FINAL
MITIGATED NEGATIVE DECLARATION

OCEANSIDE-ESCONDIDO BIKEWAY PROJECT

Prepared for:

CITY OF SAN MARCOS

(As lead agency representing the Cities of Escondido, Vista, Oceanside and the County of San Diego)

1 Civic Center Drive
San Marcos, CA 92069
Contact: Omar Dayani, P.E.
Tel.: (760) 744-1050

Environmental Consultant:

DUDEK
& ASSOCIATES, INC.
Professional Teams for Complex Projects

605 Third Street
Encinitas, California 92024
Contacts: June Collins/Sarah Lozano
Tel.: (760)942-5147

December 1999

FILED
Gregory J. Smith, Recorder/County Clerk
OCT 13 1999
BY VC DEPUTY

CITY OF SAN MARCOS
NOTICE OF DETERMINATION

TO: __ Office of Planning & Research
1400 Tenth Street, Room 121
Sacramento, CA 95814

FROM: ___Planning Division
City of San Marcos
1 Civic Center Drive
San Marcos, CA 92069

_X_ Gregory J. Smith
Recorder/County Clerk
P.O. Box 1750
San Diego, CA 92112-4147

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

ND 99-518; Oceanside-Escondido Bikeway Project
Project Title

City of San Marcos 619-744-1050
State Clearinghouse Number Lead Agency Phone Number
(if submitted to Clearinghouse Contact Person)

Along the North County Transit District rail line from Oceanside to Escondido San Diego
Project Location (include County)

Construction of a bike path 16' wide
Project Description

This is to advise that the City of San Marcos has approved the above described project and made the following determinations regarding the above described project.

1. The project __ will, _x_ will not, have a significant effect on the environment.
2. __ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
   _x_ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures _x_ were, __ were not, made a condition of the approval of the project.
4. A statement of Overriding Considerations __ was, _x_ was not, adopted for this project.
5. Findings ___ were _x_ were not, made pursuant to the provisions of CEQA.

This is to certify that the Negative Declaration with comments and response is available to the general public at 1 Civic Center Drive, San Marcos, CA 92069

Date: 10/6/99

(Signature)
Planning Division Director
(Title)

FILED IN THE OFFICE OF THE COUNTY CLERK
SAN DIEGO COUNTY ON OCT 13 1999
POSTED OCT 13 1999 REMOVED NOV 12 1999
RETURNED TO AGENCY ON NOV 12 1999
DEPUTY VC

1 Civic Center Drive
San Marcos, CA 92069-2918

Telephone
760.744.1050
FAX: 760.744.7543

August 23, 1999

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

The City of San Marcos (City) has completed a Draft Mitigated Negative Declaration (MND) for the Oceanside-Escondido Bikeway Project. The project would be located within the cities of Oceanside, Vista, San Marcos, Escondido and a portion of the unincorporated County of San Diego. The project alignment would run along the Coast Rail Trail from the Oceanside Transit Center to Oceanside Boulevard where the route would head east along Oceanside Boulevard. At College Boulevard, the bikeway would enter the North County Transit District rail right-of-way to the Escondido Transit Center.

The project would consist of a Class I bikeway 16 feet wide with 2 feet unpaved shoulders on each sides. Drinking fountains and benches would be constructed throughout the alignment. The bikeway would be accessible to bicyclists and pedestrians. The purpose of this project is to provide a continuous east-west, non-motorized vehicle route along the SR 78 corridor in order to aid in the improvement of regional air quality.

In compliance with the California Environmental Quality Act, the City has prepared a MND to address the potential environmental effects of the proposed project. The MND is available for a 30-day public review from August 25, 1999 to September 23, 1999. You are invited to review the document and submit written comments on the proposed MND by 5:00 p.m., September 23, 1999 to:

Omar Dayani, P.E.
City of San Marcos
1 Civic Center Drive
San Marcos, CA 92069
(760) 744-1050 extension 3255

Copies of the document are on file at the City of San Marcos, 1 Civic Center Drive, San Marcos, CA, and are available for public review from the hours of 8 a.m. to 5 p.m., Monday through Thursday and 9 a.m. to 5 p.m. every other Friday.

Sincerely,

Omar Dayani

Omar Dayani, P.E.
City of San Marcos

ERRATA

Responses to Letters of Comment during the Public Review Period

During the 30-day public review period ending September 23, 1999, for the Oceanside-Escondido Bikeway Project, six letters of comment were received by the City of San Marcos (lead agency). These letters as well as responses to each comment have been included in this attachment to the MND. Due to issues raised in the letters of comment, Errata have been prepared in order to incorporate changes made to the document as a result of public input. These Errata have been prepared in standard "strike-out/high-light" format. These Errata should be consulted prior to reading the content of the Draft MND as statements in the MND may have been augmented.

Figure 2 of the MND and Figures 2 and 10 of Appendix A has been included in this Errata package due to changes suggested by the City of Vista in their letter of comment. Figure 30 has also been included due to suggestions from the City of Escondido. A proposed schedule of the project has been included in this Errata package due to a comment by the City of Vista.

