DRAFT
PRELIMINARY ENGINEERING REPORT

FOR

SAN DIEGO RIVER BIKE CONNECTOR STUDY

February 2, 2009

PREPARED FOR:

PREPARED BY:

WINZLER & KELLY

Table of Contents

List of Figures and Appendices

This Draft Feasibility Study has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and/or decisions are based.

Gregory E. Campbell, PE Date

Introduction

The City of San Diego obtained the services of Winzler & Kelly to prepare a study report to determine the feasibility of a bicycle/pedestrian connector between Friars Road and Sefton Fields, in the area of Napa Street/Friars Road. The connector would cross the San Diego River and would allow bicycle/pedestrian access to and from both sides of the San Diego River. Intended uses are for access to the Trolley Station at Napa, the Mission Valley YMCA, Sefton Fields, the Ocean Beach Bike Path that connects to Sefton Fields, Hotel Circle and other destination on both sides of the river. Its also intended to be a connector between two major bicycle commuter corridors; Friars Road and the "San Diego River Path" that runs from Ocean Beach to the border of San Diego and Santee. The San Diego River Path is in various levels of completion, but much of the unfinished portions are on the Top Priority list of bike paths. Including paths such as Hotel Circle to Fashion Valley Road and Qualcomm Way to Father Junipero Serra Trail (See Attachment G – San Diego Bicycle Master Plan Map).

Background

Existing Facilities

The project lies in an area of the San Diego River channel currently occupied by several separate entities (See Attachment C – Site Layout). The northern portion of the project area currently is used by the Mission Valley YMCA. The project will connect to the Class I and Class II bike paths running east/west along Friars Rd. The southern portion of the project area is occupied by Sefton Field. The San Diego River channel and the Metropolitan Transit System (MTS) trolley line run between the YMCA and Sefton Field. The Ocean Beach to El Capitan Reservoir bike path (a multi-jurisdictional effort) traverses the project area to the south of the river channel. The project site is bounded on the west by the Mission Valley Biological Preserve. Some of the alternatives studied are aligned through portions of the Preserve area. East of the YMCA are the Presidio Place Condominiums. Just to the east of Sefton Field, are the Premiere Inns.

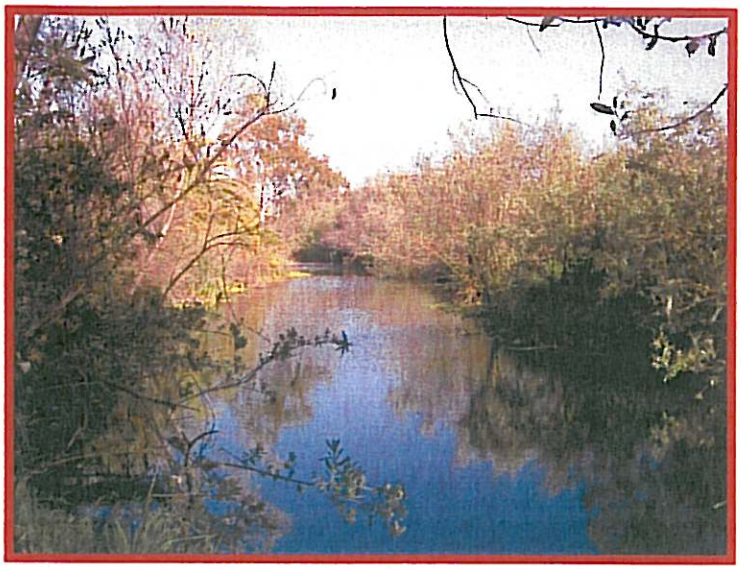
The Mission Valley YMCA occupies an approximately 8.4 acre parcel on the south side of Friars Rd. between the Trolley Line to the west and south and Presidio Place Condominiums to the east. It has an approximately 2 acres paved parking lot which is partially paved with porous pavement. The southern portion of the parcel has approximately 60,000 square feet of open space, 12,000 square feet of which is dedicated Wetland Buffer Mitigation Area.

Sefton Field is approximately 8 acres and is used for little league activities. Access to Sefton Field by car is achieved via Hotel Circle Place to the east. The Ocean Beach to El Capitan Bike Path currently under construction connects to the west end of Sefton Field and Traverses around the southern perimeter of the ball fields connecting to Hotel Circle Place at the east end of Sefton Field. This path is paved with porous pavement and is also used as vehicular access for the ball fields. There is an unpaved perimeter road around the north side of the fields. The Trolley line is elevated from Friars Rd to east of Presidio Place Condominiums. The alignment passes through the intersection of Friars Rd and Napa St from northwest to southeast. West of the intersection is an existing trolley stop. The trolley alignment traverses the project area from northwest to the east along a curve. The elevated trolley bridge crosses over the low-flow channel of the San Diego River twice in the vicinity of the project. The bridge is a concrete structure atop concrete columns. The height from the existing grade to the bottom of the structure is about 15 feet. The FEMA Floodway elevation for this location is about one foot below the bottom of the structure.

The entire project is within the San Diego River Flood Plain as defined By Federal Emergency Management Agency (FEMA), (See Attachment K – FEMA FIRM Map). The Low-flow channel for the river generally runs from east to west between the YMCA and Sefton Field. It generally runs to the south of the trolley line, but for a short distance crosses to the north and the back to the south. In the project area the low flow channel ranges from 30 feet to 70 feet wide.

West of the YMCA is a portion of the Mission Valley Biological Preserve. This is a protected habitat restoration area.

South of the YMCA there is a buried sewer main running through a dedicated easement that is currently undergoing habitat restoration. There are overhead power lines crossing over the trolley and low-flow channel running north-south from the east end of the YMCA parcel to the northeast corner of Sefton Field (see Attachment C).



Design Standards

The design studied for the bike path conforms to City of San Diego and Federal Highway Administration (FHWA) design standards. The City of San Diego Bicycle Master Plan (May 2002) recommends that Class I bike facilities conform to Caltrans design standards (See Attachment H). The bike path should also conform to FHWA bike path guidelines (See Attachment I).

Need and Purpose

Problems, Deficiencies and Justification

As stated in the introduction, there are two main bicycle thoroughfares in the area of the San Diego River; the Friars Road Class 1 bike path on the north side and the Ocean Beach to Mission Valley Class 1 bike path on the south side. Currently there is no pedestrian and/or bicycle connection between the two; the closest one is located at Fashion Valley Road, approximately a mile and a half to the east. This project will provide a vital link between the north and south sides of the river, in a location where is can be most useful.

There are several problems associated with this project discussed throughout this report. Some of the major issues revolve around the River, Habitat Restoration Projects, FEMA Floodplain, the Trolley Line and Community related issues.

The Mission Valley YMCA has indicated that there is a dedicated portion of their lot, along the south side, especially reserved for a future bike connection across the river. YMCA endorses a connection with Sefton Fields in hopes of sharing the Sefton Fields facilities with the Little League operations. Both the YMCA and Presidio Little League are hopeful that the bike path will allow for a mutually beneficial relationship between the two entities.

Traffic

At the time of the Draft Report, there are no known traffic studies for the project relating to bicycles or pedestrians.

This bike path is proposed to serve a variety of users and uses. The anticipated users will be both pedestrians and bicyclists, such as:

- YMCA Day Camp activities will use the bike path to traverse the river area to Sefton Field.
- Providing a connection between the north and south sides of the river for bicycle commuters.
- YMCA users will be able to directly access the YMCA from the south side of the river.
- Sefton Field users will have access to Sefton Field from the north side of the river, including from the trolley stop.
- Recreational bike path users will have a connection between the network of bike paths on the north and south sides of the river.

Proposed Engineering Features

Hazardous Waste

A hazardous waste assessment was not performed in preparation of this report. No hazardous waste materials are expected on this project site; however a Phase 1 Site Assessment should be performed during the design phase of this project.

Storm Water

As part of the design phase of this project, a thorough evaluation of the on-site as well as off-site storm water runoff should be performed adhering to the San Diego Drainage Design Manual storm water quality standards and guidelines. This project will require Water Quality Technical Report (WQTR) that will outline the pollutants and conditions of concern and prescribe the temporary and permanent Best Management Practices (BMP) required for this project.

A Storm Water Pollution Prevention Plan (SWPPP) will be prepared during the design phase or construction phase. The SWPPP is used as a project specific manual for implementing BMP's during construction.

Cross Section

The cross section used for all of the Alternatives studied is consistent with the FHWA Shared Use Path Guidelines (Attachment I) and Caltrans Highway Design Manual Bike Path Design Standards (See Attachment H) as recommended by the City of San Diego Bicycle Master Plan . The path is proposed to have a paved section with 5 feet for each direction of travel for a total paved width of 10 feet and 2 feet unpaved shoulder on either side for a total cross section width of 14 feet which meets or exceeds the Caltrans minimum cross section width requirements. There is a minimum height requirement of 8 feet (preferred is 10 feet) above the finished grade of the path to the lowest overhead obstruction. The most likely overhead conflict for this project is the elevated trolley line that some of the alternatives pass under. (See Attachment D – Typical Section)

The bike path could be paved in a variety of different methods. The methods of paving considered in this report are Asphalt Concrete (AC), Portland Cement Concrete (PCC) and Porous Concrete.

Asphalt Concrete: This type of paving has generally lower construction cost. It satisfies the stability and slip resistance requirements typical of bike paths. The surface is typically impervious and may increase runoff. Being that it is made from oil products, it may also contribute to hydrocarbon pollution. The Cost Estimate prepared for this report uses AC paving.

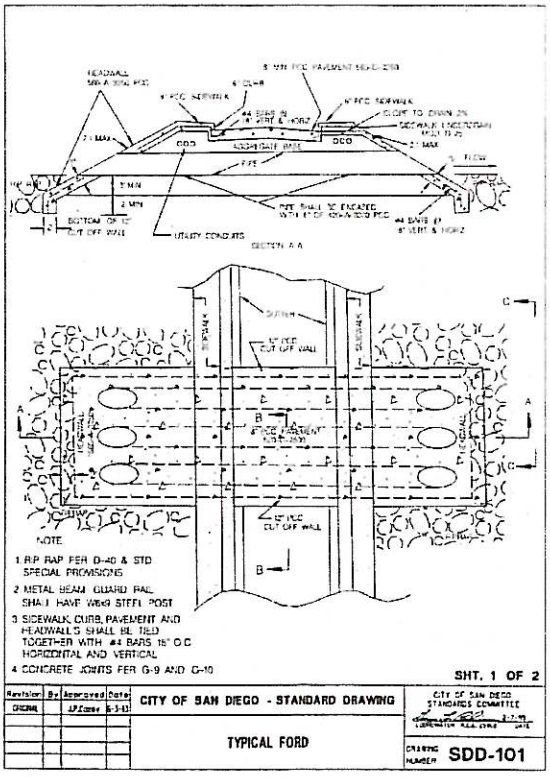
Portland Cement Concrete: PCC paving generally has a higher construction costs that AC. It satisfies the stability and slip resistance requirements for a bike path. Typically less maintenance is required than AC paving, and typically has a much longer life span.

Porous Concrete: Porous Concrete is similar to PCC, however the aggregate used in the mixture is modified to create 10%-25% void space in the concrete. This allows for storm water to infiltrate through the pavement. Porous Concrete is much less likely to increase runoff. The construction cost is typically higher for Porous Concrete than for PCC. Due to the greater porosity, there is generally a slightly greater long-term maintenance cost and shorter life span than PCC.

River Crossing

All of the Alternatives must cross the low-flow channel at some point along their alignment. There are a variety of methods that may be used for crossing the channel which will be studied in this report. This report is for identifying potential crossing types; the preferred method of crossing the low-flow channel will be determined by the City in a later stage of design. This report will discuss options for the type of crossing that may be used. Design for the low-flow channel crossing will require a detailed study, both for the pre-existing conditions of the river and for the effect that the crossing may have on the river during low-flow and flood events. .

Ford Crossing – This crossing uses culverts to channel the low flow under the path and in high flow and flood conditions the river flows both through the culverts and over the top of the road surface. The path would need to be shut down during large rain events.



Flat Slab Bridge – A flat slab bridge is similar to a box culvert, however it is open on the bottom to allow for the river bottom to be the natural bed material. A flat slab bridge is well suited to the bike path project because of its relatively thin structural section. The thickness of the section may come into play if the bike path crosses over the river at the same location as it crosses under the trolley structure and overhead space is limited. Caltrans Standard Plans show that flat slab bridges may span up to 44 feet between supports. A two-span flat slab bridge may be required.

Breakaway/Swinging Bridge – It was suggested in the kickoff meeting that the low-flow channel crossing structure could be made to "break away" during a flood event in order to not impact the floodplain by adding permanent structures that may impede the flow of flood waters. One option is a "breakaway" bridge that would require replacement after each flood event. The other option suggested was a hinged bridge that could swing out of the way of passing flood waters. This is not recommended due to the high

maintenance costs and the potential damage that an unsecured bridge could cause downstream during an event.

Stress Ribbon Bridge – A Stress Ribbon Bridge is a type of pedestrian bridge with a particularly thin section and capable of very long spans. This type of bridge would be especially beneficial because it does not require any falsework on the spans while in construction, minimizing construction impacts to the river channel. This type of structure requires that the abutments be able to resist very high side loads. Typically the abutments use rock anchors, however a deep foundation system may be used in fluvial soils. This type of bridge is excluded from this study's cost analysis based on the prohibitively high construction costs. The project area does not have underlying rock near enough to the surface for this option to be economically feasible. This type of bridge is typically used in areas with particular environmental sensitivity which prohibits traditional bridge structures. This type of bridge is also not recommended for areas where moving flood waters would reach the level of the bridge deck. Moving flood waters cause high lateral loads, which this type of bridge is typically not designed to withstand.

Elevated Crossing – Some alignments studied cross over the low-flow channel with sufficient overhead space that the thickness of the structural section is not an issue. This includes alignments that pass over the top of the trolley bridge or are aligned so that they do not cross the trolley alignment. The bridge could be a reinforced concrete box girder type structure, similar to the existing trolley structure.

Culverts – Culverts could be used to allow for the low-flow channel to pass under the bike path. In flood events the flood waters would flow both through the culverts and freely over the top of the bike path, similar to a Ford Crossing. This is similar in design to Mission Center Road, approximately 2.5 miles to the east.

Pre-Engineered Bridge – Companies such as "Big R Manufacturing LLC" and "Contech" (among others) offer pre-engineered pedestrian bridges in a wide variety of sizes, materials and structures. If so chosen, more in depth research should be done during the design phase to determine which pre-engineered bridge could serve the purposes of this project.

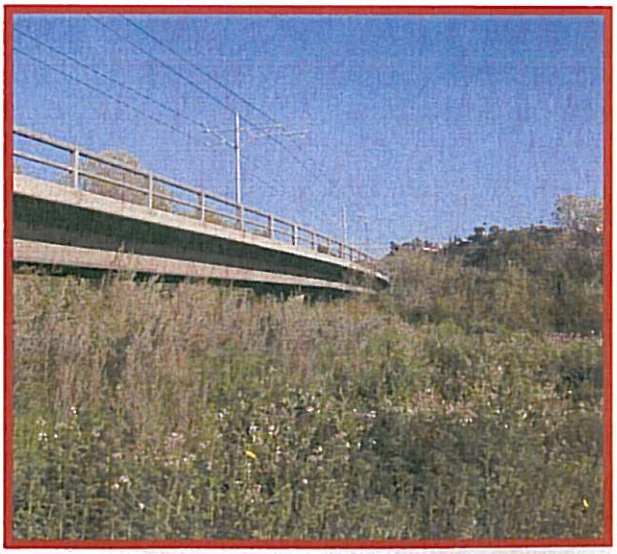
Pictured above: Big R Bridge

Hanging Bridge – During the Kickoff Meeting the suggestion was raised that the low-flow channel crossing could be a structure that "Hangs" from the bottom of the existing Trolley Bridge. This would minimize impacts to the bank area of the low flow channel because the weight of the structure would not need to be supported on large footings. This option will require coordination with MTDB and an in depth analysis of the existing trolley structure in order to determine its feasibility. It should be noted, that it is unlikely the existing structure was designed to have a hanging load. The existing structure was design to be 1 foot above the FEMA Floodway elevation. A hanging structure would cause a load not only from the weight of the attached structure, but from the load created by moving flood waters, during higher flows.

Alignment

This Report will study seven (7) preliminary alternative alignments. The Horizontal and Vertical alignments studied take various existing conditions into consideration including the existing YMCA and Sefton Field facilities, connection to the existing bike paths, the existing elevated trolley line, the low flow channel for the San Diego River, existing utilities, environmentally sensitive areas and dedicated path ROW south and east of the YMCA.

Alternative 1 – This alignment is at grade along its entire length, except over the low flow channel crossing. The alignment connects to the Friars Rd Class I and II bike path at the western edge of the YMCA parking lot. It follows the property line to the southwest corner of the parking lot where it then turns slightly to the southeast. The alignment passes at grade under the existing elevated trolley structure and crosses over the river low-flow channel before connecting to the northwest corner of Sefton Field. The path will connect to the bike path to Ocean Beach currently under construction at the western edge of Sefton Field. The total length of the alignment is 860 feet approximately 270 feet of which is located in undeveloped portions of the river channel. The alignment would impact approximately 4,600 square feet of the existing YMCA parking lot. The river crossing in this alternative is aligned directly under an existing river crossing by the trolley line and the structure length would be 60-100 feet. (See Attachment E)

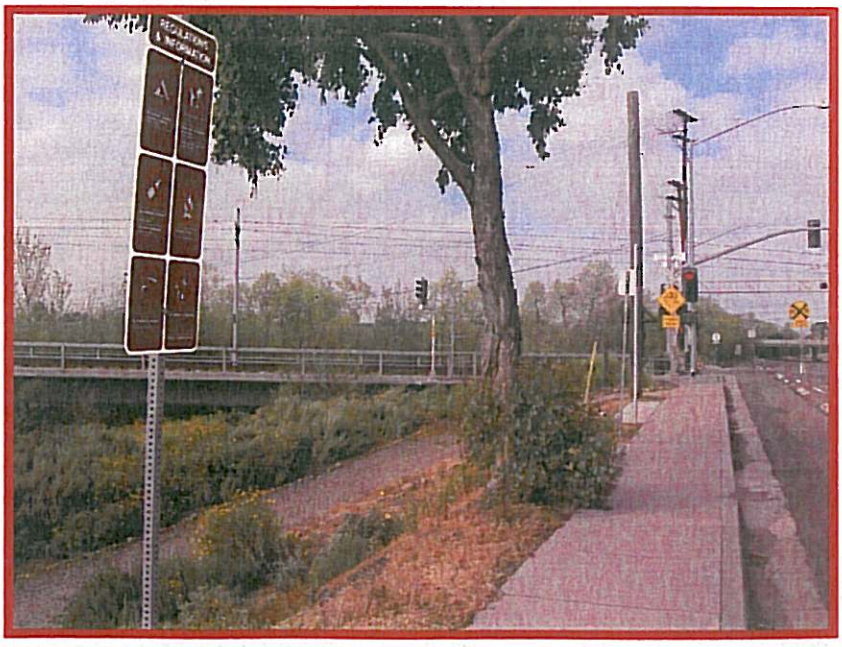


Alternative 2 – This alignment is at grade over its entire length except for the low-flow channel crossing. The alignment connects to Friars Rd at the eastern edge of the YMCA. It follows the property line south to Sefton Field. It intersects Sefton Field on the eastern side, the location of proposed improvements to Sefton Field (See Attachment N). Along with Alternative 3 this is the straightest alignment studied, it has one tangent section only. The alignment passes at grade under the existing elevated trolley structure and crosses over the river low-flow channel before connecting to the northeast corner of Sefton Field. The alignment will connect to the bike path to Ocean beach currently under construction at the connection to the west end of Hotel

Circle Place. The total length of the alignment is approximately 1400 feet approximately 740 feet of which is located in undeveloped portions of the river channel. The river crossing structure would be approximately 60-100 feet in length. (See Attachment E)

Alternative 3 – This alignment follows the same horizontal alignment as Alternative 2. The vertical alignment is elevated. The alignment passes over the top of the existing elevated trolley structure. The overall length of the alignment is the same as Alternative 2, however because is elevated, only the structural supports would impact the undeveloped areas of the river channel. It intersects Sefton Field on the eastern side, the location of proposed improvements to Sefton Field (See Attachment N). The structure which crosses over the Trolley and river would have a total length of approximately 1,100 feet and a height of approximately 30-50 feet above grade. This alignment also had the longest grades of all alignments studied. There are existing overhead electrical lines that follow the same alignment and it is possible that this alignment may interfere with them or they may pose a safety threat to bike path users. The proposed bridge is also in conflict with the proposed Sefton Field Improvement Plans and may constitute a fatal flaw for this alternative. (See Attachment E)

Alternative 4 – This alignment follows Alternative 1 through the western edge of the YMCA parking lot, and has the same point of connection to Friars Rd. At the southwest corner of the parking lot it turns 90° to the east and follows the edge of the parking lot to the southeast corner of the parking lot. The alignment follows the alignment of an existing sewer main east approximately 760 feet. The bike path alignment the turns south where it heads under the trolley and across the river on a similar alignment to the southern portion of Alternative 2. It intersects Sefton Field on the eastern side, the location of proposed improvements to Sefton Field (See Attachment N). The alignment terminates at the Ocean beach Bike Path and Hotel Circle Place, similar to Alternatives 2 and 3. The area near the sewer alignment is currently undergoing habitat restoration. This is the longest of the alternatives studied at over 2,000 feet long. The alignment has 410 feet of length crossing through undeveloped river channel area in addition to the approximately 760 feet of length through the disturbed habitat restoration area. The structure for this alternative is similar to Alternative 2 with an approximate length of 60-100 feet. (See Attachment E)



Alternative 5 – This alignment connects to Friars Rd at the intersection of Friars Rd and Napa St on the west side of the trolley line. The alignment is at grade and parallels the trolley line. The alignment crosses the low flow channel parallel to the existing crossing of the trolley. It connects to the northwest corner of Sefton Field, where it connects to the Ocean Beach Bike Path. The total length of the alignment is approximately 1,000 feet, over 830

feet of which is in the undeveloped portion of the river channel. The structure crossing the river would be 100-200 feet in length. (See Attachment E)

Alternative 6 – This alignment has the same horizontal alignment as Alternative 5. The majority of the length of the alignment is elevated to approximately the same elevation as the trolley line. The alignment would be at the elevation of Friars Road and is relatively flat for the first 340feet before it begins to descend to the level of Sefton Field over the last 400feet of the structure. The total length of the alignment is the same as Alternative 5 at approximately 1,000 feet, however the length of the structure is approximately 740 feet. The impacts to the undeveloped portion of the river channel are minimal from this alignment with only the structural supports in the channel. (See Attachment E)

Alternative 7 – This alignment is at grade for its entire length. It connects to Friars Rd at the eastern property line of the YMCA similar to Alternatives 2 and 3. At the Southeast corner of the YMCA the alignment turns 90° west and follows the southern property line to the west, to the southeast corner of the parking lot. At that point it turns due south where it will cross over the river and under the trolley line and connect to the northwest corner of Sefton Field and the Ocean Beach Bike Path. The total length of this alignment is approximately 1,650 feet, however its length through the undeveloped river channel is only approximately 300 feet. The structure for this alternative would be approximately 60-80 feet in length. (See Attachment E)

Alternative Summary

	Total Length	Structure Length	Undeveloped Length
Alt 1	860 ft	60-100 ft	270 ft
Alt 2	1400 ft	60-100 ft	740 ft
Alt 3	1400 ft	1100 ft	740 ft*
Alt 4	2000 ft	60-100 ft	400 ft (1170**)
Alt 5	1000 ft	100-200 ft	830 ft
Alt 6	1000 ft	750 ft	830 ft*
Alt 7	1650 ft	60-100 ft	300 ft

* Only Structural Supports in Undeveloped Channel
** Sewer Alignment may not count as "Developed/Disturbed"

Constructability

One of the key concerns for any project is if it can be reasonably built. Some of the alternatives (See Alternatives 1 and 7 in Attachment E) align river crossings directly beneath the existing trolley bridge. This may pose a constructability problem if deep footings are required. The equipment needed to drill for Cast in Drilled Hole (CIDH) piles or for Driven piles may not have sufficient room to operate beneath the existing trolley bridge. All of the Alternatives will require construction to take place on both sides of the channel. There will likely be difficulties associated with the physical barrier of the river low flow channel bisecting the construction site. Staging

areas for construction may be required on both the north and south sides. The environmental sensitivity of the area may cause complications in mobilizing construction activities. There may be additional complications to construction activities during the wet season. The project is entirely within the FEMA flood plain of the Sand Diego River.

