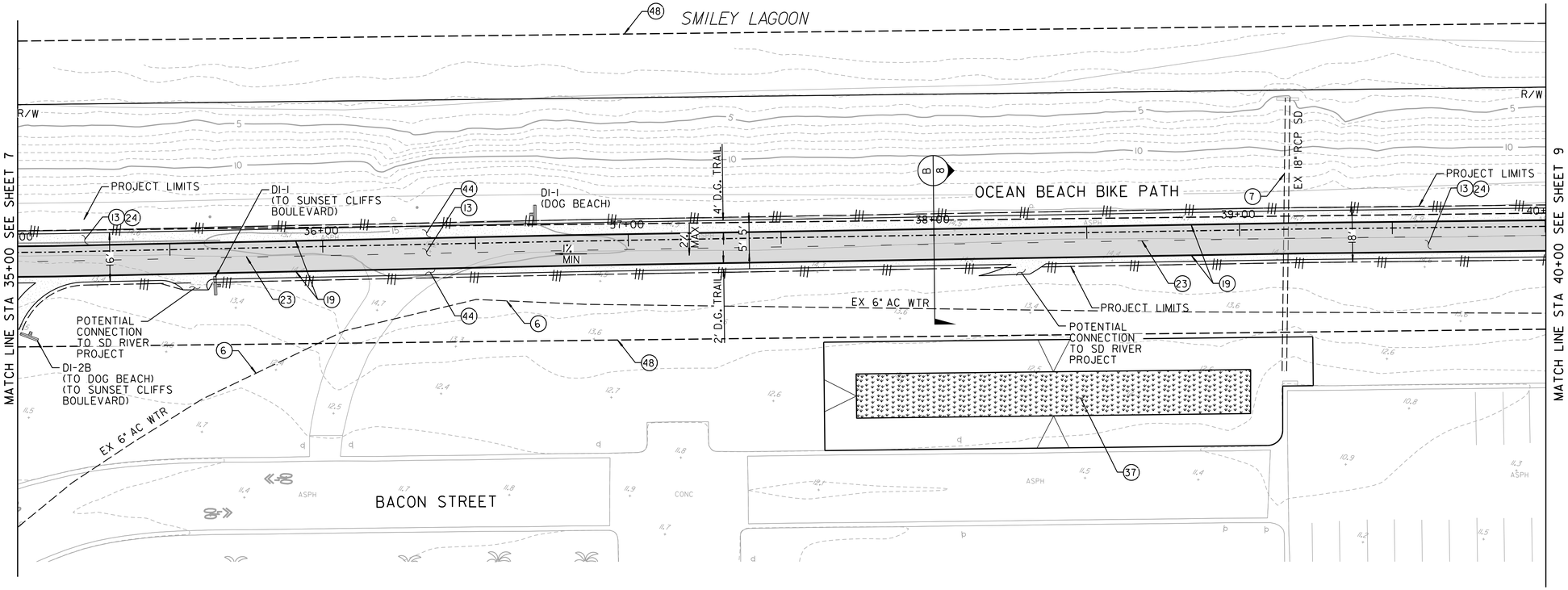
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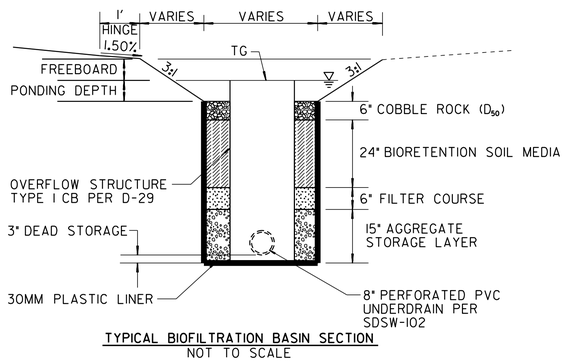
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OCEAN BEACH BIKE PATH

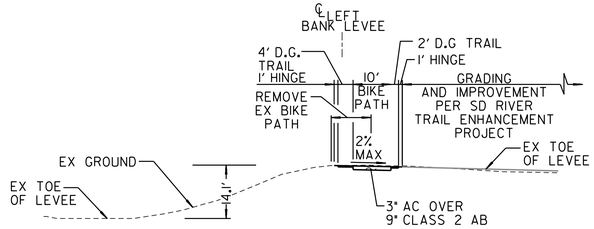
CONSTRUCTION NOTES

(6) PROTECT EX WATER MAIN IN PLACE
(7) PROTECT EX STORM DRAIN IN PLACE
(13) PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
(19) PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
(23) PROPOSED MOD DETAIL I PER CSP A20A (3' STRIPE @ 9' SPACING)
(24) REMOVE EX AC BIKE PATH
(26) PROTECT EX AC PAVEMENT
(37) PROPOSED BIOFILTRATION BASIN SEE TYPICAL SECTION THIS SHEET
(44) CONSTRUCT 4' DG TRAIL
(48) EXISTING LIMITS OF LEVEE PRISM PER CITY OF SAN DIEGO

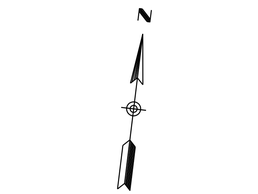




TYPICAL BIOFILTRATION BASIN SECTION
NOT TO SCALE



SECTION B
SCALE: H: 1"=20'
V: 1"=20'



C-6

MISSION BAY PROGRAM EIR BICYCLE AND PEDESTRIAN PATH IMPROVEMENTS OCEAN BEACH BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 8 OF 23 SHEETS

WBS

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ORIGINAL	RICK			

226-1701 CCS27 COORDINATE
1866-6261 CCS83 COORDINATE

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INSPECTOR ____ DATE COMPLETED ____

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SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

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04-JUN-2024 07:50 HREBELLO

OCEAN BEACH BIKE PATH

CONSTRUCTION NOTES

(6) PROTECT EX WATER MAIN IN PLACE

(13) PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)

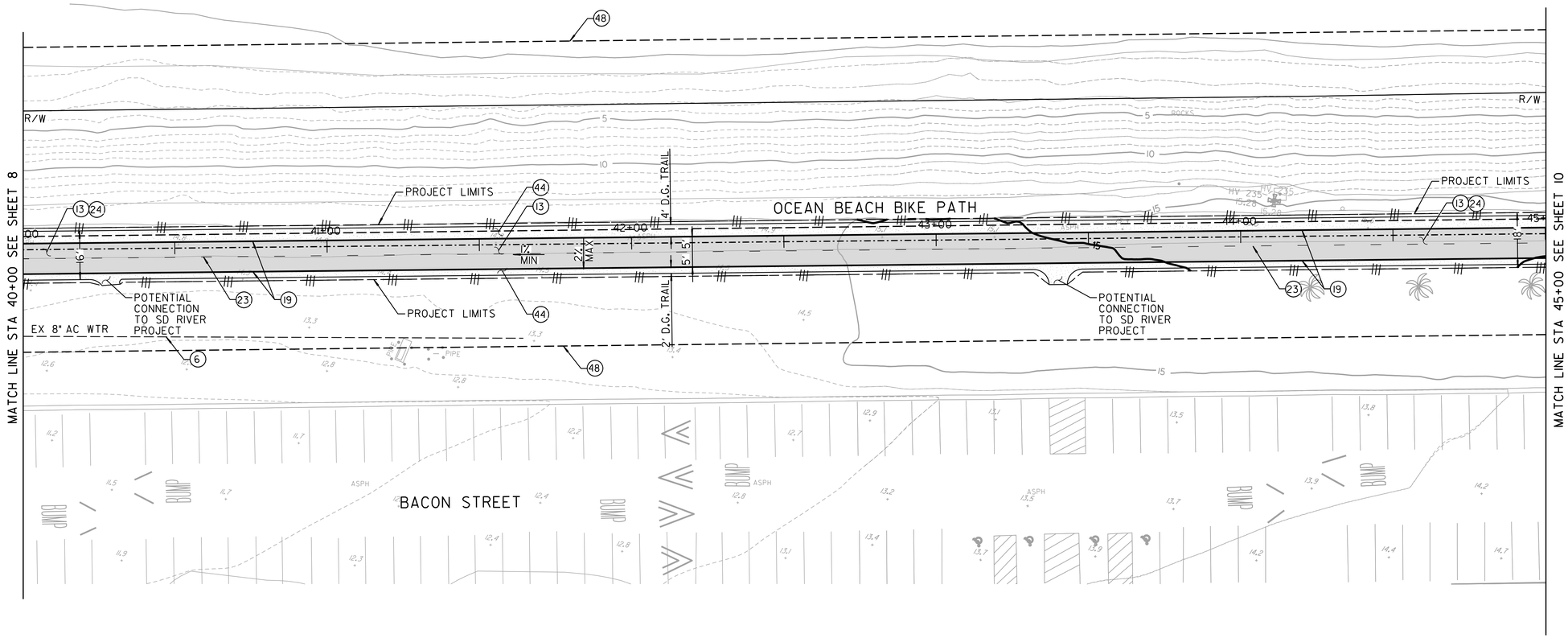
(19) PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B

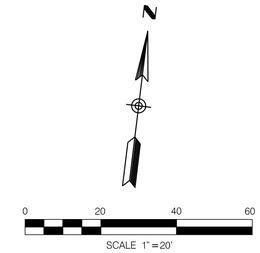
(23) PROPOSED MOD DETAIL I PER CSP A20A (3' STRIPE @ 9' SPACING)

(24) REMOVE EX AC BIKE PATH

(44) CONSTRUCT 4' DG TRAIL

(48) EXISTING LIMITS OF LEVEE PRISM PER CITY OF SAN DIEGO





C–7

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN
PATH IMPROVEMENTS
OCEAN BEACH BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 9 OF 23 SHEETS

WBS

APPROVED: FOR CITY ENGINEER ____ DATE ____ PRINT NAME ____ RCE# ____

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DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

226–1701 CCS27 COORDINATE

1866–6261 CCS83 COORDINATE

CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

XXXXX–09–D

RICK
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SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

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5620 FRIARS ROAD
SAN DIEGO, CA 92110

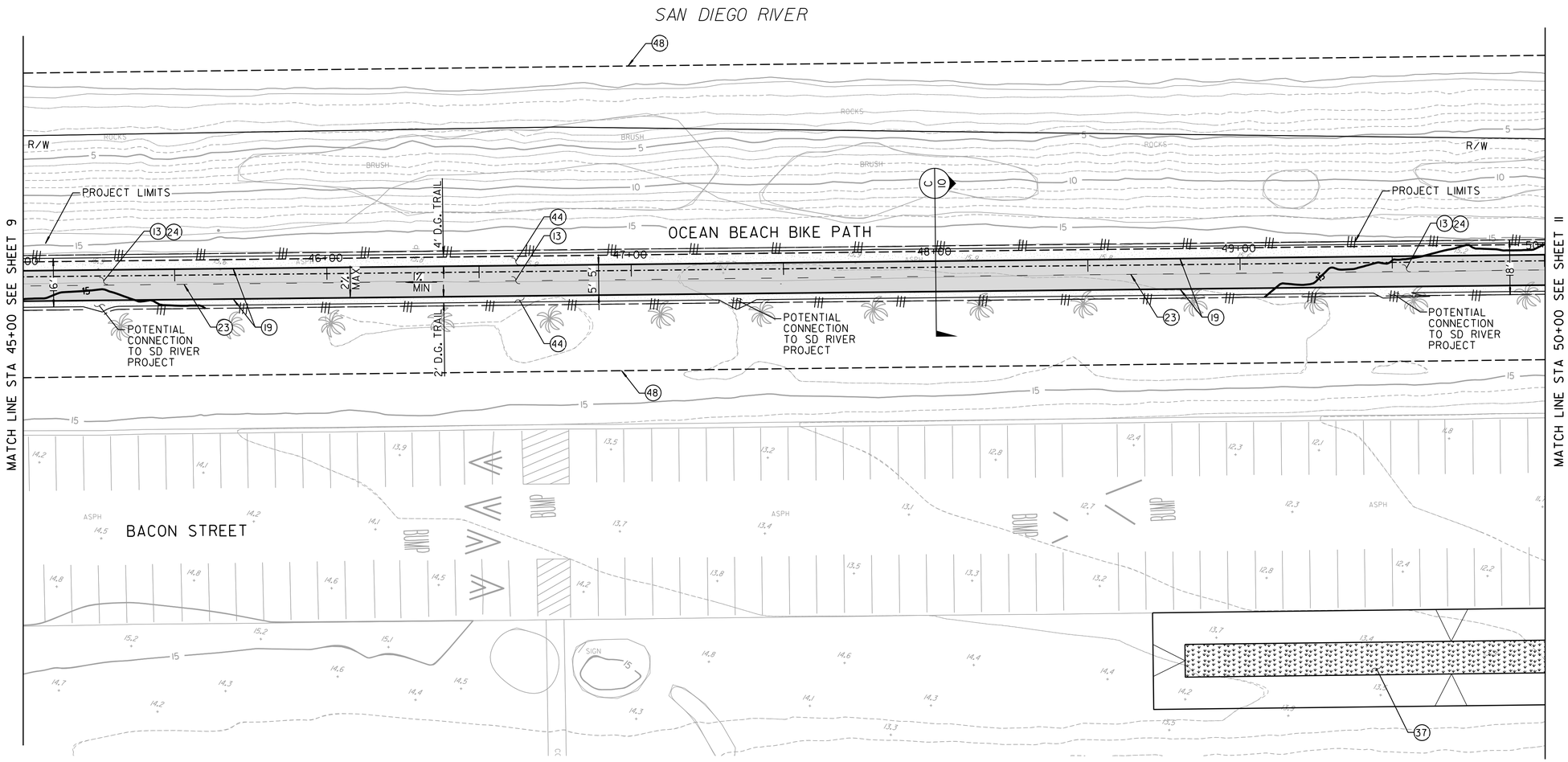
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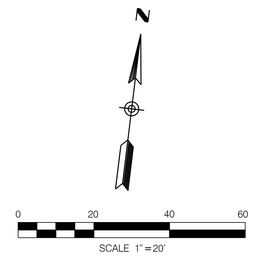
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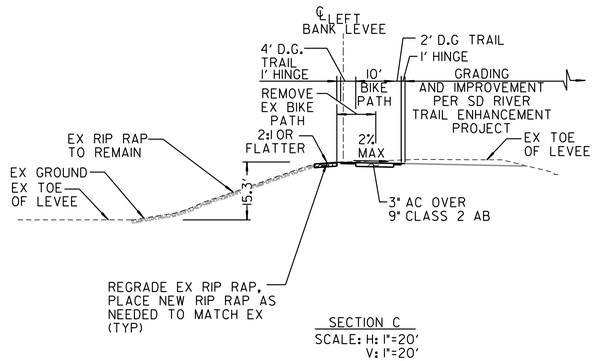
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OCEAN BEACH BIKE PATH

CONSTRUCTION NOTES
(13) PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
(19) PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
(23) PROPOSED MOD DETAIL I PER CSP A20A (3' STRIPE @ 9' SPACING)
(24) REMOVE EX AC BIKE PATH
(37) PROPOSED BIOFILTRATION BASIN PER DETAIL ON SHT 8
(44) CONSTRUCT 4' DG TRAIL
(48) EXISTING LIMITS OF LEVEE PRISM PER CITY OF SAN DIEGO







SECTION C
SCALE: H: 1"=20'
V: 1"=20'

C-8

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN PATH IMPROVEMENTS
OCEAN BEACH BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 10 OF 23 SHEETS

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ORIGINAL	RICK			

226-1701 CCS27 COORDINATE
1866-6261 CCS83 COORDINATE
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CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

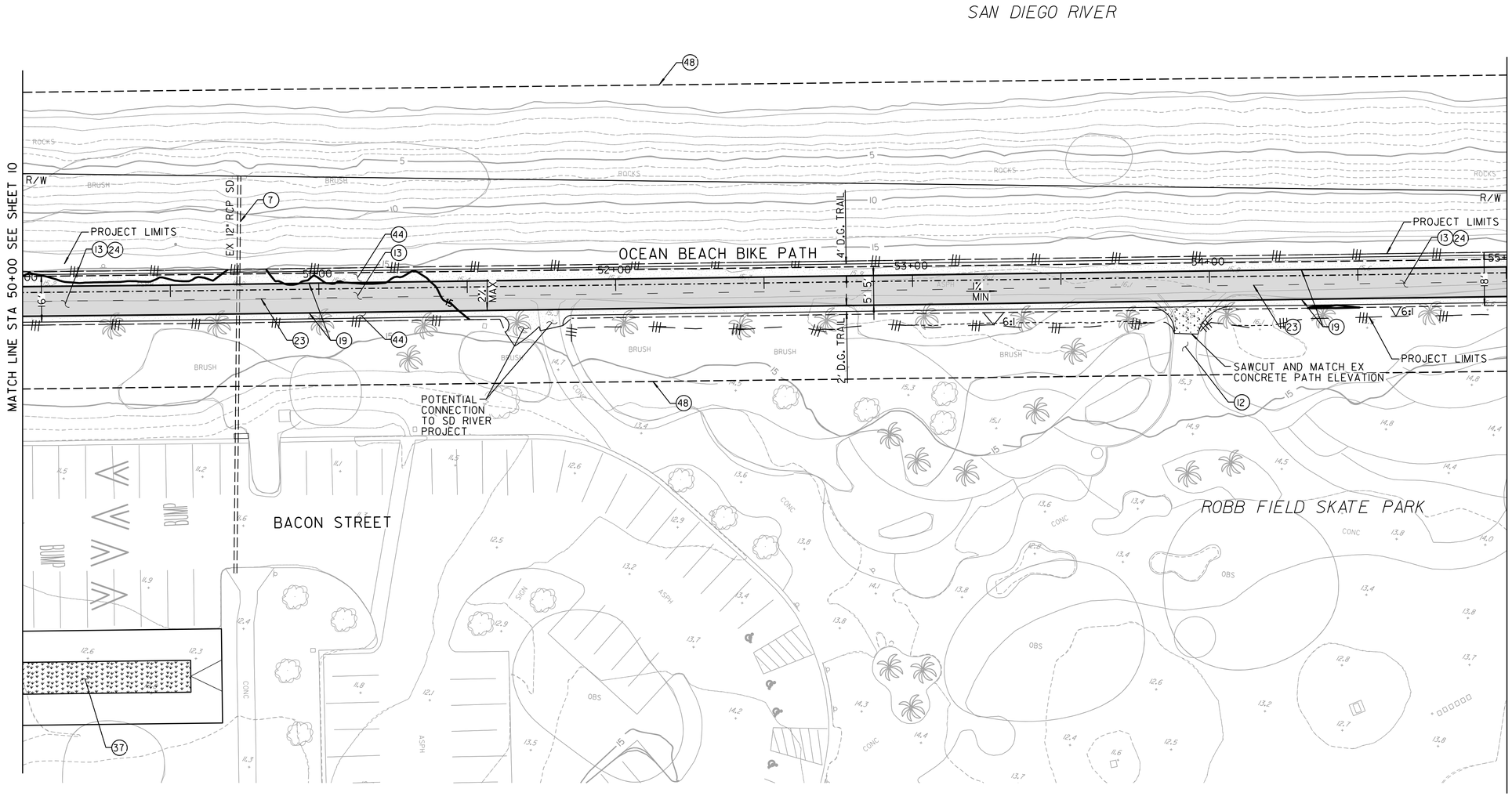
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619-291-0707
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5620 FRIARS ROAD
SAN DIEGO, CA 92110
SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

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04-JUN-2024 07:50 HREBELLO

OCEAN BEACH BIKE PATH



CONSTRUCTION NOTES

(7) PROTECT EX STORM DRAIN IN PLACE
(12) PROTECT EX CONCRETE PAVEMENT
(13) PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
(19) PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
(23) PROPOSED MOD DETAIL I PER CSP A20A (3' STRIPE @ 9' SPACING)
(24) REMOVE EX AC BIKE PATH
(37) PROPOSED BIOFILTRATION BASIN PER DETAIL ON SHT 8
(44) CONSTRUCT 4" DG TRAIL
(48) EXISTING LIMITS OF LEVEE PRISM PER CITY OF SAN DIEGO

N

0 20 40 60
SCALE 1" = 20'

C–9

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN
PATH IMPROVEMENTS
OCEAN BEACH BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 11 OF 23 SHEETS

WBS

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DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

226–1701 CCS27 COORDINATE
1866–6261 CCS83 COORDINATE
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INSPECTOR — DATE COMPLETED