COMMENTS

SEP.27'1999 14:29 916 323 3018 #0876 P.001/004

STATE OF CALIFORNIA

Governor's Office of Planning and Research
State Clearinghouse

Gray Davis
GOVERNOR

STREET ADDRESS: 1400 TENTH STREET ROOM 222 SACRAMENTO, CALIFORNIA 95814
MAILING ADDRESS: P.O. BOX 3044 SACRAMENTO, CA 95812-3044
916-445-0613 FAX 916-323-3018 www.opr.ca.gov/clearinghouse.html

Loretta Lynch
DIRECTOR

September 24, 1999

COMMENT LETTER NO. 1

Omar Dayani, P.E.
City of San Marcos
1 Civic Center Drive
San Marcos, CA 92069

Subject: Oceanside-Escondido Bikeway Project
SCH#: 99081121

Dear Omar Dayani, P.E.:

The enclosed comment (s) on your draft environmental document was (were) received by the State Clearinghouse after the end of the state review period, which closed on September 23, 1999. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document. **1-A**

The California Environmental Quality Act does not require Lead Agencies to respond to late comments. However, we encourage you to incorporate these additional comments into your final environmental document and to consider them prior to taking final action on the proposed project. **1-B**

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the eight-digit State Clearinghouse number (99081121) when contacting this office.

Sincerely,

Terry Roberts
Senior Planner, State Clearinghouse

Enclosures
cc: Resources Agency

Post-it® Fax Note 7671	Date 9-27	# of pages ▸ 4
To OMAR DAYANI	From TERRY R.	
Co./Dept. City of	Co.	
Phone # San Marcos	Phone #	
Fax # (760) 591-4135	Fax #	

09/28/99 TUE 08:21 FAX 760 591 4135 COSM DEV SERVICE DEPT 002

RESPONSES

Comment Letter No. 1

1-A The comment is noted. Responses to issues discussed in the letter from the Department of California Highway Patrol, referred to as Comment Letter 2 in this document, have been included.

1-B The comment is noted. As stated above, the comment letter from the Department of California Highway Patrol has been included as Comment Letter 2 to this MND.

COMMENTS

SEP.27'1999 14:30 916 323 3018 #0876 P.002/004

Document Details Report
State Clearinghouse Data Base

SCH# 98081121
Project Title Oceanside-Escondido Bikeway Project
Lead Agency San Marcos, City of

Type neg Negative Declaration
Description The project would be located within the cities of Oceanside, Vista, San Marcos, Escondido, and a portion of the unincorporated County of San Diego. The project alignment would run along the Coast Rail trail or South Cleveland St. (whichever option is more feasible) from the Oceanside Transit Center to Oceanside Blvd where the route would head east along Oceanside Blvd. At College Blvd., the bikeway would enter the North County Transit District rail right-of-way to the Escondido Transit Center. The project would consist of a Class I bikeway approx. 20' wide. Drinking fountains and benches would be constructed throughout the alignment. The bikeway would be accessible to bicyclists and pedestrians during all daylight hours.

Lead Agency Contact
Name Omar Dayani, P.E.
Agency City of San Marcos
Phone 760-744-1050 x3256 **Fax**
email
Address 1 Civic Center Drive
City San Marcos **State** CA **Zip** 92069

Project Location
County San Diego
City Escondido, San Marcos, Vista, Oceanside, San Diego
Region
Cross Streets NCTD rail right-of-way (Oceanside Transit Center-Escondido Transit Center)
Parcel No.
Township **Range** **Section** **Base**

Proximity to:
Highways SR-78
Airports
Railways NCTD Oceanside-Escondido Line
Waterways Loma Alta Creek, Pacific Ocean, Buena Creek, San Marcos Creek, Escondido Creek
Schools Centennial High School, San Marcos Middle School
Land Use Rail Right-of-Way; else within bike lanes of City streets.

Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Coastal Zone; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Minerals; Noise; Population/Housing Balance; Public Services; Recreation/Parks; Septic System; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; California Coastal Commission; Department of Conservation; Department of Fish and Game, Region 5; Office of Historic Preservation; Department of Parks and Recreation; California Highway Patrol; Caltrans, District 11; Regional Water Quality Control Board, Region 9; Department of Toxic Substances Control; State Lands Commission

Date Received 08/25/1999 **Start of Review** 08/25/1999 **End of Review** 09/23/1999

Note: Blanks in data fields result from insufficient information provided by lead agency.

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RESPONSES

State Clearinghouse
Comment Letter No. 1

COMMENTS

SEP.27'1999 14:30 916 324 3018

State of California

Business, Transportation and Housing Agency

Memorandum

RECEIVED SEP 24 1999 STATE CLEARINGHOUSE

clear 9/28/99 late

Date: September 20, 1999

To: State Clearing House
1400 Tenth Street, Room 121
Sacramento, CA 95814

From: DEPARTMENT OF CALIFORNIA HIGHWAY PATROL
Oceanside Area

COMMENT LETTER NO. 2

File No.: 650.9552

Subject: OCEANSIDE-ESCONDIDO BIKEWAY PROJECT, SCH #99081121

Thank you for the opportunity to review the draft Mitigated Negative Declaration (MND) for the Oceanside-Escondido Bikeway Project, State Clearing House (SCH) #99081121. The California Highway Patrol (CHP) is the primary agency that provides traffic law enforcement, safety, and management within the unincorporated portions of San Diego County. Oceanside Area is responsible for the unincorporated area between the City of Vista and the City of San Marcos, generally referred to as "Buena Creek." The bikeway project will travel through this area, within the North County Transit District (NCTD) railroad line right-of-way, roughly along South Santa Fe Avenue. The geographic area of concern in this report is depicted on figures 13 through 17 of the MND. We offer the following comments:

- The proposed bikeway will cross South Santa Fe Ave. just east of York Ave. Vehicular traffic at the current railroad crossing/proposed bikeway is controlled by standard railroad crossing flashing red lights, warning bells, and signs. Crossing guards are not in place. The proposed bikeway along the railroad right-of-way will generate an increased volume of bicycle and pedestrian traffic across this very busy highway near the York Ave. intersection. The increased bicycle and pedestrian traffic will increase the probability of vehicle vs. bicycle/pedestrian traffic accidents in the area. (Refer to figure14). **2-A**
- The proposed bikeway will also cross Buena Creek Road just north of South Santa Fe Ave. Vehicular traffic at the current railroad crossing/proposed bike path is controlled by standard railroad crossing guards, flashing red lights, warning bells, and signs. The proposed bikeway along the railroad right-of-way will generate an increased volume of bicycle and pedestrian traffic across the roadway. The increased bikeway crossing traffic will increase the probability of vehicle vs. bicycle/pedestrian traffic accidents in the area. (Refer to figure15). **2-B**
- A CHP-approved school bus stop is located on Buena Creek Rd. at Verona Hills Rd., approximately ¼ mile north of the proposed bikeway crossing. The bikeway will not significantly impact the bus stop. **2-C**

CHP 51 (Rev. 11-98) OPI 076

09/28/99 TUE 08:21 FAX 760 591 4135 COSN DEV SERVICE DEPT 004

RESPONSES

California Highway Patrol Comment Letter No. 2

2-A It is recognized that an increase in pedestrian and bicyclist crossings of South Santa Fe Avenue near the vicinity of York Avenue may occur with implementation of the proposed project. An increase in non-motorized vehicle traffic crossings of a major road may increase the potential for vehicle/pedestrian/bicyclist traffic accidents. However, as stated in Section 5.15-d, the bikeway would cross the NCTD rail line within designated pedestrian crossing zones and all pedestrian/bicyclist crossings of roadways would be located within designated pedestrian zones. At the York Avenue crossing, there is no designated pedestrian zone, therefore the project proponent would be responsible for implementation of signals and/or crossing guards in accordance with Public Utilities Commission (PUC) guidelines pertaining to both rail and street crossings. Concurrence with PUC standards would assure that adequate safety measures are implemented in order to reduce the risk of vehicle/pedestrian/bicyclist accidents.

2-B See response to Comment Number 2-A. It is recognized that an increase in pedestrian and bicyclist crossings of Buena Creek Road just north of South Santa Fe Avenue may occur with implementation of the proposed project. An increase in non-motorized vehicle traffic crossings of a major road may increase the potential for vehicle/pedestrian/bicyclist traffic accidents. However, as stated in Section 5.15-d, the bikeway would cross the NCTD rail line within designated pedestrian crossing zones and all pedestrian crossing zones and all pedestrian/bicyclist crossings of roadways would be located within designated pedestrian zones. Due to the proposed location of the bikeway within a designated pedestrian crossing zone, safety standards and guidelines set forth by the PUC would be attained. Concurrence with PUC standards assures that adequate safety measures exist and therefore reduce the risk of vehicle/pedestrian/bicyclist accidents.

2-C The comment is noted.

DUDEK & ASSOCIATES
A California Corporation

COMMENTS

SEP.27'1999 14:30 916 323 3018 #0876 P.004/004

State Clearing House
Page 2
September 20, 1999

The traffic analysis for the Final Environmental Impact Report should consider our concerns regarding the proposed bikeway crossings and identify appropriate and adequate mitigation measures to alleviate the aforementioned collision hazards and provide safe crossing points for bicycle and pedestrian traffic utilizing the bikeway. Accordingly, we recommend that pedestrian accessible signals be installed to warn approaching motorists of the bicyclists and/or pedestrians crossing the highway. **2-D**

If you have any questions regarding these comments, please contact Sergeant Dennis Martinez at (760) 757-1675.

D. Kissinger

D. G. KISSINGER, Captain
Area Commander
Oceanside Area

cc: Border Division
Office of Special Projects

09/28/99 TUE 08:22 FAX 760 891 4138 COSM DEV SERVICE DEPT 002

RESPONSES

California Highway Patrol
Comment Letter No. 2

2-D See responses to Comment Numbers 2-A and 2-B. Due to the final nature of the NCTD FEA/SEIR (it is assumed that the commentor is referring to this document when stating "Final Environmental Impact Report), it is not possible to include the comments included in Comment Letter 2 into the 1996 Traffic Analysis which is included as an appendix to the FEA/SEIR. However, as stated in responses to Comment Numbers 2-A and 2-B, all bikeway crossings of roadways would be guarded with PUC approved safety features and warning signals. Further, all approaching motorists will be warned of potential pedestrian and/or bicyclist crossings through implementation of pedestrian accessible signals. These signals will be designed and implemented according to PUC safety specifications.

COMMENTS

Charles D. Grimm
Director of Planning and Building
Planning Division
(760) 839-4671,
FAX (760) 839-4313

September 21, 1999

COMMENT LETTER NO. 3

Omar Dayani
City of San Marcos
1 Civic Center Drive
San Marcos, CA 92069

CITY OF ESCONDIDO
201 NORTH BROADWAY
ESCONDIDO, CA 92025

Re: Comments on the Draft Mitigated Negative Declaration for the Oceanside-Escondido Bikeway Project.