FEMA Requirements

Because this project is located within the land area covered by flood waters of the base flood, or 100 year event, the area is designated as Special Flood Hazard Area (SFHA). It is possible that the project will require a Conditional Letter of Map Revision (CLOMR) if it will affect the area's hydrologic or hydraulic characteristics. Hydrologic and Hydraulic analysis will be required for this project during the design phase.

Environmental Issues

Based on research of past project files, documentation has not been completed for the project site in compliance with the California Environmental Quality Act (CEQA). However, some level of CEQA documentation has been completed on two neighboring projects. Environmental documentation has been completed for the YMCA Mission Valley and the Mission Valley West Light Rail Transit projects and will be consulted as part of the CEQA/NEPA compliance for this project. No project file was located for the National Environmental Policy Act (NEPA).

The project alternatives traverse five different parcels. The Mission Valley YMCA is situated on APN 436-540-06-00. Sefton Fields is located on APN 436-730-05-00. The Mission Valley Preserve is located on APNs 436-720-07-00, 436-530-07-00, and 436-520-05-00. A restoration effort is also being done on these three parcels by the City of San Diego Metropolitan Wastewater Department. The 52 acre Mission Valley Preserve is under the supervision of the Park and Recreation Department Tri-Canyon Park Rangers.

Sefton Fields and the Mission Valley Preserve are zoned Open Space Floodplain (OF-1-1), while the YMCA is zoned Residential Single Unit Zone (RS-1-1). The intent of the OF zone is to preserve the natural character of floodplains while permitting development that will not constitute a dangerous condition or an impediment to the flow of flood waters. The intent of the RS zone is to provide for flexibility in development regulations that allow reasonable use of property while minimizing adverse impact to adjacent properties. A bike path, or active recreation, is an allowable use for both zones.

Based on the analysis of the seven project alternatives, there does not appear to be a significant distinction in the possible impacts each alternative could have on the environment. The following paragraphs summarize potential impacts and the permitting process for the aggregate of the project alternatives.

Potential Biological Issues

The Multi-Species Conservation Plan (MSCP) is a comprehensive habitat conservation planning program covering southwestern San Diego County, including this project area. Part of the purpose of the MSCP is to preserve a network of habitat and open space, protect biodiversity,

and enhance the region's quality of life. The MSCP Plan has been developed cooperatively by participating jurisdictions and special districts in partnership with the resource agencies, property owners, and representatives of the development industry and environmental groups. It is designed to preserve native vegetation and meet the habitat needs of multiple species, rather than focusing preservation efforts on one species at a time. By identifying priority areas for conservation and other areas for future development, the MSCP helps streamline existing permit procedures for projects affecting habitat.

The City of San Diego has adopted a sub-area plan that is consistent with the MSCP. The Multi-Habitat Planning Area (MHPA) has its own set of policies to implement the City's portion of the MSCP preserve. The MHPA has identified key biological areas and corridors targeted for conservation. Development is allowed in the MHPA up to 25 percent on the least sensitive portion of the site. An additional 5 percent of the site can be developed if the project is required as an essential public facility. The bike path and bridge could fit into this category.

San Diego River Park Foundation records indicate that the endangered Least Bell's vireo (animal, *Vireo bellii pusillus*) and the Southwestern Willow Flycater (animal, *Empidonax traillii extimus*) have visited the Mission Valley Preserve. Both of the species are covered in the MSCP. A preliminary review of California Natural Diversity Database (CNDDB) records show that the project site coincides with, or very near to, recorded occurrences of the following federally- and/or state-listed sensitive species: San Diego Goldenstar (plant, *Bloomeria clevelandii);* San Diego Barrel Cactus (plant, *Ferocactus viridescens*); Orcutt's Brodiaea (plant, *Brodiaea orcutti);* San Diego Mesa Mint (plant, *Pogogyne abramsii*); Otay Mesa Mint (*Pogogyne nudiuscula);* and the Variegated Dudleya (plant, *Dudleya variegata*). (This list should not be considered an exhaustive list.) These species are covered in the MSCP. In addition, *Variegated Dudleya* and *Pogogyne abramsii* are narrow endemic species which the MSCP states project impacts to the species must be avoided. A narrow endemic species is limited in its geographic range and/or is only found in a certain type of environment. A table listing the species in proximity to the project area is below.

Species List

Scientific Name	CNDBB	MSCP	Narrow Endemic Species
Lepidium virginicum L. var. robinsonii	X		
Suaeda esteroa	X		
Mobergia calculiformis	X		
Phacelia stellaris	X		
Nemacaulis denudata var. denudata	X		
Chaenactis glabriuscula var. orcuttiana	X		
Atriplex serenana var. davidsonii	X		
Dudleya variegata	X	X	X
Pogogyne abramsii	X	X	X
Brodiaea orcuttii	X	X	
Polioptila californica californica	X		
Lasthenia glabrata ssp. coulteri	X		
Southern Cottonwood Willow Riparian Forest	X		
Bloomeria clevelandii	X	X	
Ferocactus viridescens	X	X	
Danaus plexippus	X		
Heterotheca sessiliflora ssp. Sessiliflora	X		

Pogogyne nudiuscula	X	X	X
Choeronycteris mexicana	X		
Stylocline citroleum	X		
Empidonax traillii extimus		X	
Vireo bellii pusillus		X	

According to mapping available at the City of San Diego website, the existing project parcels traverse, or are adjacent to, non-native vegetation, and riparian and bottomland vegetation. In addition, the MHPA lists the project area within a portion of the San Diego River corridor where native vegetation shall be restored as a condition of future development proposals. Restoration would require a restoration plan and would require monitoring for no less than five years. A surety bond is required to assure implementation of all restoration efforts.

City of San Diego Approval

Since the project alternatives enter the MHPA, the project would likely require a site development permit from the City's Development Service Department subject to Environmentally Sensitive Lands Regulations 143.0101 Process Four and Five. Through this process, the project review would be submitted to MHPA for a consistency finding on the project. This review would occur through the CEQA process on the site development permit. The Development Services process would also confirm the resource permitting requirements for the project. All projects could cause harm of federally or state protected endangered species and/or protected species identified in the MHPA. If the project does cause harm to a species an incidental take permit would be required from the U.S. Fish and Wildlife Service. In addition, the project could possibly cause soil disturbance next to the San Diego River, thus triggering a need for a National Pollutant Discharge Elimination System (NPDES) permit from the San Diego Regional Water Quality Control Board. Other resource agencies with potential interest in the project could include, but not limited to, the California Department of Fish and Game, U.S. Army Corps of Engineers, and California State Historic Preservation Office. In order to determine the environmental compliance requirements particular to this project, a Public Project Assessment Application should be filed with the Development Services Department. This process is explained in Information Bulletin 510 (see Attachment J), which includes the assessment application (DS-510).

As discussed above, the project would likely trigger CEQA. A biological assessment of the affected area would be required to support the CEQA document. This biological assessment would be conducted in accordance with the San Diego Land Development Code Biology Guidelines. Based on research into the City of San Diego's GIS website, the project area is prone to liquefaction. A geotechnical survey would be conducted to assess soil and stability issues and provide recommendations to avoid or ameliorate the risk of liquefaction affecting any new construction.

CEQA/NEPA Compliance

The San Diego River was an important resource before and after Anglo-Saxon settlement. Early inhabitants and paleontological resources have been referenced in the brief research conducted into the project area. Given this, a records search should be conducted at the South Coastal Information Center (cultural resources) and the University of California Museum of

Paleontology (paleontological resources) to determine if any known sites have been recorded along or near the project. Based on the findings of the record search, more detailed studies may be needed for CEQA compliance. The San Diego River is also an impaired water body with high levels of fecal coliform, dissolved oxygen, phosphorus, and total dissolved solids. Runoff issues could be mitigated with an innovative design and the use of a permeable surface. The use of construction equipment would also introduce potentially hazardous substances to the site. Construction activities could also adversely affect air quality, water quality, noise, and utilities.

While the project may have a number of potential impacts due to construction activities and its location within a MHPA, floodplain, impaired water body, and restoration site, the research conducted for this preliminary report indicates that these potential impacts could be mitigated to a less-than-significant level. Therefore, a mitigated negative declaration is estimated at this time as the appropriate level of CEQA compliance and documentation. However, the final determination would be made through the Public Project Assessment Application process mentioned above.

As also noted herein, this project could be funded – in part – by the Safe Routes to School program or SAFETEA-LU. In order to qualify for Safe Routes to School funding, the infrastructure project would have to show that it is located within the vicinity of a K-12 school. "Vicinity" is not defined by the State of California, but the Federal Government defines it as a school within two miles. There are at least 10 schools within a two-mile radius of the site. These are federal programs administered by the California Department of Transportation (Caltrans). Even though administered by a state agency, the use of federal funding triggers the need for NEPA. NEPA regulations allow agencies to "exclude" certain classes of action from detailed review. These are referred to as "Categorical Exclusions" or CEs. Categorically excluded projects must receive some level of review to determine if the project would either individually or cumulatively have significant environmental impacts. Bicycle and pedestrian lanes, paths, and facilities are CE's. Based upon a preliminary review of project information, a CE appears to be the appropriate NEPA documentation for this project.

Resource Permitting

The U.S. Army Corps of Engineers (Los Angeles District) has jurisdiction over "waters [wetlands] of the U.S." and the San Diego Regional Water Quality Control Board has jurisdiction over "waters [wetlands] of the State" which may be found within the project area. The project area traverses over and near the San Diego River and the YMCA's dedicated Wetland Buffer Mitigation Area, therefore, the likelihood of the project affecting wetlands – and requiring a Corps Section 404 permit and/or Regional Board Section 401 permit – is considered high. U.S. Army Corps of Engineers Nationwide Permit 42: Recreational Facilities appears to be the appropriate permit for this process. The biological assessment to be conducted for the CEQA process (to San Diego Land Development Code standards) would confirm the presence or absence of wetlands along or near the project site. Given the presence of the river within the project site, a Streambed Alteration Agreement from the California Department of Fish and Game, Region 5, could be required to cover potential impacts to the stream.

Schedule Estimate

These environmental compliance processes do not have mandated schedule milestones. It is estimated that the environmental compliance process could take one year to 18 months from the

submittal of the Public Project Assessment Application to adoption of the CEQA document and consistency determinations or permit issuance from the involved resource agencies. As mentioned above, this estimate assumes that a mitigated negative declaration is the appropriate level of CEQA compliance and documentation. Also, this estimate largely depends on the responses from, and requirements set down by, the Development Services Department and involved resource agencies. At this preliminary stage of the project, it is not possible to provide a more confident schedule estimate.

Maintenance

Since this bike path will be located within City rights-of-way or City dedications, maintenance for the constructed project will be the responsibility of the City of San Diego Maintenance Division.

Right-of-Way Issues

Utility and Other Owner Involvement

In the project area there are known utilities. Data was gathered from a number of sources including GIS data, field survey and information provided by the City. Please refer to Attachment C for graphical representations.

Sewer: There are existing sewer mains running through the project area.

Electrical: along the eastern boundary of the project area there is an approximately 20 foot wide SDG&E easement. There are overhead power lines which cross over the trolley tracks and river.

Water: There are no known water lines through the project area. There are known water lines in Friars Road and Hotel Circle Place. It is likely that there is existing water lines in Sefton Field, however their locations are unknown at the time of the Draft Report.

Storm Drain: There are known storm drain structures in the project area. The south western corner of the YMCA parking lot has existing drainage and storm water treatment facilities. The eastern edge of the YMCA parcel has a drainage outlet which carries runoff from Friars Road to the river.

Street Lighting

The San Diego Roadway Design Standards do not require street lighting for bike paths. In addition there are several reasons that lighting is not desirable for this project. Due to the sensitive habitat around the project area, lighting could have potential negative impacts. Lighting may also encourage nighttime use, and imply safety for nighttime users. Lighting may also be considered "pollution" for the types of habitat and wildlife who occupy the site.

Street lighting should be considered during the environmental stage of this project, where a thorough investigation and public review period can be achieved.

Planting and Erosion Control

New cut and fill slopes should be re-planted with a native hydroseed mix, or as prescribed in the environmental document, if provided. A geotechnical investigation has not been conducted, however cut and fill slopes in excess of 2:1, if allowed, may require special planting and erosion control.

Temporary erosion control and storm water pollution prevention measures should also be provided in accordance with current standards (see the "Storm Water" section above).

Right-of-Way Data

The proposed bike path will have 14 feet of Right of Way associated with it from shoulder to shoulder. The alignments will have a variety of Right of Way impacts summarized in the table below.

Property line information obtained for this report is to be used for "planning level" only (See Attachment L). For accurate property impacts a more extensive property line investigation will need to be conducted during the design phase, once a preferred alternative is selected.

Alternative	YMCA Other	YMCA Parking Lot	Sefton Field	MV Preserve	City Undefined	MTS	Total
Alt1		*5,530*	*2,198*		*2,884*	*1,414*	*12,026*
Alt2	*5,362*		*3,290*		*10,164*	*700*	*19,516*
Alt3	*5,362*		*3,290*		*10,164*	*700*	*19,516*
Alt4		*5,642*	*3,248*		*18,522*	*700*	*28,112*
Alt5			*2,352*	*8,876*	*2,842*		*14,070*
Alt6			*2,352*	*8,876*	*2,842*		*14,070*
Alt7	*12,908*	*742*	*2,884*		*5,558*	*770*	*22,862*

Areas shown are in square feet.

Other Considerations

Community Involvement

The project location is key to several community groups. The concerns of the communities possibly impacted by this project were collected through a variety of meetings. Some of these meetings were help before the Draft submittal of this report. More community input was received during the review of the Draft Report at the Draft Report Review Meeting held XX/XX/2009 (After Draft Submittal prior to Final Report). Some of the community input not addressed else where in this report is listed by area below:

Mission Valley YMCA –. The area of the project near Friars Rd has had multiple violent crimes take place in or around it. (See Crime Reports Attachment M). A chain link fence lining the bike path may be one possible safety measure to protect bike path users from violent attacks.

Sefton Field – The community is interested in the possibility of sharing the YMCA parking lot with Sefton Field for Little League use. The YMCA is willing to contribute to the maintenance effort for Sefton Field in exchange for partial control over the field and its shared use. There are improvement plans for Sefton Field (See Attachment N) that should be considered for alternatives 2, 3 and 4 which connect to the eastern side of Sefton Field.

Transportation Management Plan

An extensive transportation management plan will likely not be warranted. However traffic control and a public notification plan should be put into place prior to construction.

Stage Construction

It is not anticipated that this project will have any major interruption to the flow of traffic around the site. Staging of construction will likely not be required.

Work done to the YMCA in relation to this project should be scheduled in such a way to minimize impacts while the YMCA is busiest (during summer months when summer day camp programs are in session). Likewise work on or around Sefton Field should be coordinated to minimize impacts to the little league activities that take place there.

Work within the river channel should be done during the summer months to reduce the possibility of flooding during construction.

A balance between wet season construction and impacts to YMCA operations can be achieved with proper planning.

Cost Estimate

Project Funding

Funding from this project may come from a wide variety of sources. The key to getting funding will be to make the project appealing to the possible sources of funding. Various State Conservancies have funding for trails, and potentially this project. Transportation funds may be available for this project as it is a link between activity centers and alleviates a safety issue present in traversing between the north and south corridors that this project would link.

Project Costs

Preliminary project cost estimates have been prepared as part of this report. These estimates are included in Attachment F and summarized below:

** Environmental Mitigation Costs in Draft Cost Estimate are approximations. More accurate costs can be achieved during the Environmental Document phase of the project.*

Alignment Alternative	Base Estimate Without Crossing	Estimated Cost With Ford Crossing	Estimated Cost With Box Culvert	Estimated Cost With Slab Bridge	Estimated Cost With Pre-Engineered	Estimated Cost With Box Girder
Alternative 1	$264,889	**$443,639**	**$482,249**	**$505,129**	**$470,809**	N/A
Alternative 2	$355,284	**$534,034**	**$572,644**	**$595,524**	**$561,204**	N/A
Alternative 3	$235,479	N/A	N/A	N/A	N/A	**$3,538,779**
Alternative 4	$483,929	**$662,679**	**$701,289**	**$724,169**	**$689,849**	N/A
Alternative 5	$198,954	**$535,004**	**$559,314**	**$649,404**	**$778,104**	N/A
Alternative 6	$144,086	N/A	N/A	N/A	N/A	**$2,396,336**
Alternative 7	$516,648	**$695,398**	**$734,008**	**$756,888**	**$722,568**	N/A

Note: The accuracy of estimates at this stage of project development is very low. Estimates are for alternative comparison purposes only. The costs above include estimated ROW costs, which could vary greatly over time.

Conclusion

Feasibility Decision Matrix

Alt	Advantages	Disadvantages	Feasible
Alt 1	• Shortest Alignment • Short Structure • Does not create a new river crossing as defined during kickoff meeting	• Impacts to YMCA parking lot • Impacts to MV Preserve • Possible difficulties in constructing river crossing due to proximity of trolley bridge	Yes
Alt 2	• Small impact to YMCA • Small Impact to Sefton Field • Straight Alignment • Ease of River Crossing construction • May fit within existing utility easement • Short Structure	• Creates new river crossing • Long Alignment • Connection to Ocean Beach Bike Path is the longest • Must be designed to work with proposed Sefton Field Improvements	Yes
Alt 3	• Small impact to YMCA • Small Impact to Sefton Field • Straight Alignment • Ease of River Crossing construction • May fit within existing utility easement	• High construction cost for very large structure • Conflicts with proposed Sefton Field Improvements • Visual impact to river park area • Creates new river crossing • Possible conflict with overhead utilities	Yes

Alt 4	• Short Structure • Existing utility easement may lessen environmental impacts	• Creates new river crossing • Longest Alignment • Impacts to YMCA parking lot • Impacts to MV Preserve • Impacts sensitive habitat restoration site • Must be designed to work with proposed Sefton Field Improvements	Yes
Alt 5	• No impact to YMCA • Meets Friars Rd at an existing signalized intersection • Close to trolley stop on Friars Rd • Does not cross trolley alignment • Short structure • River crossing is adjacent to existing river crossing by trolley	• Alignment is entirely in Mission Valley Biological Preserve area • No direct access to YMCA • Long Alignment	Yes
Alt 6	• No impact to YMCA • Meets Friars Rd at an existing signalized intersection • Close to trolley stop on Friars Rd • Does not cross trolley alignment	• High construction cost for very large structure • Alignment is entirely in Mission Valley Biological Preserve area • No direct access to YMCA • Long Alignment	Yes

	• River crossing is adjacent to existing river crossing by trolley		
Alt 7	• Small impact to YMCA parking lot • Small Impact to Sefton Field • Does not create a new river crossing as defined during kickoff meeting • Short Structure • Alignment not in mission valley preserve area	• Possible difficulties in constructing river crossing due to proximity of trolley bridge • Long alignment • May have impacts to YMCA open space area	Yes

Project Personnel

Project Personnel

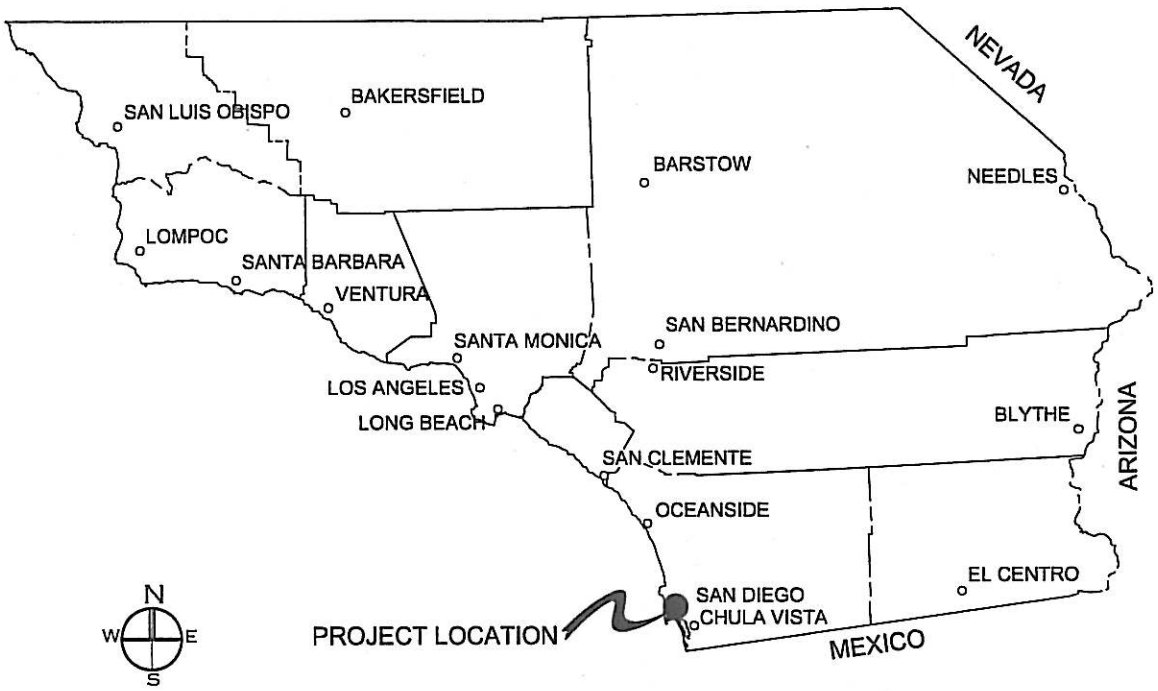
The following City of San Diego Engineering Division personnel have been involved in the preliminary development of this project:

Esmerelda White, Project Manager	(619) 533-3183
Sheila Bose	(619) 533-3054

The following Winzler & Kelly personnel have been involved in the preliminary development of this project:

Gregory Campbell, PE, Project Manager	(858) 244-0440
Ian Allegoren, EIT, Project Engineer	(858) 244-0440

Attachment A: Vicinity Map



VICINITY MAP

SCALE: NTS

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FEASIBILITY STUDY

YMCA TO SEFTON FIELD
BIKE PATH

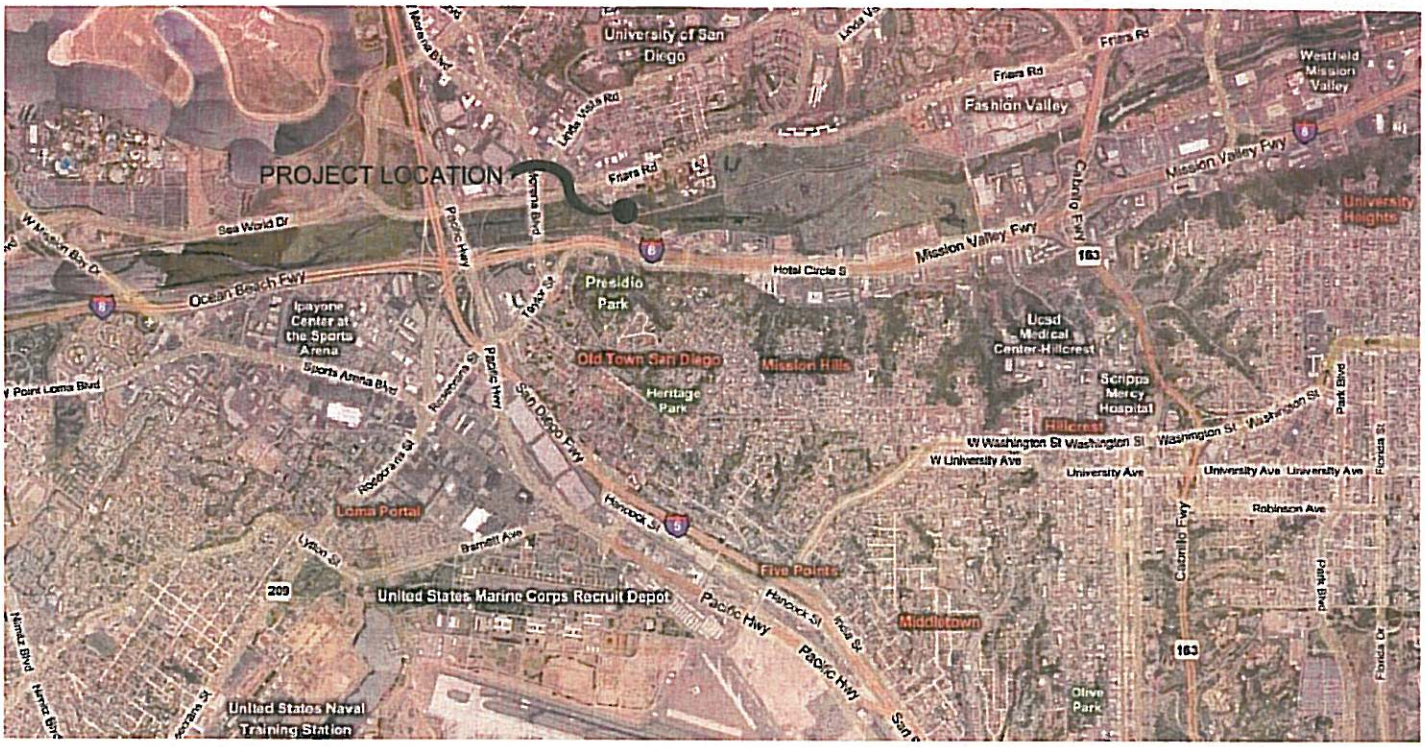
VICINITY MAP

PROJECT NO. 11489

DRAWING NO.