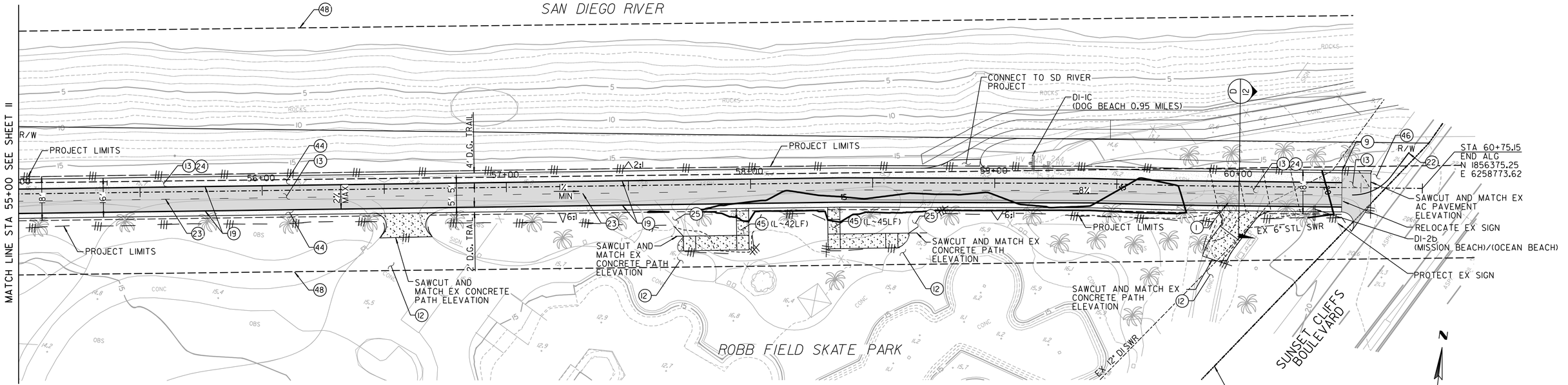
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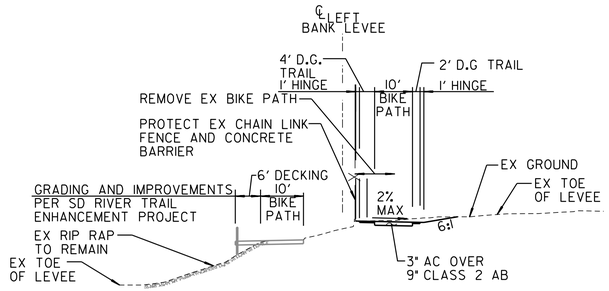
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619-291-0707
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5620 FRIARS ROAD
SAN DIEGO, CA 92110
SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
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OCEAN BEACH BIKE PATH

CONSTRUCTION NOTES

1. REMOVE EX TREE
9. PROTECT EX CHAIN LINK FENCE IN PLACE
12. PROTECT EX CONCRETE PAVEMENT
13. PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
19. PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
22. PROPOSED 4" SOLID YELLOW STRIPING
23. PROPOSED MOD DETAIL I PER CSP A20A (3' STRIPE @ 9' SPACING)
24. REMOVE EX AC BIKE PATH
25. REMOVE EX PCC BIKE PATH
44. CONSTRUCT 4" DG TRAIL
45. CONSTRUCT PEDESTRIAN RAMP AND PROTECTIVE RAILING PER SDM-115
46. PROTECT EX AC PAVEMENT





SECTION D
SCALE: H: 1"=20'
V: 1"=20'

0 20 40 60
SCALE 1"=20'

C-10

MISSION BAY PROGRAM EIR BICYCLE AND PEDESTRIAN PATH IMPROVEMENTS OCEAN BEACH BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 12 OF 23 SHEETS

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DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

226-1701 CCS27 COORDINATE

1866-6261 CCS83 COORDINATE

CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

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5620 FRIARS ROAD
SAN DIEGO, CA 92110

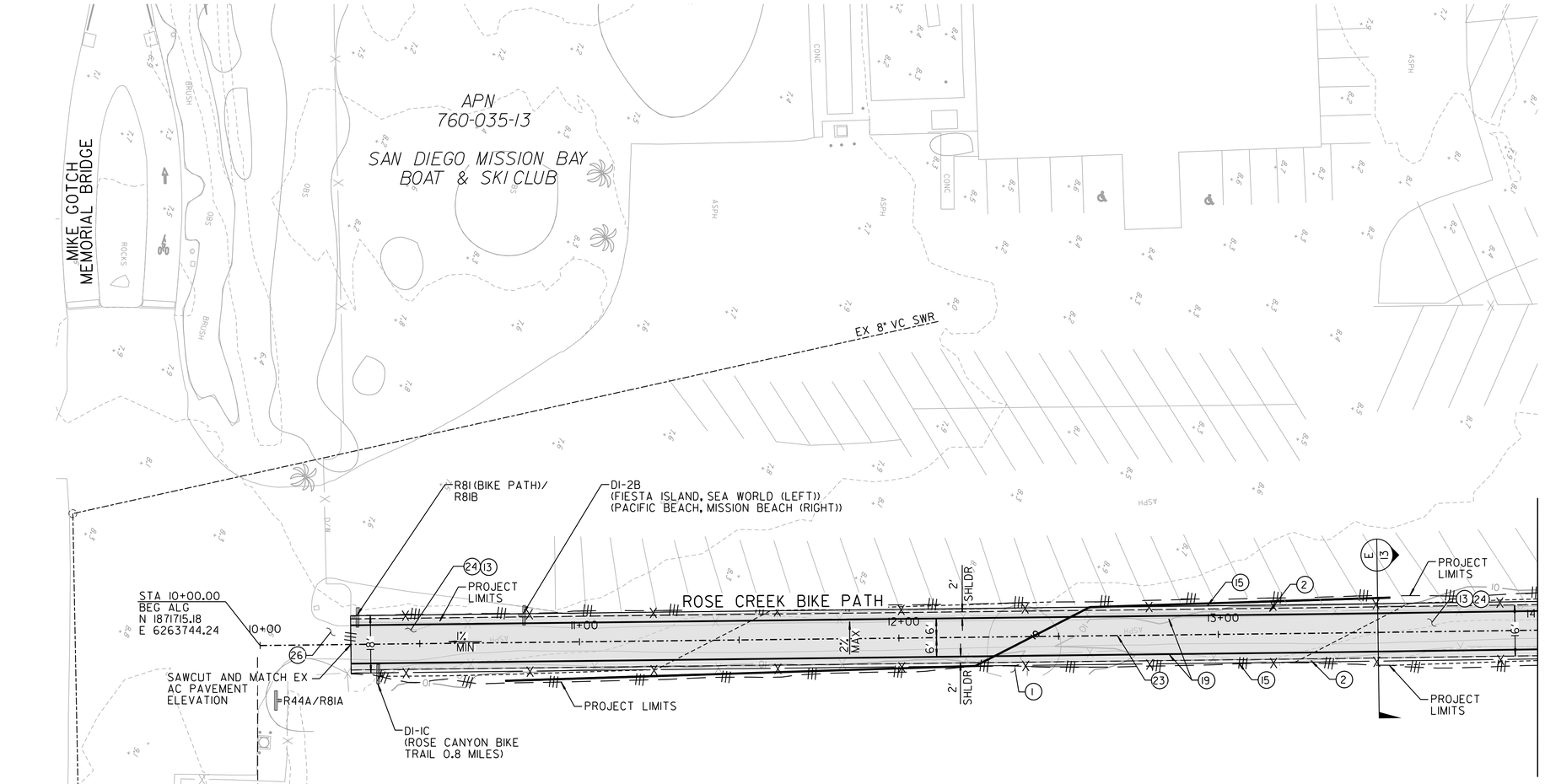
RICK
SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

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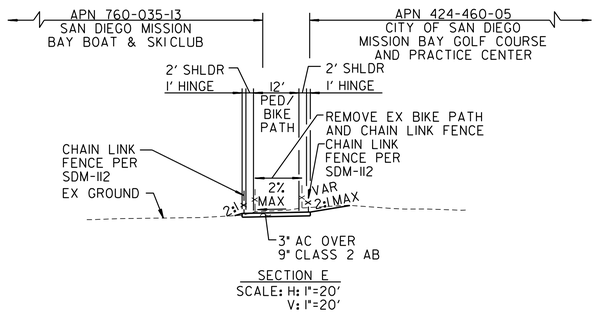
ROSE CREEK BIKE PATH



APN
424-460-05
CITY OF SAN DIEGO

MISSION BAY GOLF COURSE AND PRACTICE CENTER

CONSTRUCTION NOTES
1. REMOVE EX TREE
2. REMOVE EX CHAIN LINK FENCE
13. PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
15. PROPOSED CHAIN LINK FENCE PER SDM-112
19. PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
23. PROPOSED MOD DETAIL 1 PER CSP A20A (3' STRIPE @ 9' SPACING)
24. REMOVE EX AC BIKE PATH
26. PROTECT EX AC PAVEMENT



SECTION E
SCALE: H: 1"=20'
V: 1"=20'

ADDITIONAL PROJECTS NOTE:
ROSE CREEK BIKE PATH ALIGNMENT FOLLOWS EXISTING BIKE PATH ALIGNMENT TO MINIMIZE IMPACTS TO ADJACENT PROPERITES. ALTERNATIVE ALGINMENT MAY BE DESIRABLE IF SAN DIEGO MISSION BAY BOAT AND SKI CLUB LEASEHOLD AND USE IS NOT CONTINUED.

0 20 40 60
SCALE 1" = 20'

C–11

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN PATH IMPROVEMENTS
ROSE CREEK BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 13 OF 23 SHEETS

WBS

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CHECKED BY: PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

226–1701 CCS27 COORDINATE

1866–6261 CCS83 COORDINATE

CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

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5620 FRIARS ROAD
SAN DIEGO, CA 92110

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SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

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04–JUN–2024 07:50 HREBELLO

ADDITIONAL PROJECTS NOTE:
ROSE CREEK BIKE PATH ALIGNMENT FOLLOWS EXISTING BIKE PATH ALIGNMENT TO MINIMIZE IMPACTS TO ADJACENT PROPERITES. ALTERNATIVE ALIGNMENT MAY BE DESIRABLE IF SAN DIEGO MISSION BAY BOAT AND SKI CLUB LEASEHOLD AND USE IS NOT CONTINUED.

CONSTRUCTION NOTES
(1) REMOVE EX TREE
(2) REMOVE EX CHAIN LINK FENCE
(8) PROTECT EX TREE IN PLACE
(9) PROTECT EX CHAIN LINK FENCE IN PLACE
(13) PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
(15) PROPOSED CHAIN LINK FENCE PER SDM-112
(19) PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
(22) PROPOSED 4" SOLID YELLOW STRIPING
(23) PROPOSED MOD DETAIL 1 PER CSP A20A (3' STRIPE @ 9' SPACING)
(24) REMOVE EX AC BIKE PATH
(37) PROPOSED BIOFILTRATION BASIN SEE TYPICAL SECTION THIS SHEET
(41) CONSTRUCT 18" RCP
(42) CONSTRUCT TYPE 1 CB PER D-29
(43) CONSTRUCT WING TYPE HEADWALL PER D-34

ROSE CREEK BIKE PATH

APN 760-035-13
SAN DIEGO MISSION BAY BOAT & SKI CLUB

APN 424-460-05
CITY OF SAN DIEGO
SOCCER FIELD

APN 424-460-05
CITY OF SAN DIEGO
MISSION BAY GOLF COURSE AND PRACTICE CENTER

BASEBALL FIELD

TENNIS COURT

MATCH LINE STA 14+00 SEE SHEET 13

MATCH LINE STA 20+00 SEE SHEET 15

PROP 6" CURB

PROJECT LIMITS

R=100'

WI-3/SW-60 (WATCH FOR PEDESTRIANS)

WI-1(RT)/SW-60 (WATCH FOR PEDESTRIANS)

WI-1(RT)/SW-60 (WATCH FOR PEDESTRIANS)

12' MIN

2' SHLDR

6' 6'

2% MAX

8'

14+00

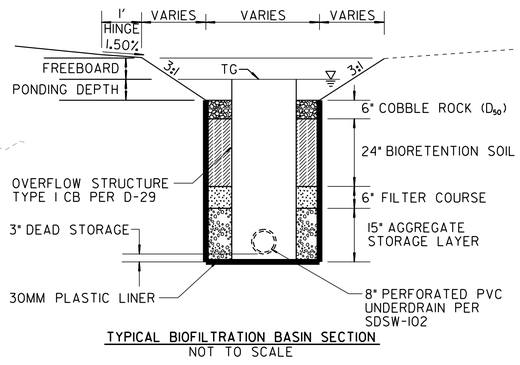
15+00

16+00

17+00

18+00

19+00



TYPICAL BIOFILTRATION BASIN SECTION
NOT TO SCALE

0 20 40 60
SCALE 1" = 20'

C–12

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN PATH IMPROVEMENTS
ROSE CREEK BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 14 OF 23 SHEETS

WBS

APPROVED: FOR CITY ENGINEER ____ DATE ____
PRINT NAME ____ RCE# ____

SUBMITTED BY: PROJECT MANAGER
CHECKED BY: PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

226–1701 CCS27 COORDINATE
1866–6261 CCS83 COORDINATE
XXXXX–14–D

CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

PRELIMINARY
NOT FOR CONSTRUCTION

619-291-0707
rickengineering.com
5620 FRIARS ROAD
SAN DIEGO, CA 92110
RICK
SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

C:\RICK\Projects\C_SD_T\18097_MissionBayPEIR\Civil\Bike–Pedestrian Path\Projects\Rose Creek Bike Path\Sheets\18097AC_C–2_Rose Creek.dgn

04–JUN–2024 07:50 HREBELLO

ADDITIONAL PROJECTS NOTE:
ROSE CREEK BIKE PATH ALIGNMENT FOLLOWS EXISTING BIKE PATH ALIGNMENT TO MINIMIZE IMPACTS TO ADJACENT PROPERITES. ALTERNATIVE ALGINMENT MAY BE DESIRABLE IF SAN DIEGO MISSION BAY BOAT AND SKI CLUB LEASEHOLD AND USE IS NOT CONTINUED.

CONSTRUCTION NOTES
(2) REMOVE EX CHAIN LINK FENCE
(8) PROTECT EX TREE IN PLACE
(9) PROTECT EX CHAIN LINK FENCE IN PLACE
(13) PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
(15) PROPOSED CHAIN LINK FENCE PER SDM-112
(16) PROPOSED PEDESTRIAN RAILING
(19) PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
(22) PROPOSED 4" SOLID YELLOW STRIPING
(23) PROPOSED MOD DETAIL I PER CSP A20A (3' STRIPE @ 9' SPACING)
(24) REMOVE EX AC BIKE PATH
(26) PROTECT EX AC PAVEMENT
(45) CONSTRUCT PEDESTRIAN RAMP AND PROTECTIVE RAILING PER SDM-115

ROSE CREEK

MATCH LINE STA 20+00 SEE SHEET 14

PROJECT LIMITS

PROP 6" CURB

ROSE CREEK BIKE PATH

20+00 21+00 22+00 23+00 24+00

1% MIN

22% MAX

SHLDR

6' 16'

2%

SHLDR

PROJECT LIMITS

PROJECT LIMITS

DI-L (TO GRAND AVENUE)

PROJECT LIMITS

APN 424-460-05 CITY OF SAN DIEGO

SOCCER FIELD

(45) (L~50LF)

SAWCUT AND MATCH EX PEDESTRIAN PATH ELEVATION

BASKETBALL COURT

MATCH LINE STA 25+00 SEE SHEET 16

0 20 40 60
SCALE 1"=20'

C–13

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN PATH IMPROVEMENTS
ROSE CREEK BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 15 OF 23 SHEETS

WBS

APPROVED: FOR CITY ENGINEER — DATE
PRINT NAME — RCE#

SUBMITTED BY: PROJECT MANAGER
CHECKED BY: PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

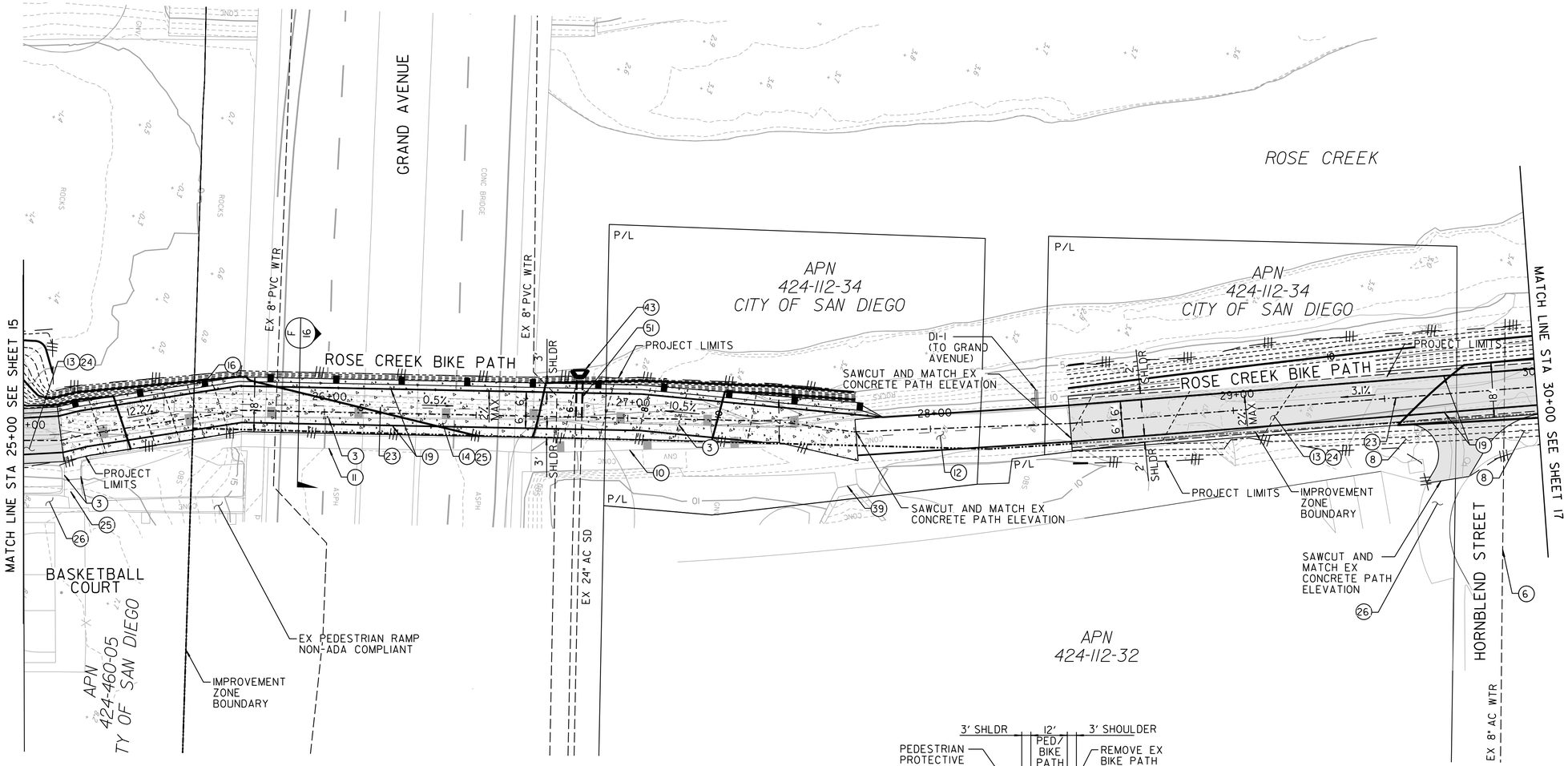
226–1701 CCS27 COORDINATE
1866–6261 CCS83 COORDINATE

CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED
XXXXX–15–D

PRELIMINARY
NOT FOR CONSTRUCTION

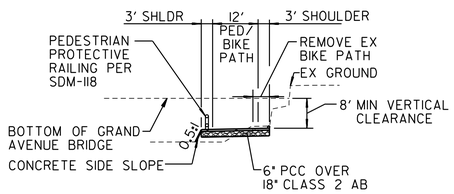
RICK
619-291-0707
rickengineering.com
5620 FRIARS ROAD
SAN DIEGO, CA 92110
SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

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04–JUN–2024 07:50 HREBELLO



CONSTRUCTION NOTES

(3) REMOVE PEDESTRIAN RAILING
(6) PROTECT EX WATER MAIN IN PLACE
(8) PROTECT EX TREE IN PLACE
(10) PROTECT EX PEDESTRIAN RAILING
(11) PROTECT EX BRIDGE IN PLACE
(12) PROTECT EX CONCRETE PAVEMENT
(13) PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
(14) PROPOSED PCC PAVEMENT (6" PCC OVER 18" CLASS AB)
(16) PROPOSED PEDESTRIAN RAILING PER SDM-118
(19) PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
(23) PROPOSED MOD DETAIL 1 PER CSP A20A (3' STRIPE @ 9' SPACING)
(24) REMOVE EX AC BIKE PATH
(25) REMOVE EX PCC BIKE PATH
(26) PROTECT EX AC PAVEMENT
(39) PROTECT EX HEADWALL
(43) CONSTRUCT WING TYPE HEADWALL PER D-34
(51)