Dear Mr. Dayani:

Thank you for inviting the City of Escondido to comment on the Draft Mitigated Negative Declaration for the Oceanside-Escondido Bikeway Project. Having reviewed the draft document, staff offers the following recommendations and comments:

- Staff recommends that the link between the Oceanside-Escondido Bikeway Project with the Escondido Creek Bike Trail be reference in the document where appropriate, including but not limited to, the following sections: Section 2.2, Project Description and Section 2.3, Project Characteristics (see attached suggested language). The link with Escondido Creek Bike Trail, which is an approximately 5.5 mile long Class I bike/pedestrian facility, will enhance the utility of the proposed Oceanside-Escondido Bikeway as a regional non-motorized transportation facility. **3-A**

- The document should address how the proposed bikeway would connect to the Escondido Transit Center and the Escondido Creek Bike Trail. Currently maps within the Draft Mitigated Negative Declaration show the eastern project to terminate within the NCTD right-of-way located on the north side of the Escondido Creek Flood Control Channel while the Escondido Transit Center and the Escondido Creek Bike Trail are located on the south side of the channel. **3-B**

- Page 1, Section 1.3, second paragraph. The City recommends that for purposes of consistency, the wording "City of San Marcos bike trail" should be replaced by "Oceanside-Escondido Bikeway Project." **3-C**

- Miscellaneous Editing
  - Page 2, Section 1.5. The last word in the second sentence, "permits," should be deleted. **3-D**
  - The document contains two exhibits called "Figure 3" and two attachments called Attachment "A". **3-E**
  - Page 40, Section 5.7-a, last sentence: Staff wonders if the word "occur" should be replaced by "cease." It is highly unlikely that the use of the completed bike facility would involve the transport, use or disposal of hazardous materials. **3-F**
  - References in aerials(Figure 30) and text to Reidy Canyon should be changed to Reidy Creek **3-G**

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CITY OF SAN MARCOS

Lori Holt Pfeiler, Mayor
Keith E. Beiler, Mayor Pro Tem
Jerry Kreitman
Jane Rady
Maria Waldron

Printed on Recycled Paper

RESPONSES

City of Escondido Planning Division
Comment Letter No. 3

3-A The comment is noted. References to the Escondido Creek Bike Trail have been incorporated in the Errata to the Final MND.

3-B The comment is noted. Figure 30, included in Attachment A to the MND, has been revised to depict the location of the Escondido Creek Bikeway and the termination of the Oceanside-Escondido Bikeway along the south side of Escondido Creek at the Escondido Transit Center. This revised figure has been included in the Errata to the Final MND.

3-C The comment is noted and changes are incorporated in the Errata to the Final MND.

3-D The comment is noted and changes are incorporated in the Errata to the Final MND.

3-E The MND contains an Appendix A which consists of the Dudek & Associates Wetland Delineation and Impact Assessment for the proposed project. This document contains its own Appendix A as well. Page 7 of the MND consists of Figure 3. Page 14 of the Wetland Delineation and Impact Assessment, included as Appendix A to the MND, consists of Figure 3. The MND and Wetland Delineation and Impact Assessment, although bound as one document, are two stand-alone reports, hence the duplicate figure numbers.

3-F The comment is noted. The word "cease" should be replaced with the word "occur" as transport, use or disposal of hazardous materials are highly unlikely to occur due to project implementation. This change is incorporated in the Errata to the Final MND.

3-G The comment is noted. See revised Figure 30 included in the Errata to the Final MND.

COMMENTS

Re: Draft Mitigated Negative Declaration for the Oceanside-Escondido Bikeway Project
September 21, 1999
Page 2

Escondido City Staff is pleased that the Oceanside-Escondido Bikeway Project is proceeding. We thank you for the offer to participate in the selection process for design consultants. At this time, we respectfully decline but hope that you will continue to give us the opportunity to participate in decision processes affecting Escondido, including, but not limited to, the design of the proposed bridge across Reidy Creek **3-H**

If you have any questions regarding our comments or would like more details, please call me at (760) 839-4553.
Sincerely,

Oda R. Audish

Oda R. Audish
Assistant Planner, AICP

Enclosures

Cc: Phillip Broughton, Traffic Engineer

RESPONSES

City of Escondido Planning Division
Comment Letter No. 3

3-H The comment is noted.

COMMENTS

SECTION 2.0
PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The project is located within the communities of Oceanside, Vista, San Marcos and Escondido as well as within a portion of the unincorporated County of San Diego. The project alignment generally follows the North County Transit District (NCTD) rail line (see *Figures 1 and 2*). *Figure 3, Index Map*, has been included in order to provide the reader with a detailed view of the project alignment. Corresponding figures referenced on *Figure 3* have been included in APPENDIX A, WETLAND DELINEATION AND IMPACT ASSESSMENT, to this MND.

2.2 PROJECT NEED

The purpose of the Oceanside-Escondido Rail Project is rooted in the existing and increasing congestion projected for SR-78. The proposed action is regarded as a viable means to provide an alternative mode of transportation to the automobile within the SR-78 corridor. Regional and local transportation planners have recognized the importance of providing a safe, usable bicycle route along the existing NCTD railroad corridor right-of-way. The purpose of the bike trail is to provide a non-motorized commuter facility along the NCTD rail right-of-way.

Due to recent growth along the Oceanside-Escondido corridor, major roads such as Oceanside Boulevard in Oceanside, Mission Avenue in Oceanside and Mission Road in Vista, San Marcos, Escondido, especially the SR-78 corridor, are experiencing increasing levels of congestion that also affects the air quality. This congestion has intimidated many bicyclists from using existing bike lanes along these roadways. Implementation of the Bikeway would provide a safe alternate mode for commuting and recreation.

The existing Oceanside-Escondido railroad right-of-way presents a unique opportunity to provide a usable non-motorized transportation facility through the entire Oceanside-Escondido transportation corridor. This bikeway will link with the San Luis Rey Bicycle Trail and the proposed Coastal Rail Trail. According to the local jurisdictions through which the Bikeway would travel, without use of the railroad right-of-way, land acquisition costs would probably preclude any form of separated bikeway from Oceanside to Escondido (NCTD, DEA/SEIR, page 1-6 through 1-7).

insert [A]

[A], the Escondido Creek Bicycle Trail

RESPONSES

City of Escondido Planing Division
Comment Letter No. 3

COMMENTS

Section 2.0 Project Description

2.3 PROJECT CHARACTERISTICS

As shown in *Figure* 3, the Oceanside-Escondido Bikeway Project would involve the construction of a Class I bikeway along a majority of the Oceanside-Escondido rail line. A Class I bikeway consists of a completely separate right-of-way designated for the exclusive use of bicycles and pedestrians with minimal cross-flows by motorists. The Bikeway would have 2-foot unpaved shoulders and two 8-foot bicycle lanes that would accommodate bikers of average ability, including handicapped riders. Modifications to this layout are incorporated in certain areas in order to avoid impact to sensitive biological resources. In these areas, the bikeway would consist of 1-foot shoulders and two 5-foot paved bicycle lanes.