SHT OF

Attachment B: Location Map



LOCATION MAP

SCALE: NTS

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FEASIBILITY STUDY YMCA TO SEFTON FIELD BIKE PATH	PROJECT NO. 11489
LOCATION MAP	DRAWING NO. SHT OF

WINZLER & KELLY
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Attachment C: Site Layout

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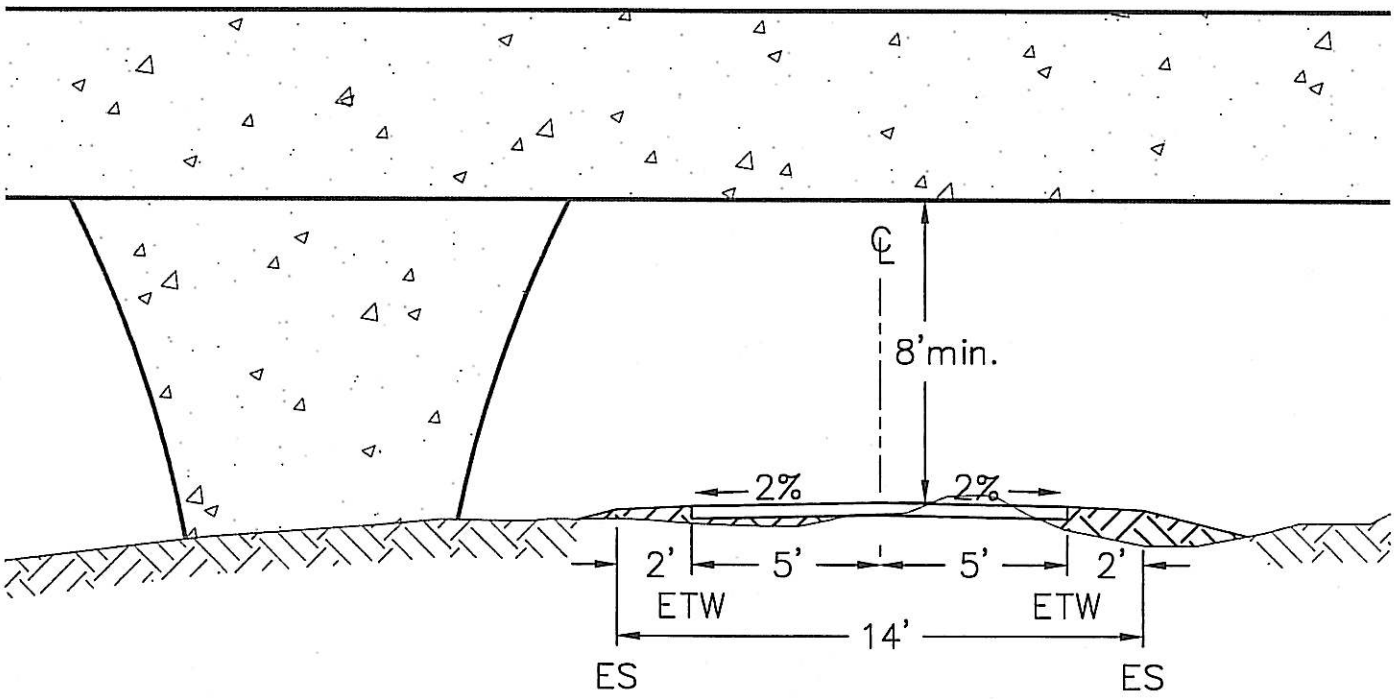
CITY OF SAN DIEGO
YMCA TO SEFTON FIELD BIKE PATH

SITE LAYOUT

FIGURE NO.

JOB #

Attachment D: Typical Bike Path Section



FEASIBILITY STUDY	PROJECT NO. 11489
YMCA TO SEFTON FIELD BIKE PATH	DRAWING NO.
TYPICAL CROSS SECTION	SHT OF

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Attachment E: Alignment Alternatives

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CITY OF SAN DIEGO
YMCA TO SEFTON FIELD BIKE PATH

ALTERNATIVE 1

FIGURE NO.

JOB # 0000000

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CITY OF SAN DIEGO
YMCA TO SEFTON FIELD BIKE PATH

ALTERNATIVE 2

FIGURE NO.

JOB # 0205603003

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CITY OF SAN DIEGO
YMCA TO SEFTON FIELD BIKE PATH

ALTERNATIVE 3

FIGURE NO.

JOB # [redacted]

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CITY OF SAN DIEGO
YMCA TO SEFTON FIELD BIKE PATH

ALTERNATIVE 4

FIGURE NO.

JOB # 0205600008

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CITY OF SAN DIEGO
YMCA TO SEFTON FIELD BIKE PATH

ALTERNATIVE 5

FIGURE NO.

JOB # 0206600000

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CITY OF SAN DIEGO
YMCA TO SEFTON FIELD BIKE PATH

ALTERNATIVE 6

FIGURE NO.

JOB # 0205603003

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CITY OF SAN DIEGO
YMCA TO SEFTON FIELD BIKE PATH

ALTERNATIVE 7

FIGURE NO.

JOB # 0206080000

Attachment F: Cost Estimates

Base Estimate - No structure Costs Included

Alternative 1

ROADWAY ITEMS					
Section 1 - Earthwork	**Quantity**	**Unit**	**Unit Price**	**Item Cost**	**Section Cost**
Roadway Excavation	808	CY	$ 27.00	$ 21,816.00	
Imported Borrow	0	CY	$ 50.00	$ -	
Clearing & Grubbing	0.28	AC	$ 2,800.00	$ 773.02	
				$ -	
				Subtotal Earthwork	**$ 22,589.02**
Section 2 - Pavement Structural Section					
Asphalt Concrete	146	TON	$ 100.00	$ 14,600.00	
Aggregate Base	144	CY	$ 60.00	$ 8,640.00	
Aggregate Subbase	0	CY	$ 90.00	$ -	
Edge Drains	0	LF	$ 13.70	$ -	
				$ -	
				Subtotal Pavement Structural Section	**$ 23,240.00**
Section 3 - Drainage					
Storm Drains				$ -	
Project Drainage (X-Drains, overside, etc.)				$ -	
				$ -	
				Subtotal Drainage	**$ -**
Section 4 - Specialty Items					
Landscape and Irrigation	8590	SF	$ 1.50	$ 12,885.00	
Erosion Control	1558	LF	$ 4.00	$ 6,232.00	
Environmental Mitigation	0.28	AC	$ 100,000.00	$ 27,607.90	
Chain Link Fence	730	LF	$ 29.00	$ 21,170.00	
				$ -	
				Subtotal Specialty Items	**$ 67,894.90**
Section 5 - Traffic Items					
Lighting	0	LS	$ -	$ -	
Traffic Delineation Items	859	LF	$ 1.50	$ 1,288.50	
Traffic Signal Modification	0	LS	$ -	$ -	
Roadside Signs	4	EA	$ 300.00	$ 1,200.00	
				$ -	
				Subtotal Traffic Items	**$ 2,488.50**
				TOTAL SECTIONS 1 thru 5	**$ 116,212.42**
Section 6 - Minor Items					
	$ 116,212.42 (Subtotal Sections 1 thru 5)	x (10%) =	$ 11,621.24		
				TOTAL MINOR ITEMS	**$ 11,621.24**
Section 7 - Roadway Mobilization					
	$ 127,833.66 (Subtotal Sections 1 thru 6)	x (10%) =	$ 12,783.37		
				TOTAL ROADWAY MOBILIZATION	**$ 12,783.37**
Section 8 - Roadway Additions					
Supplemental Work	$ 127,833.66 (Subtotal Sections 1 thru 6)	x (10%) =	$ 12,783.37		
Contingencies	$ 127,833.66 (Subtotal Sections 1 thru 6)	x (10%) =	$ 12,783.37		
				TOTAL ROADWAY ADDITIONS	**$ 25,566.73**
				TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 8)	**$ 166,183.76**

RIGHT OF WAY ITEMS					
	Quantity	Unit	Unit Price	Item Cost	ESCALATED VALUE
YMCA Right of Way Take	0.13	AC	$500,000	$63,476	
Sefton Field Right of Way Take	0.05	AC	$500,000	$25,230	
Title and Escrow Fees	1	LS	$10,000	$10,000	
			TOTAL RIGHT OF WAY ITEMS (Escalated Value)		$98,705
GRAND TOTAL					
			GRAND TOTAL BASE ESTIMATE (NO CROSSING INCLUDED)		**$264,889**

Base Estimate - No structure Costs Included

Alternative 2

ROADWAY ITEMS					
Section 1 - Earthwork	**Quantity**	**Unit**	**Unit Price**	**Item Cost**	**Section Cost**
Roadway Excavation	1340	CY	$ 27.00	$ 36,180.00	
Imported Borrow	0	CY	$ 50.00	$ -	
Clearing & Grubbing	0.44	AC	$ 2,800.00	$ 1,234.67	
				$ -	
				Subtotal Earthwork	**$ 37,414.67**
Section 2 - Pavement Structural Section					
Asphalt Concrete	242	TON	$ 100.00	$ 24,200.00	
Aggregate Base	359	CY	$ 60.00	$ 21,540.00	
Aggregate Subbase	0	CY	$ 90.00	$ -	
Edge Drains	0	LF	$ 13.70	$ -	
				$ -	
				Subtotal Pavement Structural Section	**$ 45,740.00**
Section 3 - Drainage					
Storm Drains				$ -	
Project Drainage (X-Drains, overside, etc.)				$ -	
				$ -	
				Subtotal Drainage	**$ -**
Section 4 - Specialty Items					
Landscape and Irrigation	13720	SF	$ 1.50	$ 20,580.00	
Erosion Control	2584	LF	$ 4.00	$ 10,336.00	
Environmental Mitigation	0.44	LS	$ 100,000.00	$ 44,095.50	
Chain Link Fence	365	LF	$ 29.00	$ 10,585.00	
				$ -	
				Subtotal Specialty Items	**$ 85,596.50**
Section 5 - Traffic Items					
Lighting	0	LS	$ -	$ -	
Traffic Delineation Items	1372	LF	$ 1.50	$ 2,058.00	
Traffic Signal Modification	0	LS	$ -	$ -	
Roadside Signs	4	EA	$ 300.00	$ 1,200.00	
				$ -	
				Subtotal Traffic Items	**$ 3,258.00**
				TOTAL SECTIONS 1 thru 5	**$ 172,009.17**
Section 6 - Minor Items					
	$ 172,009.17 (Subtotal Sections 1 thru 5)	x (10%) =	$ 17,200.92		
				TOTAL MINOR ITEMS	**$ 17,200.92**
Section 7 - Roadway Mobilization					
	$ 189,210.09 (Subtotal Sections 1 thru 6)	x (10%) =	$ 18,921.01		
				TOTAL ROADWAY MOBILIZATION	**$ 18,921.01**
Section 8 - Roadway Additions					
Supplemental Work	$ 189,210.09 (Subtotal Sections 1 thru 6)	x (10%) =	$ 18,921.01		
Contingencies	$ 189,210.09 (Subtotal Sections 1 thru 6)	x (10%) =	$ 18,921.01		
				TOTAL ROADWAY ADDITIONS	**$ 37,842.02**
				TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 8)	**$ 245,973.12**

RIGHT OF WAY ITEMS					
	Quantity	Unit	Unit Price	Item Cost	ESCALATED VALUE
YMCA Right of Way Take	0.12	AC	$500,000	$61,547	
Sefton Field Right of Way Take	0.08	AC	$500,000	$37,764	
Title and Escrow Fees	1	LS	$10,000	$10,000	
			TOTAL RIGHT OF WAY ITEMS (Escalated Value)		$109,311
GRAND TOTAL					
			GRAND TOTAL BASE ESTIMATE (NO CROSSING INCLUDED)		$355,284

Base Estimate - No structure Costs Included

Alternative 3

ROADWAY ITEMS					
Section 1 - Earthwork	**Quantity**	**Unit**	**Unit Price**	**Item Cost**	**Section Cost**
Roadway Excavation	305	CY	$ 27.00	$ 8,235.00	
Imported Borrow	0	CY	$ 50.00	$ -	
Clearing & Grubbing	0.45	AC	$ 2,800.00	$ 1,254.47	
				$ -	
				Subtotal Earthwork	**$ 9,489.47**
Section 2 - Pavement Structural Section					
Asphalt Concrete	55	TON	$ 100.00	$ 5,500.00	
Aggregate Base	82	CY	$ 60.00	$ 4,920.00	
Aggregate Subbase	0	CY	$ 90.00	$ -	
Edge Drains	0	LF	$ 13.70	$ -	
				$ -	
				Subtotal Pavement Structural Section	**$ 10,420.00**
Section 3 - Drainage					
Storm Drains				$ -	
Project Drainage (X-Drains, overside, etc.)				$ -	
				$ -	
				Subtotal Drainage	**$ -**
Section 4 - Specialty Items					
Landscape and Irrigation	8590	SF	$ 1.50	$ 12,885.00	
Erosion Control	1558	LF	$ 4.00	$ 6,232.00	
Environmental Mitigation	0.45	AC	$ 100,000.00	$ 44,802.57	
Chain Link Fence	294	LF	$ 29.00	$ 8,526.00	
				$ -	
				Subtotal Specialty Items	**$ 72,445.57**
Section 5 - Traffic Items					
Lighting	0	LS	$ -	$ -	
Traffic Delineation Items	1394	LF	$ 1.50	$ 2,091.00	
Traffic Signal Modification	0	LS	$ -	$ -	
Roadside Signs	4	EA	$ 300.00	$ 1,200.00	
				$ -	
				Subtotal Traffic Items	**$ 3,291.00**
				TOTAL SECTIONS 1 thru 5	**$ 95,646.04**
Section 6 - Minor Items					
	$ 95,646.04 (Subtotal Sections 1 thru 5)	x (10%) =	$ 9,564.60		
				TOTAL MINOR ITEMS	**$ 9,564.60**
Section 7 - Roadway Mobilization					
	$ 105,210.65 (Subtotal Sections 1 thru 6)	x (10%) =	$ 10,521.06		
				TOTAL ROADWAY MOBILIZATION	**$ 10,521.06**
Section 8 - Roadway Additions					
Supplemental Work	$ 105,210.65 (Subtotal Sections 1 thru 6)	x (10%) =	$ 10,521.06		
Contingencies	$ 105,210.65 (Subtotal Sections 1 thru 6)	x (10%) =	$ 10,521.06		
				TOTAL ROADWAY ADDITIONS	**$ 21,042.13**
				TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 8)	**$ 136,773.84**

RIGHT OF WAY ITEMS					
	Quantity	Unit	Unit Price	Item Cost	ESCALATED VALUE
YMCA Right of Way Take	0.13	AC	$500,000	$63,476	
Sefton Field Right of Way Take	0.05	AC	$500,000	$25,230	
Title and Escrow Fees	1	LS	$10,000	$10,000	
			TOTAL RIGHT OF WAY ITEMS (Escalated Value)		$98,705
GRAND TOTAL					
			GRAND TOTAL BASE ESTIMATE (NO CROSSING INCLUDED)		$235,479

Base Estimate - No structure Costs Included

Alternative 4

ROADWAY ITEMS					
Section 1 - Earthwork	**Quantity**	**Unit**	**Unit Price**	**Item Cost**	**Section Cost**
Roadway Excavation	2000	CY	$ 27.00	$ 54,000.00	
Imported Borrow	0	CY	$ 50.00	$ -	
Clearing & Grubbing	0.65	AC	$ 2,800.00	$ 1,807.92	
				$ -	
				Subtotal Earthwork	**$ 55,807.92**
Section 2 - Pavement Structural Section					
Asphalt Concrete	362	TON	$ 100.00	$ 36,200.00	
Aggregate Base	536	CY	$ 60.00	$ 32,160.00	
Aggregate Subbase	0	CY	$ 90.00	$ -	
Edge Drains	0	LF	$ 13.70	$ -	
				$ -	
				Subtotal Pavement Structural Section	**$ 68,360.00**
Section 3 - Drainage					
Storm Drains				$ -	
Project Drainage (X-Drains, overside, etc.)				$ -	
				$ -	
				Subtotal Drainage	**$ -**
Section 4 - Specialty Items					
Landscape and Irrigation	20100	SF	$ 1.50	$ 30,150.00	
Erosion Control	4020	LF	$ 4.00	$ 16,080.00	
Environmental Mitigation	0.65	AC	$ 100,000.00	$ 64,568.41	
Chain Link Fence	720	LF	$ 29.00	$ 20,880.00	
				$ -	
				Subtotal Specialty Items	**$ 131,678.41**
Section 5 - Traffic Items					
Lighting	0	LS	$ -	$ -	
Traffic Delineation Items	2009	LF	$ 1.50	$ 3,013.50	
Traffic Signal Modification	0	LS	$ -	$ -	
Roadside Signs	4	EA	$ 300.00	$ 1,200.00	
				$ -	
				Subtotal Traffic Items	**$ 4,213.50**
				TOTAL SECTIONS 1 thru 5	**$ 260,059.83**
Section 6 - Minor Items					
	$ 260,059.83 (Subtotal Sections 1 thru 5)	x (10%) =	$ 26,005.98		
				TOTAL MINOR ITEMS	**$ 26,005.98**
Section 7 - Roadway Mobilization					
	$ 286,065.81 (Subtotal Sections 1 thru 6)	x (10%) =	$ 28,606.58		
				TOTAL ROADWAY MOBILIZATION	**$ 28,606.58**
Section 8 - Roadway Additions					
Supplemental Work	$ 286,065.81 (Subtotal Sections 1 thru 6)	x (10%) =	$ 28,606.58		
Contingencies	$ 286,065.81 (Subtotal Sections 1 thru 6)	x (10%) =	$ 28,606.58		
				TOTAL ROADWAY ADDITIONS	**$ 57,213.16**
				TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 8)	**$ 371,885.55**

RIGHT OF WAY ITEMS					
	Quantity	Unit	Unit Price	Item Cost	ESCALATED VALUE
YMCA Right of Way Take	0.13	AC	$500,000	$64,761	
Sefton Field Right of Way Take	0.07	AC	$500,000	$37,282	
Title and Escrow Fees	1	LS	$10,000	$10,000	
			TOTAL RIGHT OF WAY ITEMS (Escalated Value)		$112,043
GRAND TOTAL					
			GRAND TOTAL BASE ESTIMATE (NO CROSSING INCLUDED)		**$483,929**

Base Estimate - No structure Costs Included

Alternative 5

ROADWAY ITEMS					
Section 1 - Earthwork	**Quantity**	**Unit**	**Unit Price**	**Item Cost**	**Section Cost**
Roadway Excavation	887	CY	$ 27.00	$ 23,949.00	
Imported Borrow	0	CY	$ 50.00	$ -	
Clearing & Grubbing	0.32	AC	$ 2,800.00	$ 904.41	
				$ -	
				Subtotal Earthwork	**$ 24,853.41**
Section 2 - Pavement Structural Section					
Asphalt Concrete	160	TON	$ 100.00	$ 16,000.00	
Aggregate Base	238	CY	$ 60.00	$ 14,280.00	
Aggregate Subbase	0	CY	$ 90.00	$ -	
Edge Drains	0	LF	$ 13.70	$ -	
				$ -	
				Subtotal Pavement Structural Section	**$ 30,280.00**
Section 3 - Drainage					
Storm Drains				$ -	
Project Drainage (X-Drains, overside, etc.)				$ -	
				$ -	
				Subtotal Drainage	**$ -**
Section 4 - Specialty Items					
Landscape and Irrigation	10050	SF	$ 1.50	$ 15,075.00	
Erosion Control	2010	LF	$ 4.00	$ 8,040.00	
Environmental Mitigation	0.32	AC	$ 100,000.00	$ 32,300.28	
Chain Link Fence	0	LF	$ 29.00	$ -	
				$ -	
				Subtotal Specialty Items	**$ 55,415.28**
Section 5 - Traffic Items					
Lighting	0	LS	$ -	$ -	
Traffic Delineation Items	1005	LF	$ 1.50	$ 1,507.50	
Traffic Signal Modification	0	LS	$ -	$ -	
Roadside Signs	4	EA	$ 300.00	$ 1,200.00	
				$ -	
				Subtotal Traffic Items	**$ 2,707.50**
				TOTAL SECTIONS 1 thru 5	**$ 113,256.18**
Section 6 - Minor Items					
	$ 113,256.18 (Subtotal Sections 1 thru 5)	x (10%) =	$ 11,325.62		
				TOTAL MINOR ITEMS	**$ 11,325.62**
Section 7 - Roadway Mobilization					
	$ 124,581.80 (Subtotal Sections 1 thru 6)	x (10%) =	$ 12,458.18		
				TOTAL ROADWAY MOBILIZATION	**$ 12,458.18**
Section 8 - Roadway Additions					
Supplemental Work	$ 124,581.80 (Subtotal Sections 1 thru 6)	x (10%) =	$ 12,458.18		
Contingencies	$ 124,581.80 (Subtotal Sections 1 thru 6)	x (10%) =	$ 12,458.18		
				TOTAL ROADWAY ADDITIONS	**$ 24,916.36**
				TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 8)	**$ 161,956.34**

RIGHT OF WAY ITEMS					
	Quantity	Unit	Unit Price	Item Cost	ESCALATED VALUE
YMCA Right of Way Take	0.00	AC	$500,000	$0	
Sefton Field Right of Way Take	0.05	AC	$500,000	$26,997	
Title and Escrow Fees	1	LS	$10,000	$10,000	
			TOTAL RIGHT OF WAY ITEMS (Escalated Value)		$36,997
GRAND TOTAL					
			GRAND TOTAL BASE ESTIMATE (NO CROSSING INCLUDED)		$198,954