SECTION F
SCALE: H: 1"=20'
V: 1"=20'

0 20 40 60
SCALE 1"=20'

C-14

MISSION BAY PROGRAM EIR BICYCLE AND PEDESTRIAN PATH IMPROVEMENTS
ROSE CREEK BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 16 OF 23 SHEETS

WBS

APPROVED: FOR CITY ENGINEER — DATE
PRINT NAME — RCE#
SUBMITTED BY: PROJECT MANAGER
CHECKED BY: PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

226-1701 CCS27 COORDINATE
1866-6261 CCS83 COORDINATE
XXXXX-16-D

CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED

PRELIMINARY
NOT FOR CONSTRUCTION

RICK
619-291-0707
rickengineering.com
5620 FRIARS ROAD
SAN DIEGO, CA 92110
SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

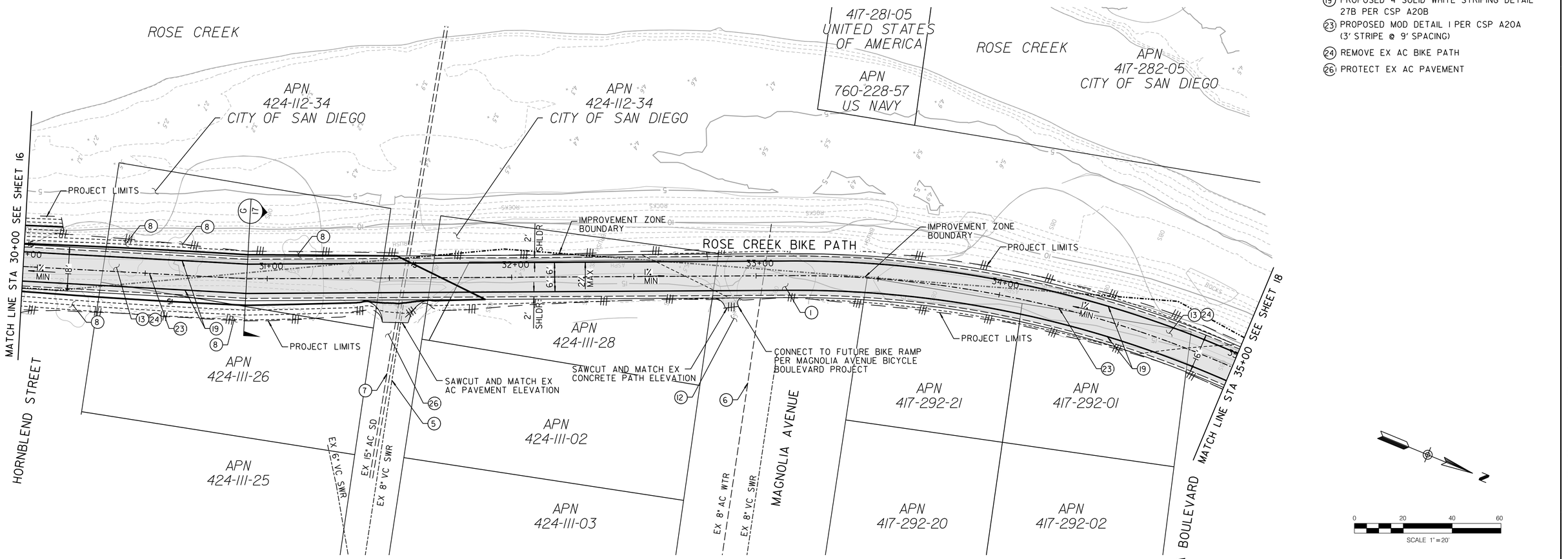
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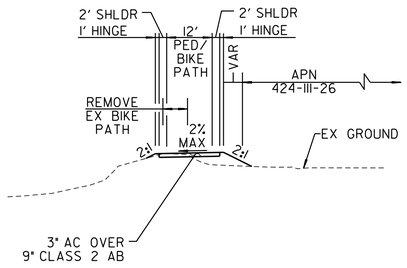
04-JUN-2024 07:50 HREBELLO

ROSE CREEK BIKE PATH

ROSE CREEK BIKE PATH

CONSTRUCTION NOTES
1. REMOVE EX TREE
5. PROTECT EX SEWER IN PLACE
6. PROTECT EX WATER MAIN IN PLACE
7. PROTECT EX STORM DRAIN IN PLACE
8. PROTECT EX TREE IN PLACE
12. PROTECT EX CONCRETE PAVEMENT
13. PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
19. PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
23. PROPOSED MOD DETAIL I PER CSP A20A (3' STRIPE @ 9' SPACING)
24. REMOVE EX AC BIKE PATH
26. PROTECT EX AC PAVEMENT





SECTION G
SCALE: H: 1"=20'
V: 1"=20'

C–15

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN PATH IMPROVEMENTS
ROSE CREEK BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 17 OF 23 SHEETS

WBS

APPROVED: FOR CITY ENGINEER — DATE
PRINT NAME — RCE#
SUBMITTED BY: PROJECT MANAGER
CHECKED BY: PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

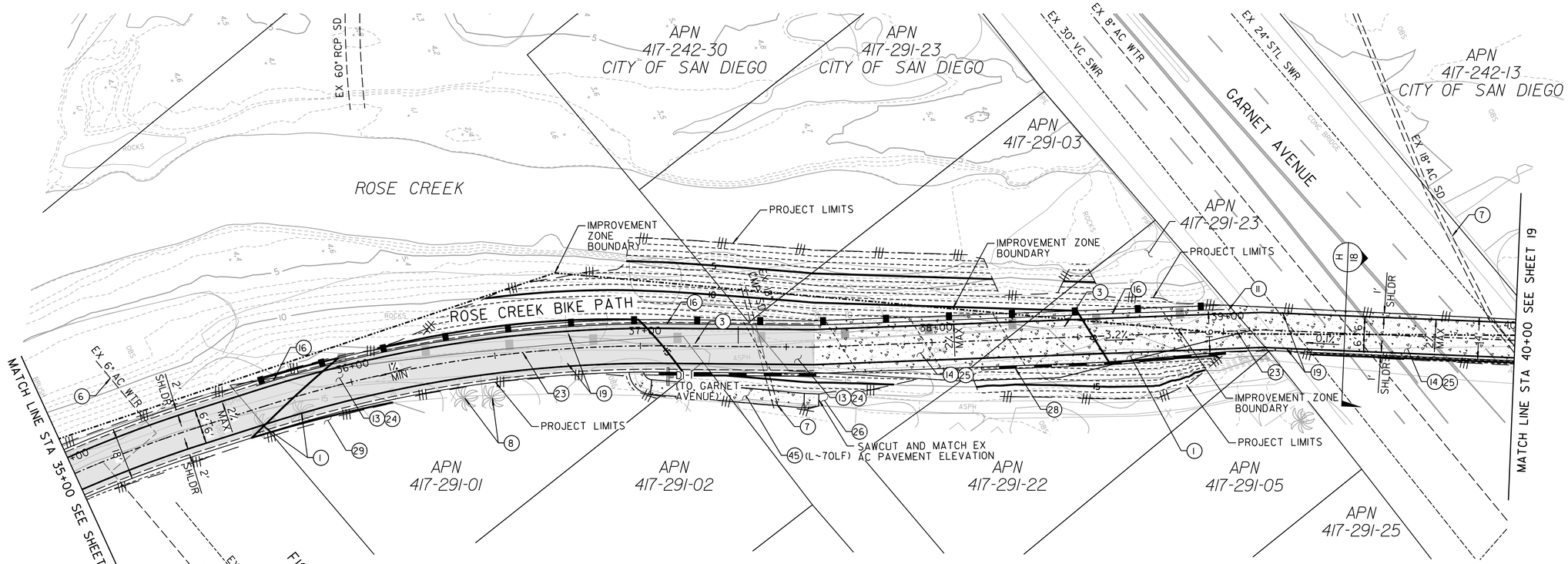
226–1701 CCS27 COORDINATE
1866–6261 CCS83 COORDINATE
CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED
XXXXX–17–D

PRELIMINARY
NOT FOR CONSTRUCTION

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5620 FRIARS ROAD
SAN DIEGO, CA 92110
RICK
SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

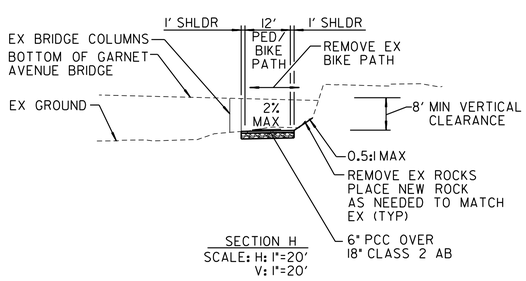
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04–JUN–2024 07:50 HREBELLO

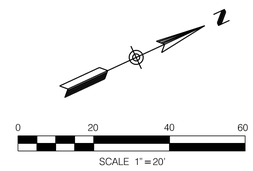


CONSTRUCTION NOTES

1. REMOVE EX TREE
3. REMOVE PEDESTRIAN RAILING
6. PROTECT EX WATER MAIN IN PLACE
7. PROTECT EX STORM DRAIN IN PLACE
8. PROTECT EX TREE IN PLACE
11. PROTECT EX BRIDGE IN PLACE
13. PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
14. PROPOSED PCC PAVEMENT (6" PCC OVER 18" CLASS AB)
16. PROPOSED PEDESTRIAN RAILING PER SDM-118
19. PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
23. PROPOSED MOD DETAIL 1 PER CSP A20A (3' STRIPE @ 9' SPACING)
24. REMOVE EX AC BIKE PATH
25. REMOVE EX PCC BIKE PATH
26. PROTECT EX AC PAVEMENT
28. PROPOSED GRAVITY RETAINING WALL PER C-09
29. PROPOSED 4" SIDEWALK PER SDG-155



SECTION H
SCALE: H: 1"=20'
V: 1"=20'



C–16

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN PATH IMPROVEMENTS
ROSE CREEK BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 18 OF 23 SHEETS

WBS

APPROVED: FOR CITY ENGINEER — DATE
PRINT NAME — RCE#

SUBMITTED BY: PROJECT MANAGER
CHECKED BY: PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

226–1701 CCS27 COORDINATE
1866–6261 CCS83 COORDINATE
XXXXX–18–D

CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED

PRELIMINARY
NOT FOR CONSTRUCTION

RICK
619-291-0707
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5620 FRIARS ROAD
SAN DIEGO, CA 92110
SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

ROSE CREEK BIKE PATH

CONSTRUCTION NOTES

(9) PROTECT EX CHAIN LINK FENCE IN PLACE
(10) PROTECT EX PEDESTRIAN RAILING
(11) PROTECT EX BRIDGE IN PLACE
(13) PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
(14) PROPOSED PCC PAVEMENT (6" PCC OVER 18" CLASS AB)
(16) PROPOSED PEDESTRIAN RAILING PER SDM-118
(19) PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
(23) PROPOSED MOD DETAIL 1 PER CSP A20A (3' STRIPE @ 9' SPACING)
(24) REMOVE EX AC BIKE PATH
(25) REMOVE EX PCC BIKE PATH
(26) PROTECT EX AC PAVEMENT

APN 417-242-13 CITY OF SAN DIEGO

APN 417-242-32 CITY OF SAN DIEGO

APN 417-242-24 CITY OF SAN DIEGO

APN 760-103-83 CITY OF SAN DIEGO

APN 417-242-38

APN 417-242-23

APN 417-250-42

MATCH LINE STA 40+00 SEE SHEET 18

PROJECT LIMITS

IMPROVEMENT ZONE BOUNDARY

EX 24" VC SWR

EX 30" UNK SWR

PROJECT LIMITS

PROTECT IN PLACE EX UNK WATER LINE

SAWCUT AND MATCH EX AC PAVEMENT ELEVATION

R/W

GARNET AVENUE

EX 16" AC WTR

EX 30" VC SWR

EX 18" RCP SD

EX 8" VC SWR

R/W

ROSE CREEK BIKE PATH

DI-1 (TO GARNET AVENUE)

4.0%

PROJECT LIMITS

PROJECT LIMITS

IMPROVEMENT ZONE BOUNDARY

MATCH LINE STA 45+00 SEE SHEET 20

N

0 20 40 60

SCALE 1" = 20'

ROSE CREEK BIKE PATH

C–17

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN
PATH IMPROVEMENTS
ROSE CREEK BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 19 OF 23 SHEETS

WBS

APPROVED: FOR CITY ENGINEER — DATE
PRINT NAME — RCE#

SUBMITTED BY: PROJECT MANAGER

CHECKED BY: PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

226–1701 CCS27 COORDINATE

1866–6261 CCS83 COORDINATE

CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED

XXXXX–19–D

PRELIMINARY
NOT FOR CONSTRUCTION

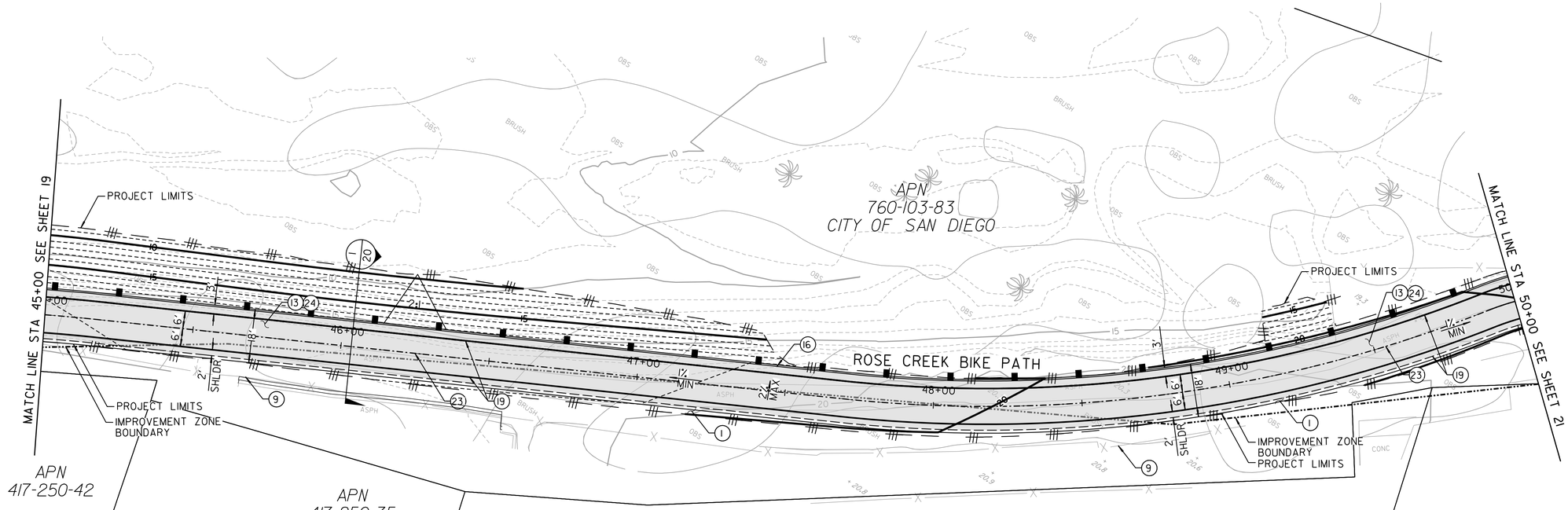
RICK
SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

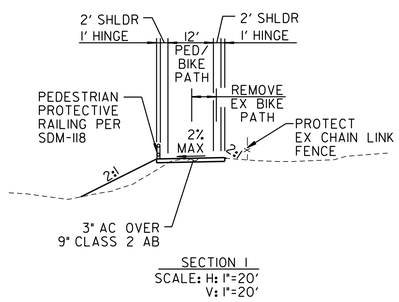
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rickengineering.com

5620 FRIARS ROAD
SAN DIEGO, CA 92110

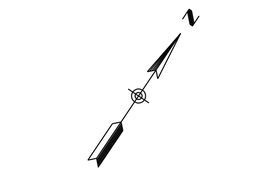
ROSE CREEK BIKE PATH

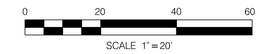
CONSTRUCTION NOTES
(1) REMOVE EX TREE
(9) PROTECT EX CHAIN LINK FENCE IN PLACE
(13) PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
(16) PROPOSED PEDESTRIAN RAILING PER SDM-118
(19) PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
(23) PROPOSED MOD DETAIL 1 PER CSP A20A (3' STRIPE @ 9' SPACING)
(24) REMOVE EX AC BIKE PATH





SECTION 1
SCALE: H: 1"=20'
V: 1"=20'





C–18

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN PATH IMPROVEMENTS
ROSE CREEK BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 20 OF 23 SHEETS

WBS

APPROVED: FOR CITY ENGINEER ____ DATE ____
PRINT NAME ____ RCE# ____

SUBMITTED BY: PROJECT MANAGER
CHECKED BY: PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

226–1701 CCS27 COORDINATE
1866–6261 CCS83 COORDINATE

CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

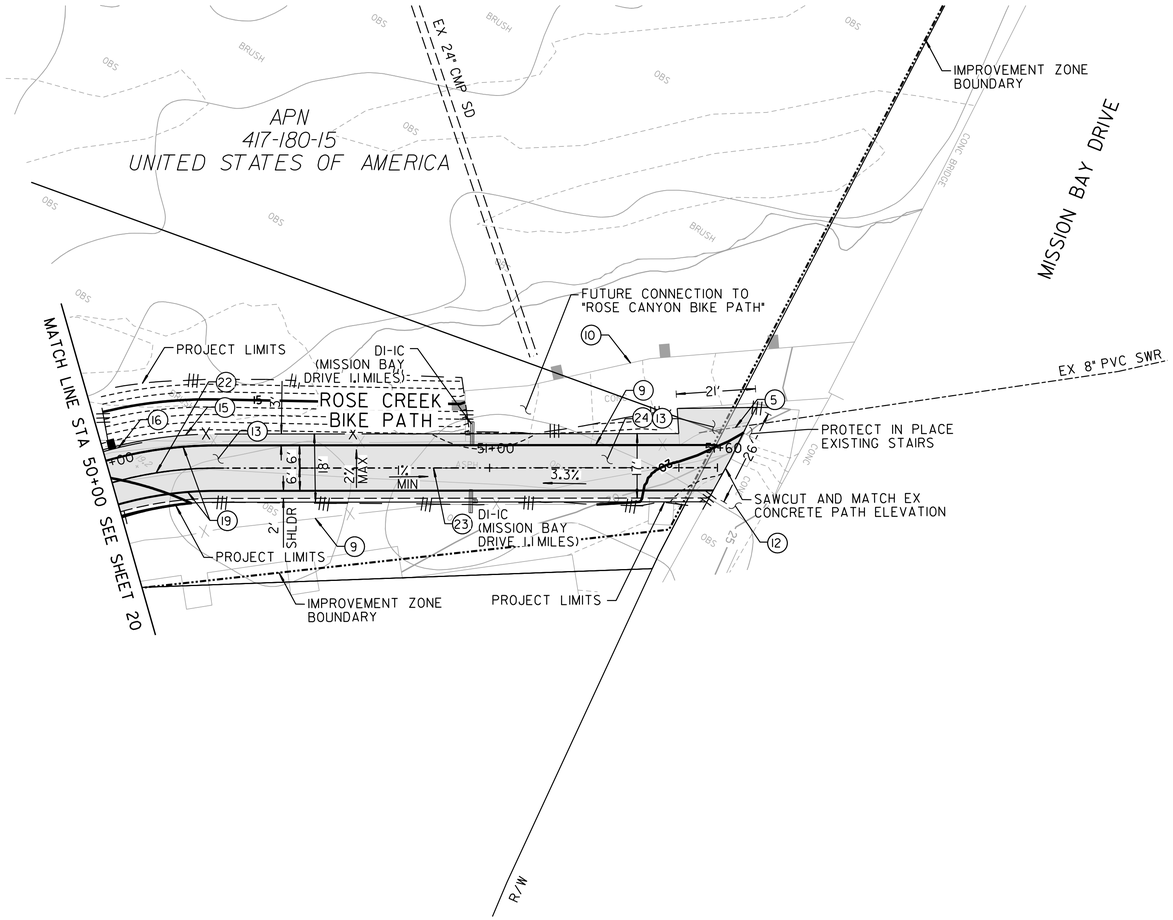
XXXXX–20–D

PRELIMINARY
NOT FOR CONSTRUCTION

RICK
619-291-0707
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5620 FRIARS ROAD
SAN DIEGO, CA 92110
SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

C:\RICK\Projects\C_SD_T\18097_MissionBayPEIR\Civil\Bike–Pedestrian Path\Projects\Rose Creek Bike Path\Sheets\18097AC_C–8_Rose Creek.dgn