The project would begin at the Oceanside Transit Center, traveling south within Coastal Rail Trail right-of-way until the junction of Oceanside Boulevard. The trail would be temporarily located along South Cleveland Street from the Oceanside Transit Center to Oceanside Boulevard. The trail would not be moved within the NCTD right-of-way until the Coastal Rail Trail is completed. The Coastal Rail Trail is a project currently being proposed by the coastal communities of Oceanside, Carlsbad (designated lead agency), Encinitas, Solana Beach, Del Mar and San Diego and would be located within NCTD right-of-way from the Oceanside Transit Center to the City of San Diego's Santa Fe Depot Station and would consist mostly of a Class I bike trail. Upon completion of the ultimate trail alignment, the two trails would follow the same path from the Oceanside Transit Center to Oceanside Boulevard where the Oceanside-Escondido Trail would break off and travel east. From South Cleveland Street, the project follows Oceanside Boulevard to College Boulevard where it moves to the NCTD right-of-way. The trail separates from the NCTD right-of-way approximately 600 feet west of North Melrose Drive where it again joins Oceanside Boulevard. The bike trail rejoins the rail line on the east side of North Melrose Drive. The project would separate from the rail right-of-way at Valpreda Street where it runs along a parcel owned by the City of San Marcos for approximately 600 linear feet. Then, it would again return to the right-of-way. The Bikeway would also separate from the rail line just east of Washington Avenue where it would join North Washington Avenue and North Spruce Street before returning to the NCTD right-of-way directly west of the Escondido Transit Center, where it would also connect to the Escondido Creek Bicycle Trail.

This project was originally planned to be designed and constructed within the same time frame as the Oceanside-Escondido Rail Project and therefore initial environmental studies included impacts and analyses for the bikeway project as well as the rail project. A Final EA/EIR which served as environmental documentation for the rail project was certified by NCTD in 1996. As stated on pages ES-5 and ES-6, of the EA/EIR, information including impact analyses for the bikeway portion of the project were included in the EA/EIR, however it was intended that the bikeway portion of the project be covered under its own CEQA/NEPA review effort. In addition to information contained in the EA/EIR and technical appendices, a wetland delineation was conducted by Dudek & Associates in

RESPONSES

City of Escondido Planning Division
Comment Letter No. 3

COMMENTS

City of Vista

September 22, 1999

Mr. Omar Dayani
City of San Marcos
1 Civic Center Drive
San Marcos, California 92069

RE: City of Vista's Comments on Oceanside-Escondido Bikeway Draft Mitigated Negative Declaration

Dear Omar:

The City of Vista appreciates the opportunity to comment on the Mitigated Negative Declaration (MND) prepared for the Oceanside-Escondido Bikeway Project. As you know, the project was presented to the Vista City Council on September 14, 1999, in order to provide some background on the proposal and receive comments and concerns from the council members. Following is a list of comments received from the City Council regarding the MND and some general comments regarding the project.

1. General – Please omit all references to the "Vista Transfer Station" and replace with "Vista Village Transit Center." **4-A**

2. Page 8, Project Description – The project description identifies that "the bikeway would be available for use during all daylight hours." Please identify how daylight-only use would be monitored and enforced. **4-B**

3. Page 47, 1st Paragraph – The Vista General Plan Bicycle, Hiking, and Equestrian Trails Element states that where possible "all bicycle trails shall be separated from vehicular and pedestrian traffic by a physical separation or safe distance." Are the trains using the NCTD railway considered vehicular traffic? If so, are there any physical barriers between the tracks and the proposed trail? What is considered a "safe distance" from the tracks for the bikeway? If no physical barrier is provided between the tracks and the bikeway, please provide a discussion of potential safety impacts associated with conflicts between trains and pedestrian/bicycle users of the trail. **4-C**

4. Page 49, Section 5.11, Item c – It is estimated that approximately 220-240 residential homes are located adjacent to the NCTD railway within the City of Vista. Please identify that residential homes are considered sensitive receptors. In addition, please include additional discussion relative to a possible increase in permanent noise levels to adjacent residential uses from project implementation. For example, please address possible nuisance noise from large groups using the bikeway and anticipated noise levels from regular use. **4-D**

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600 Eucalyptus Avenue • P.O. Box 1988 • Vista, California 92085 (760) 726-1340

RESPONSES

City of Vista
Comment Letter No. 4

4-A The comment is noted. This change has been incorporated in Figure 10, which is included in the Errata to the Final MND.

4-B As stated in Section 5.1-d, it has been determined that lighting would not be implemented throughout a majority of the alignment. This design feature is largely due to the project's location near sensitive biological resources. It is assumed however, that near stations and around roadway intersections, standard outdoor or street lighting would be implemented. This lighting would concur with PUC and/or representative jurisdictional specifications. The bikeway would be accessible 24 hours a day. Due to the absence of lighting throughout much of the facility, it is anticipated that use during nighttime hours would be little if any. However, nighttime bicycle and pedestrian use would be a permitted activity on the bikeway.