Base Estimate - No structure Costs Included

Alternative 6

ROADWAY ITEMS					
Section 1 - Earthwork	**Quantity**	**Unit**	**Unit Price**	**Item Cost**	**Section Cost**
Roadway Excavation	275	CY	$ 27.00	$ 7,425.00	
Imported Borrow	0	CY	$ 50.00	$ -	
Clearing & Grubbing	0.32	AC	$ 2,800.00	$ 904.41	
				$ -	
				Subtotal Earthwork	**$ 8,329.41**
Section 2 - Pavement Structural Section					
Asphalt Concrete	50	TON	$ 100.00	$ 5,000.00	
Aggregate Base	74	CY	$ 60.00	$ 4,440.00	
Aggregate Subbase	0	CY	$ 90.00	$ -	
Edge Drains	0	LF	$ 13.70	$ -	
				$ -	
				Subtotal Pavement Structural Section	**$ 9,440.00**
Section 3 - Drainage					
Storm Drains				$ -	
Project Drainage (X-Drains, overside, etc.)				$ -	
				$ -	
				Subtotal Drainage	**$ -**
Section 4 - Specialty Items					
Landscape and Irrigation	10050	SF	$ 1.50	$ 15,075.00	
Erosion Control	2010	LF	$ 4.00	$ 8,040.00	
Environmental Mitigation	0.32	AC	$ 100,000.00	$ 32,300.28	
Chain Link Fence	0	LF	$ 29.00	$ -	
				$ -	
				Subtotal Specialty Items	**$ 55,415.28**
Section 5 - Traffic Items					
Lighting	0	LS	$ -	$ -	
Traffic Delineation Items	1005	LF	$ 0.50	$ 502.50	
Traffic Signal Modification	0	LS	$ -	$ -	
Roadside Signs	4	EA	$ 300.00	$ 1,200.00	
				$ -	
				Subtotal Traffic Items	**$ 1,702.50**
				TOTAL SECTIONS 1 thru 5	**$ 74,887.18**
Section 6 - Minor Items					
	$ 74,887.18 (Subtotal Sections 1 thru 5)	x (10%) =	$ 7,488.72		
				TOTAL MINOR ITEMS	**$ 7,488.72**
Section 7 - Roadway Mobilization					
	$ 82,375.90 (Subtotal Sections 1 thru 6)	x (10%) =	$ 8,237.59		
				TOTAL ROADWAY MOBILIZATION	**$ 8,237.59**
Section 8 - Roadway Additions					
Supplemental Work	$ 82,375.90 (Subtotal Sections 1 thru 6)	x (10%) =	$ 8,237.59		
Contingencies	$ 82,375.90 (Subtotal Sections 1 thru 6)	x (10%) =	$ 8,237.59		
				TOTAL ROADWAY ADDITIONS	**$ 16,475.18**
				TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 8)	**$ 107,088.67**

RIGHT OF WAY ITEMS					
	Quantity	Unit	Unit Price	Item Cost	ESCALATED VALUE
YMCA Right of Way Take	0.00	AC	$500,000	$0	
Sefton Field Right of Way Take	0.05	AC	$500,000	$26,997	
Title and Escrow Fees	1	LS	$10,000	$10,000	
			TOTAL RIGHT OF WAY ITEMS (Escalated Value)		$36,997
GRAND TOTAL					
			GRAND TOTAL BASE ESTIMATE (NO CROSSING INCLUDED)		**$144,086**

Base Estimate - No structure Costs Included

Alternative 7

ROADWAY ITEMS					
Section 1 - Earthwork	**Quantity**	**Unit**	**Unit Price**	**Item Cost**	**Section Cost**
Roadway Excavation	1613	CY	$ 27.00	$ 43,551.00	
Imported Borrow	0	CY	$ 50.00	$ -	
Clearing & Grubbing	0.53	AC	$ 2,800.00	$ 1,471.35	
				$ -	
				Subtotal Earthwork	**$ 45,022.35**
Section 2 - Pavement Structural Section					
Asphalt Concrete	292	TON	$ 100.00	$ 29,200.00	
Aggregate Base	432	CY	$ 60.00	$ 25,920.00	
Aggregate Subbase	0	CY	$ 90.00	$ -	
Edge Drains	0	LF	$ 13.70	$ -	
				$ -	
				Subtotal Pavement Structural Section	**$ 55,120.00**
Section 3 - Drainage					
Storm Drains				$ -	
Project Drainage (X-Drains, overside, etc.)				$ -	
				$ -	
				Subtotal Drainage	**$ -**
Section 4 - Specialty Items					
Landscape and Irrigation	16350	SF	$ 1.50	$ 24,525.00	
Erosion Control	3110	LF	$ 4.00	$ 12,440.00	
Environmental Mitigation	0.53	AC	$ 100,000.00	$ 52,548.21	
Chain Link Fence	975	LF	$ 29.00	$ 28,275.00	
				$ -	
				Subtotal Specialty Items	**$ 117,788.21**
Section 5 - Traffic Items					
Lighting	0	LS	$ -	$ -	
Traffic Delineation Items	1635	LF	$ 1.50	$ 2,452.50	
Traffic Signal Modification	0	LS	$ -	$ -	
Roadside Signs	4	EA	$ 300.00	$ 1,200.00	
				$ -	
				Subtotal Traffic Items	**$ 3,652.50**
				TOTAL SECTIONS 1 thru 5	**$ 221,583.06**
Section 6 - Minor Items					
	$ 221,583.06 (Subtotal Sections 1 thru 5)	x (10%) =	$ 22,158.31		
				TOTAL MINOR ITEMS	**$ 22,158.31**
Section 7 - Roadway Mobilization					
	$ 243,741.37 (Subtotal Sections 1 thru 6)	x (10%) =	$ 24,374.14		
				TOTAL ROADWAY MOBILIZATION	**$ 24,374.14**
Section 8 - Roadway Additions					
Supplemental Work	$ 243,741.37 (Subtotal Sections 1 thru 6)	x (10%) =	$ 24,374.14		
Contingencies	$ 243,741.37 (Subtotal Sections 1 thru 6)	x (10%) =	$ 24,374.14		
				TOTAL ROADWAY ADDITIONS	**$ 48,748.27**
				TOTAL ROADWAY ITEMS (Subtotal Sections 1 thru 8)	**$ 316,863.77**

RIGHT OF WAY ITEMS					
	Quantity	Unit	Unit Price	Item Cost	ESCALATED VALUE
YMCA Right of Way Take	0.31	AC	$500,000	$156,680	
Sefton Field Right of Way Take	0.07	AC	$500,000	$33,104	
Title and Escrow Fees	1	LS	$10,000	$10,000	
			TOTAL RIGHT OF WAY ITEMS (Escalated Value)		$199,784
GRAND TOTAL					
			GRAND TOTAL BASE ESTIMATE (NO CROSSING INCLUDED)		**$516,648**

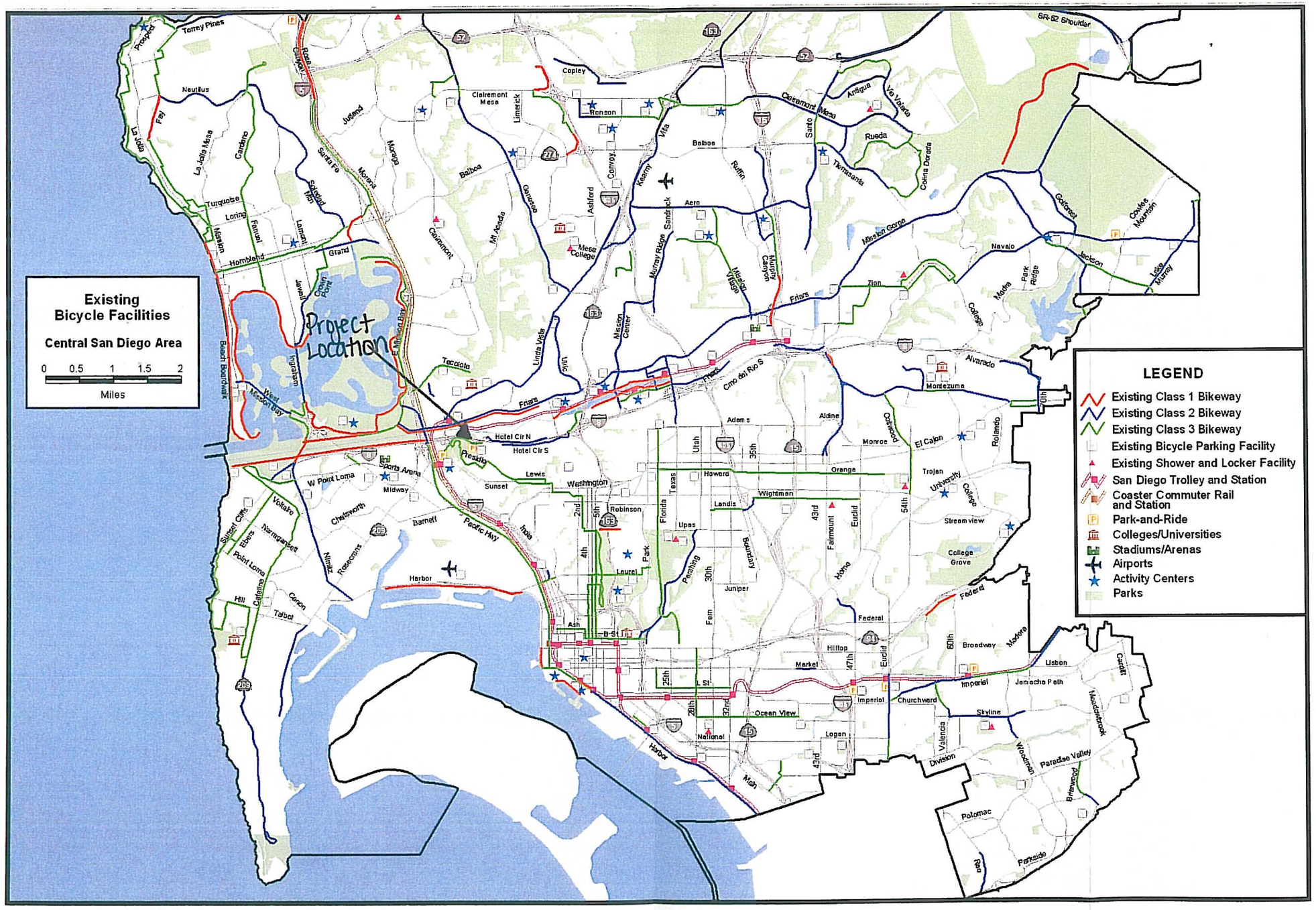
River Crossing Estimate - Add to Base Cost

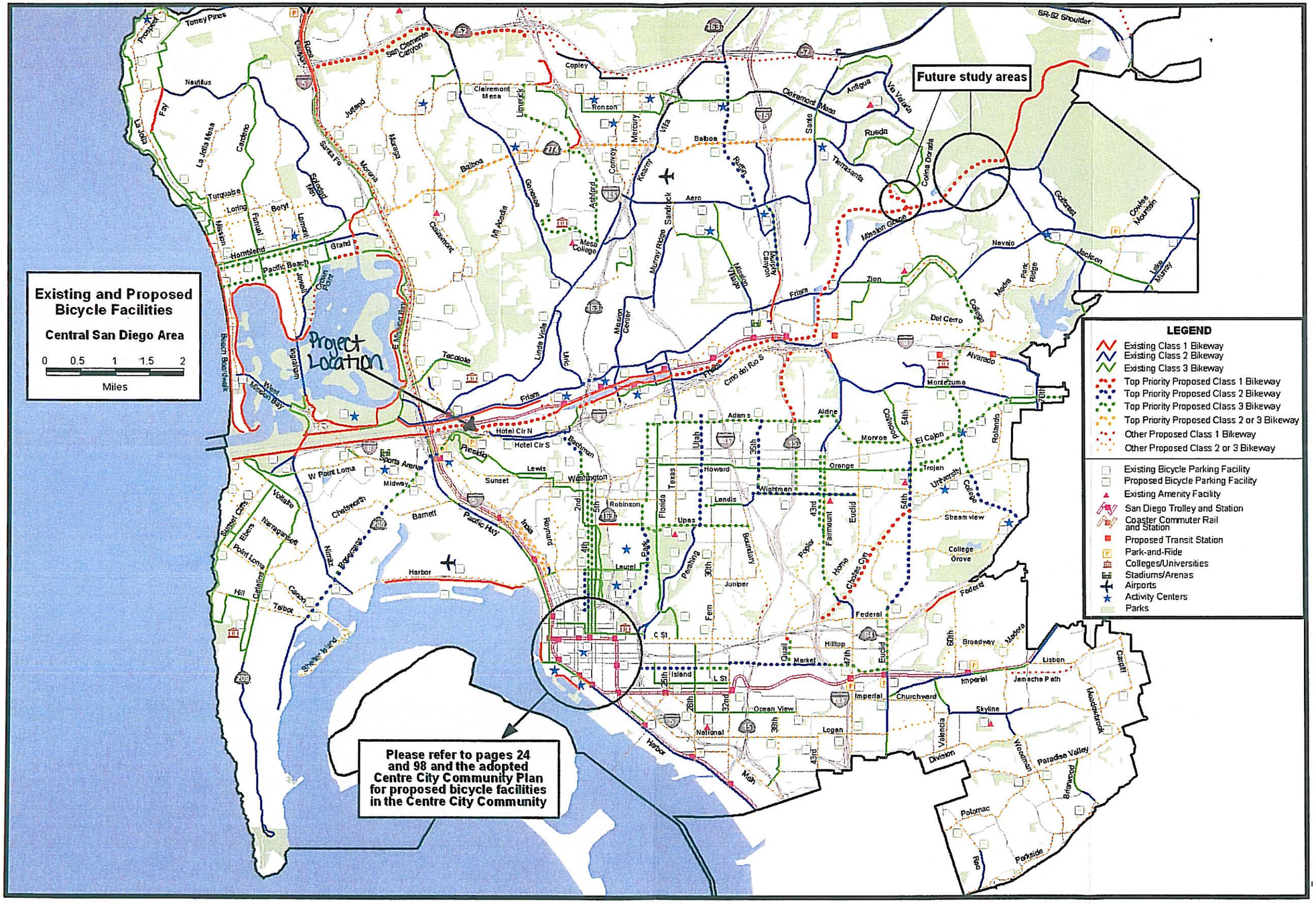
STRUCTURES ITEMS - 80ft Crossing				
Bridge Type	Ford Crossing	Box Culvert	Slab Bridge	Pre-Engineered Bridge
Structure Cost	$125,000	$152,000	$168,000	$144,000
10% Minor Items	$12,500	$15,200	$16,800	$14,400
10% Mobilization	$13,750	$16,720	$18,480	$15,840
20% Supplemental Work and Contingencies	$27,500	$33,440	$36,960	$31,680
Total Cost for Structure	**$ 178,750.00**	**$ 217,360.00**	**$ 240,240.00**	**$ 205,920.00**

STRUCTURES ITEMS - 150ft Crossing				
Bridge Type	Ford Crossing	Box Culvert	Slab Bridge	Pre-Engineered Bridge
Structure Cost	$235,000	$252,000	$315,000	$405,000
10% Minor Items	$23,500	$25,200	$31,500	$40,500
10% Mobilization	$25,850	$27,720	$34,650	$44,550
20% Supplemental Work and Contingencies	$51,700	$55,440	$69,300	$89,100
Total Cost for Structure	**$ 336,050.00**	**$ 360,360.00**	**$ 450,450.00**	**$ 579,150.00**

STRUCTURES ITEMS - Box Girder Bridge				
Bridge Type	Box Girder	Box Girder		
Length	750ft	1100ft		
Structure Cost	$1,575,000	$2,310,000		
10% Minor Items	$157,500	$231,000		
10% Mobilization	$173,250	$254,100		
20% Supplemental Work and Contingencies	$346,500	$508,200		
Total Cost for Structure	**$ 2,252,250.00**	**$ 3,303,300.00**		

Attachment G: San Diego Bicycle Master Plan Map


Existing
Bicycle Facilities
Central San Diego Area
0 0.5 1 1.5 2
Miles
Project Location
LEGEND
Existing Class 1 Bikeway
Existing Class 2 Bikeway
Existing Class 3 Bikeway
Existing Bicycle Parking Facility
Existing Shower and Locker Facility
San Diego Trolley and Station
Coaster Commuter Rail and Station
Park-and-Ride
Colleges/Universities
Stadiums/Arenas
Airports
Activity Centers
Parks
SR-52 Shoulder
Torrey Pines
Prospect
Nautilus
Fay
La Jolla
La Jolla Mesa
Gardena
Turquoise
Loring
Fanuel
Mission
Hornblend
Lamont
Grand
Jewell
Crown Point
Santa Fe
Morena
Clairemont Mesa
Balboa
Gonzaga
Mt Acadia
Limerick
Copley
Renson
Convoy
Ashford
Kearny Vista
Sandrick
Aero
Murray Ridge
Mesa College
Mission Village
Murphy Canyon
Ruffin
Santo
Antigua
Ve Valarta
Rueda
Corina Dorada
Terrasanta
Mission Gorge
Oxford
Cowles Mountain
Navajo
Jackson
Lake Murray
Zion
Fenis
Park Ridge
Medra
College
Alvarado
Montezuma
Cmo del Rio S
Linda Vista
Mesa Center
Tecolote
Hotel Cir N
Hotel Cir S
Preskitt
Sports Arena
Midway
Lewis
Sunset
Washington
Robinson
Landis
Howard
Wightman
Upas
Adams
Aldine
Monroe
Orange
Trojan
University
College
Stream view
College Grove
El Cajon
Rolando
Oakwood
Utah
35th
Texas
Florida
Park
Laurel
Juniper
Pershing
30th
Fern
Beech
Fairmount
43rd
Euclid
54th
Home
Federal
Hilltop
Market
47th
B St
L St
25th
28th
32nd
Ash
Ocean View
National
Logan
Imperial
Churchward
60th
Broadway
Lisbon
Jamacha Path
Skyline
Valencia
Division
Woodman
Paradise Valley
Briarwood
Maidenbrook
Cardiff
Potomac
Parkside
Rea
Moore
W Point Loma
Chatsworth
Volstead
Narragansett
Ebers
Point Loma
Catalina
Hill
Carson
Talbot
Sunset Cliffs
Nimitz
Rosecrans
Barnett
Pacific Hwy
Harbor
Ingraham
West Mission Bay
Beach Boardwalk
E Mission Bay
Ingle
4th
2nd
5th
Texas
Florida
Mesa
Harbor


Existing and Proposed Bicycle Facilities
Central San Diego Area
0 0.5 1 1.5 2
Miles
Project Location
Future study areas
Please refer to pages 24 and 98 and the adopted Centre City Community Plan for proposed bicycle facilities in the Centre City Community
LEGEND
Existing Class 1 Bikeway
Existing Class 2 Bikeway
Existing Class 3 Bikeway
Top Priority Proposed Class 1 Bikeway
Top Priority Proposed Class 2 Bikeway
Top Priority Proposed Class 3 Bikeway
Top Priority Proposed Class 2 or 3 Bikeway
Other Proposed Class 1 Bikeway
Other Proposed Class 2 or 3 Bikeway
Existing Bicycle Parking Facility
Proposed Bicycle Parking Facility
Existing Amenity Facility
San Diego Trolley and Station
Coaster Commuter Rail and Station
Proposed Transit Station
Park-and-Ride
Colleges/Universities
Stadiums/Arenas
Airports
Activity Centers
Parks

Attachment H: Caltrans Highway Design Manual Bike Path Standards Excerpt

CHAPTER 1000 BIKEWAY PLANNING AND DESIGN

Topic 1001 - General Criteria

Index 1001.1 - Introduction

The needs of non-motorized transportation are an essential part of all highway projects. Topic 105 discusses Pedestrian Facilities with Index 105.3 addressing accessibility needs. This chapter discusses bicycle travel. All city, county, regional and other local agencies responsible for bikeways or roads where bicycle travel is permitted must follow the minimum bicycle planning and design criteria contained in this and other chapters of this manual (See Streets and Highways Code Section 891).

Bicycle travel can be enhanced by improved maintenance and by upgrading existing roads used regularly by bicyclists, regardless of whether or not bikeways are designated. This effort requires increased attention to the right-hand portion of roadways where bicyclists are expected to ride. On new construction, and major reconstruction projects, adequate width should be provided to permit shared use by motorists and bicyclists. On resurfacing projects, it is important to provide a uniform surface for bicyclists and pedestrians. See Index 625.1(1) and 635.1(1) for guidance in accommodating bicyclist and pedestrian needs on resurfacing projects. **When adding lanes or turn pockets, a minimum 4-foot shoulder shall be provided (see Topic 405 and Table 302.1).** When feasible, a wider shoulder should be considered. When placing a roadway edge line, sufficient room outside the line should be provided for bicyclists. When considering the restriping of roadways for more traffic lanes, the impact on bicycle travel should be assessed. Bicycle and pedestrian traffic through construction zones should be addressed in the project development process. These efforts, to preserve or improve an area for use by bicyclists, can enhance motorist and bicyclist safety and mobility.

1001.2 The Role of Bikeways

Bikeways are one element of an effort to improve bicycling safety and convenience - either to help accommodate motor vehicle and bicycle traffic on shared roadways, or to complement the road system to meet needs not adequately met by roads.

Off-street bikeways in exclusive corridors can be effective in providing new recreational opportunities, or in some instances, desirable commuter routes. They can also be used to close gaps where barriers exist to bicycle travel (e.g., river crossing). On-street bikeways can serve to enhance safety and convenience, especially if other commitments are made in conjunction with establishment of bikeways, such as: elimination of parking or increasing roadway width, elimination of surface irregularities and roadway obstacles, frequent street sweeping, establishing intersection priority on the bike route street as compared with the majority of cross streets, and installation of bicycle-sensitive loop detectors at signalized intersections.

1001.3 The Decision to Develop Bikeways

The decision to develop bikeways should be made with the knowledge that bikeways are not the solution to all bicycle-related problems. Many of the common problems are related to improper bicyclist and motorist behavior and can only be corrected through effective education and enforcement programs. The development of well conceived bikeways can have a positive effect on bicyclist and motorist behavior. Conversely, poorly conceived bikeways can be counterproductive to education and enforcement programs.

1001.4 Definitions

The Streets and Highway Code Section 890.4 defines a "Bikeway" as a facility that is provided primarily for bicycle travel.

(1) Class I Bikeway (Bike Path). Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with crossflow by motorists minimized.

(2) Class II Bikeway (Bike Lane). Provides a striped lane for one-way bike travel on a street or highway.

(3) Class III Bikeway (Bike Route). Provides for shared use with pedestrian or motor vehicle traffic.

1001.5 Streets and Highways Code References - Chapter 8 - Nonmotorized Transportation

(a) Section 887 -- Definition of nonmotorized facility.

(b) Section 887.6 -- Agreements with local agencies to construct and maintain nonmotorized facilities.

(c) Section 887.8 -- Payment for construction and maintenance of nonmotorized facilities approximately paralleling State highways.

(d) Section 888 -- Severance of existing major nonmotorized route by freeway construction.

(e) Section 888.2 -- Incorporation of non-motorized facilities in the design of freeways.

(f) Section 888.4 -- Requires Caltrans to budget not less than $360,000 annually for nonmotorized facilities used in conjunction with the State highway system.

(g) Section 890.4 -- Class I, II, and III bikeway definitions.

(h) Section 890.6 - 890.8 -- Caltrans and local agencies to develop design criteria and symbols for signs, markers, and traffic control devices for bikeways and roadways where bicycle travel is permitted.

(i) Section 891 -- Local agencies must comply with design criteria and uniform symbols.

(j) Section 892 -- Use of abandoned right-of-way as a nonmotorized facility.