04–JUN–2024 07:50 HREBELLO



CONSTRUCTION NOTES

(5) PROTECT EX SEWER IN PLACE
(9) PROTECT EX CHAIN LINK FENCE IN PLACE
(10) PROTECT EX PEDESTRIAN RAILING
(12) PROTECT EX CONCRETE PAVEMENT
(13) PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
(15) PROPOSED CHAIN LINK FENCE PER SDM-112
(16) PROPOSED PEDESTRIAN RAILING PER SDM-118
(19) PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
(22) PROPOSED 4" SOLID YELLOW STRIPING
(23) PROPOSED MOD DETAIL I PER CSP A20A (3' STRIPE @ 9' SPACING)
(24) REMOVE EX AC BIKE PATH

0 20 40 60
SCALE 1" = 20'

ROSE CREEK BIKE PATH

C-19

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN
PATH IMPROVEMENTS
ROSE CREEK BIKE PATH

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 21 OF 23 SHEETS

WBS

APPROVED:
FOR CITY ENGINEER — DATE
PRINT NAME — RCE#

SUBMITTED BY:
PROJECT MANAGER

CHECKED BY:
PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

226-1701
CCS27 COORDINATE

1866-6261
CCS83 COORDINATE

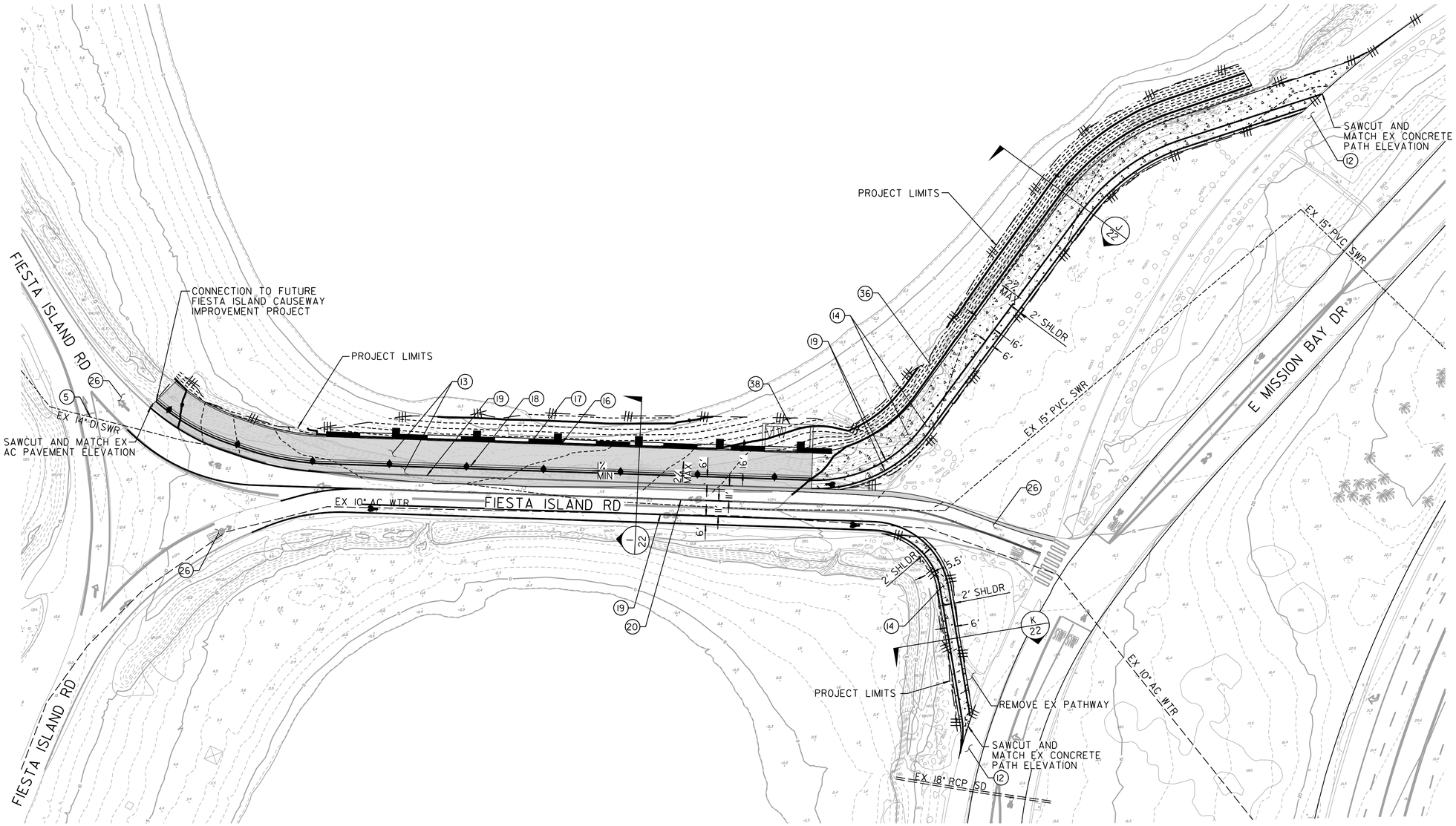
CONTRACTOR
INSPECTOR
DATE STARTED
DATE COMPLETED

XXXXX-21-D

PRELIMINARY
NOT FOR CONSTRUCTION

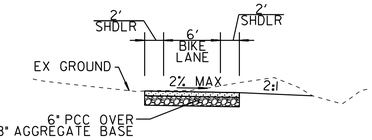
RICK
619-291-0707
rickengineering.com
5620 FRIARS ROAD
SAN DIEGO, CA 92110
SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

C:\RICK\Projects\C_SD_T\18097_MissionBayPEIR\Civil\Bike-Pedestrian Path\Projects\Rose Creek Bike Path\Sheets\18097AC_C-9_Rose Creek.dgn
04-JUN-2024 07:50 HREBELLO



CONSTRUCTION NOTES

(5) PROTECT EX SEWER IN PLACE
(12) PROTECT EX CONCRETE PAVEMENT
(13) PROPOSED AC PAVEMENT (3" AC OVER 9" CLASS AB)
(14) PROPOSED PCC PAVEMENT (6" PCC OVER 18" CLASS AB)
(16) PROPOSED PEDESTRIAN RAILING PER SDM-118
(17) PROPOSED MASONRY RETAINING WALL PER C-09 (H=5'-4" MAX)
(18) PROPOSED CONCRETE BARRIER TYPE 60K PER CSP A63A
(19) PROPOSED 4" SOLID WHITE STRIPING DETAIL 27B PER CSP A20B
(20) PROPOSED 4" DOUBLE SOLID YELLOW STRIPING
(26) PROTECT EX AC PAVEMENT
(38) PROPOSED MODULAR WETLAND MWS-L-4-15, 5' (W) X 16' (L)



SECTION K
SCALE: H:1"=8'
V:1"=8'

SECTION I
SCALE: H:1"=8'
V:1"=8'

SECTION J
SCALE: H:1"=8'
V:1"=8'

FIESTA ISLAND CAUSEWAY

C-20

MISSION BAY PROGRAM EIR BICYCLE AND PEDESTRIAN PATH IMPROVEMENTS FIESTA ISLAND CAUSEWAY

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 22 OF 23 SHEETS

WBS

APPROVED: FOR CITY ENGINEER ____ DATE ____
PRINT NAME ____ RCE# ____

SUBMITTED BY: PROJECT MANAGER
CHECKED BY: PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

226-1701 CCS27 COORDINATE
1866-6261 CCS83 COORDINATE
XXXXX-22-D

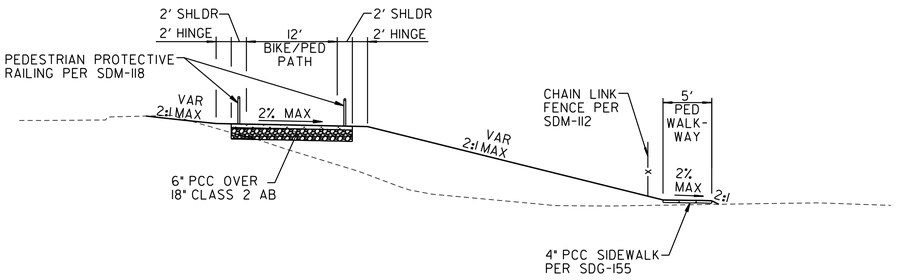
CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

PRELIMINARY
NOT FOR CONSTRUCTION

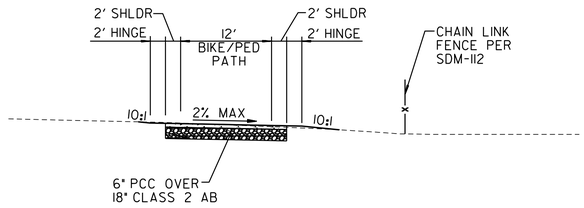
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SAN DIEGO ORANGE RIVERSIDE SACRAMENTO SAN LUIS OBISPO
SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

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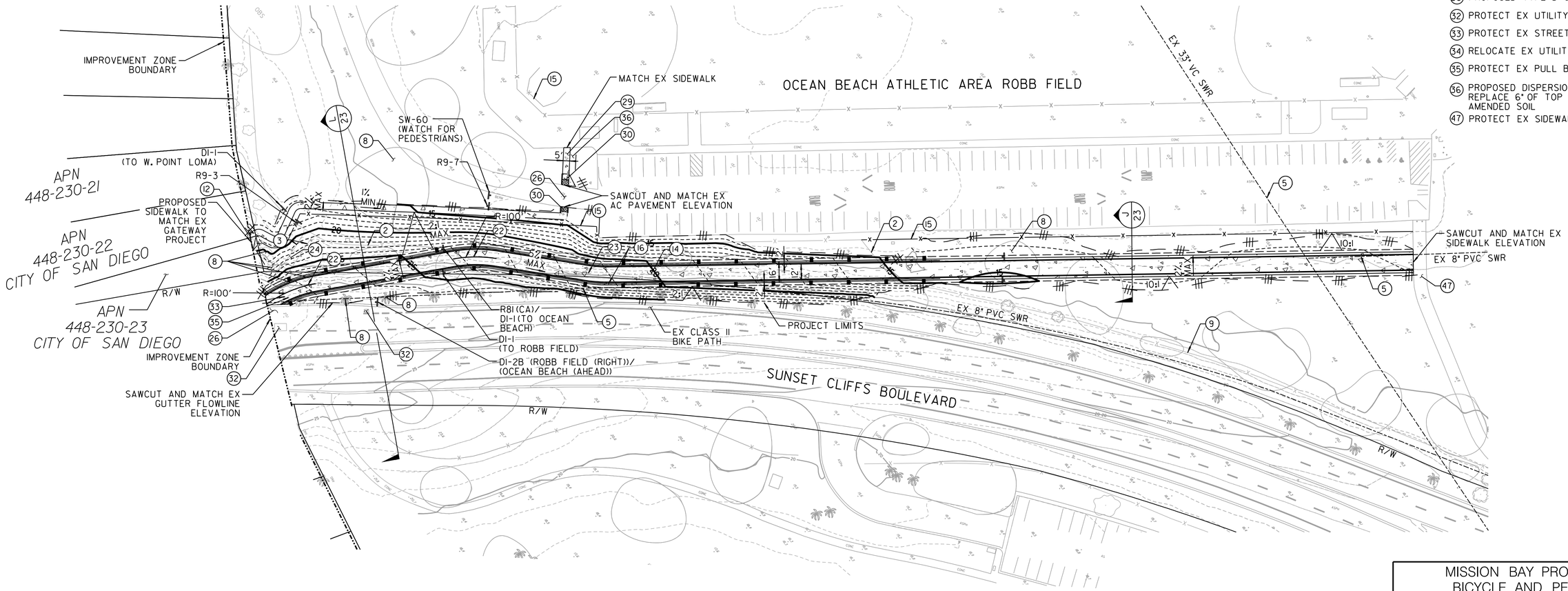
SECTION L
SCALE: H: 1"=10'
V: 1"=10'

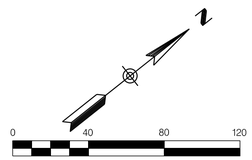


SECTION J
SCALE: H: 1"=10'
V: 1"=10'

CONSTRUCTION NOTES

(2) REMOVE EX CHAIN LINK FENCE
(3) REMOVE PEDESTRIAN RAILING
(5) PROTECT EX SEWER IN PLACE
(8) PROTECT EX TREE IN PLACE
(9) PROTECT EX CHAIN LINK FENCE IN PLACE
(12) PROTECT EX CONCRETE PAVEMENT
(14) PROPOSED PCC PAVEMENT (6" PCC OVER 18" CLASS AB)
(15) PROPOSED CHAIN LINK FENCE PER SDM-112
(16) PROPOSED PEDESTRIAN RAILING PER SDM-118
(22) PROPOSED 4" SOLID YELLOW STRIPING
(23) PROPOSED MOD DETAIL I PER CSP A20A (3' STRIPE @ 9' SPACING)
(24) REMOVE EX AC BIKE PATH
(26) PROTECT EX AC PAVEMENT
(29) PROPOSED 4" SIDEWALK PER SDG-155
(30) PROPOSED TYPE D CURB RAMP SDG-137
(32) PROTECT EX UTILITY VAULT
(33) PROTECT EX STREET LIGHT
(34) RELOCATE EX UTILITY CABINET
(35) PROTECT EX PULL BOX
(36) PROPOSED DISPERSION AREA, REPLACE 6" OF TOP SOIL WITH AMENDED SOIL
(47) PROTECT EX SIDEWALK





ROBB FIELD / GATEWAY CONNECTIVITY

C–21

MISSION BAY PROGRAM EIR
BICYCLE AND PEDESTRIAN
PATH IMPROVEMENTS
ROBB FIELD/GATEWAY CONNECTIVITY

CITY OF SAN DIEGO, CALIFORNIA
ENGINEERING & CAPITAL PROJECTS DEPARTMENT
SHEET 23 OF 23 SHEETS

WBS

APPROVED: FOR CITY ENGINEER ____ DATE ____
PRINT NAME ____ RCE# ____

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	RICK			

SUBMITTED BY: PROJECT MANAGER
CHECKED BY: PROJECT ENGINEER
226–1701 CCS27 COORDINATE
1866–6261 CCS83 COORDINATE
XXXXX–23–D

CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

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SANTA CLARITA PHOENIX TUCSON LAS VEGAS DENVER

C:\RICK\Projects\C_SD_T\18097_MissionBayPEIR\Civil\Bike–Pedestrian Path\Projects\Robb Field–Gateway Project Connectivity\Sheets\18097AC_C–1_Robb Field.dgn

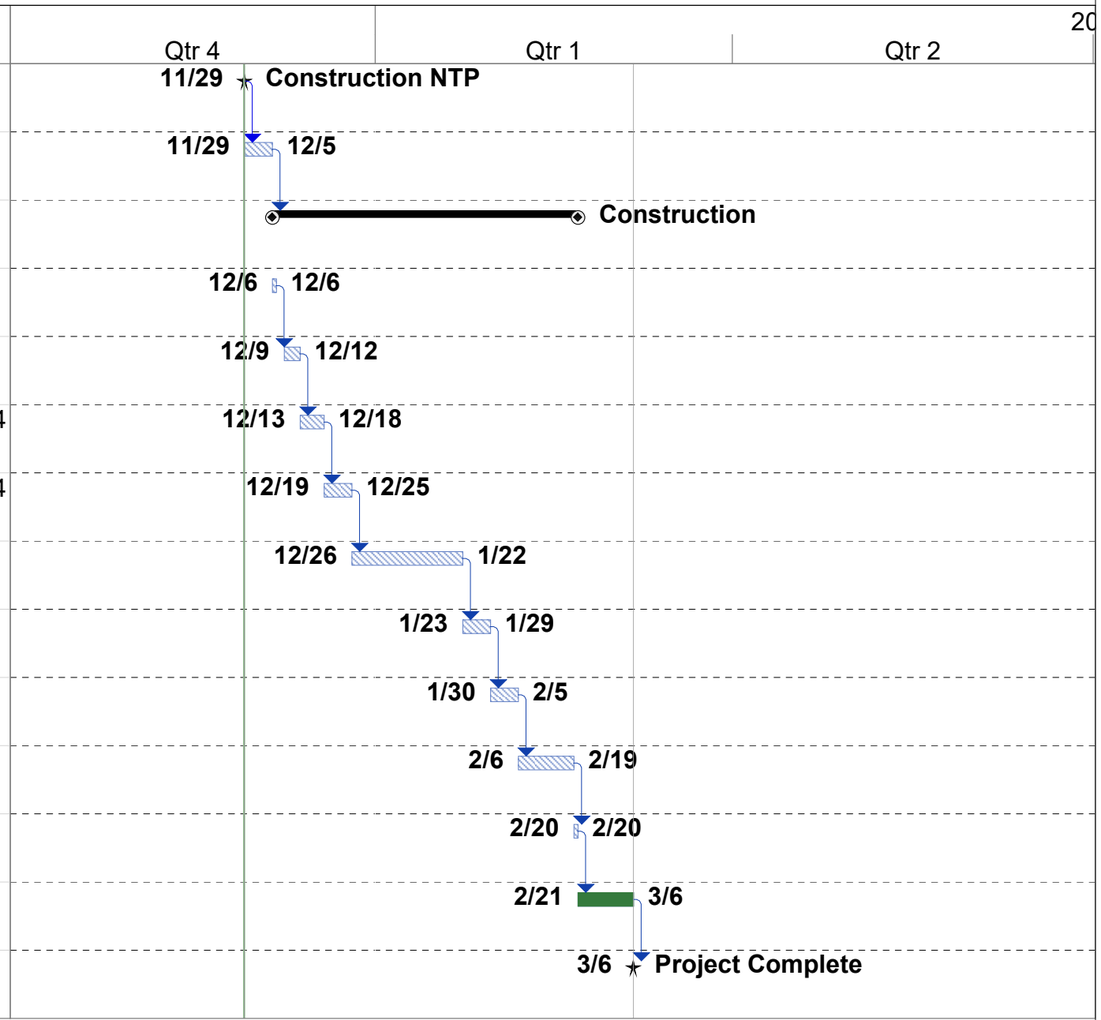
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C. Preliminary Project Schedule

Mission Bay PEIR: Bike & Ped PER

Fiesta Island Causeway

ID	Task Name	Duration	Start	Finish
1	**Construction NTP**	0 days	Fri 11/29/24	Fri 11/29/24
2	**Mobilization**	1 wk	Fri 11/29/24	Thu 12/5/24
3	**Construction**	**11 wks**	**Fri 12/6/24**	**Thu 2/20/25**
4	Clearing and Grubbing	1 day	Fri 12/6/24	Fri 12/6/24
5	Demolition of AC Paving	4 days	Mon 12/9/24	Thu 12/12/24
6	Excavation for Retaining Wall	4 days	Fri 12/13/24	Wed 12/18/24
7	Retaining Wall Foundation Construction	5 days	Thu 12/19/24	Wed 12/25/24
8	Retaining Wall Construction	20 days	Thu 12/26/24	Wed 1/22/25
9	Grading & Backfilling of Retaining Wall	5 days	Thu 1/23/25	Wed 1/29/25
10	Sawcut Existing Roadway, Pave Asphalt Concrete & Place K-Rail	5 days	Thu 1/30/25	Wed 2/5/25
11	Form & Pour Concrete Bicylce Paths and Multi-Use Trail	10 days	Thu 2/6/25	Wed 2/19/25
12	Remove Existing Striping & Place New Striping & Signage	1 day	Thu 2/20/25	Thu 2/20/25
13	**Project Closeout**	2 wks	Fri 2/21/25	Thu 3/6/25
14	**Project Complete**	0 days	Thu 3/6/25	Thu 3/6/25