4-C The PUC requires a minimum of 10 feet between a rail road track line and an alternative use facility such as a bikeway. It is anticipated that PUC safety specifications would satisfy the City of Vista's General Plan Bicycle, Hiking, and Equestrian Trails Element safety guidelines. A vacant area of 10 to 34 feet will be located between the proposed bikeway and the rail line(s). In selected areas of the alignment, barriers or landscaping treatment would be implemented in order to compensate for distances of 10 to 15 feet between the two facilities. These barriers and landscape treatments would be designed in accordance with PUC guidelines.

4-D In researching this comment, Stephan Vance, SanDAG Regional Trails Coordinator, was contacted. It is apparent that very little if any information is available which could provide an estimate as to the number of users anticipated on this type of trail facility. The only similar data set available pertains to peak hour counts for the City of San Diego Bayshore Bikeway. An average of 77 trips occur on that bikeway during peak commute hours. Mr. Vance stated that it could be inferred that about 35-40 trips would occur during non-peak hours. Weekend use is very unpredictable as weather is often a determining factor.

COMMENTS

Mr. Omar Dayani
September 22, 1999
Page 2

5. Page 51, Section 5.13, Item II – We assume there will be a need for additional police services in order to patrol the bikeway. Will each municipality be responsible for security along their segment of the bikeway, or will NCTD (or some other entity) provide security? If individual municipalities are responsible, please provide some discussion of possible impacts to police services within those jurisdictions. **4-E**

6. Page 53, Section 5.15, Item d – The proposed bikeway alignment would cross some major roadways (e.g., Escondido Avenue) in areas where no traffic signal currently exists. We feel that a crossing in an area without a signal represents a significant safety hazard for those using the bikeway, as well as motorists along those roads. Please address the potential safety issues associated with road crossings where no signal currently exists. Are new pedestrian crossing signals going to be installed at these locations? If so, please identify who will be responsible for installation and maintenance of the signal(s)? **4-F**

In addition, the existing 50-foot right-of-way provides a clear area in case of train derailment. Please include a brief discussion of how this project would potentially affect the existing clear area in the event of a train derailment and if any potential safety impacts would occur. **4-G**

In addition to the specific comments regarding the MND, the Council offered the following general comments regarding the project:

- Please identify who the responsible entity would be for any accidents on the bikeway, e.g., who would be liable? **4-H**
- Who would be responsible for maintenance of the bikeway and associated facilities? **4-I**
- How would the proposal to install double tracks along portions of the NCTD right-of-way affect this project? **4-J**
- What are the estimated construction and completion dates? Please provide a schedule for review. **4-K**
- Please ensure the areas adjacent to the bikeway are kept clear or allow only low-lying vegetation for security purposes. **4-L**

Again, we appreciate being included in the public review process. Should you have any questions regarding these comments, please feel free to contact me at (760) 726-1340, extension 1262.

Sincerely,

John Conley
Environmental Planner

SIGN HERE

RESPONSES

City of Vista
Comment Letter No. 4

4-D (Cont.) As stated in Section 5.1-d, the bikeway would be largely utilized during daytime hours due to the absence of lighting along a majority of the alignment. In addition, use would be intermittent, as well as temporary as bicyclists and pedestrians would likely be moving rather than congregating. Therefore, the primary noise source that would be introduced to the area would be that of passing bicyclists or pedestrians. During normal conversations, humans generate a noise level of approximately 60 to 65 dB at a distance of three feet. The closest residences are set back approximately 20 feet from the right-of-way. The noise level associated with bikeway users would range up to approximately 50 dB at the closest residences. This noise level would not result in a significant impact on adjacent sensitive receptors.

4-E Each jurisdiction would be responsible for maintenance and security along their portion of the bikeway alignment. It is understood that the introduction of an additional public use facility would require service from the local police force however; in all cases the bikeway would be located within the existing service areas of the affected jurisdictions and within areas that are currently accessible to the public and possible patrol requirements. In addition, security provided by NCTD for the rail line when in operation would augment local security efforts. For these reasons, demand on local police services associated with implementation of the project is not expected to be substantial.

4-F As discussed in response to Comment Number 2-A, the bikeway would not cross roadways or the NCTD rail line without PUC approved crossing systems. If the system is not in place at the time of bikeway construction, the project would be responsible for implementation of this safety feature. Once implemented, maintenance would be the responsibility of the jurisdiction in which the feature is located.

COMMENTS

RESPONSES

City of Vista
Comment Letter No. 4

4-G The right-of-way for the Oceanside-Escondido Rail Project is 100 feet wide throughout the majority of the project area. There are limited areas where the right-of-way is less than 100 feet and areas where the right-of-way is up to 300 feet wide, which is in Escondido. In the unfortunate event of a derailment, the impacts of the derailment would vary depending on a number of factors such as the speed of the train, cause of derailment and all other dynamics involved. The 100 foot width of the right-of-way would most likely allow a derailment to be contained within the right-of-way. Any facilities built within the right-of-way would be subject to the impacts of the derailment in the area of that derailment (Blanda, pers. comm, October 1999).

In researching this comment, Jerry Hittleman, Associate Planner for the City of Oceanside, was consulted due to his involvement with planning for the proposed Coastal Bike Trail. During consultations with the PUC regarding Coast Bikeway safety issues, it was determined that although assurance against a train derailment could never be guaranteed, setbacks from rail lines as well as any additional safety feature mandates by the PUC were adequate precautions for keeping pedestrians and bicyclists out of rail track areas. All safety features discussed in Response 2-A will be implemented during construction of the project, therefore reducing bikeway users exposure to train derailment hazards as much as possible.