1001.6 Vehicle Code References - Bicycle Operation

(a) Section 21200 -- Bicyclist's rights and responsibilities for traveling on highways.

(b) Section 21202 -- Bicyclist's position on roadways when traveling slower than the normal traffic speed.

(c) Section 21206 -- Allows local agencies to regulate operation of bicycles on pedestrian or bicycle facilities.

(d) Section 21207 -- Allows local agencies to establish bike lanes on non-state highways.

(e) Section 21207.5 -- Prohibits motorized bicycles on bike paths or bike lanes.

(f) Section 21208 -- Specifies permitted movements by bicyclists from bike lanes.

(g) Section 21209 -- Specifies permitted movements by motorists in bike lanes.

(h) Section 21210 -- Prohibits bicycle parking on sidewalks unless pedestrians have an adequate path.

(i) Section 21211 -- Prohibits impeding or obstruction of bicyclists on bike paths.

(j) Section 21717 -- Requires a motorist to drive in a bike lane prior to making a turn.

(k) Section 21960 -- Use of freeways by bicyclists.

Topic 1002 - Bikeway Facilities

1002.1 Selection of the Type of Facility

The type of facility to select in meeting the bicycle need is dependent on many factors, but the following applications are the most common for each type.

(1) Shared Roadway (No Bikeway Designation). Most bicycle travel in the State now occurs on streets and highways without bikeway designations. This probably will be true in the future as well. In some instances, entire street systems may be fully adequate for safe and efficient bicycle travel, and signing and pavement marking for bicycle use may be unnecessary. In other cases, prior to designation as a bikeway, routes may need improvements for bicycle travel.

Many rural highways are used by touring bicyclists for intercity and recreational travel. It might be inappropriate to designate the highways as bikeways because of the limited use and the lack of continuity with other bike routes. However, the development and

maintenance of 4-foot paved roadway shoulders with a standard 4 inch edge line can significantly improve the safety and convenience for bicyclists and motorists along such routes.

(2) *Class I Bikeway (Bike Path).* Generally, bike paths should be used to serve corridors not served by streets and highways or where wide right of way exists, permitting such facilities to be constructed away from the influence of parallel streets. Bike paths should offer opportunities not provided by the road system. They can either provide a recreational opportunity, or in some instances, can serve as direct high-speed commute routes if cross flow by motor vehicles and pedestrian conflicts can be minimized. The most common applications are along rivers, ocean fronts, canals, utility right of way, abandoned railroad right of way, within college campuses, or within and between parks. There may also be situations where such facilities can be provided as part of planned developments. Another common application of Class I facilities is to close gaps to bicycle travel caused by construction of freeways or because of the existence of natural barriers (rivers, mountains, etc.).

(3) *Class II Bikeway (Bike Lane).* Bike lanes are established along streets in corridors where there is significant bicycle demand, and where there are distinct needs that can be served by them. The purpose should be to improve conditions for bicyclists in the corridors. Bike lanes are intended to delineate the right of way assigned to bicyclists and motorists and to provide for more predictable movements by each. But a more important reason for constructing bike lanes is to better accommodate bicyclists through corridors where insufficient room exists for safe bicycling on existing streets. This can be accomplished by reducing the number of lanes, reducing lane width, or prohibiting parking on given streets in order to delineate bike lanes. In addition, other things can be done on bike lane streets to improve the situation for bicyclists, that might not be possible on all streets (e.g., improvements to the surface, augmented sweeping programs, special signal facilities, etc.). Generally, pavement markings alone will not measurably enhance bicycling.

If bicycle travel is to be controlled by delineation, special efforts should be made to assure that high levels of service are provided with these lanes.

In selecting appropriate streets for bike lanes, location criteria discussed in the next section should be considered.

(4) *Class III Bikeway (Bike Route).* Bike routes are shared facilities which serve either to:

(a) Provide continuity to other bicycle facilities (usually Class II bikeways); or

(b) Designate preferred routes through high demand corridors.

As with bike lanes, designation of bike routes should indicate to bicyclists that there are particular advantages to using these routes as compared with alternative routes. This means that responsible agencies have taken actions to assure that these routes are suitable as shared routes and will be maintained in a manner consistent with the needs of bicyclists. Normally, bike routes are shared with motor vehicles. The use of sidewalks as Class III bikeways is strongly discouraged.

It is emphasized that the designation of bikeways as Class I, II and III should not be construed as a hierarchy of bikeways; that one is better than the other. Each class of bikeway has its appropriate application.

In selecting the proper facility, an overriding concern is to assure that the proposed facility will not encourage or require bicyclists or motorists to operate in a manner that is inconsistent with the rules of the road.

An important consideration in selecting the type of facility is continuity. Alternating segments of Class I and Class II (or Class III) bikeways along a route are generally incompatible, as street crossings by bicyclists are required when the route changes character. Also, wrong-way bicycle travel will occur on the street beyond the ends of bike paths because of the inconvenience of having to cross the street.

Topic 1003 - Design Criteria

1003.1 Class I Bikeways

Class I bikeways (bike paths) are facilities with exclusive right of way, with cross flows by motorists minimized. Section 890.4 of the Streets and Highways Code describes Class I bikeways as serving "the exclusive use of bicycles and pedestrians". However, experience has shown that if significant pedestrian use is anticipated, separate facilities for pedestrians are necessary to minimize conflicts. Dual use by pedestrians and bicycles is undesirable, and the two should be separated wherever possible.

Sidewalk facilities are not considered Class I facilities because they are primarily intended to serve pedestrians, generally cannot meet the design standards for Class I bikeways, and do not minimize motorist cross flows. See Index 1003.3 for discussion relative to sidewalk bikeways.

By State law, motorized bicycles ("mopeds") are prohibited on bike paths unless authorized by ordinance or approval of the agency having jurisdiction over the path. Likewise, all motor vehicles are prohibited from bike paths. These prohibitions can be strengthened by signing.

(1) *Widths.* **The minimum paved width for a two-way bike path shall be 8 feet. The minimum paved width for a one-way bike path shall be 5 feet. A minimum 2-foot wide graded area shall be provided adjacent to the pavement (see Figure 1003.1A).** A 3-foot graded area is recommended to provide clearance from poles, trees, walls, fences, guardrails, or other lateral obstructions. A wider graded area can also serve as a jogging path. Where the paved width is wider than the minimum required, the graded area may be reduced accordingly; however, the graded area is a desirable feature regardless of the paved width. Development of a one-way bike path should be undertaken only after careful consideration due to the problems of enforcing one-way operation and the difficulties in maintaining a path of restricted width.

Where heavy bicycle volumes are anticipated and/or significant pedestrian traffic is expected, the paved width of a two-way path should be greater than 8-feet, preferably 12 feet or more. Another important factor to consider in determining the appropriate width is that bicyclists will tend to ride side by side on bike paths, necessitating more width for safe use.

Experience has shown that paved paths less than 12 feet wide sometimes break up along the edge as a result of loads from maintenance vehicles.

Where equestrians are expected, a separate facility should be provided.

(2) *Clearance to Obstructions.* **A minimum 2-foot horizontal clearance to obstructions shall be provided adjacent to the pavement (see Figure 1003.1A).** A 3-foot clearance is recommended. Where the paved width is wider than the minimum required, the clearance may be reduced accordingly; however, an adequate clearance is desirable regardless of the paved width. If a wide path is paved contiguous with a continuous fixed object (e.g., block wall), a 4-inch white edge line, 2 feet from the fixed object, is recommended to minimize the likelihood of a bicyclist hitting it. **The clear width on structures between railings shall be not less than 8 feet.** It is desirable that the clear width of structures be equal to the minimum clear width of the path (i.e., 12 feet).

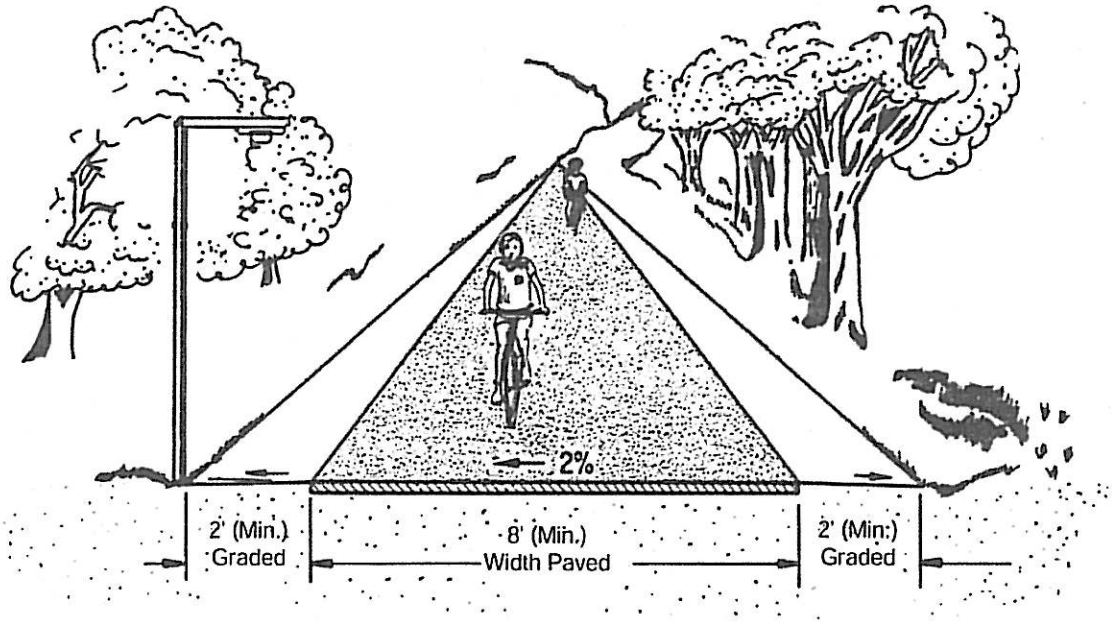
The vertical clearance to obstructions across the clear width of the path shall be a minimum of 8 feet. Where practical, a vertical clearance of 10 feet is desirable.

(3) *Signing and Delineation.* For application and placement of signs, see the Manual on Uniform Traffic Control Devices (MUTCD), Section 9B.01 and the MUTCD and California Supplement Section 9B.01 and Figure 9B-101. For pavement marking guidance, see the MUTCD, Section 9C.03.

(4) *Intersections with Highways.* Intersections are a prime consideration in bike path design. If alternate locations for a bike path are available, the one with the most favorable intersection conditions should be selected.

Figure 1003.1A

Two-Way Bike Path on Separate Right of Way



Note: For sign clearances, see MUTCD, Figure 9B-1.

Attachment I: FHWA Bike Path Guidelines

Designing Sidewalks and Trails for Access,

Part II of II, Best Practices Design Guide

Chapter 14. Shared Use Path Design

A shared-use path serves as part of a transportation circulation system and supports multiple recreation opportunities, such as walking, bicycling, and inline skating. A shared-use path typically has a surface that is asphalt, concrete, or firmly packed crushed aggregate. The 1999 AASHTO Guide for the Development of Bicycle Facilities defines a shared-use path as being physically separated from motor vehicular traffic with an open space or barrier (AASHTO, 1999). Shared-use paths should always be designed to include pedestrians even if the primary anticipated users are bicyclists.

Shared-use paths provide a transportation function. All newly constructed shared-use paths should be built to provide access for people with disabilities. In addition, existing shared-use paths should be improved to enhance access whenever possible. If improvements to existing facilities cannot be made immediately, it is recommended that information, including signage, be provided at all path entrances. This information should clearly convey objective information to trail users, including data about grade, cross slope, surface, and width.

14.1 Background information

For most shared-use paths, bicyclists are the primary user group. Cyclists include tandem, recumbent, and hand powered three-wheelers. Road racing wheelchairs may use shared-use paths, reaching speeds of over 30 mph on downhill sections, and should have the same rights and privileges as cyclists. In many cases, the design requirements for bicyclists are similar, if not more stringent, than the design requirements for pedestrians with disabilities. For example, people who use wheelchairs can travel over small changes in level. However, because bicyclists are often traveling at faster speeds, smooth surfaces are needed. Although people with vision impairments can identify an edge protection in a trail environment if it is more than 76 mm (3 in) high, an edge protection lower than a 1.065 m (42 in) railing can be dangerous for a bicyclist.

> For this report, the majority of the accessibility recommendations for shared-use paths are based on the 1999 AASHTO Guide for the Development of Bicycle Facilities (AASHTO, 1999). Additional issues, such as protruding objects (that are not addressed in the AASHTO bicycle facility guide) are also included in this report. However, the recommendations for grade in this report are based on the work by the Regulatory Negotiation Committee for Outdoor Developed Areas because the maximum grades identified for bicyclists in the AASHTO bicycle facility guide do not provide access to many people with mobility impairments.

14.2 Access to shared-use paths

Creating a shared-use path that provides access for people with disabilities involves more than the trail itself. Ensuring that an accessible pathway leads up to the shared-use path must also be considered. In addition, all access points along the shared-use path should be accessible to people with disabilities. Furthermore, the facilities around the trail should also be designed for access. For example:

- Trailhead and destination areas with parking and bathrooms should conform to ADAAG requirements for accessible parking and bathrooms;

☐ Yes ☐ No ☐ NA ☐ Comment

- Elements, such as picnic areas, should be connected with a pathway that meets the accessible design recommendations for shared-use paths;

☐ Yes ☐ No ☐ NA ☐ Comment

- Road access points should meet the recommendations in Chapter 16 as reviewed in the Access Law Design Compliance Checklist and

☐ Yes ☐ No ☐ NA ☐ Comment

- Signage at the access point should conform to ADAAG requirements for font size, font type, and contrast.

☐ Yes ☐ No ☐ NA ☐ Comment

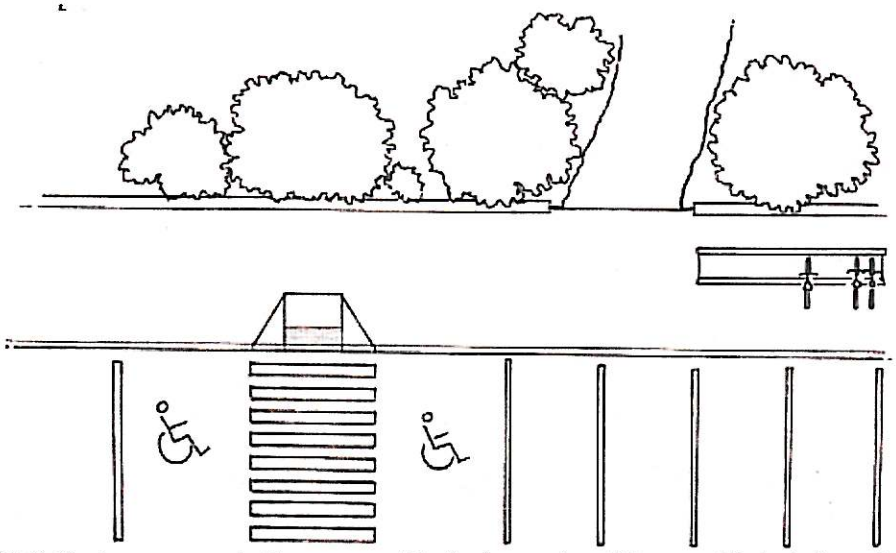


Figure 14-2. Curb ramps and other accessible features should be provided at shared-use path access points.

As previously indicated, the design of pathways leading up to shared-use paths should provide the same standard of accessibility as is provided on the path itself. However, the full 3.05 m (10 ft) that is recommended for tread width may not be necessary unless traffic is expected to be heavy.

14.2.1 Rail trails

Rail trails are an example of shared-use paths that are created from the right-of-way of abandoned railroad lines. Because railroad beds have gradual grades and turns, relatively few barriers exist in making this type of trail accessible. The greatest challenge is typically designing an accessible pathway to the shared-use path. If the rail bed is raised high above the surrounding areas, providing access for people with mobility impairments may involve changes in design, such as reducing grade through the use of switchbacks or building ramped surfaces.

☐ Yes ☐ No ☐ NA ☐ Comment

14.3 Conflicts between multiple user groups

Shared-use paths attract a variety of user groups who often have conflicting needs. All pedestrians are affected by sudden changes in the environment and by other trail users, such as bicyclists, who travel at high speeds. However, the conflicts on shared-use paths are especially significant for people who cannot react quickly to hazards, such as some people with mobility impairments. To improve the shared-use path experience for all users, including people with disabilities, designers and planners should be aware of potential conflicts and employ innovative solutions whenever possible. Basic conflicts can be reduced by:

- Providing information, including signage, in multiple formats that clearly indicates permitted users and rules of conduct;

☐ Yes ☐ No ☐ NA ☐ Comment

- Ensuring that the shared-use path provides sufficient width and an appropriate surface for everyone, or providing alternate paths for different types of users;

☐ Yes ☐ No ☐ NA ☐ Comment

- Providing sufficient separation for users traveling at different speeds. For example, if volume and space permits, bicyclists and pedestrians should have different lanes or pathways;

☐ Yes ☐ No ☐ NA ☐ Comment

- Providing the necessary amenities for all users. For example, bicyclists require bike racks or lockers; and

☐ Yes ☐ No ☐ NA ☐ Comment

- Considering the needs of people with disabilities within all of the user groups permitted on the path. For example, many individuals with disabilities may use a longer hand cycle or wider tricycle design that may not be compatible with bike racks, bathroom stalls, or lockers of limited width. Longer and wider equipment may need additional maneuvering space in restrooms and when transferring from the chair to benches.

☐ Yes ☐ No ☐ NA ☐ Comment

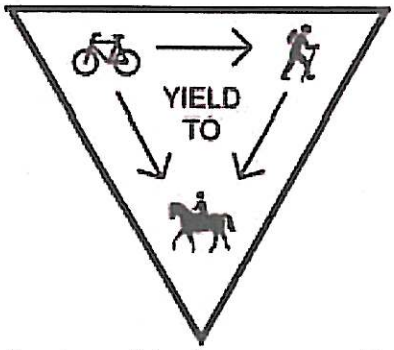


Figure 14-5. Shared-use paths attract a variety of user groups. Providing signs that clearly indicate which users have the right of way will help avoid conflict.

14.4 Shared-use path surfaces

The condition of the surface is a significant factor in determining how easily a person with a disability can travel along a shared-use path. The accessibility of the shared-use path surface is determined by a variety of factors including:

- Surface material;

☐ Yes ☐ No ☐ NA ☐ Comment

- Surface firmness and stability;

☐ Yes ☐ No ☐ NA ☐ Comment

- Slip-resistance;

☐ Yes ☐ No ☐ NA ☐ Comment

- Changes in level; and

☐ Yes ☐ No ☐ NA ☐ Comment

- Size and design of surface openings.

☐ Yes ☐ No ☐ NA ☐ Comment

14.4.1 Surface material

There are various surface materials that can be used in outdoor environments. Shared-use paths are generally paved with asphalt or concrete, but may also use prepared surfaces such as crushed stone or soil stabilizing agents mixed with native soils or aggregates. High use trails passing through developed areas or fragile environments are commonly surfaced with asphalt or concrete to maximize the longevity of the shared-use path surface and promote bicycle and inline skating use.

The surfacing material on the shared-use path significantly affects which user groups will be capable of negotiating the terrain. Shared-use paths that have been built using crushed aggregate generally are unusable by inline skaters and slow down the speed of bicyclists. Paved surfaces should be provided in areas that are subject to flooding or drainage problems, in areas with steep terrain, and in areas where bicyclists or inline skaters are the primary users.

☒ Yes ☐ No ☐ NA ☐ Comment

14.4.2 Surface firmness, stability, and slip resistance

The firmness, stability, and slip resistance of the shared-use path surface affects all users but is particularly important for people using mobility devices such as canes, crutches, wheelchairs, or walkers.

- **Firmness** is the degree to which a surface resists deformation by indentation when a person walks or wheels across it. A firm surface would not compress significantly under the forces exerted as a person walks or wheels on it.

☐ Yes ☐ No ☐ NA ☐ Comment

- **Stability** is the degree to which a surface remains unchanged by contaminants or applied force so that when the contaminant or force is removed, the surface returns to its original condition. A stable surface would not be significantly altered by a person walking or maneuvering a wheelchair on it.

☐ Yes ☐ No ☐ NA ☐ Comment

- **Slip resistance** is based on the frictional force necessary to permit a person to ambulate without slipping. A slip resistant surface does not allow a shoe heel, wheelchair tires, or a crutch tip to slip when ambulating on the surface.

☐ Yes ☐ No ☐ NA ☐ Comment

Shared-use paths should have a firm and stable surface. When a person walks or wheels across a surface that is not firm and stable, energy that would otherwise cause forward motion instead deforms or displaces the surface or is lost through slipping. Asphalt and concrete are firm and stable in all conditions. Other shared use path materials, such as crushed limestone, are also firm and

stable under most conditions. If a more natural surface is desired, synthetic bonding materials should be considered.

Under dry conditions, most asphalt and concrete surfaces are fairly slip resistant. Shared use paths should be designed with a surface that is slip resistant during typical weather conditions. A slip-resistant surface reduces the possibility of a person's shoes, crutch tips, or tires sliding across the surface. The U.S. Access Board Technical Bulletin #4 addresses slip resistance in further detail (U.S. Access Board, 1994a).

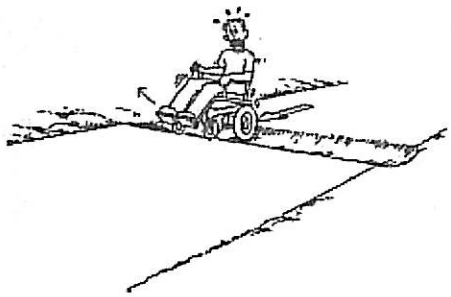


Figure 14-7. Often times, surface maintenance issues are addressed in small segments rather than resurfacing the entire path. Improperly recompacted trenching can contribute to loss of control and cause the wheelchair to flip over backwards.

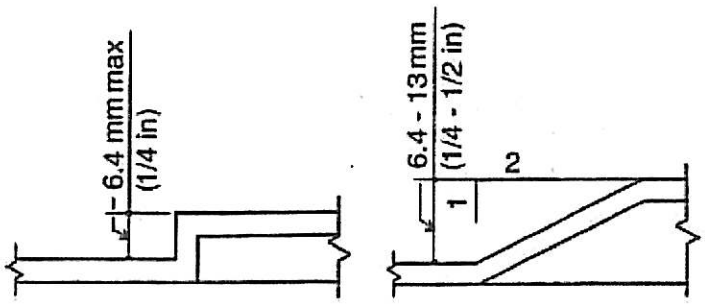


Figure 14-8. Vertical changes in level on shared use paths should not exceed 6.4 mm (0.25 in). A bevel should be applied to changes in level between 6.4 mm (0.25 in) and 13 mm (0.5 in).

14.4.3 Changes in level

Changes in level are defined as the maximum vertical change between two adjacent surfaces. Examples of changes in level that may be seen on shared-use paths include uneven transitions from the shared-use path surface to a bridge or walkway, cracks caused by freezing and thawing, or a sudden change in the natural ground level (often caused by earthquakes or nearby trees).

Although changes in level are not desirable for people with mobility impairments, they are most harmful to bicyclists and inline skaters. Abrupt changes in level can cause pedestrians to trip and fall. The risk is particularly acute for individuals who have difficulty lifting their feet high up off the ground or who have limited vision and may be unable to detect the change in level. Catching a wheel on an obstacle or change in level can easily tip wheeled devices over as the individual's momentum continues despite the wheel having suddenly stopped. Minimizing or eliminating changes in level will greatly improve shared-use path safety for all users.