Last Revised: Fri 5/31/24

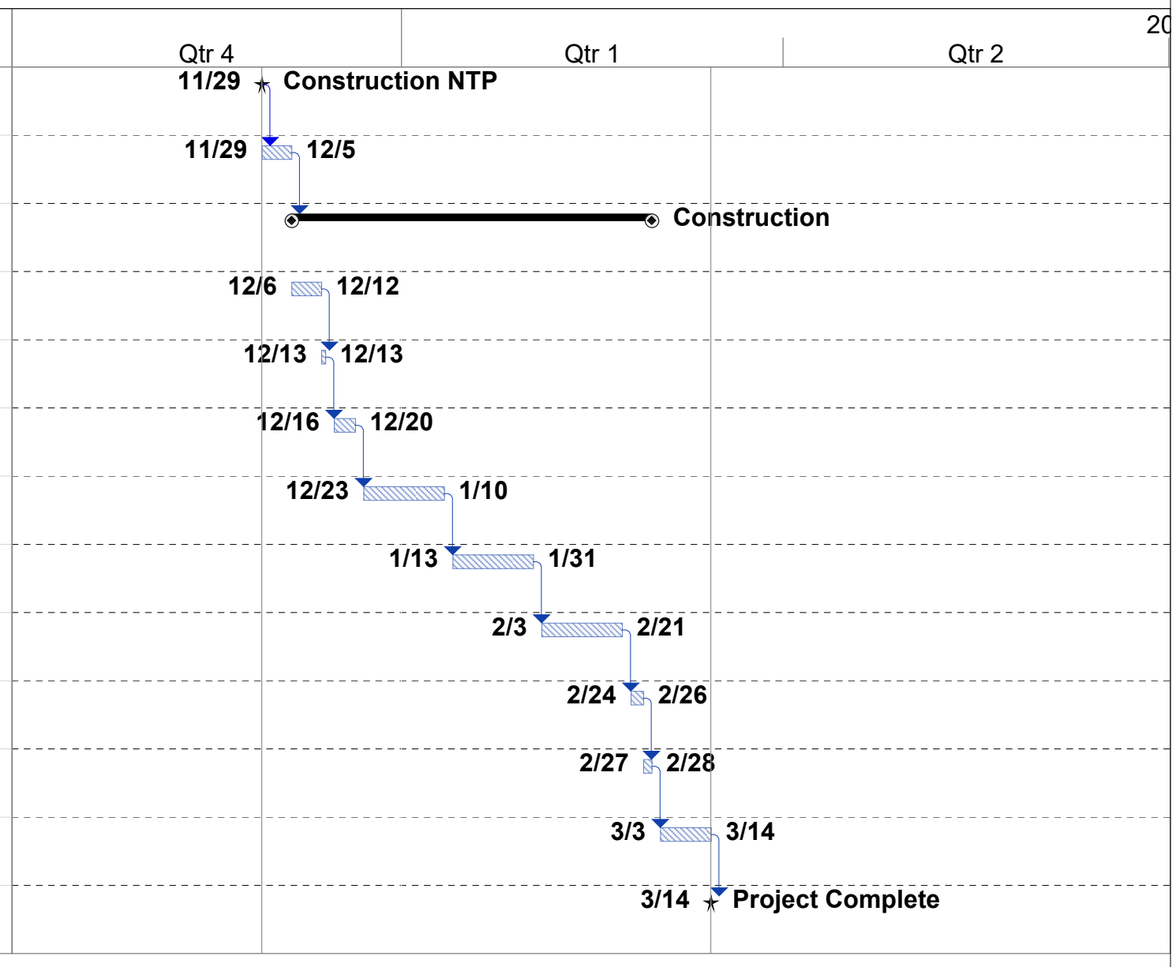
Contractor Task | Milestone | Summary | Agency / Contractor Task

RICK

Mission Bay PEIR: Bike & Ped PER

Ocean Beach Bike Path

ID	Task Name	Duration	Start	Finish
1	**Construction NTP**	0 days	Fri 11/29/24	Fri 11/29/24
2	**Mobilization**	1 wk	Fri 11/29/24	Thu 12/5/24
3	**Construction**	**12.2 wks**	**Fri 12/6/24**	**Fri 2/28/25**
4	Clearing and Grubbing, Remove Existing Trees	5 days	Fri 12/6/24	Thu 12/12/24
5	Remove and Relocate/Salvage Existing Bollards & Benches	1 day	Fri 12/13/24	Fri 12/13/24
6	Demolition of AC Paving	5 days	Mon 12/16/24	Fri 12/20/24
7	Proposed Grading	15 days	Mon 12/23/24	Fri 1/10/25
8	BMP Installation Including Storm Drain Design	15 days	Mon 1/13/25	Fri 1/31/25
9	Place AC Pavement	15 days	Mon 2/3/25	Fri 2/21/25
10	Form & Pour Concrete Path	3 days	Mon 2/24/25	Wed 2/26/25
11	Remove Existing Striping & Place New Striping & Signage	2 days	Thu 2/27/25	Fri 2/28/25
12	**Project Closeout**	2 wks	Mon 3/3/25	Fri 3/14/25
13	Project Complete	0 days	Fri 3/14/25	Fri 3/14/25



Last Revised: Fri 5/31/24

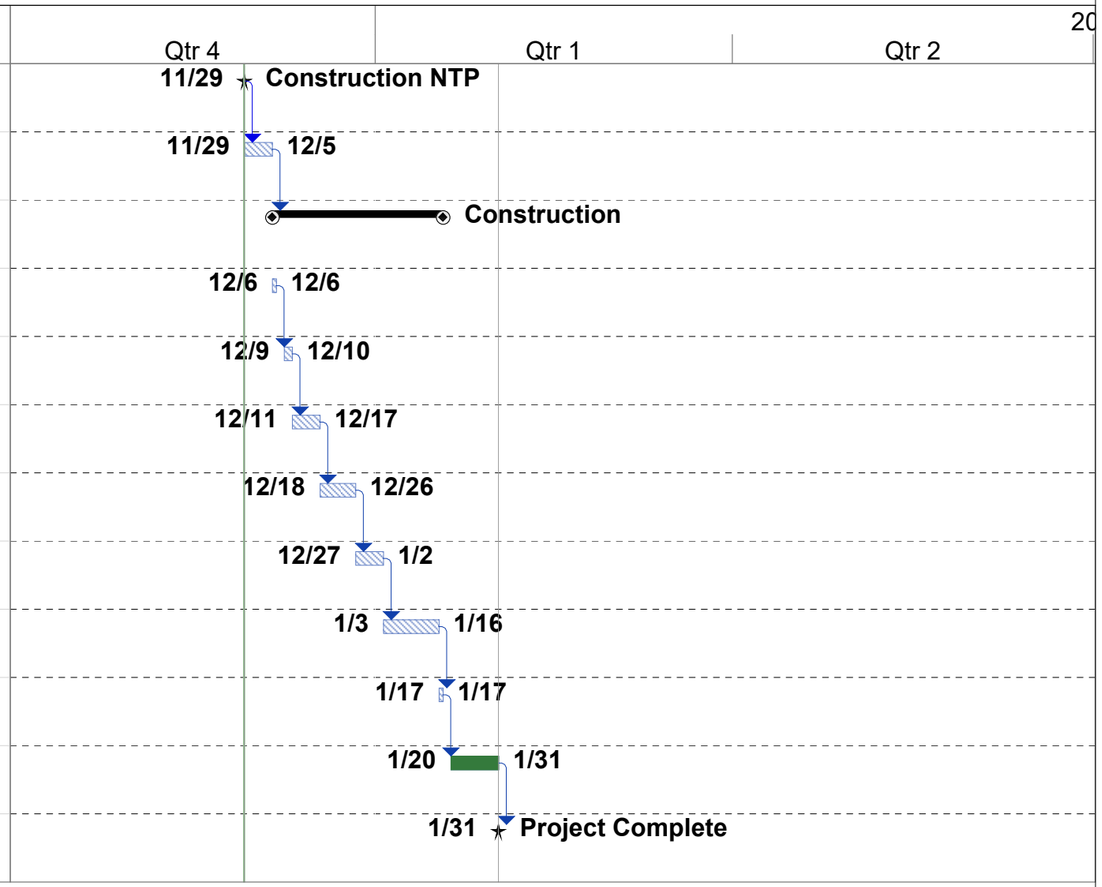
Contractor Task | Milestone | Summary | Agency / Contractor Task

RICK

Mission Bay PEIR: Bike & Ped PER

Robb Field - Gateway Connectivity

ID	Task Name	Duration	Start	Finish
1	**Construction NTP**	0 days	Fri 11/29/24	Fri 11/29/24
2	**Mobilization**	1 wk	Fri 11/29/24	Thu 12/5/24
3	**Construction**	**6.2 wks**	**Fri 12/6/24**	**Fri 1/17/25**
4	Clearing and Grubbing	1 day	Fri 12/6/24	Fri 12/6/24
5	Excavation for Retaining Wall	2 days	Mon 12/9/24	Tue 12/10/24
6	Retaining Wall Foundation Construction	5 days	Wed 12/11/24	Tue 12/17/24
7	Retaining Wall Construction	7 days	Wed 12/18/24	Thu 12/26/24
8	Grading & Backfilling of Retaining Wall	5 days	Fri 12/27/24	Thu 1/2/25
9	Form & Pour Concrete Bicycle Paths and Pedestrian Path	10 days	Fri 1/3/25	Thu 1/16/25
10	Place New Striping & Signage	1 day	Fri 1/17/25	Fri 1/17/25
11	**Project Closeout**	2 wks	Mon 1/20/25	Fri 1/31/25
12	**Project Complete**	0 days	Fri 1/31/25	Fri 1/31/25



Last Revised: Fri 5/31/24

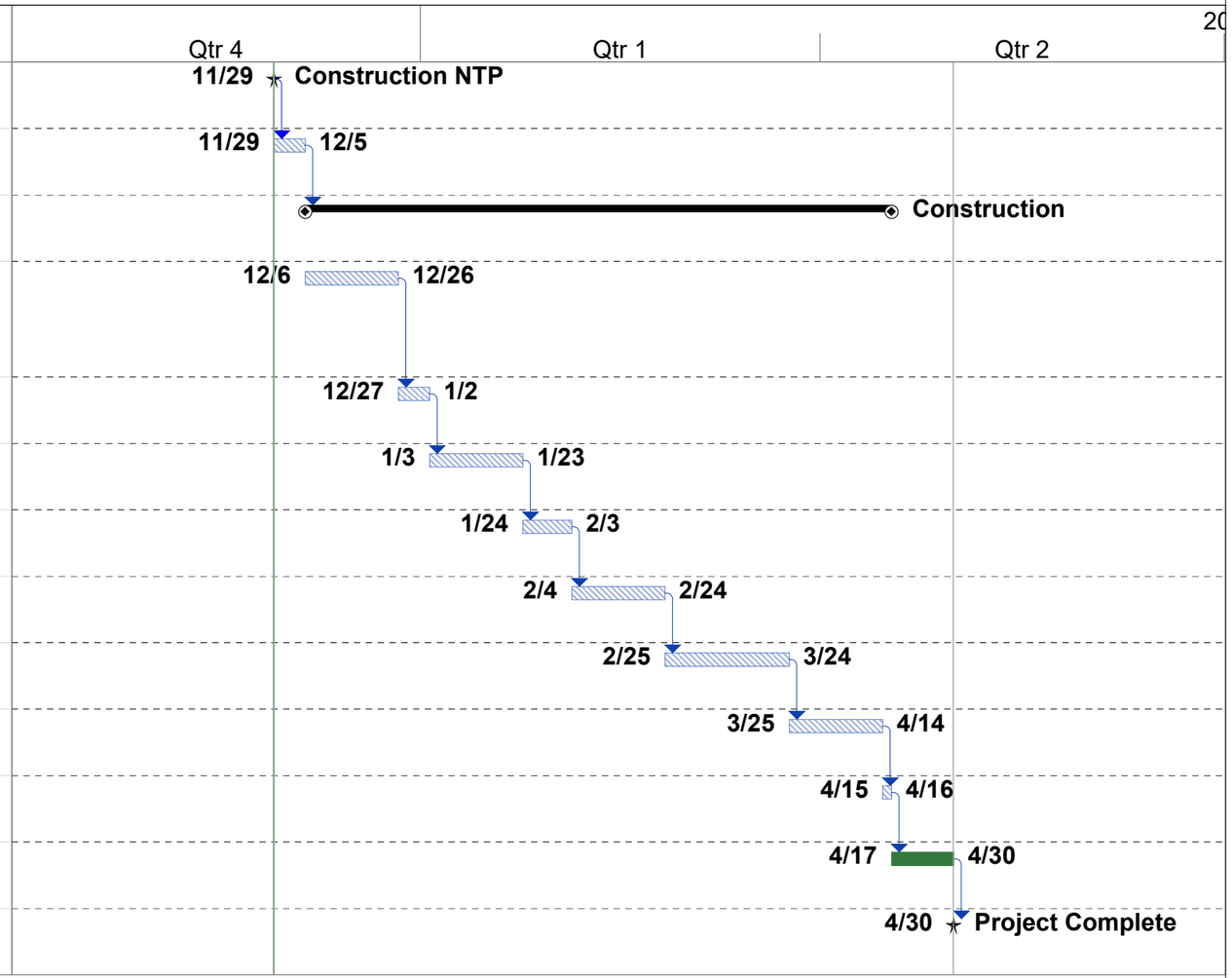
Contractor Task | Milestone | Summary | Agency / Contractor Task

RICK

Mission Bay PEIR: Bike & Ped PER

Rose Creek Bike Path

ID	Task Name	Duration	Start	Finish
1	**Construction NTP**	0 days	Fri 11/29/24	Fri 11/29/24
2	**Mobilization**	1 wk	Fri 11/29/24	Thu 12/5/24
3	**Construction**	**18.8 wks**	**Fri 12/6/24**	**Wed 4/16/25**
4	Clearing and Grubbing, Remove Existing Trees, Chain Link Fence, Pedestrian Railing & Concrete Bike	15 days	Fri 12/6/24	Thu 12/26/24
5	Demolition of AC Paving	5 days	Fri 12/27/24	Thu 1/2/25
6	Proposed Grading	15 days	Fri 1/3/25	Thu 1/23/25
7	BMP Installation Including Storm Drain Design	7 days	Fri 1/24/25	Mon 2/3/25
8	Place AC Pavement	15 days	Tue 2/4/25	Mon 2/24/25
9	Form & Pour Concrete Path	20 days	Tue 2/25/25	Mon 3/24/25
10	Place Chain Link Fence/Pedestrian Railing	15 days	Tue 3/25/25	Mon 4/14/25
11	Remove Existing Striping & Place New Striping & Sigr	2 days	Tue 4/15/25	Wed 4/16/25
12	**Project Closeout**	2 wks	Thu 4/17/25	Wed 4/30/25
13	**Project Complete**	0 days	Wed 4/30/25	Wed 4/30/25



Last Revised: Fri 5/31/24

Contractor Task | Milestone | Summary | Agency / Contractor Task

RICK

D. Drainage Management Areas (DMA) and Best Management Practices (BMP) Exhibits

DMA ID	DMA TYPE	BMP ID	BMP TYPE	SHEET	BMP FOOTPRINT
1	-	-	WATER QUALITY CREDITS	1-4	-
2	DRAINS TO BMP	1	BIOFILTRATION (BF-1)	4, 5	1,860 SQ. FT.
3	DRAINS TO BMP	2	BIOFILTRATION (BF-2)	5, 6	1,880 SQ. FT.
4	-	-	WATER QUALITY CREDITS	6	-

NOTES:

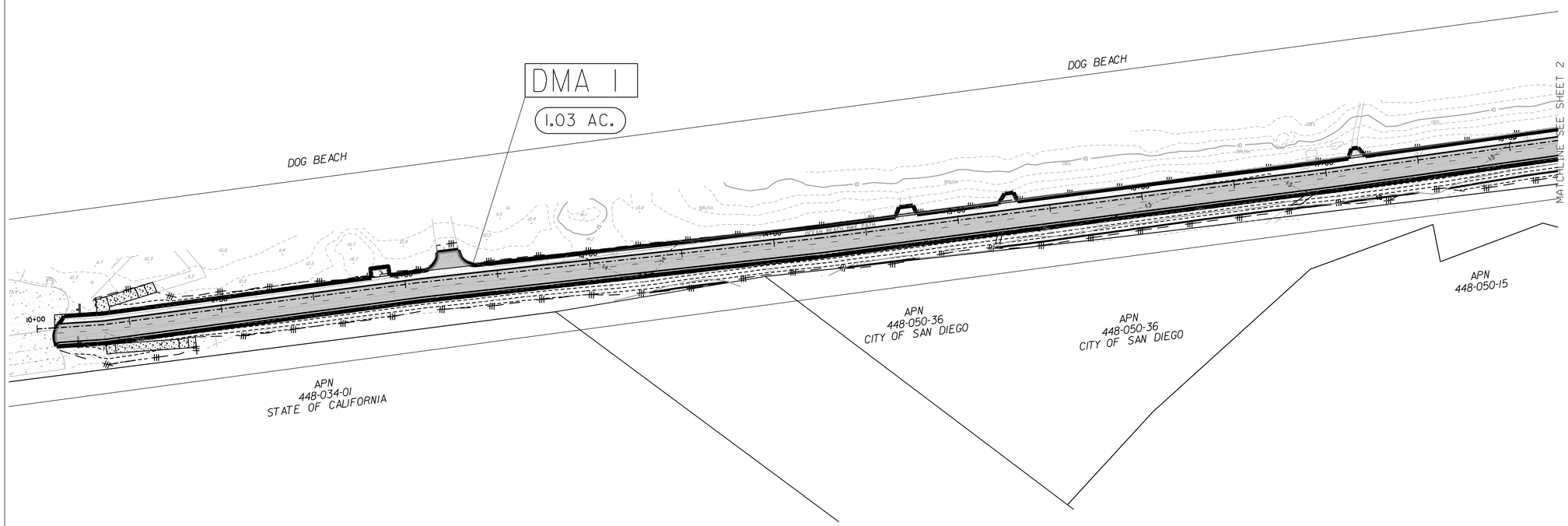
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2. GROUNDWATER IS EXPECTED AT DEPTHS LESS THAN 10' BELOW GROUND.

3. INFILTRATION WAS DEEMED INFEASIBLE.

4. THE PREDOMINANT UNDERLYING HYDROLOGIC SOIL GROUP WITHIN THE PROJECT FOOTPRINT IS TYPE D, PENDING GEOTECHNICAL REPORT.

5. SIDEWALKS AND ROADS WILL BE CONSTRUCTED TO MINIMUM WIDTHS NECESSARY TO MINIMIZE IMPERVIOUS AREA.



STORM WATER MANAGEMENT FEATURES
DRAINAGE MANAGEMENT AREA LEGEND:

DMA BOUNDARY	
DMA IDENTIFICATION	DMA X
BMP IDENTIFICATION	BMP-#
DMA AREA	X.X AC.
BIOFILTRATION BASIN AREAS	

N

30 15 0 30 60 90

GRAPHIC SCALE 1" = 30'

DMA EXHIBIT FOR OCEAN BEACH BIKE PATH

Sheet 1 of 6

J-18097A

Date: May 31, 2024

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DMA ID	DMA TYPE	BMP ID	BMP TYPE	SHEET	BMP FOOTPRINT
1	-	-	WATER QUALITY CREDITS	1-4	-
2	DRAINS TO BMP	1	BIOFILTRATION (BF-1)	4, 5	1,860 SQ. FT.
3	DRAINS TO BMP	2	BIOFILTRATION (BF-2)	5, 6	1,880 SQ. FT.
4	-	-	WATER QUALITY CREDITS	6	-

NOTES:

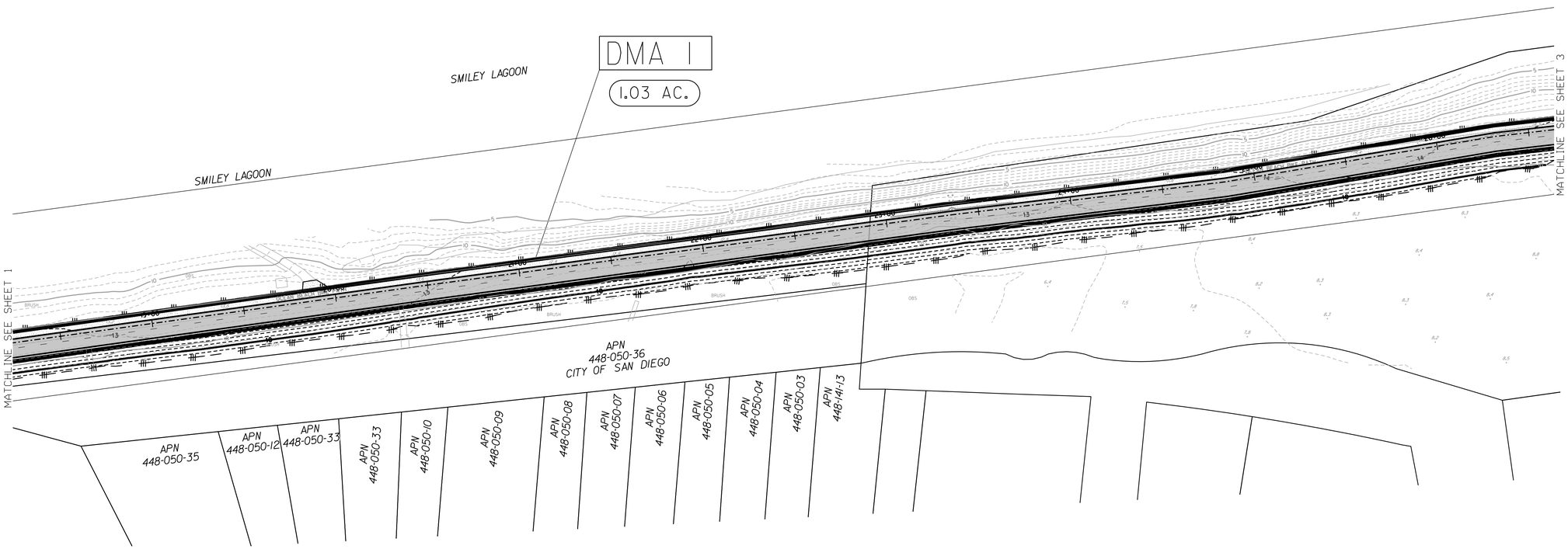
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2. GROUNDWATER IS EXPECTED AT DEPTHS LESS THAN 10' BELOW GROUND.