4-H A Joint Use Agreement is planned to be executed between the cities of Oceanside, Vista, San Marcos, Escondido, the County of San Diego, and NCTD. This agreement will address all details pertaining to liability.

COMMENTS

RESPONSES

City of Vista
Comment Letter No. 4

4-I Maintenance of bikeway facilities would be the responsibility of each jurisdiction traversed by the bikeway. Maintenance responsibilities would include the bikeway itself, drinking fountains and benches. This would also include repairs necessary due to natural disasters such as flooding or erosion. It is assumed that NCTD would provide maintenance for stations and associated facilities.

4-J Analysis for purposes of the MND was performed using the 30% design engineering plans. These plans included locations for double tracks. The bikeway was analyzed as currently engineered to accommodate double track areas.

4-K A proposed project schedule has been included in the attached errata.

4-L It is anticipated that vegetation would be trimmed back from the bikeway in order to allow for unimpeded passage as well as increased safety. However, it is to be noted, that several portions of the alignment cross sensitive biological resource areas such as Loma Alta Creek, Buena Vista Creek and San Marcos Creek. In these specific areas, it is anticipated that trimming would be kept to a minimum in order to minimize disturbance to sensitive wildlife species.

COMMENTS

09/23/99 THU 11:52 FAX 760 967 0941 NCTD CAO

September 23, 1999

N C T D

Mr. Omar Dayani, P.E.
City of San Marcos
1 Civic Center Drive
San Marcos, CA 92069

Reference: Oceanside-Escondido Bikeway Project
Draft Mitigated Negative Declaration, August 1999

Dear Mr. Dayani:

Thank you for the opportunity to review and comment on the above referenced document. North County Transit District reviewed the document and offers the following comments:

1. Notice of Intent to Adopt a Mitigated Negative Declaration

The above referenced Notice states that the project alignment would run along the Coast Rail Trail from the Oceanside Transit Center to Oceanside Boulevard. The Coast Rail Trail would be more accurately referred to as the proposed Coastal Rail Trail and as such we would suggest this revision. **5-A**

2. Section 1.6, Public Review Process, Page 2

This section provides a distribution list of affected agencies, organizations and persons who may have an interest in the project. NCTD would recommend that the City of San Marcos, as lead agency for the project, consider expanding the distribution list to include Burlington Northern & Santa Fe Railway, Amtrak and the Federal Railroad Administration.

Though NCTD owns the San Diego Northern Railway right-of-way, Burlington Northern & Santa Fe Railway retains a freight easement over both the Oceanside-Escondido rail line and the Oceanside-San Diego rail line. As a user of both rail facilities, Burlington Northern & Santa Fe Railway may be considered an affected agency that may have an interest in the project. **5-B**

Amtrak provides passenger rail service on the San Diego Northern Railway right-of-way and as such may also be considered an affected agency that may have an interest in the project.

NORTH COUNTY TRANSIT DISTRICT
810 Mission Avenue, Oceanside, CA 92054
760-967-2828

RESPONSES

North County Transit District
Comment Letter No. 5

5-A The comment is noted. This change is incorporated in the Errata to the Final MND.

5-B Any comments or input from Burlington Northern/Santa Fe Rail Road, Amtrak and the Federal Rail Road Commission will be addressed during the PUC permit process for the project.

COMMENTS

09/23/99 THU 11:52 FAX 760 967 0941 NCTD GAO

September 23, 1999
Mr. Omar Dayani
Page 2

The Federal Railroad Administration regulates the nation's railroads for safety purposes. As the Oceanside-Escondido Bikeway Project is proposed to be located within the railroad right-of-way, the Federal Railroad Administration may be considered an affected agency. **5-B Cont.**

3. Section 2.3, Project Characteristics, Page 8

Paragraph 2 in this section references the Coastal Rail Trail right-of-way. The Coastal Rail Trail does not possess any right-of-way that NCTD is aware of and there is no agreement in place transferring San Diego Northern Railroad right-of-way to the Coastal Rail Trail Project. This reference may need to be clarified. **5-C**

4. Section 2.3, Project Characteristics, Page 8

Paragraph 3 states that a Final EA/EIR for the rail project was certified by NCTD in 1996. The environmental document for the Oceanside-Escondido Rail Project was an EA/SEIR. The North San Diego County Transit Development Board certified the Final EA/SEIR in March, 1997. We recommend that these facts be accurately represented. **5-D**

5. Section 5.9, Land Use Planning, Page 47

In the Section discussing the City of Vista General Plan, the statement is made that parking for the proposed bikeway project would be available at the various rail stations along the line. The parking planned for the proposed Oceanside-Escondido Rail Project is based on demand and presented in the Final EA/SEIR for the proposed project. The rail station parking, as planned, is not sufficient to accommodate bikeway users. In various other sections of the Draft Mitigated Negative Declaration, it is stated that parking for the proposed bikeway project will be located within the City of San Marcos Civic Center Parking Structure. We recommend that the location of parking for the proposed project be clarified. **5-E**

6. Section 5.9, Land Use Planning, Page 48

In the Section discussing the City of Oceanside Local Coastal Program the statement is made that the proposed project would allow for a multi-city transportation corridor within NCTD jurisdiction. We believe that the statement should be clarified to correctly reflect that the Oceanside-Escondido Bikeway Project is proposed to be located within the NCTD right-of-way as opposed to being within NCTD jurisdiction. **5-F**

RESPONSES

North County Transit District
Comment Letter No. 5

5-C The comment is noted. This change is incorporated in the Errata to the Final MND.

5-D The comment is noted. This change is incorporated in the Errata to the Final MND.

5-E The comment is noted. This change is incorporated in the Errata to the Final MND.