For shared-use paths, the following recommendations should be followed:

- Vertical changes in level should not be incorporated in new construction;

☐ Yes ☐ No ☐ NA ☐ Comment

- If unavoidable, small changes in level up to 6.4 mm (0.25 in) may remain vertical and without edge treatment;

☐ Yes ☐ No ☐ NA ☐ Comment

A beveled surface with a maximum slope of 50 percent should be added to small level changes in levels between 6.4 mm (0.25 in) and 13 mm (0.5 in); and

☐ Yes ☐ No ☐ NA ☐ Comment

Changes in level such as curbs that exceed 13 mm (0.5 in) should be ramped or removed.

☐ Yes ☐ No ☐ NA ☐ Comment

14.4.4 Openings

Openings are spaces or holes in the tread surface. On recreation trails, openings may occur naturally, such as a crack in a rock surface. On shared-use paths, however, openings are usually constructed, such as spaces between the planks of a boardwalk that allow water to drain from the surface. A grate is an example of an opening that is a framework of latticed or parallel bars that prevents large obstacles from falling through a drainage inlet but permits water and some sediment to pass through. Another example of an opening is a flangeway gap at a railroad crossing.

If at all possible, openings should not be within the shared-use path surface. Openings, such as drainage grates, should be located outside the shared-use path tread. Wheelchair casters or walkers, crutch and cane tips, inline skate wheels, and the tires of road bicycles can get caught in poorly placed grates or gaps creating a serious safety hazard.

When designers cannot avoid placing openings in the shared-use path, they employ the following specifications:

- **Opening Width** - The size of the open space should not permit a 13 mm (0.5 in) diameter sphere to pass through the opening. If a wider gap is unavoidable because of existing design constraints, it may be acceptable to extend the width to a maximum of 19 mm (0.75 in); and

☐ Yes ☐ No ☐ NA ☐ Comment

- **Opening Orientation** - If the open space is elongated, it must be oriented so that the long dimension is perpendicular to the dominant direction of travel.

☐ Yes ☐ No ☐ NA ☐ Comment

14.5 Shared-use path grade and cross slope

Steep grades and cross slopes have significant drawbacks for people with mobility impairments. For example, more energy is required to traverse sloped surfaces than level surfaces. Powered wheelchairs use more battery power on steep grades because the chair compensates for the difficult terrain. Furthermore, both powered and manual wheelchairs are less stable on sloped surfaces, particularly if wet or frozen.

14.5.1 Grade

People with mobility impairments have a difficult time negotiating steep grades because of the additional effort required to travel over sloped surfaces. Manual wheelchair users may travel very rapidly on downhill pathways but will be significantly slower on uphill segments. Steep running grades are particularly difficult for users with mobility impairments when resting opportunities are not provided. Less severe grades that extend over longer distances may tire users as much as shorter, steeper grades. In general, running grades on shared-use paths should not exceed 5 percent and the most gradual slope possible should be used at all times.

If steeper segments are incorporated into the shared-use path, the total running grade that exceeds 8.33 percent should be less than 30 percent of the total trail length. In addition, it is essential that the lengths of the steep sections are minimized and are free of other access barriers. Negotiating a steep grade requires considerable effort. Users should not be required to exert additional energy to simultaneously deal with other factors, such as steep cross slopes and change in vertical levels. When designing maximum grade segments, the following recommendations should be used:

- 8.3 percent for a maximum of 61.0 m (200 ft);

☐ Yes ☐ No ☐ NA ☐ Comment

10 percent for a maximum of 9.14 m (30 ft); and

☐ Yes ☐ No ☐ NA ☐ Comment

- 12.5 percent for a maximum of 3.05 m (10 ft).

☐ Yes ☐ No ☐ NA ☐ Comment

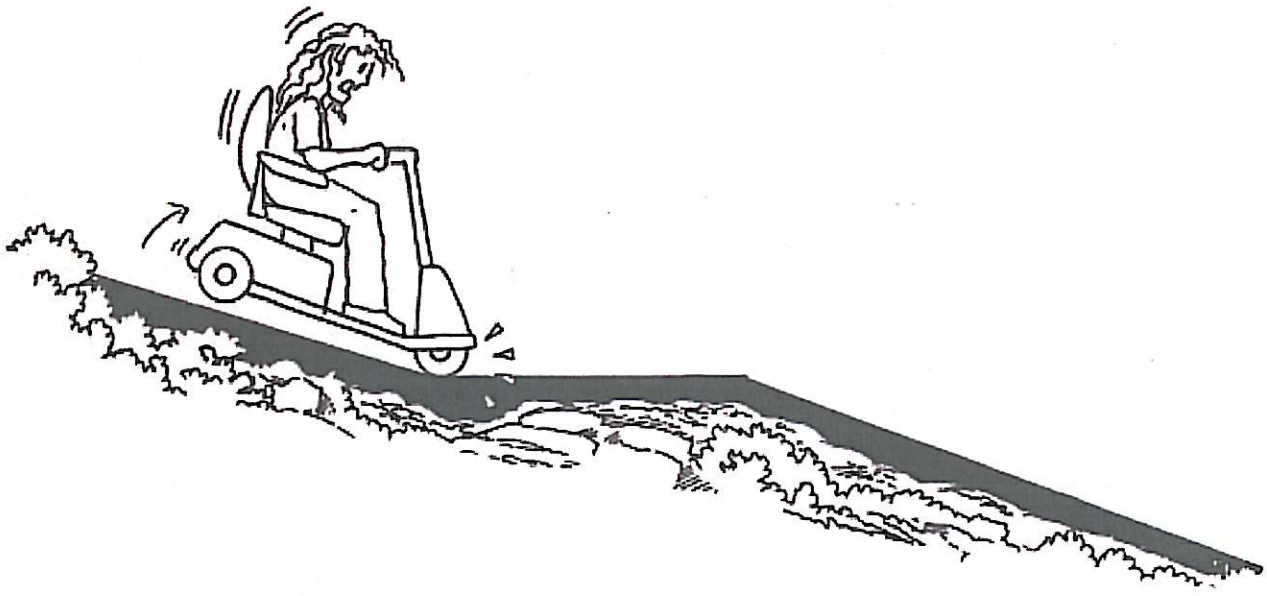


Figure 14-9. When steep grades abruptly change into level landings, people who use wheelchairs and scooters are put at risk of falling forward or losing control of their device.

Although the recommended maximum grades are similar to those recommended in the 1999 AASHTO Guide for the Development of Bicycle Facilities, the maximum distances are significantly shorter.

Near the top and bottom of the maximum grade segments, the grade should gradually transition to less than 5 percent. In addition, rest intervals should be provided within 7.6 m (25 ft) of the top and bottom of a maximum grade segment. Rest intervals may be located on the shared-use path but should ideally be located adjacent to the path for the safety of all users (see Section 14.5.2). Well-designed rest intervals should have the following characteristics:

- Grades that do not exceed 5 percent;

☐ **Yes** ☐ **No** ☐ **NA** ☐ **Comment**

- Cross slopes on paved surfaces that do not exceed 2 percent and cross slopes on non-paved surfaces that do not exceed 5 percent;

☐ **Yes** ☐ **No** ☐ **NA** ☐ **Comment**

- A firm and stable surface;

☐ **Yes** ☐ **No** ☐ **NA** ☐ **Comment**

- A width equal to or greater than the width of the path segment leading to and from the rest interval;

☐ **Yes** ☐ **No** ☐ **NA** ☐ **Comment**

Apply to the interpretive area and the single bench

- A minimum length of 1.525 m (60 in); and

☐ Yes ☐ No ☐ NA ☐ Comment

- A minimum change of grade and cross slope on the segment connecting the rest interval with the shared-use path.

☐ Yes ☐ No ☐ NA ☐ Comment

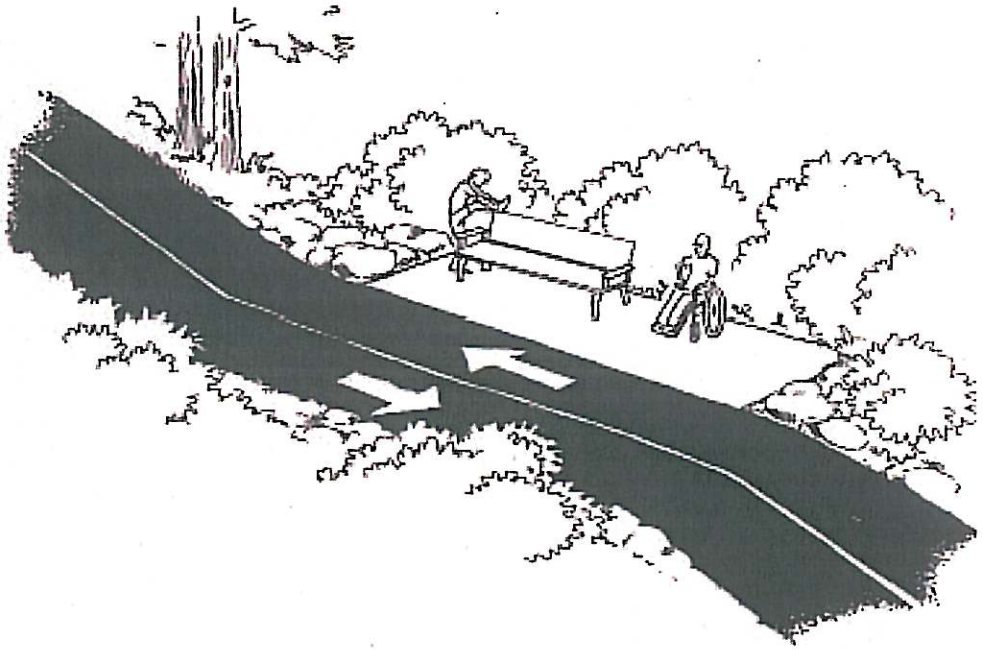


Figure 14-10. Frequent rest areas that include benches and wheelchair spaces provide relief from prevailing grades.

14.5.2 Rest areas

Periodic rest areas are beneficial for all shared-use path users, particularly for people with mobility impairments that expend more effort to walk than other pedestrians. Rest areas are especially crucial when grade or cross slope demands increase. The frequency of rest areas should vary depending on the terrain and intended use. For example, heavily used shared-use paths should have more frequent opportunities for rest. Rest areas provide an opportunity for users to move off the trail, instead of remaining on the trail to stop and rest. If a rest area is only provided on one side of the trail, it should be on the uphill side. Having separate rest areas on both sides of the trail is preferred when there is a higher volume or higher traffic speed. This reduces trail users from having to cross in front of other trail users moving in the opposite direction.

A rest area will have many of the same characteristics as a rest interval (see Section 15.5.1.3). However the additional space allows for more amenities. In general, rest areas should have the following design characteristics:

- Grades that do not exceed 5 percent;
- Cross slopes on paved surfaces that do not exceed 2 percent and cross slopes on non-paved surfaces that do not exceed 5 percent;

- A firm and stable surface;
- A width equal to or greater than the width of the trail segment leading to and from the rest area;
- A minimum length of 1.525 m (60 in);
- A minimal change of grade and cross slope on the segment connecting the rest area with the main pathway; and
- Accessible designs for amenities such as benches, where provided.

Benches can be particularly important for people with disabilities, who may have difficulty getting up from a seated position on the ground. Some benches should have backrests to provide support when resting, and at least one armrest to provide support as the user resumes a standing position. Accessible seating should provide the same benefits as seating for users without disabilities. For example, providing a wheelchair space facing away from the intended view would not be appropriate.

☐ Yes ☐ No ☐ NA ☐ Comment

14.5.3 Cross slope and drainage

Severe cross slopes can make it difficult for wheelchair users and other pedestrians to maintain their lateral balance because they must work against the force of gravity. Cross slopes can cause wheelchairs to veer downhill and create problems for individuals using crutches who cannot compensate for the height differential that cross slopes create. The impacts of cross slopes are compounded when combined with steep grades or surfaces that are not firm and stable.

Cross slope can be a barrier to people with mobility impairments. However, some cross slope is necessary to drain water quickly off of shared-use paths. Designers must balance the negative effect cross slopes have on pedestrian mobility against the necessity of including cross slopes to provide adequate drainage. Designers should use the minimum cross slope necessary for the shared-use path. For asphalt and concrete, a cross slope of 2.0 percent should be adequate. For non-paved surfaces, such as crushed aggregate, the maximum recommended cross slope is 5 percent.

☐ Yes ☐ No ☐ NA ☐ Comment

14.6 Shared-use path width

The width of the shared-use path tread not only affects pedestrian usability but also determines the types of users who can use the path. Factors, such as the movement patterns of designated user groups, should be considered. For example, skaters may use a lateral foot motion for propulsion that is wider than the stride of most pedestrians. In addition, shared-use paths should be designed to accommodate high-speed users in both directions.

The tread of a shared-use path should be at least 3.05 m (10 ft) wide. A minimum of 2.44 m (8 ft) may be used on shared-use paths that will have limited use. Shared use paths should also have graded areas at least 610 mm (2 ft) on either side of the path. On shared-use paths with heavy volumes of users, tread width should be increased to a range from 3.66 m to 4.27 m (12 ft to 14 ft).

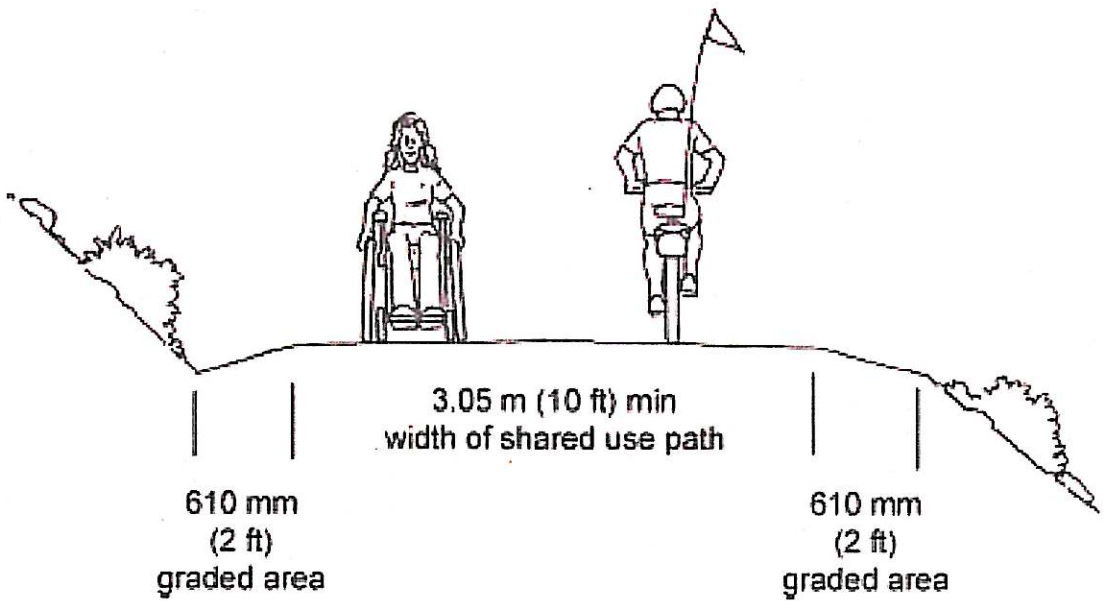


Figure 14-11. Shared-use paths should be designed with a minimum tread width of 3.05 m (10 ft) with graded areas of at least 610 mm (2 ft) on either side of the path.

☐ Yes ☐ No ☐ NA ☐ Comment

14.6.1 Passing space

Generally, passing spaces are not necessary on shared-use paths because the width of the shared-use path exceeds the recommended dimensions that require a passing space. If a shared-use path is narrow, periodic passing spaces of at least 1.525 m x 1.525 m (60 in x 60 in) should be provided.

☐ Yes ☐ No ☐ NA ☐ Comment

The width of the path is 10'

14.6.2 Protruding objects

Protruding objects are anything that overhangs or protrudes into the shared-use path tread whether or not the object touches the surface. Examples of protruding objects include lighting posts, poorly maintained vegetation, and signs.

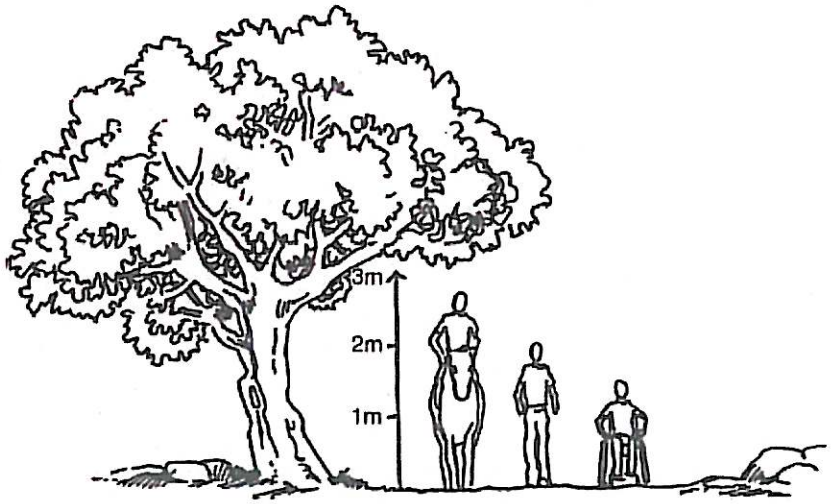


Figure 14-12. Overhead branches should be maintained to a height which is sufficient for all expected users of a shared-use path.

People with vision impairments who use guide dogs for navigation are able to avoid obstacles in the pathway up to 2.030 m (80 in). Objects that protrude into a shared-use path but are higher than 2.030 m (80 in) tend to go unnoticed because most pedestrians require less than2.030 m (80 in) of headroom. People with vision impairments who use long white canes to navigate can easily detect objects on the shared-use path that are below 685 mm (27 in). However, objects that protrude into the pathway between 685 mm (27 in) and 2.030 m (80 in) are more difficult because the cane will not always come in contact with the object before the pedestrian comes in contact with the object.

Ideally, objects should not protrude into any portion of the clear tread width of a shared-use path. If an object must protrude into the travel space, it should not extend more than 101 mm (4 in). Furthermore, a vertical clearance of 2.44 (8 ft) should be provided rather than the 2.030 m (80 in) needed for pedestrians, to accommodate other shared-use path users, such as bicyclists. On shared-use paths where there is the potential for emergency or maintenance vehicles to gain access to areas, it may be necessary to increase the vertical clearance. In addition, when an underpass such as a tunnel is used, 3.05 m (10 ft) of vertical clearance is recommended (Section 16.4).

☐ Yes ☐ No ☐ NA ☐ Comment

Check

14.7 Railings

Low forms of edge protection, such as curbs, are not recommended on shared use paths because of the negative impact they have on bicyclists. If edge protection is needed, it should take the form of a railing. The minimum railing height on a shared-use path should be 1.065 m (42 in). In some situations, it may also be beneficial to provide a gripping surface for pedestrian use in addition to the protective railing. If a handrail is included as part of the railing design, it should meet the specifications in ADAAG 4.26.

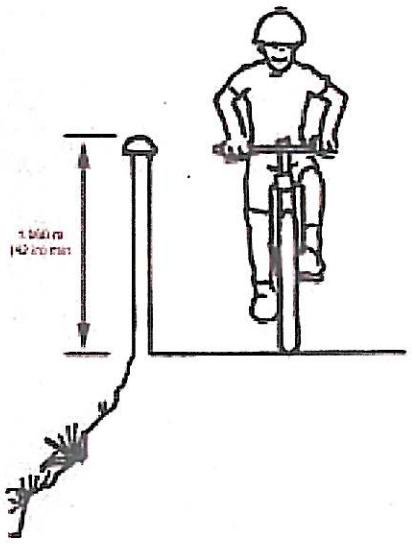


Figure 14-13. Railings on shared use paths should be at least 1.065 m (42 in) high to prevent bicycle riders from flipping over the top. AVOID protrusions at handlebar height.

☐ Yes ☐ No ☐ NA ☐ Comment

14.8 Signs

Signs that clearly describe the shared use path conditions are an essential component to enhance pedestrian access. Signs should be provided in an easy to understand format with limited text and graphics that are understood by all users. Providing accurate, objective information about actual shared-use path conditions will allow people to assess their own interests, experience, and skills in order to determine whether a particular shared-use path is appropriate or provides access to them with their assistive devices. Providing information about the condition of the shared-use path to users is strongly recommended for the following reasons:

- Users are less likely to find themselves in unsafe situations if they understand the demands of the shared-use path before beginning;
- Frustration is reduced and people are less likely to have to turn around on a shared-use path because they can identify impassible situations, such as steep grades, before they begin;
- Users can select shared-use paths that meet their skill level and desired experience;
- The level of satisfaction increases because the user is able to select a shared-use path that meets his or her expectations; and
- If more difficult conditions will be encountered, users can prepare for the skill level and equipment required.

Objective information about the shared-use path conditions (e.g., grade, cross slope, surface, width, obstacles) is preferable to subjective difficulty ratings (e.g., easier, most difficult). Because subjective ratings of difficulty typically represent the perceptions of the person making the assessment, the ratings cannot be accurate or appropriate for the range of shared-use path users. Individuals with respiratory or heart conditions, as well as individuals with mobility impairments, are more likely to have different interpretations of shared-use path difficulty than other users.

A variety of information formats may be used to convey objective shared-use path information. The type of format should conform to the policy of the management agency. Written information should

also be provided in alternative formats, such as Braille, large print, or an audible format. For example, the text of a shared-use trailhead sign can also be made available on audiocassette or using a digital voice recorder. In addition, simplified text and reliance on universal graphic symbols will provide information to individuals with limited reading abilities.

The type and extent of the information provided will vary depending on the shared-use path, environmental conditions, and expected users. It is recommended that the following information be objectively measured and conveyed to the user through appropriate information formats:

- Shared-use path name;

☐ Yes ☐ No ☐ NA ☐ Comment

- Permitted users;

☐ Yes ☐ No ☐ NA ☐ Comment

- Path length;

☐ Yes ☐ No ☐ NA ☐ Comment

- Change in elevation over the total length and maximum elevation obtained;

☐ Yes ☐ No ☐ NA ☐ Comment

- Average running grade and maximum grades that will be encountered;

☐ Yes ☐ No ☐ NA ☐ Comment

- Average and maximum cross slopes;

☐ Yes ☐ No ☐ NA ☐ Comment

- Average tread width and minimum clear width;

☐ Yes ☐ No ☐ NA ☐ Comment

- Type of surface; and

☐ Yes ☐ No ☐ NA ☐ Comment

- Firmness, stability, and slip resistance of surface.

☐ Yes ☐ No ☐ NA ☐ Comment

Attachment J: Information Bulletin 510 Public Project Assessment

THE CITY OF SAN DIEGO

Public Project Assessment

CITY OF SAN DIEGO DEVELOPMENT SERVICES
1222 FIRST AVENUE, MS 302, SAN DIEGO, CA 92101-4101
CALL (619) 446-5300 FOR APPOINTMENTS AND (619) 446-5000 FOR INFORMATION

INFORMATION BULLETIN
510
MARCH 2008

This bulletin provides the procedures and requirements for the assessment of "public projects" and will identify required discretionary permits, approval processes and make an environmental determination of the project. A "public project" is typically defined as a project originated by a City department or lessee for a project located on City-owned property, but also includes other public agencies (e.g., Metropolitan Transit Development Board (MTDB), San Diego Gas and Electric (SDG&E), Housing Commission, etc.).

If a discretionary permit is needed, do not complete the attached application. Instead, complete and submit the appropriate application as identified in the Public Project Submittal Requirements for Development Permit/Approvals. If you are not sure the project needs a discretionary permit or an environmental determination please fill out the "Public Project Assessment Application (DS-510)."

The assessment process should begin in conjunction with the preparation of the projects budget/schedule. If you have questions or would like more information regarding the Public Project Assessment process please call (619) 446-5000 in the Project Management Division.