3. INFILTRATION WAS DEEMED INFEASIBLE.

4. THE PREDOMINANT UNDERLYING HYDROLOGIC SOIL GROUP WITHIN THE PROJECT FOOTPRINT IS TYPE D, PENDING GEOTECHNICAL REPORT.

5. SIDEWALKS AND ROADS WILL BE CONSTRUCTED TO MINIMUM WIDTHS NECESSARY TO MINIMIZE IMPERVIOUS AREA.



STORM WATER MANAGEMENT FEATURES
DRAINAGE MANAGEMENT AREA LEGEND:

DMA BOUNDARY	
DMA IDENTIFICATION	DMA X
BMP IDENTIFICATION	BMP-* —
DMA AREA	X.X AC.
BIOFILTRATION BASIN AREAS	

N

30 15 0 30 60 90

GRAPHIC SCALE 1" = 30'

DMA EXHIBIT FOR OCEAN BEACH BIKE PATH

Sheet 2 of 6

J-18097A

Date: May 31, 2024

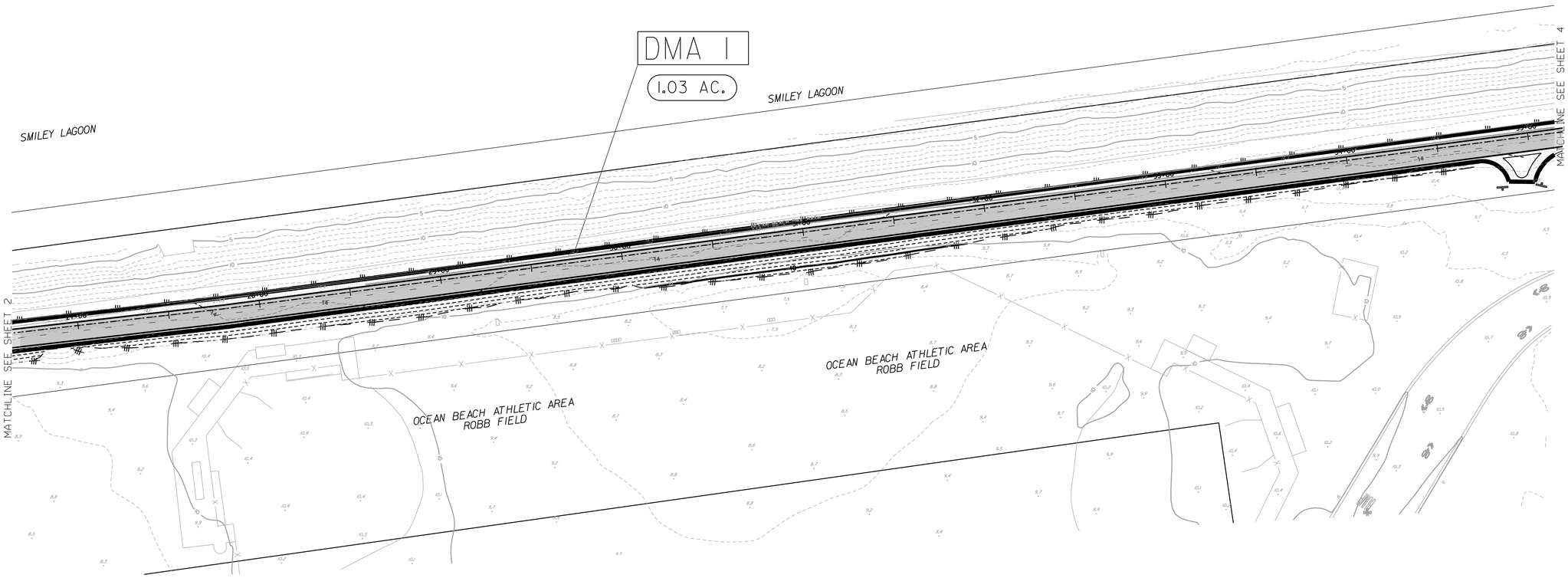
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DMA ID	DMA TYPE	BMP ID	BMP TYPE	SHEET	BMP FOOTPRINT
1	-	-	WATER QUALITY CREDITS	1-4	-
2	DRAINS TO BMP	1	BIOFILTRATION (BF-1)	4, 5	1,860 SQ. FT.
3	DRAINS TO BMP	2	BIOFILTRATION (BF-2)	5, 6	1,880 SQ. FT.
4	-	-	WATER QUALITY CREDITS	6	-



NOTES:

1. DETAILS RELATED TO THE BMP SIZING PARAMETERS ARE SUMMARIZED IN SIZING WORKSHEETS PROVIDED IN ATTACHMENT 1E OF THE PDP SWQMP. REFER TO CROSS SECTION DETAILS IN ATTACHMENT 4 PLAN SHEETS.

2. GROUNDWATER IS EXPECTED AT DEPTHS LESS THAN 10' BELOW GROUND.

3. INFILTRATION WAS DEEMED INFEASIBLE.

4. THE PREDOMINANT UNDERLYING HYDROLOGIC SOIL GROUP WITHIN THE PROJECT FOOTPRINT IS TYPE D, PENDING GEOTECHNICAL REPORT.

5. SIDEWALKS AND ROADS WILL BE CONSTRUCTED TO MINIMUM WIDTHS NECESSARY TO MINIMIZE IMPERVIOUS AREA.

STORM WATER MANAGEMENT FEATURES
DRAINAGE MANAGEMENT AREA LEGEND:

DMA BOUNDARY
DMA IDENTIFICATION — DMA X
BMP IDENTIFICATION — BMP-* —
DMA AREA — X.X AC.
BIOFILTRATION BASIN AREAS

N

30 15 0 30 60 90
GRAPHIC SCALE 1" = 30'

DMA EXHIBIT FOR OCEAN BEACH BIKE PATH

Sheet 3 of 6

J-18097A

Date: May 31, 2024

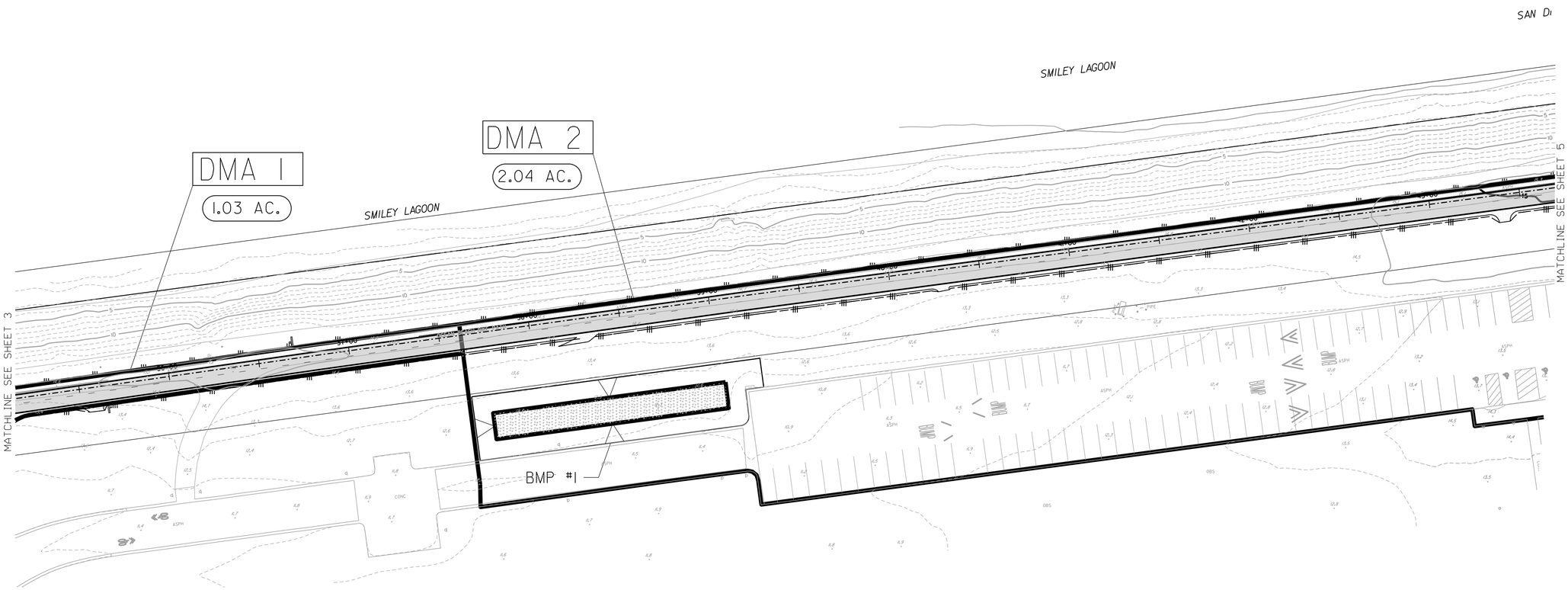
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DMA ID	DMA TYPE	BMP ID	BMP TYPE	SHEET	BMP FOOTPRINT
1	-	-	WATER QUALITY CREDITS	1-4	-
2	DRAINS TO BMP	1	BIOFILTRATION (BF-1)	4, 5	1,860 SQ. FT.
3	DRAINS TO BMP	2	BIOFILTRATION (BF-2)	5, 6	1,880 SQ. FT.
4	-	-	WATER QUALITY CREDITS	6	-



NOTES:

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3. INFILTRATION WAS DEEMED INFEASIBLE.

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STORM WATER MANAGEMENT FEATURES
DRAINAGE MANAGEMENT AREA LEGEND:

DMA BOUNDARY

DMA IDENTIFICATION — DMA X

BMP IDENTIFICATION — BMP-* —

DMA AREA — X.X AC.

BIOFILTRATION BASIN AREAS

N

30 15 0 30 60 90

GRAPHIC SCALE 1" = 30'

DMA EXHIBIT FOR OCEAN BEACH BIKE PATH

Sheet 4 of 6

J-18097A

Date: May 31, 2024

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DMA ID	DMA TYPE	BMP ID	BMP TYPE	SHEET	BMP FOOTPRINT
1	-	-	WATER QUALITY CREDITS	1-4	-
2	DRAINS TO BMP	1	BIOFILTRATION (BF-1)	4, 5	1,860 SQ. FT.
3	DRAINS TO BMP	2	BIOFILTRATION (BF-2)	5, 6	1,880 SQ. FT.
4	-	-	WATER QUALITY CREDITS	6	-

NOTES:

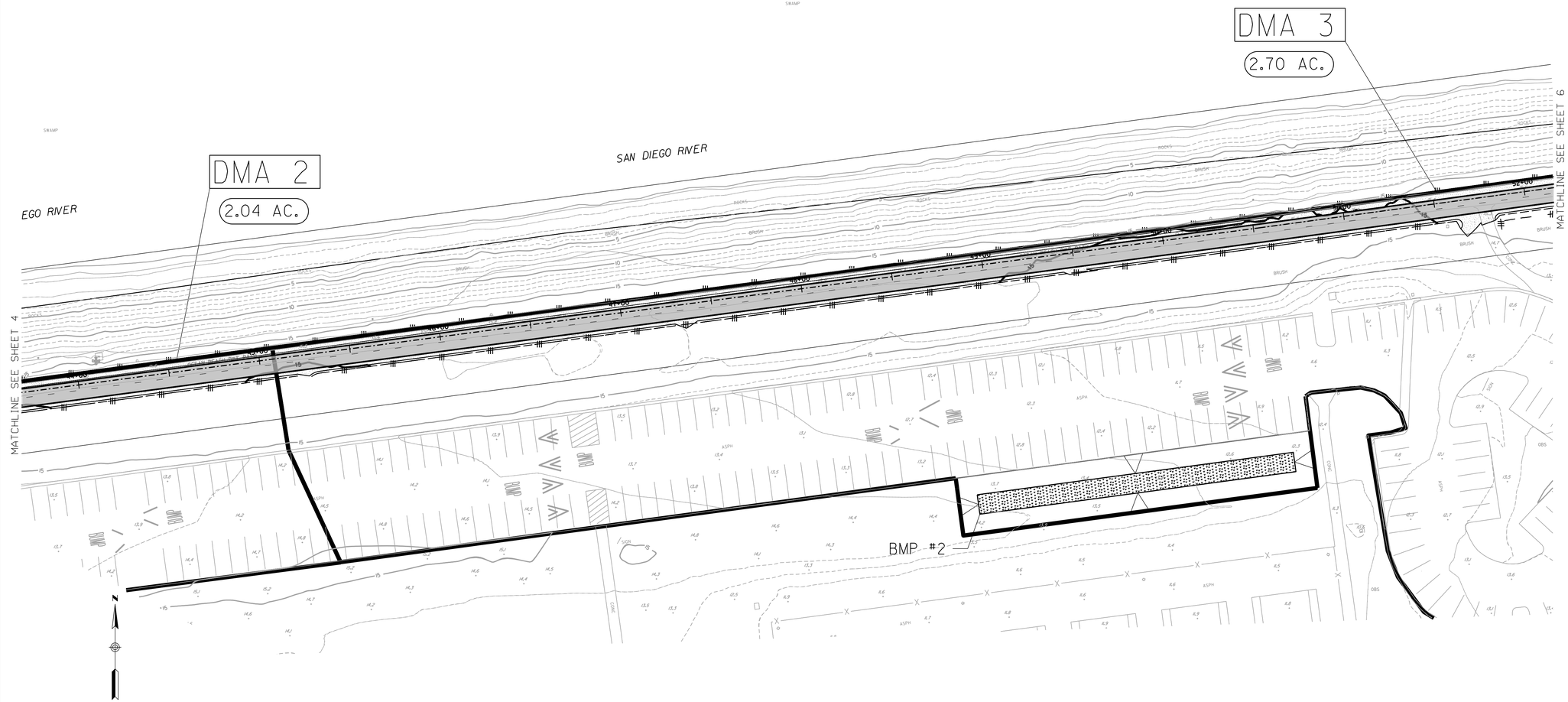
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STORM WATER MANAGEMENT FEATURES
DRAINAGE MANAGEMENT AREA LEGEND:

DMA BOUNDARY	
DMA IDENTIFICATION	DMA X
BMP IDENTIFICATION	BMP-* —
DMA AREA	X.X AC.
BIOFILTRATION BASIN AREAS	

DMA EXHIBIT FOR OCEAN BEACH BIKE PATH

Sheet 5 of 6

J-18097A

Date: May 31, 2024

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DMA ID	DMA TYPE	BMP ID	BMP TYPE	SHEET	BMP FOOTPRINT
1	-	-	WATER QUALITY CREDITS	1-4	-
2	DRAINS TO BMP	1	BIOFILTRATION (BF-1)	4, 5	1,860 SQ. FT.
3	DRAINS TO BMP	2	BIOFILTRATION (BF-2)	5, 6	1,880 SQ. FT.
4	-	-	WATER QUALITY CREDITS	6	-

NOTES:

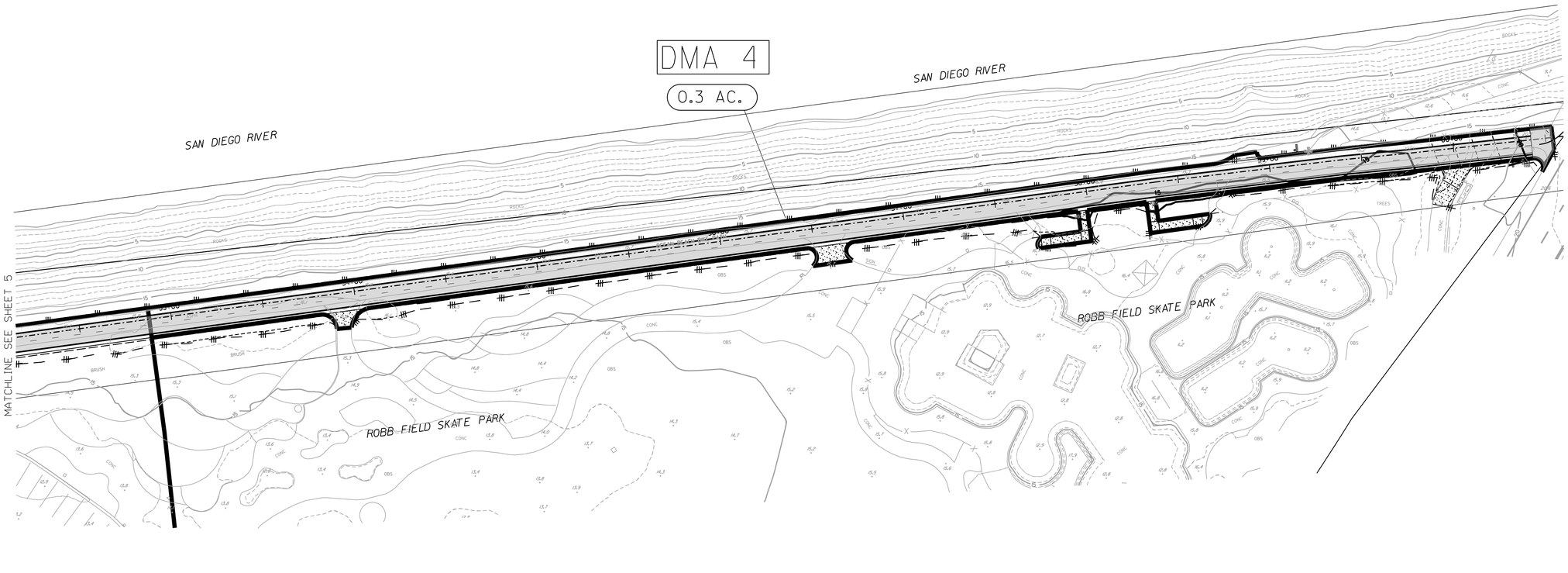
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2. GROUNDWATER IS EXPECTED AT DEPTHS LESS THAN 10' BELOW GROUND.