I. THE PROCESS

The purpose of the public project assessment process is for the Development Services Department (DSD) staff to identify the required California Environmental Quality Act (CEQA) document (Exemption, Negative Declaration, Mitigated Negative Declaration, or an Environmental Impact Report) and identify if any discretionary permits are required. Typical discretionary permits, if required, may include a Site Development Permit, Coastal Development Permit, etc. The requirements for a discretionary permit are based upon the regulations set forth in the Land Development Code (Chapters 10-15). The environmental determination is based upon the CEQA. A Development Project Manager (DPM) from DSD will be assigned to your project after a complete public project assessment application is submitted. The submittal information you provide will be distributed to the appropriate reviewing disciplines. When the review is completed, the DPM will send an Assessment Letter to the contact person identified on the application.

Documents referenced in this Information Bulletin

- Land Development Code
- Information Bulletin 401, Overview of the state of California and Federal Environmental Review Process
- Public Project Assessment Application (DS-510)
- Storm Water Requirements Applicability Checklist (DS-560).
- General Application (DS-3032)

The letter will include an Issues Report, detailing issues from each of the disciplines and will identify if a discretionary permit(s) or if CEQA review is required.

Some public projects may not require a discretionary permit, but are still subject to CEQA. For example, a CEQA document is required for the City Council to release funding. If a CEQA document is needed or a discretionary permit is required the next step in the process will be identified in the Assessment Letter. The letter will also include the requirements for the next submittal and any additional information or studies needed. If a discretionary permit is required, a copy of the Public Project Submittal Requirements for Development Permit/Approvals will be included with the letter which describes how to complete an application for a discretionary permit.

II. SUBMITTAL REQUIREMENTS

City staff relies upon the information provided by the applicant when assessing the project. Please submit the "Public Project Assessment Application (DS-510)" Include a complete project description and conceptual plans as outlined in the attached submittal requirements. Please do not submit final construction drawings, the plans should be submitted in the conceptual stage.

III. HOW TO SUBMIT THE PROJECT

To schedule an appointment to submit a Public Project Assessment Application, please call (619) 446-5300. Submittals are made at the Development Services Center (1222 First Avenue, 3rd Floor), first stop at the Check-In Counter across from the 3rd floor entrance, sign-in for the ap-

pointment, staff will then direct you to the correct service location.

IV. PAYMENT

Both Development Services Department (DSD) and City Planning and Community Investment (CPCI) staff will review your project proposal. Each project must have one billable job order account number that is opened to both DSD No. 1300 and CPCI No. 065. You are responsible for ensuring that the project job order account is opened to these department numbers prior to your submittal appointment, if they are not open you will not be able to submit. If a billable job order account number cannot be opened, then a deposit account with an initial deposit of $4,000 will be required, along with a $10 mapping fee at the time of submittal. Additional deposits may be required for the environmental review when an environmental determination is made.

If you will be using a deposit account you must also fill out a General Application (DS-3032). For item 1, Approval Type, check "other" and fill in PPA on the blank line. Also, complete items 2, 9 and 11. Leave the other items blank.

V. INFORMATION RESOURCES

Information regarding the Land Development Code and zoning can be located on the following web sites: www.sandiego.gov/development-services or www.sangis.org. You may also visit the Development and Permit Information area located on the 3rd Floor, Development Services Center, 1222 First Avenue, San Diego CA, 92101-4155. To schedule appointments with Development and Permit Information staff to get information on zoning or the Land Development Code please call, (619) 446-5300.

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

THE CITY OF SAN DIEGO

Public Project Assessment Application

FORM DS-510
OCTOBER 2007

Project Tracking Number (PTS)	Job Order No.	Date Received

A. SUBMITTAL REQUIREMENTS

1. Plans/drawings of the proposed project (folded to 8 1/2" x 11") (5 sets)
2. Public Project Assessment Application (DS-510) (5 copies)
3. Copy JOB 2X Screen
4. Cover Memo/Letter describing the project (5 copies)
5. Location Map
6. Photo Survey or Orthophotographic Map with key (5 copies)
7. Completed Stormwater Requirements Applicability Checklist Form (DS-560). If required, provide the Best Management Practices (BMP) or Water Quality Technical Report in accordance with the checklist (does not apply to administrative projects)
8. General Application (DS-3032) if using deposit account

B. APPLICANT INFORMATION

Contact Name:	Title:
Department/Organization:	Mail Station:
Address:	
Phone No.:	FAX No:
Internet Address:	

C. PROJECT INFORMATION

Project Name:
Job Order Numbers (open to Dept. Nos. 1300 and 065):
Existing Use(s):
Location (street address or hundred block. If a large area, give general description, such as, east of, south of, etc.):
Council District(s):
Community Plan Names(s):
Assessor Parcel Number(s):

Zoning:	Overlays:

D. GENERAL

Is a National Environmental Policy Act (NEPA) review required?	❑ Yes ❑ No
Located within or adjacent to City open space?	❑ Yes ❑ No
Located within or adjacent to Multi-Habitat Planning Area (MHPA)?	❑ Yes ❑ No
Does the project include a Revegetation Plan?	❑ Yes ❑ No
Does this proposal impact City owned property? If yes, identify Department(s) _____	❑ Yes ❑ No
Is this proposal within the public right-of-way?	❑ Yes ❑ No
Does the project include an off-street staging area?	❑ Yes ❑ No
Does the project include a maintenance access path/road?	❑ Yes ❑ No

E. PRIOR APPROVAL(S)/REVIEW(S)

Has a California Environmental Quality Act (CEQA) review (Exemption, Mitigated Negative Declaration, etc.) or a development permit (Site Development Permit, Coastal Development Permit, etc.) been previously approved for this proposal?

Public Project Assessment? Project No. _____	❑ Yes ❑ No
NEPA/CEQA review? If yes, attach copy(ies)	❑ Yes ❑ No
Discretionary Permit(s)? If yes, attach copy(ies)	❑ Yes ❑ No

F. ENVIRONMENTALLY SENSITIVE LANDS

Does the project site contain or is it adjacent to any site that contains any of the following, Environmentally Sensitive Lands as identified in Municipal Code Section 113.0103?

Sensitive Biological Resources	❑ Yes ❑ No	Sensitive Coastal Bluffs	❑ Yes ❑ No
Steep Hillside	❑ Yes ❑ No	100-Year Flood Plain	❑ Yes ❑ No

G. HISTORICAL RESOURCES

Is your structure(s) a designated resource?	❑ Yes ❑ No
If yes, what is the Historic Resource Board (HRB) No. _____	
Are you proposing to demolish or alter the exterior of an existing structure that is 45 years or older?	❑ Yes ❑ No
Is the site identified on the Historical Resource Sensitivity Map for Archaeology?	❑ Yes ❑ No

H. GRADING

Are you proposing to grade the site?	❑ Yes ❑ No
Import (cubic yards) _____	❑ Yes ❑ No
Export (cubic yards) _____	❑ Yes ❑ No
Grading area (percentage of site) _____	❑ Yes ❑ No

I. FUNDING

Federal funding? Identify Source: _____	❑ Yes ❑ No
State funding? Identify Source: _____	❑ Yes ❑ No
City funding? Identify Source: _____	❑ Yes ❑ No

Decision maker: ❑ City Council ❑ Mayor ❑ Other

Anticipated Public Hearing Date? _____

J. PIPELINE PROJECTS

Trenching Alignment? ❑ New ❑ Replace-In-Place ❑ Trenchless

Pipeline/Trench Depth:

Existing
Depth: _____ feet
Length: _____ feet
Width: _____ feet

Proposed
Depth: _____ feet
Length: _____ feet
Width: _____ feet

Abandonment
Length: _____ feet

New or modified structure(s)? ❑ Yes ❑ No

If yes, identify, type of structure/use: _____

New or modified service, maintenance access roads or staging areas? ❑ Yes ❑ No

If yes, identify _____

K. CITY REAL ESTATE ACTIVITIES

Are any real estate actions (new lease, amended lease, property sale, right of entry permit, vacations, easements, dedications, etc.)? If yes, identify _____ ❑ Yes ❑ No

_____

Contact in Real Estate Assets Department:

Name: _____

MS: _____

Phone No. _____

L. AIRPORTS

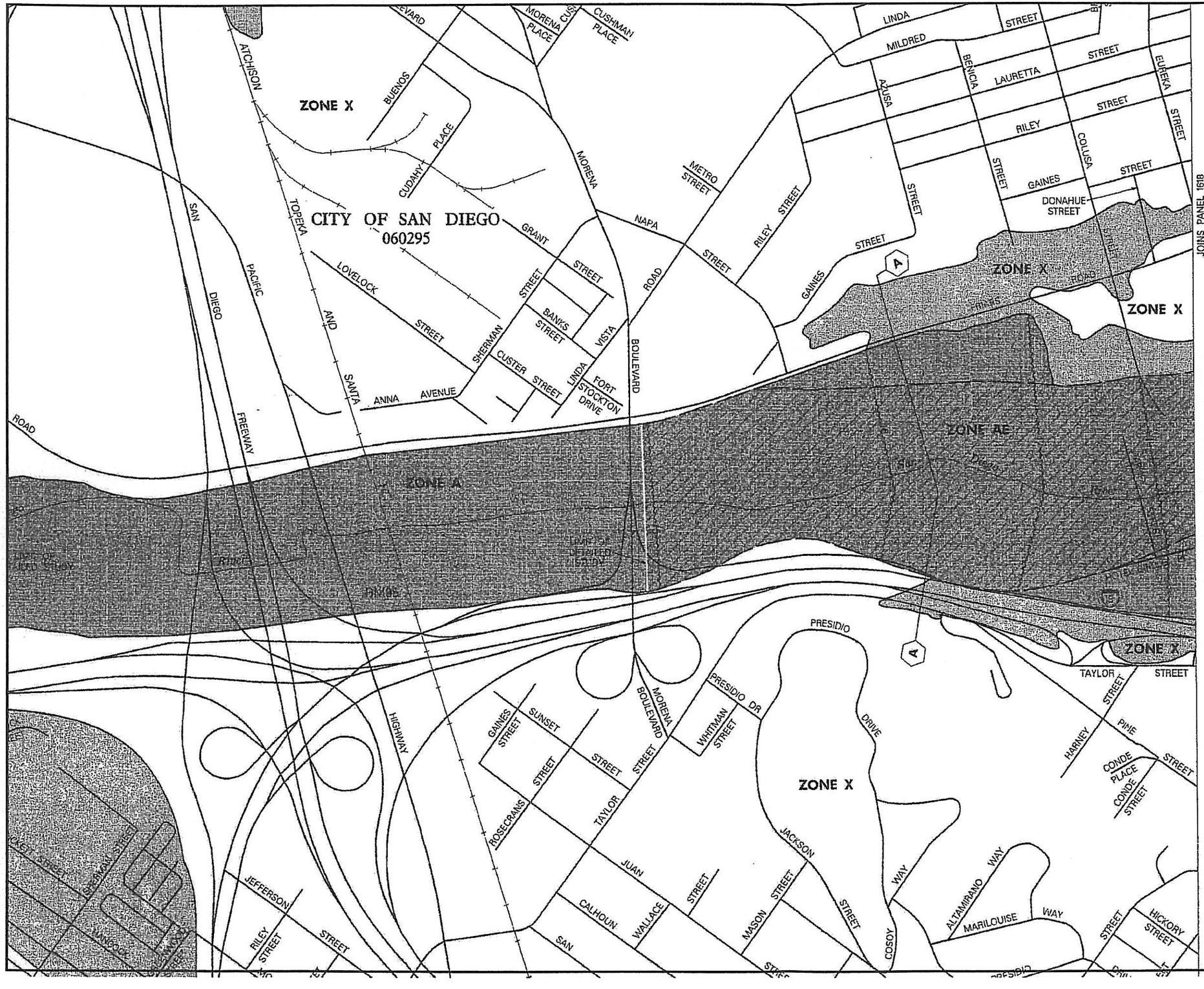
Airport Influence Area (AIA) ❑ Yes ❑ No

FAA Part 77 Notification Area ❑ Yes ❑ No

Applies to above ground structures

(If yes, see Information Bulletin 520, Federal Aviation Administration Notification and Evaluation Process)

Attachment K: FEMA FIRM Map



NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

SAN DIEGO COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 1614 OF 2375

(SEE MAP INDEX FOR PANELS NOT PRINTED)

CONTAINS: COMMUNITY	NUMBER	PANEL	SUFFIX
SAN DIEGO, CITY OF	060295	1614	F

MAP NUMBER
06073C1614 F

EFFECTIVE DATE:
JUNE 19, 1997

Federal Emergency Management Agency

Attachment L: Existing ROW


CITY OF SAN DIEGO
CITY OF SAN DIEGO
CITY OF SAN DIEGO
CITY OF SAN DIEGO
CITY OF SAN DIEGO
CITY OF SAN DIEGO
CITY OF SAN DIEGO
CITY OF SAN DIEGO
CITY OF SAN DIEGO
WAITE SURVIVOR8 TRUST
DAVIS BRYNMOR E&SUE A
WILLIAMS WAYNE T&IRINA
BALIKIAN PAUL&NELIDA M
MCBRIDE ROBERT&PENNY
San Diego
Metropolitan
Dev Board
N
No scale

Attachment M: 2008 Crime Reports

Crime MAPS Incident Report

Sorted By: Date ascending, Time ascending

#	Incident	100 Block Address	Day	Date	Time
1	Theft	5500 FRIARS RD	Sunday	10/19/2008	6:00 PM
2	Aggravated Assault (non-DV)	5300 NAPA ST	Monday	10/20/2008	11:00 PM
3	Theft	900 MORENA BL	Wednesday	10/22/2008	4:45 PM
4	Vehicle Break-in	4400 TAYLOR ST	Monday	10/27/2008	2:00 PM
5	Theft	5300 NAPA ST	Tuesday	10/28/2008	5:00 PM
6	Vehicle Break-in	5400 NAPA ST	Tuesday	10/28/2008	7:00 PM
7	Theft	5500 GAINES ST	Saturday	11/01/2008	2:45 PM
8	Narcotics	5600 MILDRED ST	Tuesday	11/04/2008	6:50 PM
9	Aggravated Assault (non-DV)	800 MORENA BL	Wednesday	11/05/2008	2:20 PM
10	Malicious Mischief/Vandalism	I-8 WB / MORENA BL	Wednesday	11/05/2008	2:20 PM
11	Drunk in Public	5100 LINDA VISTA RD	Tuesday	11/11/2008	6:56 PM
12	Narcotics	2400 HOTEL CIRCLE PL	Wednesday	11/12/2008	10:41 PM
13	Vehicle Theft	5200 LINDA VISTA RD	Tuesday	11/18/2008	09:00 AM
14	Theft	5500 FRIARS RD	Tuesday	11/18/2008	09:15 AM
15	Vehicle Break-in	1100 EUREKA ST	Thursday	11/20/2008	02:20 AM
16	Residential Burglary	5500 LINDA VISTA RD	Thursday	11/20/2008	6:00 PM
17	Vehicle Break-in	5400 LAURETTA ST	Thursday	11/20/2008	9:00 PM
18	Vehicle Theft	900 MORENA BL	Sunday	11/23/2008	03:00 AM
19	Vehicle Break-in	5400 NAPA ST	Monday	11/24/2008	2:00 PM
20	Commercial Burglary	5400 LINDA VISTA RD	Tuesday	11/25/2008	5:00 PM
21	Vehicle Break-in	5500 FRIARS RD	Wednesday	11/26/2008	3:55 PM
22	Theft	2400 HOTEL CIRCLE PL	Monday	12/08/2008	3:00 PM
23	Theft	5100 LINDA VISTA RD	Tuesday	12/09/2008	09:25 AM
24	Commercial Burglary	900 SHERMAN ST	Wednesday	12/10/2008	09:00 AM
25	Vehicle Break-in	1200 EUREKA ST	Thursday	12/11/2008	8:08 PM
26	Vehicle Theft	5400 MARIAN WY	Saturday	12/13/2008	08:00 AM
27	Vehicle Break-in	5400 NAPA ST	Tuesday	12/16/2008	07:00 AM
28	Theft	5400 GAINES ST	Tuesday	12/16/2008	11:45 AM
29	Commercial Burglary	900 SHERMAN ST	Wednesday	12/17/2008	12:00 PM
30	Commercial Burglary	5300 METRO ST	Thursday	12/18/2008	10:25 PM
31	Vehicle Theft	5600 FRIARS RD	Sunday	12/21/2008	4:00 PM
32	Narcotics	5300 NAPA ST	Thursday	12/25/2008	10:00 PM
33	Deadly Weapons	700 MORENA BL	Saturday	12/27/2008	12:57 AM
34	Narcotics	5300 FRIARS RD	Saturday	12/27/2008	11:30 AM
35	Narcotics	5000 FRIARS RD	Tuesday	12/30/2008	09:00 AM
36	Vehicle Break-in	5500 MILDRED ST	Tuesday	12/30/2008	9:00 PM
37	Vehicle Break-in	5500 MILDRED ST	Tuesday	12/30/2008	11:00 PM
38	Vehicle Break-in	5500 MILDRED ST	Wednesday	12/31/2008	05:45 AM
39	Aggravated Assault (non-DV)	5200 GAINES ST	Thursday	01/01/2009	12:50 AM
40	Malicious Mischief/Vandalism	5100 LINDA VISTA RD	Saturday	01/03/2009	06:00 AM
41	Vehicle Break-in	2400 HOTEL CIRCLE PL	Saturday	01/03/2009	8:30 PM
42	Narcotics	5000 FRIARS RD	Tuesday	01/06/2009	12:02 PM
43	Theft	5400 GAINES ST	Sunday	01/11/2009	10:30 AM
44	Narcotics	5400 NAPA ST	Thursday	01/15/2009	9:27 PM

Crime MAPS Incident Report

Sorted By: Date ascending, Time ascending

#	Incident	100 Block Address	Day	Date	Time
1	Theft	900 SHERMAN ST	Saturday	07/19/2008	4:15 PM
2	Drunk in Public	5400 LINDA VISTA RD	Friday	07/25/2008	4:36 PM
3	Theft	5600 FRIARS RD	Saturday	07/26/2008	5:00 PM
4	Narcotics	5400 LINDA VISTA RD	Monday	07/28/2008	11:30 AM
5	Theft	5700 LAURETTA ST	Wednesday	07/30/2008	8:00 PM
6	Theft	5700 LAURETTA ST	Wednesday	07/30/2008	10:30 PM
7	Narcotics	5000 FRIARS RD	Friday	08/01/2008	10:30 AM
8	Narcotics	5200 LINDA VISTA RD	Friday	08/01/2008	10:49 PM
9	Deadly Weapons	5200 GAINES ST	Sunday	08/03/2008	7:00 PM
10	Vehicle Break-in	2500 HOTEL CIRCLE PL	Tuesday	08/05/2008	03:00 AM
11	Theft	5200 GAINES ST	Tuesday	08/05/2008	07:00 AM
12	Vehicle Break-in	2400 HOTEL CIRCLE PL	Saturday	08/09/2008	06:00 AM
13	Vehicle Break-in	1100 EUREKA ST	Monday	08/11/2008	11:00 AM
14	Simple Assault (non-DV)	5700 FRIARS RD	Tuesday	08/12/2008	07:00 AM
15	Theft	5200 LINDA VISTA RD	Friday	08/15/2008	11:30 AM
16	Theft	5300 NAPA ST	Sunday	08/17/2008	09:00 AM
17	Theft	5500 FRIARS RD	Sunday	08/17/2008	5:45 PM
18	Robbery	2400 HOTEL CIRCLE PL	Tuesday	08/19/2008	01:00 AM
19	Theft	5400 NAPA ST	Tuesday	08/19/2008	2:00 PM
20	Narcotics	5200 GAINES ST	Thursday	08/21/2008	1:27 PM
21	Drunk in Public	5100 LINDA VISTA RD	Thursday	08/21/2008	6:15 PM
22	Drunk in Public	5700 FRIARS RD	Sunday	08/24/2008	01:30 AM
23	Theft	5300 CUSTER ST	Friday	08/29/2008	4:00 PM
24	Residential Burglary	1000 DONAHUE ST	Friday	08/29/2008	5:00 PM
25	Deadly Weapons	5500 FRIARS RD	Saturday	08/30/2008	08:35 AM
26	Simple Assault (non-DV)	5500 FRIARS RD	Sunday	08/31/2008	9:25 PM
27	Theft	5200 LINDA VISTA RD	Tuesday	09/02/2008	09:00 AM
28	Theft	5400 LAURETTA ST	Tuesday	09/02/2008	10:30 PM
29	Vehicle Theft	2400 HOTEL CIRCLE PL	Thursday	09/04/2008	5:00 PM
30	Vehicle Break-in	2400 HOTEL CIRCLE PL	Saturday	09/06/2008	3:30 PM
31	Drunk in Public	5300 RILEY ST	Saturday	09/06/2008	9:59 PM
32	Narcotics	5400 MARIAN WY	Sunday	09/07/2008	12:48 AM
33	Narcotics	2400 HOTEL CIRCLE PL	Monday	09/08/2008	3:50 PM
34	Commercial Burglary	900 SHERMAN ST	Saturday	09/13/2008	10:00 AM
35	Vehicle Theft	5500 MILDRED ST	Tuesday	09/16/2008	02:30 AM
36	Theft	1100 COLUSA ST	Tuesday	09/16/2008	07:00 AM
37	Vehicle Theft	900 SHERMAN ST	Thursday	09/18/2008	12:01 AM
38	Theft	5300 NAPA ST	Friday	09/19/2008	6:00 PM
39	Narcotics	5700 LAURETTA ST	Friday	09/19/2008	8:24 PM
40	Vehicle Break-in	5400 LAURETTA ST	Friday	09/19/2008	11:55 PM
41	Vehicle Break-in	5500 FRIARS RD	Monday	09/22/2008	1:00 PM
42	Narcotics	600 MORENA BL	Wednesday	09/24/2008	7:45 PM
43	Theft	5200 GAINES ST	Saturday	09/27/2008	4:00 PM
44	Simple Assault (non-DV)	5700 FRIARS RD	Sunday	09/28/2008	4:00 PM
45	Vehicle Theft	5600 RILEY ST	Tuesday	09/30/2008	02:00 AM
46	Commercial Burglary	900 SHERMAN ST	Wednesday	10/08/2008	12:00 PM
47	Malicious Mischief/Vandalism	2400 HOTEL CIRCLE PL	Wednesday	10/08/2008	11:00 PM
48	Robbery	5300 NAPA ST	Sunday	10/12/2008	01:23 AM
49	Vehicle Theft	5400 MARIAN WY	Monday	10/13/2008	12:01 AM
50	Commercial Burglary	900 SHERMAN ST	Monday	10/13/2008	9:00 PM

Crime MAPS Incident Report

Sorted By: Date ascending, Time ascending

#	Incident	100 Block Address	Day	Date	Time
1	Vehicle Break-in	5300 FRIARS RD	Thursday	04/17/2008	12:00 PM
2	Vehicle Break-in	5400 NAPA ST	Thursday	04/17/2008	12:00 PM
3	Vehicle Break-in	5400 NAPA ST	Thursday	04/17/2008	1:00 PM
4	Theft	5600 MILDRED ST	Saturday	04/19/2008	2:30 PM
5	Narcotics	1000 SHERMAN ST	Sunday	04/20/2008	02:00 AM
6	Vehicle Break-in	2400 HOTEL CIRCLE PL	Wednesday	04/23/2008	6:00 PM
7	Vehicle Break-in	5400 LINDA VISTA RD	Thursday	04/24/2008	12:01 AM
8	Vehicle Theft	5600 MILDRED ST	Thursday	04/24/2008	11:00 PM
9	Vehicle Break-in	2400 HOTEL CIRCLE PL	Friday	04/25/2008	9:00 PM
10	Vehicle Break-in	2400 HOTEL CIRCLE PL	Friday	04/25/2008	10:00 PM
11	Theft	5400 MARIAN WY	Saturday	04/26/2008	04:00 AM
12	Vehicle Break-in	1100 EUREKA ST	Saturday	04/26/2008	12:00 PM
13	Malicious Mischief/Vandalism	5500 MILDRED ST	Monday	04/28/2008	9:55 PM
14	Vehicle Theft	5300 NAPA ST	Wednesday	04/30/2008	08:00 AM
15	Vehicle Theft	5500 LAURETTA ST	Saturday	05/03/2008	10:00 AM
16	Robbery	5100 LINDA VISTA RD	Saturday	05/03/2008	11:40 PM
17	Narcotics	5300 NAPA ST	Sunday	05/04/2008	03:07 AM
18	Vehicle Break-in	5600 LAURETTA ST	Monday	05/05/2008	6:00 PM
19	Vehicle Break-in	5500 LAURETTA ST	Monday	05/05/2008	8:00 PM
20	Vehicle Break-in	1200 BENICIA ST	Monday	05/05/2008	10:30 PM
21	Vehicle Break-in	5400 LAURETTA ST	Monday	05/05/2008	11:00 PM
22	Vehicle Break-in	5600 FRIARS RD	Tuesday	05/06/2008	01:00 AM
23	Malicious Mischief/Vandalism	5600 LAURETTA ST	Tuesday	05/06/2008	01:00 AM
24	Theft	5600 FRIARS RD	Tuesday	05/06/2008	6:00 PM
25	Vehicle Break-in	5700 FRIARS RD	Wednesday	05/07/2008	03:30 AM
26	Vehicle Theft	900 SHERMAN ST	Thursday	05/08/2008	09:50 AM
27	Vehicle Theft	2400 HOTEL CIRCLE PL	Friday	05/09/2008	1:00 PM
28	Drunk in Public	5400 NAPA ST	Friday	05/09/2008	11:49 PM
29	Theft	4400 TAYLOR ST	Tuesday	05/13/2008	3:30 PM
30	Commercial Burglary	5200 LINDA VISTA RD	Tuesday	05/13/2008	11:30 PM
31	Narcotics	600 MORENA BL	Friday	05/16/2008	7:00 PM
32	Vehicle Break-in	5500 FRIARS RD	Saturday	05/17/2008	5:30 PM
33	Drunk in Public	5100 LINDA VISTA RD	Sunday	05/18/2008	9:30 PM
34	Vehicle Break-in	5500 FRIARS RD	Monday	05/19/2008	09:00 AM
35	Commercial Burglary	1000 SHERMAN ST	Thursday	05/22/2008	2:00 PM
36	Theft	5300 NAPA ST	Friday	05/23/2008	5:03 PM
37	Robbery	5300 METRO ST	Tuesday	05/27/2008	01:45 AM
38	Malicious Mischief/Vandalism	5400 LAURETTA ST	Thursday	05/29/2008	10:00 PM
39	Commercial Burglary	5300 BANKS ST	Friday	05/30/2008	3:30 PM
40	Vehicle Theft	5500 FRIARS RD	Saturday	05/31/2008	6:45 PM
41	Residential Burglary	5700 RILEY ST	Friday	06/06/2008	10:00 AM
42	Vehicle Theft	5700 RILEY ST	Friday	06/06/2008	10:00 AM
43	Vehicle Break-in	5500 FRIARS RD	Friday	06/06/2008	1:00 PM
44	Deadly Weapons	5100 LINDA VISTA RD	Friday	06/06/2008	10:40 PM
45	Theft	5100 LINDA VISTA RD	Thursday	06/12/2008	10:36 PM
46	Theft	5400 LINDA VISTA RD	Friday	06/13/2008	5:00 PM
47	Vehicle Theft	5500 LAURETTA ST	Saturday	06/14/2008	4:00 PM
48	Malicious Mischief/Vandalism	5500 MILDRED ST	Friday	06/20/2008	3:00 PM
49	Vehicle Break-in	5700 FRIARS RD	Monday	06/23/2008	6:00 PM
50	Vehicle Break-in	5500 FRIARS RD	Friday	06/27/2008	12:15 PM

Crime MAPS Incident Report

Sorted By: Date ascending, Time ascending

#	Incident	100 Block Address	Day	Date	Time
51	Commercial Burglary	900 SHERMAN ST	Saturday	06/28/2008	12:01 AM
52	Vehicle Break-in	1200 COLUSA ST	Saturday	06/28/2008	3:30 PM
53	Vehicle Theft	900 SHERMAN ST	Monday	06/30/2008	06:30 AM
54	Theft	5500 FRIARS RD	Monday	06/30/2008	8:30 PM
55	Theft	5100 LINDA VISTA RD	Wednesday	07/02/2008	4:15 PM
56	Vehicle Break-in	900 SHERMAN ST	Tuesday	07/08/2008	7:00 PM
57	Vehicle Break-in	5500 FRIARS RD	Wednesday	07/09/2008	08:35 AM
58	Vehicle Break-in	2400 HOTEL CIRCLE PL	Sunday	07/13/2008	10:30 PM
59	Narcotics	5200 GAINES ST	Wednesday	07/16/2008	12:35 PM
60	Vehicle Break-in	1200 COLUSA ST	Wednesday	07/16/2008	9:45 PM
61	Theft	2400 HOTEL CIRCLE PL	Thursday	07/17/2008	07:00 AM

Crime MAPS Incident Report

Sorted By: Date ascending, Time ascending

#	Incident	100 Block Address	Day	Date	Time
1	Drunk in Public	5200 FRIARS RD	Sunday	01/20/2008	10:30 PM
2	Vehicle Theft	5400 MILDRED ST	Monday	01/21/2008	11:00 PM
3	Theft	5500 FRIARS RD	Wednesday	01/23/2008	6:30 PM
4	Vehicle Theft	2400 HOTEL CIRCLE PL	Friday	01/25/2008	6:00 PM
5	Malicious Mischief/Vandalism	5400 LINDA VISTA RD	Monday	01/28/2008	5:13 PM
6	Vehicle Theft	2400 HOTEL CIRCLE PL	Sunday	02/03/2008	12:01 AM
7	Vehicle Break-in	5500 FRIARS RD	Monday	02/11/2008	4:55 PM
8	Vehicle Theft	5400 MARIAN WY	Thursday	02/14/2008	12:30 PM
9	Robbery	5300 NAPA ST	Thursday	02/14/2008	8:45 PM
10	Theft	900 MORENA BL	Saturday	02/16/2008	7:30 PM
11	Malicious Mischief/Vandalism	5100 LINDA VISTA RD	Sunday	02/17/2008	01:45 AM
12	Simple Assault (non-DV)	5100 LINDA VISTA RD	Sunday	02/17/2008	01:50 AM
13	Vehicle Break-in	5500 FRIARS RD	Monday	02/18/2008	09:00 AM
14	Vehicle Break-in	5500 FRIARS RD	Thursday	02/21/2008	6:30 PM
15	Homicide	5300 FRIARS RD	Friday	02/22/2008	8:13 PM
16	Narcotics	2400 HOTEL CIRCLE PL	Sunday	02/24/2008	08:15 AM
17	Malicious Mischief/Vandalism	5400 FRIARS RD	Monday	02/25/2008	2:15 PM
18	Malicious Mischief/Vandalism	5400 FRIARS RD	Monday	02/25/2008	2:20 PM
19	Narcotics	5300 NAPA ST	Sunday	03/02/2008	1:43 PM
20	Theft	5400 LAURETTA ST	Monday	03/10/2008	7:00 PM
21	Residential Burglary	2400 HOTEL CIRCLE PL	Tuesday	03/11/2008	1:00 PM
22	Robbery	2400 HOTEL CIRCLE PL	Wednesday	03/12/2008	8:30 PM
23	Residential Burglary	5700 LAURETTA ST	Saturday	03/15/2008	10:30 PM
24	Malicious Mischief/Vandalism	5700 LAURETTA ST	Sunday	03/16/2008	03:00 AM
25	Vehicle Break-in	2400 HOTEL CIRCLE PL	Sunday	03/16/2008	10:30 PM
26	Vehicle Theft	5300 NAPA ST	Monday	03/24/2008	11:00 PM
27	Vehicle Break-in	5400 LINDA VISTA RD	Tuesday	03/25/2008	6:00 PM
28	Vehicle Break-in	5400 NAPA ST	Wednesday	03/26/2008	10:00 AM
29	Theft	900 MORENA BL	Sunday	03/30/2008	5:45 PM
30	Vehicle Break-in	1200 COLUSA ST	Monday	03/31/2008	6:00 PM
31	Theft	5500 FRIARS RD	Wednesday	04/09/2008	5:30 PM
32	Vehicle Break-in	5500 FRIARS RD	Thursday	04/10/2008	5:30 PM
33	Theft	5500 FRIARS RD	Friday	04/11/2008	12:50 PM
34	Malicious Mischief/Vandalism	5300 NAPA ST	Friday	04/11/2008	2:00 PM
35	Theft	5700 FRIARS RD	Friday	04/11/2008	5:00 PM
36	Commercial Burglary	800 MORENA BL	Saturday	04/12/2008	01:15 AM
37	Vehicle Theft	5500 FRIARS RD	Monday	04/14/2008	1:20 PM

Attachment N: Sefton Field Improvement Plan

WINZLER & KELLY
CONSULTING ENGINEERS

LETTER OF TRANSMITTAL

ISSUING OFFICE:

- ☐ 633 THIRD STREET • EUREKA, CA 95501 • (707) 443-8326
- ☐ 495 TESCONI CIRCLE • SANTA ROSA, CA 95401 • (707) 523-1010
- ☐ 417 MONTGOMERY STREET, SUITE 600 • SAN FRANCISCO, CA 94104 • (415) 283-4970
- ☐ 4463 B STONERIDGE DRIVE, PLEASANTON, CA 94588 • (925) 846-0499
- ☐ 2984 TEAGARDEN STREET • SAN LEANDRO, CA 95477 • (510) 667-6440
- ☐ 3531 E. MIRALOMA AVENUE • ANAHEIM, CA 92806 • (714) 854-1890
- ☒ 4180 RUFFIN RD, SUITE 115 • SAN DIEGO, CA 92123 • (858) 244-0440
- ☐ 414 WEST SOLEDAD, SUITE 904 • HAGATNA, GUAM 96910 USA • (671) 472-6792
- ☐ DEL SOL BUILDING • PPP 596, BOX 10000 • SAIPAN, MP 96950 • (670) 234-0483

Date: 02/04/2009	Job No.:

Re: San Diego River Bike Connector Feasibility Study

TO: SAN DIEGO RIVER PARK FOUNDATION
4891 PACIFIC HIGHWAY, SUITE 114
SAN DIEGO, CA 92110

ATTN: ROBERT HUTSEL

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via ____ the following items:

☐ Shop Drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications

☐ Copies ☐ Change Order ☐ Original ☐ Contract

COPIES	DATE	DESCRIPTION
1	02/02/2009	Draft Preliminary Engineering Report for San Diego River Bike Connector Study

THESE ARE TRANSMITTED as checked below:

☐ For approval ☐ For your use ☒ For review and comment ☐ As requested

REMARKS:

Rob,

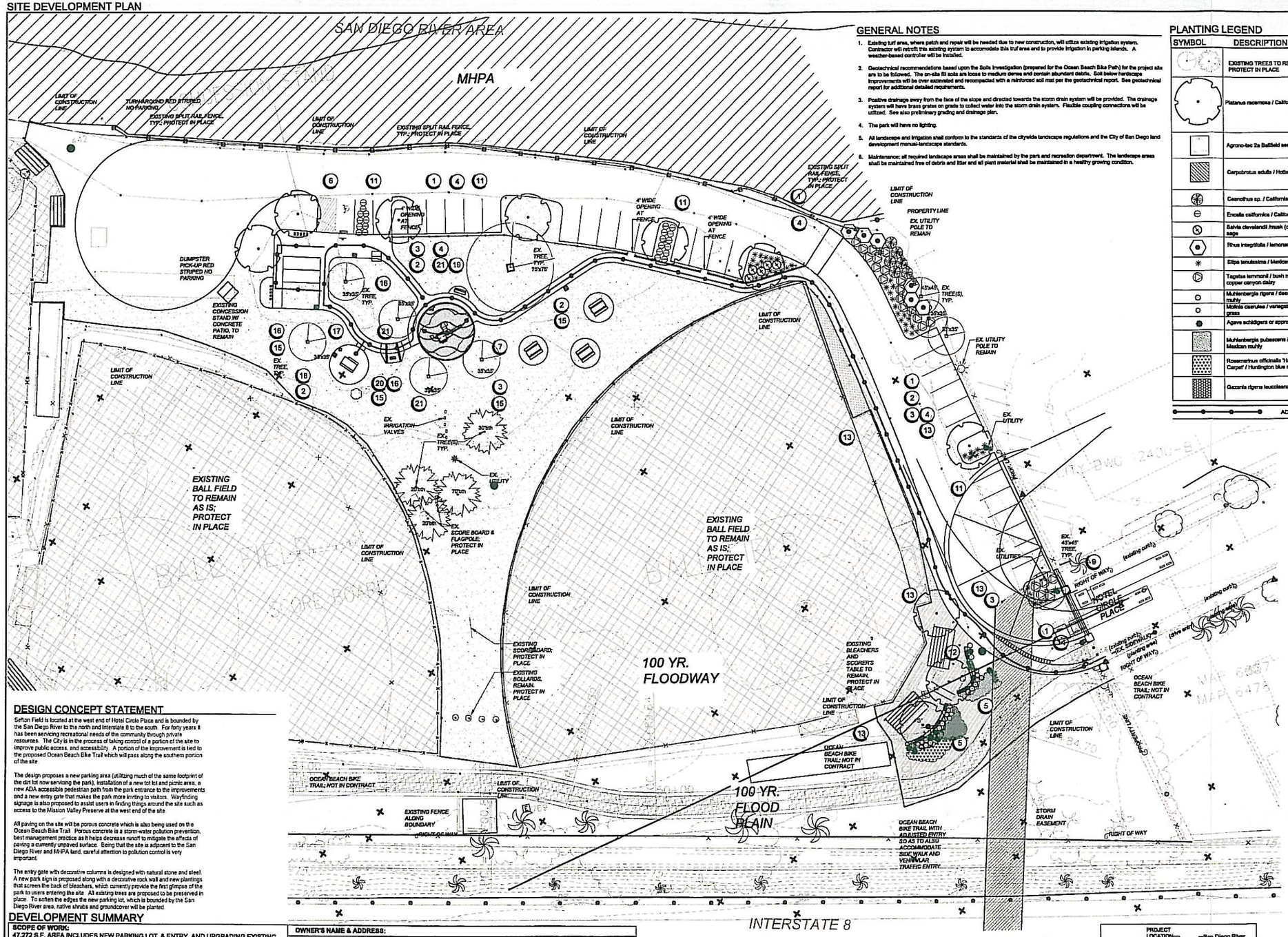
Please find the Attached Draft Report for your review and comment.

Thank you,

Ian Allegoren

COPY TO: _____ SIGNED: _____

SITE DEVELOPMENT PLAN



GENERAL NOTES

1. Existing turf area, where patch and repair will be needed due to new construction, will utilize existing irrigation system. Contractor will retrofit this existing system to accomodate this turf area and to provide irrigation in parking islands. A weather-based controller will be installed.
2. Geotechnical recommendations based upon the Soils Investigation (prepared for the Ocean Beach Bike Path) for the project site are to be followed. The on-site fill soils are loose to medium dense and contain abundant debris. Soil below hardscape improvements will be over excavated and recompacted with a reinforced soil mat per the geotechnical report. See geotechnical report for additional detailed requirements.
3. Positive drainage away from the face of the slope and directed towards the storm drain system will be provided. The drainage system will have brass grates on grade to collect water into the storm drain system. Flexible coupling connections will be utilized. See also preliminary grading and drainage plan.
4. The park will have no lighting.
5. All landscape and irrigation shall conform to the standards of the citywide landscape regulations and the City of San Diego land development manual-landscape standards.
6. Maintenance: all required landscape areas shall be maintained by the park and recreation department. The landscape areas shall be maintained free of debris and litter and all plant material shall be maintained in a healthy growing condition.

PLANTING LEGEND

SYMBOL	DESCRIPTION	QUANTITY	SIZE	HTXSP	FORM / FUNCTION
	EXISTING TREES TO REMAIN; PROTECT IN PLACE	14		(see plan)	TRIM SUCKERS AND LOW BRANCHES AND TO RE-ESTABLISH SHAPE.
	Platanus racemosa / California sycamore	8	100% 24" Box	50'x40'	CANOPY / SHADE; PARKING LOT
	Agrono-tec 2a Battlfield seed mix				PATCH AND REPAIR EXISTING TURF AREA DUE TO CONSTRUCTION.
	Carpobrotus edulis / Hottentot Fig		cuttings spaced 12" O.C.		PATCH AND REPAIR BARE SPOTS ALONG SMALL SLOPE OF EXISTING CAPOBROTUS EDULIS (HOTTENTOT FIG).
	Ceanothus sp. / California lilac	6	100% 5 gal.	6'x5'	med. shrub; native, color
	Encelia californica / California sunflower	10	100% 1 gal.	3'x3'	small shrub; native, color
	Salvia clevelandii /musk (or Cleveland) sage	5	100% 5 gal.	5'x5'	med. shrub; native, color
	Rhus integrifolia / lemonadeberry	6	100% 5 gal.	6'-8'x5'-8'	med. shrub; native
	Stipa tenuissima / Mexican feather grass	49	100% 1 gal.	3'x3'	ornamental grass
	Tagetes lemmonii / bush marigold or copper canyon daisy	22	100% 1 gal.	3-8'x3-6'	small shrub; color
	Muhlenbergia rigens / deer grass, muhly	18	100% 1 gal.	2'x3'	ornamental grass
	Molinia caerulea / variegated moor grass	22	100% 1 gal.	2'x2'	ornamental grass
	Agave schidigera or approved equal	10	100% 1 gal.	2'x2'	accent
	Muhlenbergia pulescens / soft blue Mexican muhly	125 S.F. @ 24" O.C.	100% 1 gal.	8'-12'	sm. ornamental grass groundcover, texture
	Rosemarinus officinalis 'Huntington Carpet' / Huntington blue rosemary	275 S.F. @ 24" O.C.	100% 1 gal.	18"-36"	groundcover
	Gazania rigens leucolaena / gazania	400 S.F. @ 18" O.C.	100% 1 gal.	8"-36"	groundcover, color

ACCESSIBLE ROUTE

DESCRIPTIVE LEGEND

NO.	SYMBOL	DESCRIPTION
1		6" POUROUS CONCRETE PAVING W/4" AGGREGATE BASE. COLOR: GRAY
2		4" POUROUS CONCRETE PAVING W/ 4" THICK AGGREGATE BASE. COLOR: GRAY
3		4' HT. SPLIT RAIL FENCE; TO MATCH EXISTING IN FORM AND COLOR
4		2X4 HEADER BOARD ON PAVING EDGE
5		42" HT X 18" WIDE ACCENT SCREEN WALL
6		DISABLED PARKING; ONE VAN ACCESSIBLE
7		2-5 TOT PLAY STRUCTURE ON RUBBERIZED RESILIENT SURFACING (THICKENED EDGE FOR SUPPORT). LANDSCAPE STRUCTURES, INC. OR APPROVED EQUAL. MODLE: TBD.
8		(NOT USED)
9		MANUALLY OPERATED, LOCKABLE ENTRY GATE W/ RED BEACH PEBBLE COLUMNS.
10		EXISTING TRASH DUMPSTER RELOCATED ON CONCRETE PAD PER PLAN
11		PARKING ISLAND W/ 12" CONCRETE STRIPS, TYPICAL
12		ENTRY SIGN / WAYFINDING
13		SITE SOIL MIXED W/ STABILIZER
14		2 BOLLARDS AT ENTRY
15		8' LONG PICNIC TABLES; ONE ADA ACCESSABLE ON CONCRETE PAD; 3 REGULAR
16		TRASH RECEPTACLE; COLOR GREY.
17		BAR-B-QUE GRILL
18		HOT ASH DISPENSER
19		8' LONG BENCH WITH BACK ON CONCRETE PAD
20		BIKE RACKS; MODLE D-BR-5 BIKELOCK THROUGH QUICKCRETE OR APPROVED EQUAL. 10 TOTAL
21		EXISTING PICNIC TABLES; RELOCATED AS SHOWN

DESIGN CONCEPT STATEMENT

Sefton Field is located at the west end of Hotel Circle Place and is bounded by the San Diego River to the north and Interstate 8 to the south. For forty years it has been servicing recreational needs of the community through private resources. The City is in the process of taking control of a portion of the site to improve public access, and accessibility. A portion of the improvement is tied to the proposed Ocean Beach Bike Trail which will pass along the southern portion of the site.

The design proposes a new parking area (utilizing much of the same footprint of the dirt lot now servicing the park), installation of a new tot lot and picnic area, a new ADA accessible pedestrian path from the park entrance to the improvements and a new entry gate that makes the park more inviting to visitors. Wayfinding signage is also proposed to assist users in finding things around the site such as access to the Mission Valley Preserve at the west end of the site.

All paving on the site will be porous concrete which is also being used on the Ocean Beach Bike Trail. Porous concrete is a storm-water pollution prevention, best management practice as it helps decrease runoff to mitigate the effects of paving a currently unpaved surface. Being that the site is adjacent to the San Diego River and MHPA land, careful attention to pollution control is very important.

The entry gate with decorative columns is designed with natural stone and steel. A new park sign is proposed along with a decorative rock wall and new plantings that screen the back of bleachers, which currently provide the first glimpse of the park to users entering the site. All existing trees are proposed to be preserved in place. To soften the edges the new parking lot, which is bounded by the San Diego River area, native shrubs and groundcover will be planted.

DEVELOPMENT SUMMARY

SCOPE OF WORK: 47,272 S.F. AREA INCLUDES NEW PARKING LOT & ENTRY, AND UPGRADING EXISTING PICNIC AREA WITHIN PARK LIMITS.	
REQUIRED PERMITS / APPROVALS: SITE DEVELOPMENT PERMIT	**BUILDING CODE:** N/A
ASSESSOR PARCEL NUMBER: 760-000-00	**ZONING DESIGNATION:** TBD
EXISTING / PROPOSED USES: RECREATION	**FLOOR AREA RATIO:** N/A
DESIGN PROFESSIONAL'S NAME: SCHMIDT DESIGN GROUP, INC.	**BUILDING HEIGHT:** N/A
TYPE OF CONSTRUCTION:	**GROSS FLOOR AREA:** N/A
OCCUPANCY CLASSIFICATION: N/A	**CONDITION OF SOIL:** DISTURBED

OWNER'S NAME & ADDRESS:
City of San Diego
Contact: Tina Huang / (619) 533-7412
Public Buildings and Parks
600 B Street, Ste. 800 (M.S. 908A)
San Diego, CA 92101

PROJECT DESIGN TEAM:

Landscape Architect	Civil Engineering	Biological Resources
Schmidt Design Group, Inc. 2655 Fourth Avenue San Diego, CA 92103 Phone: (619) 235-1482	Burkett & Wong Engineers 3434 Fourth Avenue San Diego, CA 92103 Phone: (619) 299-5550	Recon Environmental (Recon) 1927 Fifth Avenue San Diego, CA 92101 Phone (619) 308-9333

VICINITY MAP
NTS

PREPARED BY:
SCHMIDT DESIGN GROUP, INC.
BALANCING ARTISTIC EXPRESSION IN DESIGN WITH ENVIRONMENTAL SENSITIVITY
2655 Fourth Avenue, San Diego, CA 92103
telephone (619) 235-1482 facsimile (619) 235-8752
www.schmidtdesign.com
Lic. CA 2138, NV 219, AZ 34139

SDG #06408.03
ORIGINAL DATE: 04/18/08
SHEET 1 OF 3

PROJECT ADDRESS:
WEST TERMINUS OF HOTEL CIRCLE PLACE

SITE DEVELOPMENT PLAN FOR SEFTON FIELD

SHEET TITLE: SITE DEVELOPMENT PLAN