3. INFILTRATION WAS DEEMED INFEASIBLE.

4. THE PREDOMINANT UNDERLYING HYDROLOGIC SOIL GROUP WITHIN THE PROJECT FOOTPRINT IS TYPE D, PENDING GEOTECHNICAL REPORT.

5. SIDEWALKS AND ROADS WILL BE CONSTRUCTED TO MINIMUM WIDTHS NECESSARY TO MINIMIZE IMPERVIOUS AREA.



STORM WATER MANAGEMENT FEATURES
DRAINAGE MANAGEMENT AREA LEGEND:

DMA BOUNDARY	
DMA IDENTIFICATION	DMA X
BMP IDENTIFICATION	BMP-* —
DMA AREA	X.X AC.
BIOFILTRATION BASIN AREAS	

N

30 15 0 30 60 90

GRAPHIC SCALE 1" = 30'

DMA EXHIBIT FOR OCEAN BEACH BIKE PATH

Sheet 6 of 6

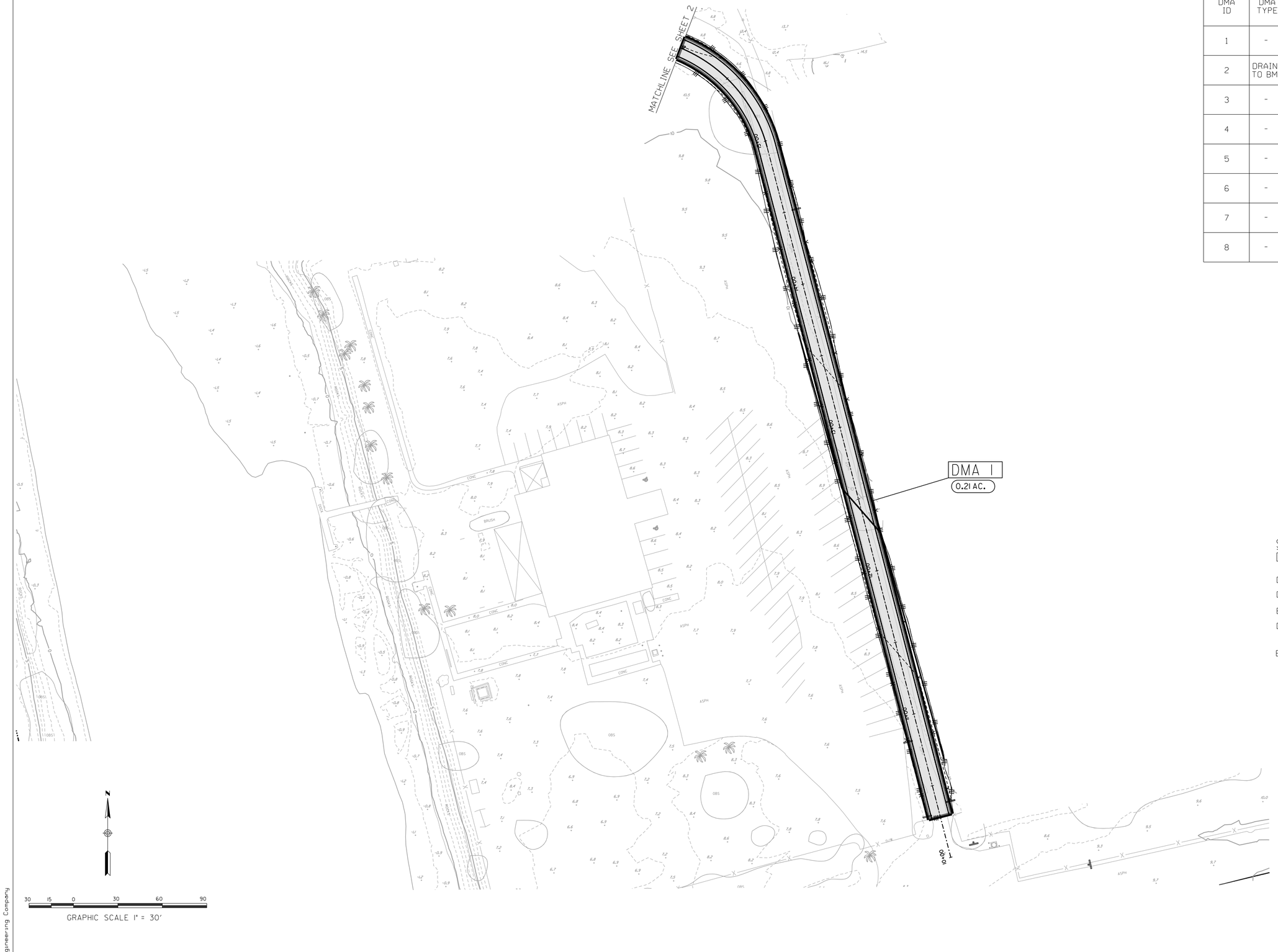
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DMA ID	DMA TYPE	BMP ID	BMP TYPE	SHEET NO.	BMP FOOTPRINT
1	-	-	WATER QUALITY CREDITS	1	-
2	DRAINS TO BMP	1	BIOFILTRATION (BF-3)	2	460 SQ. FT.
3	-	-	WATER QUALITY CREDITS	3	-
4	-	-	WATER QUALITY CREDITS	3	-
5	-	-	WATER QUALITY CREDITS	4	-
6	-	-	WATER QUALITY CREDITS	4	-
7	-	-	WATER QUALITY CREDITS	5	-
8	-	-	WATER QUALITY CREDITS	6	-

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5. SIDEWALKS AND ROADS WILL BE CONSTRUCTED TO MINIMUM WIDTHS NECESSARY TO MINIMIZE IMPERVIOUS AREA.

STORM WATER MANAGEMENT FEATURES
DRAINAGE MANAGEMENT AREA LEGEND:

DMA BOUNDARY

DMA IDENTIFICATION — DMA X

BMP IDENTIFICATION — BMP-* —

DMA AREA — X.X AC.

BIOFILTRATION BASIN AREAS

N

30 15 0 30 60 90

GRAPHIC SCALE 1" = 30'

DMA EXHIBIT FOR ROSE CREEK BIKE PATH

Sheet 1 of 6

J-18097A

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DMA ID	DMA TYPE	BMP ID	BMP TYPE	SHEET NO.	BMP FOOTPRINT
1	-	-	WATER QUALITY CREDITS	1	-
2	DRAINS TO BMP	1	BIOFILTRATION (BF-3)	2	460 SQ. FT.
3	-	-	WATER QUALITY CREDITS	3	-
4	-	-	WATER QUALITY CREDITS	3	-
5	-	-	WATER QUALITY CREDITS	4	-
6	-	-	WATER QUALITY CREDITS	4	-
7	-	-	WATER QUALITY CREDITS	5	-
8	-	-	WATER QUALITY CREDITS	6	-

NOTES:

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5. SIDEWALKS AND ROADS WILL BE CONSTRUCTED TO MINIMUM WIDTHS NECESSARY TO MINIMIZE IMPERVIOUS AREA.



STORM WATER MANAGEMENT FEATURES DRAINAGE MANAGEMENT AREA LEGEND:

DMA BOUNDARY	
DMA IDENTIFICATION	DMA X
BMP IDENTIFICATION	BMP-* —
DMA AREA	X.X AC.
BIOFILTRATION BASIN AREAS	

30 15 0 30 60 90

GRAPHIC SCALE 1" = 30'

DMA EXHIBIT FOR ROSE CREEK BIKE PATH

Sheet 2 of 6

J-18097A

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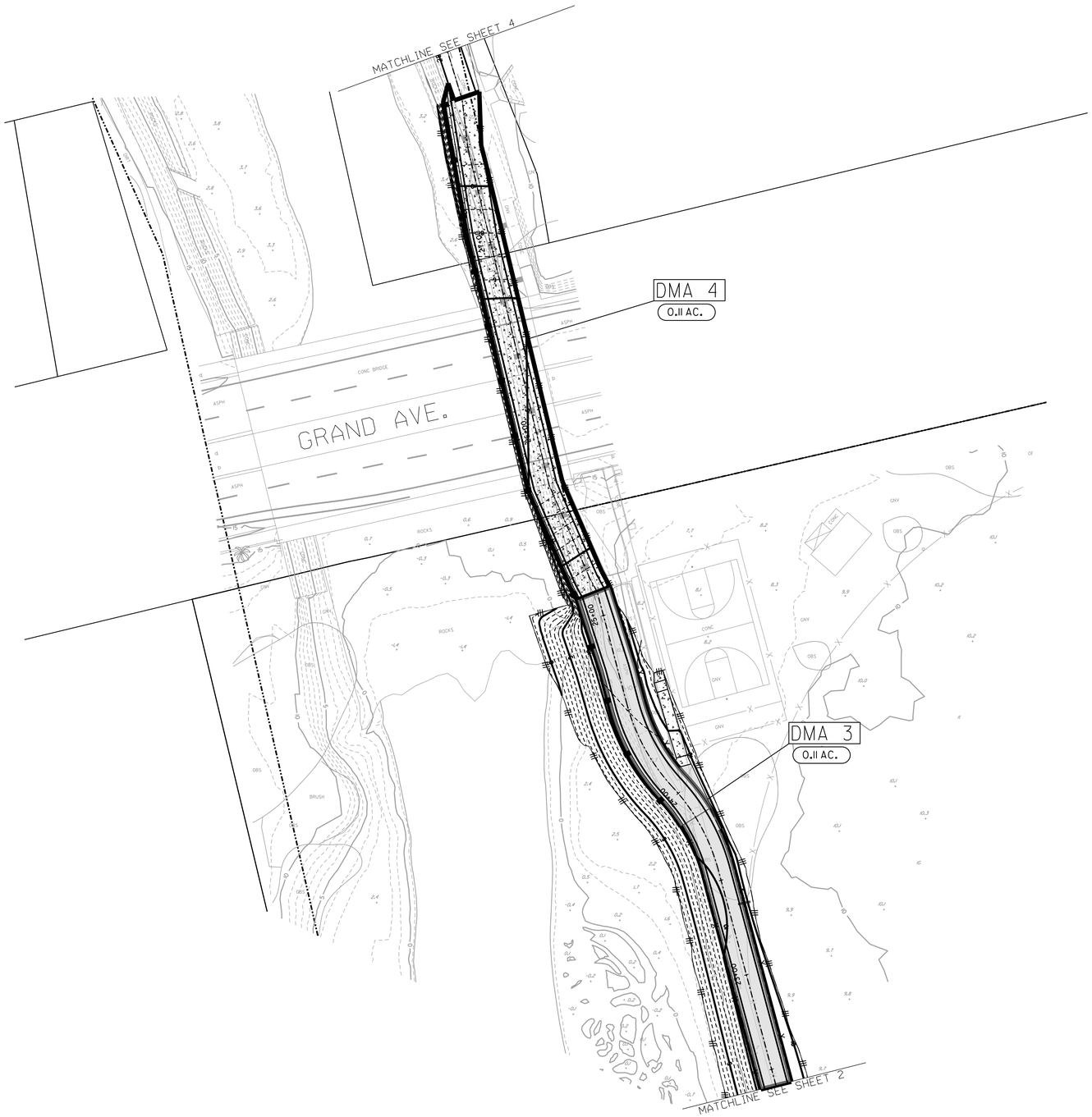
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DMA ID	DMA TYPE	BMP ID	BMP TYPE	SHEET NO.	BMP FOOTPRINT
1	-	-	WATER QUALITY CREDITS	1	-
2	DRAINS TO BMP	1	BIOFILTRATION (BF-3)	2	460 SQ. FT.
3	-	-	WATER QUALITY CREDITS	3	-
4	-	-	WATER QUALITY CREDITS	3	-
5	-	-	WATER QUALITY CREDITS	4	-
6	-	-	WATER QUALITY CREDITS	4	-
7	-	-	WATER QUALITY CREDITS	5	-
8	-	-	WATER QUALITY CREDITS	6	-



NOTES:

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STORM WATER MANAGEMENT FEATURES
DRAINAGE MANAGEMENT AREA LEGEND:

DMA BOUNDARY

DMA IDENTIFICATION — DMA X

BMP IDENTIFICATION — BMP-* —

DMA AREA — X.X AC.

BIOFILTRATION BASIN AREAS

N

30 15 0 30 60 90

GRAPHIC SCALE 1" = 30'

DMA EXHIBIT FOR ROSE CREEK BIKE PATH

Sheet 3 of 6

J-18097A

Date: May 31, 2024

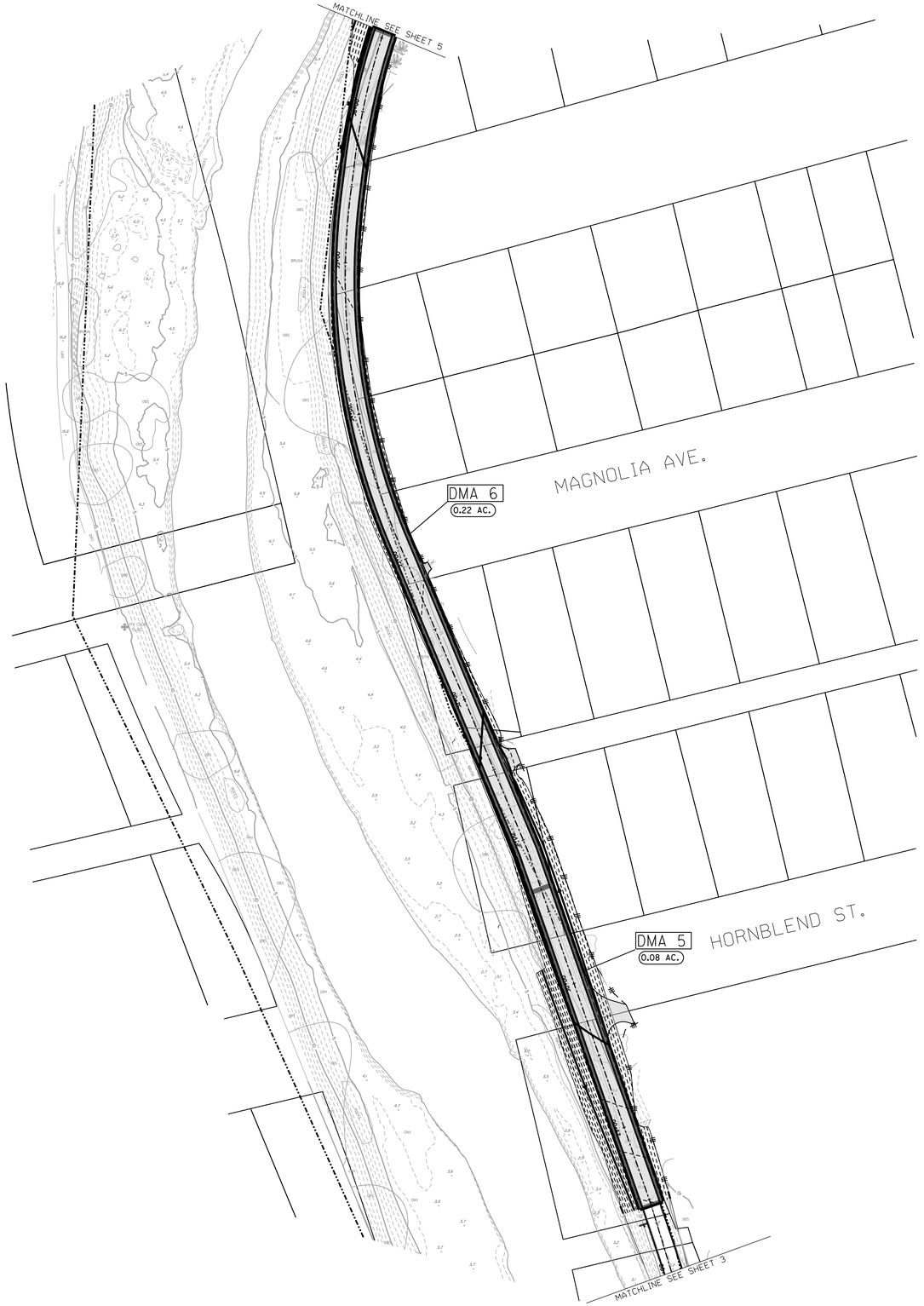
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1	-	-	WATER QUALITY CREDITS	1	-
2	DRAINS TO BMP	1	BIOFILTRATION (BF-3)	2	460 SQ. FT.
3	-	-	WATER QUALITY CREDITS	3	-
4	-	-	WATER QUALITY CREDITS	3	-
5	-	-	WATER QUALITY CREDITS	4	-
6	-	-	WATER QUALITY CREDITS	4	-
7	-	-	WATER QUALITY CREDITS	5	-
8	-	-	WATER QUALITY CREDITS	6	-



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STORM WATER MANAGEMENT FEATURES
DRAINAGE MANAGEMENT AREA LEGEND:

DMA BOUNDARY

DMA IDENTIFICATION — DMA X

BMP IDENTIFICATION — BMP-# —

DMA AREA — X.X AC.

BIOFILTRATION BASIN AREAS

N

40 20 0 40 80 120

GRAPHIC SCALE 1" = 40'

DMA EXHIBIT FOR ROSE CREEK BIKE PATH

Sheet 4 of 6

J-18097A

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DMA ID	DMA TYPE	BMP ID	BMP TYPE	SHEET NO.	BMP FOOTPRINT
1	-	-	WATER QUALITY CREDITS	1	-
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3	-	-	WATER QUALITY CREDITS	3	-
4	-	-	WATER QUALITY CREDITS	3	-
5	-	-	WATER QUALITY CREDITS	4	-
6	-	-	WATER QUALITY CREDITS	4	-
7	-	-	WATER QUALITY CREDITS	5	-
8	-	-	WATER QUALITY CREDITS	6	-

NOTES:

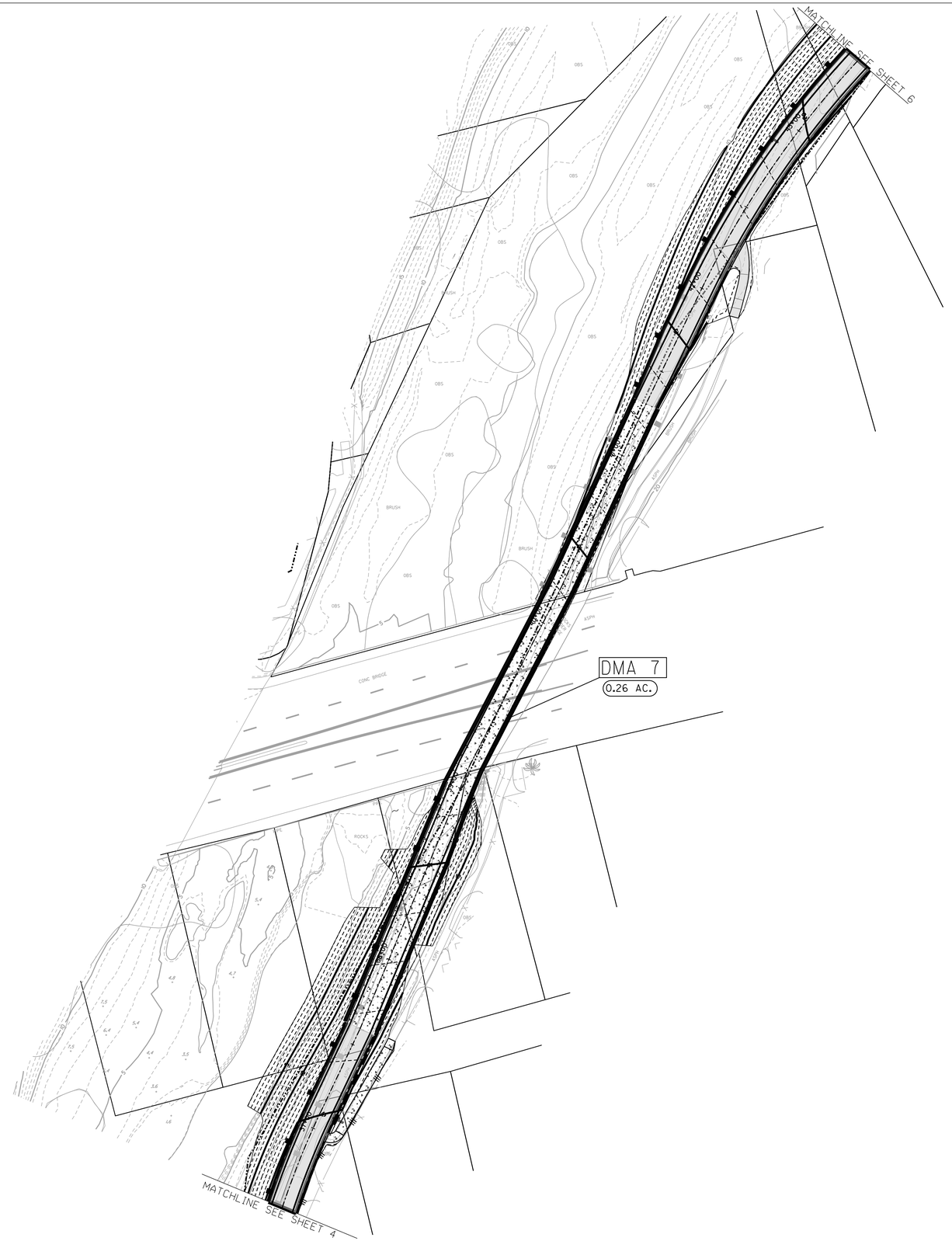
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STORM WATER MANAGEMENT FEATURES
DRAINAGE MANAGEMENT AREA LEGEND:

DMA BOUNDARY	
DMA IDENTIFICATION	DMA X
BMP IDENTIFICATION	BMP-*
DMA AREA	X.X AC.
BIOFILTRATION BASIN AREAS	

30 15 0 30 60 90

GRAPHIC SCALE 1" = 30'

DMA EXHIBIT FOR ROSE CREEK BIKE PATH

Sheet 5 of 6

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DMA ID	DMA TYPE	BMP ID	BMP TYPE	SHEET NO.	BMP FOOTPRINT
1	-	-	WATER QUALITY CREDITS	1	-
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3	-	-	WATER QUALITY CREDITS	3	-
4	-	-	WATER QUALITY CREDITS	3	-
5	-	-	WATER QUALITY CREDITS	4	-
6	-	-	WATER QUALITY CREDITS	4	-
7	-	-	WATER QUALITY CREDITS	5	-
8	-	-	WATER QUALITY CREDITS	6	-



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STORM WATER MANAGEMENT FEATURES
DRAINAGE MANAGEMENT AREA LEGEND:

DMA BOUNDARY

DMA IDENTIFICATION — DMA X

BMP IDENTIFICATION — BMP-# —

DMA AREA — X.X AC.

BIOFILTRATION BASIN AREAS

N

30 15 0 30 60 90

GRAPHIC SCALE 1" = 30'

DMA EXHIBIT FOR ROSE CREEK BIKE PATH

Sheet 6 of 6

J-18097A

Date: May 31, 2024

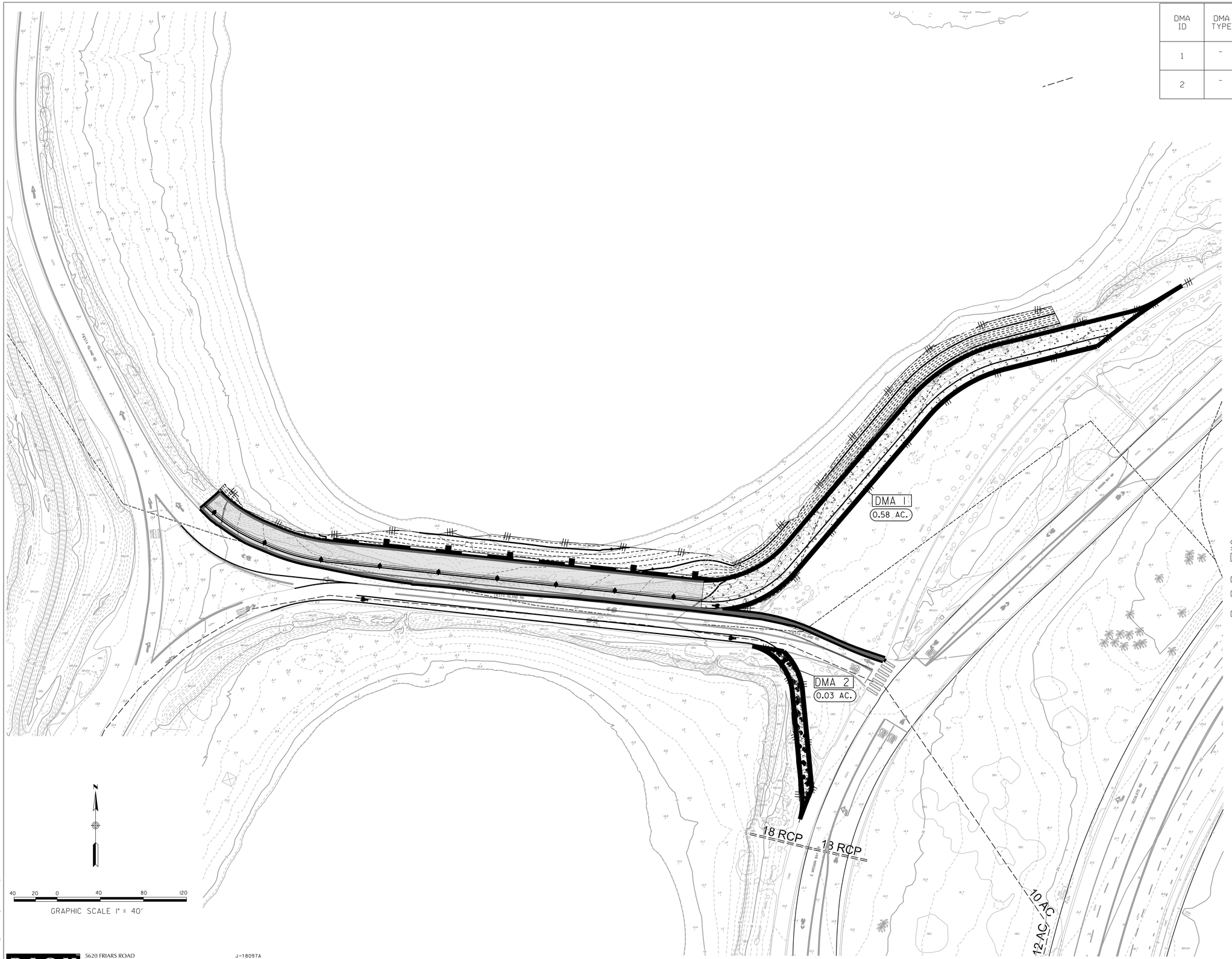
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DMA ID	DMA TYPE	BMP ID	BMP TYPE	BMP MODEL NO.	BMP FOOTPRINT
1	-	-	WATER QUALITY CREDITS	-	-
2	-	-	WATER QUALITY CREDITS	-	-



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STORM WATER MANAGEMENT FEATURES
DRAINAGE MANAGEMENT AREA LEGEND:

DMA BOUNDARY

DMA IDENTIFICATION — DMA X

DMA AREA — X.X AC.

N

40 20 0 40 80 120

GRAPHIC SCALE 1" = 40'

DMA EXHIBIT FOR FIESTA ISLAND CAUSEWAY

Sheet 1 of 1

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DMA ID	DMA TYPE	BMP ID	BMP TYPE	BMP FOOTPRINT
1	-	-	WATER QUALITY CREDITS	-
2	-	-	WATER QUALITY CREDITS	-

NOTES:

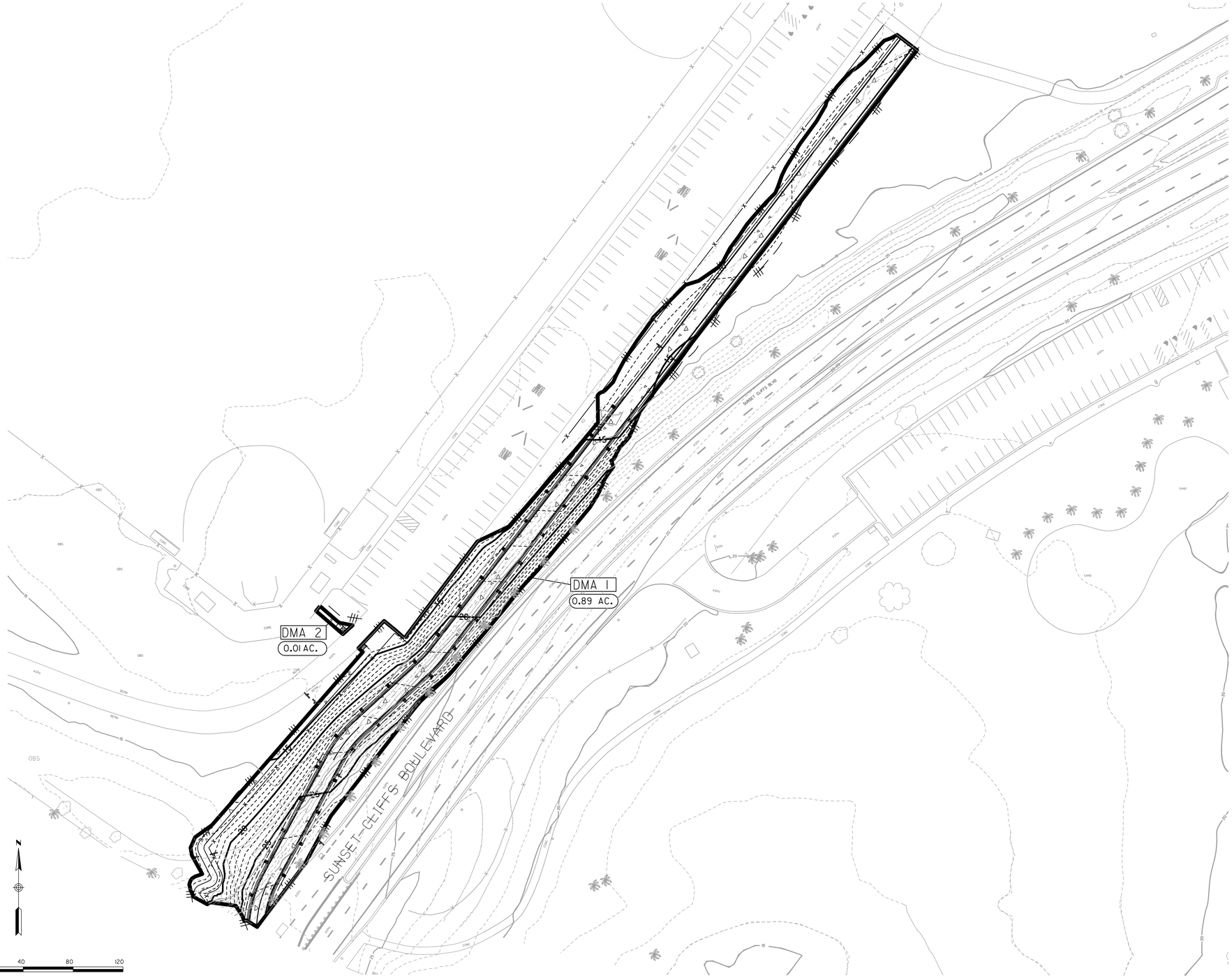
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STORM WATER MANAGEMENT FEATURES
DRAINAGE MANAGEMENT AREA LEGEND:

DMA BOUNDARY

DMA IDENTIFICATION — DMA X

DMA AREA — X.X AC.

DMA EXHIBIT FOR ROBB FIELD GATEWAY CONNECTIVITY PATH

Sheet 1 of 1

J-18097A

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E. Risk Assessment Table

RISK ASSESSMENT TABLE			Project Name: **Ocean Beach Bike Path**				**J-18097-A**	
				Risk Assessment			Risk Response	
ID #	Category	Title	Risk Statement	Probability	Cost Impact	Time Impact	Strategy	Response Actions
1	PM	Utilities	There are no known utility conflicts. Encountering unforeseen utilities could cause schedule delays and increased costs.	Low	Moderate	High	Mitigate	The design team will coordinate with utility owners early in the design phase to verify utility locations and coordinate for relocation if necessary. The contractor is required to notify Underground Service Alert (USA) so that utilities are accurately marked in the field prior to excavation.
2	Construction	Existing Soil Data	Soil data has not been explored at this time. If compromised or contaminated soils are discovered, mitigation will be required which could delay the schedule and increase costs.	Low	Moderate	Moderate	Mitigate	Geotechnical investigations are needed to identify and mitigate soil issues.
3	Construction	Proximity to Neighbors	As a result of construction activities that may have noise and traffic impacts, mitigation could be required, resulting in an extended project schedule.	Moderate	Moderate	Moderate	Mitigate	The contractor may be required to use time windows that reduce the noise and traffic impacts to the surrounding park and bay areas.
4	Environmental	Environmental Windows	The project is based on assuming breeding restrictions will be in effect and limit construction from February/March to September 1st. Construction can be conducted with slightly less urgency and accommodate contingency actions if they became necessary.	Moderate	Low	High	Mitigate	The risk will be mitigated by determining the breeding restriction dates, and planning the construction and contingencies accordingly and in concurrence with the governing agencies early in the design process.
5	Design	Water Quality Concerns	If the project is not classified as PDP Exempt, structural pollutant control and hydromodification management will be required.	Low	Moderate	Low	Mitigate	The design team will work with the City of San Diego early in the design process to determine classification and requirements.
6	Environmental	Sensitive Habitat	As a result of earthwork activities, impacts to archeological or paleontological resources may occur which would lead to potential delays during construction.	Very Low	Moderate	High	Mitigate	The team will work directly with the resource agencies to ensure timely response times and the efficient transfer of information.
7	Environmental	Sensitive Habitat	As a result of earthwork activities, impacts to rare plant species may occur requiring mitigation or avoidance.	Low	Moderate	Low	Mitigate	All efforts will be taken to minimize or avoid impacts to any rare plant species found on site.
8	Environmental	Sensitive Habitat	As a result of earthwork activities, impacts to rare or endangered wildlife may occur requiring avoidance or mitigation.	Low	Low	Low	Mitigate	All efforts will be taken to minimize or avoid impacts to any rare or endangered wildlife species found on site.
9	PM	Permitting	As a result of the need to receive approval from multiple permitting agencies, the possibility of unanticipated mitigation requirements or project delays during approval could occur, which would result in increased project schedule and/or cost.	Moderate	Low	High	Mitigate	During the approval process, the team will work directly with the permitting agencies to ensure timely response times and the efficient transfer of information.

RISK ASSESSMENT TABLE			Project Name: **Rose Creek Bike Path**					**J-18097-A**
				Risk Assessment			Risk Response	
ID #	Category	Title	Risk Statement	Probability	Cost Impact	Time Impact	Strategy	Response Actions
1	PM	Utilities	There are no known utility conflicts. Encountering unforeseen utilities could cause schedule delays and increased costs.	Low	Moderate	High	Mitigate	The design team will coordinate with utility owners early in the design phase to verify utility locations and coordinate for relocation if necessary. The contractor is required to notify Underground Service Alert (USA) so that utilities are accurately marked in the field prior to excavation.
2	Construction	Existing Soil Data	Soil data has not been explored at this time. Further geotechnical investigations may be required to design the pavement and water quality features. Retaining walls may be required to allow the existing path to be widened. Site-specific geotechnical analysis will be required for each of the proposed retaining walls. Foundation materials may require removal and recompaction or replacement prior to construction of the retaining walls. If compromised or contaminated soils are discovered on the site, mitigation will be required which may delay the schedule, and increase costs.	Low	Moderate	Moderate	Mitigate	Geotechnical investigations are needed to identify and mitigate soil issues.
3	Construction	Proximity to Neighbors	As a result of construction activities that may have noise and traffic impacts, mitigation could be required, resulting in an extended project schedule.	Moderate	Moderate	Moderate	Mitigate	The contractor may be required to use time windows that reduce the noise and traffic impacts to the surrounding park and bay areas.
4	Environmental	Environmental Windows	The project is based on assuming breeding restrictions will be in effect and limit construction from February/March to September 1st. Construction can be conducted with slightly less urgency and accommodate contingency actions if they became necessary.	Moderate	Low	High	Mitigate	The risk will be mitigated by determining the breeding restriction dates, and planning the construction and contingencies accordingly and in concurrence with the governing agencies early in the design process.
5	Design	Water Quality Concerns	Due to site constraints not all water quality requirements will be met.	High	Very low	Very low	Mitigate	This risk is mitigated with early coordination of water quality credits from other Bicycle and Pedestrian Path projects.
6	Environmental	Sensitive Habitat	As a result of earthwork activities, impacts to archeological or paleontological resources may occur which would lead to potential delays during construction.	Very Low	Moderate	High	Mitigate	The team will work directly with the resource agencies to ensure timely response times and the efficient transfer of information.
7	Environmental	Sensitive Habitat	As a result of earthwork activities, impacts to rare plant species may occur requiring mitigation or avoidance.	Low	Moderate	Low	Mitigate	All efforts will be taken to minimize or avoid impacts to any rare plant species found on site.
8	Environmental	Sensitive Habitat	As a result of earthwork activities, impacts to rare or endangered wildlife may occur requiring avoidance or mitigation.	Low	Low	Low	Mitigate	All efforts will be taken to minimize or avoid impacts to any rare or endangered wildlife species found on site.
9	PM	Permitting	As a result of the need to receive approval from multiple permitting agencies, the possibility of unanticipated mitigation requirements or project delays during approval could occur, which would result in increased project schedule and/or cost.	Moderate	Low	High	Mitigate	During the approval process, the team will work directly with the permitting agencies to ensure timely response times and the efficient transfer of information.

RISK ASSESSMENT TABLE			Project Name:	**Fiesta Island Causeway**			**J-18097-A**	
				Risk Assessment			Risk Response	
ID #	Category	Title	Risk Statement	Probability	Cost Impact	Time Impact	Strategy	Response Actions
1	PM	Utilities	There are no known utility conflicts. Encountering unforeseen utilities could cause schedule delays and increased costs.	Low	Moderate	High	Mitigate	The design team will coordinate with utility owners early in the design phase to verify utility locations and coordinate for relocation if necessary. The contractor is required to notify Underground Service Alert (USA) so that utilities are accurately marked in the field prior to excavation.
2	Construction	Existing Soil Data	Soil data has not been explored at this time. Further geotechnical investigations may be required to design the pavement and water quality features. Retaining wall design will require site-specific geotechnical analysis. The wall must be constructed on competent materials that are not subject to subsidence or liquefaction. If competent materials are not available at the wall site, then a deep foundation system consisting of steel or concrete piles may be required. A deep foundation system will increase the project cost and construction duration and has the potential to result in unanticipated challenges during the construction phase. If compromised or contaminated soils are discovered on the site, mitigation will be required which will delay the schedule, and increase costs.	Low	Moderate	Moderate	Mitigate	Geotechnical investigations are needed to identify and mitigate soil issues.
3	Construction	Proximity to Neighbors	As a result of construction activities that may have noise and traffic impacts, mitigation could be required, resulting in an extended project schedule.	Moderate	Moderate	Moderate	Mitigate	The contractor may be required to use time windows that reduce the noise and traffic impacts to the surrounding park and bay areas.
4	Environmental	Environmental Windows	The project is based on assuming breeding restrictions will be in effect and limit construction from February/March to September 1st. Construction can be conducted with slightly less urgency and accommodate contingency actions if they became necessary.	Moderate	Low	High	Mitigate	The risk will be mitigated by determining the breeding restriction dates, and planning the construction and contingencies accordingly and in concurrence with the governing agencies early in the design process.
5	Environmental	Sensitive Habitat	As a result of earthwork activities, impacts to archeological or paleontological resources may occur which would lead to potential delays during construction.	Very Low	Moderate	High	Mitigate	The team will work directly with the resource agencies to ensure timely response times and the efficient transfer of information.
6	Environmental	Sensitive Habitat	As a result of earthwork activities, impacts to rare plant species may occur requiring mitigation or avoidance.	Low	Moderate	Low	Mitigate	All efforts will be taken to minimize or avoid impacts to any rare plant species found on site.
7	Environmental	Sensitive Habitat	As a result of earthwork activities, impacts to rare or endangered wildlife may occur requiring avoidance or mitigation.	Low	Low	Low	Mitigate	All efforts will be taken to minimize or avoid impacts to any rare or endangered wildlife species found on site.
8	PM	Permitting	As a result of the need to receive approval from multiple permitting agencies, the possibility of unanticipated mitigation requirements or project delays during approval could occur, which would result in increased project schedule and/or cost.	Moderate	Low	High	Mitigate	During the approval process, the team will work directly with the permitting agencies to ensure timely response times and the efficient transfer of information.

RISK ASSESSMENT TABLE			Project Name:	**Robb Field/Gateway Connectivity Path**			**J-18097-A**	
				Risk Assessment			Risk Response	
ID #	Category	Title	Risk Statement	Probability	Cost Impact	Time Impact	Strategy	Response Actions
1	PM	Utilities	There are two known utility conflicts, with minor relocation. Encountering unforeseen utilities could cause schedule delays and increased costs.	Low	Moderate	High	Mitigate	The design team will coordinate with utility owners early in the design phase to verify utility locations and coordinate for relocation if necessary. The contractor is required to notify Underground Service Alert (USA) so that utilities are accurately marked in the field prior to excavation.
2	Construction	Existing Soil Data	Soil data has not been explored at this time. If compromised or contaminated soils are discovered, mitigation will be required which could delay the schedule and increase costs.	Low	Moderate	Moderate	Mitigate	Geotechnical investigations are needed to identify and mitigate soil issues.
3	Construction	Proximity to Neighbors	As a result of construction activities that may have noise and traffic impacts, mitigation could be required, resulting in an extended project schedule.	Moderate	Moderate	Moderate	Mitigate	The contractor may be required to use time windows that reduce the noise and traffic impacts to the surrounding park and bay areas.
4	Environmental	Environmental Windows	The project is based on assuming breeding restrictions will be in effect and limit construction from February/March to September 1st. Construction can be conducted with slightly less urgency and accommodate contingency actions if they became necessary.	Moderate	Low	High	Mitigate	The risk will be mitigated by determining the breeding restriction dates, and planning the construction and contingencies accordingly and in concurrence with the governing agencies early in the design process.
5	Design	Water Quality Concerns	If the project is not classified as PDP Exempt, structural pollutant control and hydromodification management will be required.	Low	Moderate	Low	Mitigate	The design team will work with the City of San Diego early in the design process to determine classification and requirements.
6	Environmental	Sensitive Habitat	As a result of earthwork activities, impacts to archeological or paleontological resources may occur which would lead to potential delays during construction.	Very Low	Moderate	High	Mitigate	The team will work directly with the resource agencies to ensure timely response times and the efficient transfer of information.
7	Environmental	Sensitive Habitat	As a result of earthwork activities, impacts to rare plant species may occur requiring mitigation or avoidance.	Low	Moderate	Low	Mitigate	All efforts will be taken to minimize or avoid impacts to any rare plant species found on site.
8	Environmental	Sensitive Habitat	As a result of earthwork activities, impacts to rare or endangered wildlife may occur requiring avoidance or mitigation.	Low	Low	Low	Mitigate	All efforts will be taken to minimize or avoid impacts to any rare or endangered wildlife species found on site.
9	PM	Permitting	As a result of the need to receive approval from multiple permitting agencies, the possibility of unanticipated mitigation requirements or project delays during approval could occur, which would result in increased project schedule and/or cost.	Moderate	Low	High	Mitigate	During the approval process, the team will work directly with the permitting agencies to ensure timely response times and the efficient transfer of information.