5-F The comment is noted. It is assumed that the comment was referring to the discussion of the City of Escondido's General Plan rather than the City of Oceanside's Local Coastal Program. This change is incorporated in the Errata to the Final MND.

COMMENTS

09/23/99 THU 11:53 FAX 760 967 0941 NCTD GAO

September 23, 1999
Mr. Omar Dayani
Page 3

7. Appendix B, Cultural Resources Inventory

In this section, a number of references are made to the project being located within the Atchinson, Topeka and Santa Fe Railroad right-of-way. These references should be revised to indicate that the Oceanside-Escondido Bikeway Project is proposed to be located within the San Diego Northern Railroad right-of-way. **5-G**

Thank you again for the opportunity to review the Draft Mitigated Negative Declaration for the Oceanside-Escondido Bikeway Project. We look forward to continuing to work with you on the proposed project.

Sincerely,

Leslie Blanda
Manager of Capital Development

RESPONSES

North County Transit District
Comment Letter No. 5

5-G The comment is noted. Due to comments received during the Caltrans/FHWA review process, the *Cultural Resources Inventory and Significance Test for Prehistoric Site CA-SDI-14340 Report*, included as Appendix B to the Draft MND, has been revised. The revised version no longer makes references to the Atchinson, Topeka and Santa Fe Railroad right-of-way. In addition to the right-of-way corrections, several other minor revisions were made to the original draft. The overall conclusions of this report have not changed. It should be noted that the title of this document has been changed to *Historic Property Survey Report, Oceanside-Escondido Bikeway, Volume 3 of 3, Attachment 4, Technical Report*. A copy of this report has been incorporated in the Errata to the Final MND.

COMMENTS

San Diego County Archaeological Society

Environmental Review Committee

16 September 1999

To: Mr. Omar Dayani, P.E.
City of San Marcos
1 Civic Center Drive
San Marcos, California 92069

Subject: Proposed Mitigated Negative Declaration
Escondido-Oceanside Bikeway Project

Dear Mr. Dayani:

I have reviewed the cultural resources aspects of the subject PMND on behalf of this committee of the San Diego County Archaeological Society.

Based on the information contained in the PMND and its Appendix B, we agree with the significance assessment presented. The only addition we would make to the mitigation discussion would be the addition of curation of the collections from the testing program performed, as would be required by federal agencies, by Section V of the Standards of Research Performance of the Register of Professional Archaeologists, and by the adopted SDCAS Policy on Curation. **6-A** **6-B**

SDCAS appreciates being afforded this opportunity to review and comment upon this project's environmental documents.

Sincerely,

James W. Royle, Jr., Chairperson
Environmental Review Committee

cc: Gallegos & Associates
SDCAS President
file

RECEIVED
SEP 20 1999
ENGINEERING
CITY OF SAN MARCOS

P.O. Box 81106 . San Diego, CA 92138-1106 . (619) 538-0935

RESPONSES

San Diego County Archaeological Society
Comment Letter No. 6

6-A The comment is noted. The City of San Marcos will curate all cultural resources in accordance with Federal requirements.

COMMENTS

SDCAS POLICY ON CURATION
(Adopted by SDCAS Board on 10/21/97)

(1) For mitigation of impacts to cultural resources to be complete, all collections resulting from survey, testing, salvage excavation and monitoring activities must be curated in a qualified facility. "Qualified" is intended to mean one which meets the standards of 36 CFR 79 and any and all applicable federal, state and local laws. In the context of this policy, "collections" includes the artifacts and other collected material, plus all field notes, photographs and other documentation relating to them.

(2) To ensure reasonable accessibility to researchers, collections from within San Diego County should be curated within the county.

(3) Jurisdictions should require curation, as discussed in (1) and (2), above, for all collections resulting from new projects under their purview.

(4) Where a new project relies upon previous archaeological fieldwork as a basis for mitigation of a new project, the applicant must be responsible for locating, inspecting and upgrading, as necessary, all collections from the previous fieldwork. The inability to locate such collections will make reliance upon the work that produced them impossible, and new fieldwork should be required.

(5) Jurisdictions should support and help archaeologists and others to solve the problem of locating, upgrading and curating earlier collections for which no provision was made for curation.

C:\TEMP\CURATION.002

RESPONSES

San Diego County Archaeological Society
Comment Letter No. 6

ERRATA TO MND

Page 1, paragraph 4

This draft MND has been prepared by the City as the lead agency and in conformance with Section 15070, subsection (a), of the State of California Guidelines. The purpose of the MND and the Initial Checklist/Environmental Evaluation is to determine the potential significant impact associated with the proposed ~~City of San Marcos bike trail~~ Oceanside-Escondido Bikeway Project and incorporate mitigation measures into the project design as necessary to reduce or eliminate the significant or potentially significant effects of the project (see *Section 3, Proposed Finding of No Significant Effect, and Mitigation Measures and Monitoring Program*).

Page 2, paragraph 2

This MND is intended to be used by responsible and trustee agencies that may have review authority over the project. The City will obtain all permits as required by law ~~permits~~. Based on the analysis in Sections 4 and 5 of this document, other permits by responsible agencies with jurisdiction over the proposed project include, California Department of Fish and Game, the United States Army Corps of Engineers, the United States Fish and Wildlife Service and the California Coastal Commission.

Page 4, paragraph 4

The existing Oceanside-Escondido railroad right-of-way presents a unique opportunity to provide a usable non-motorized transportation facility through the entire Oceanside-Escondido transportation corridor. This bikeway will link with the San Luis Rey Bicycle Trail, the Escondido Creek Bicycle Trail and the proposed Coastal Rail Trail. According to the local jurisdictions through which the bikeway would travel, without the use of the railroad right-of-way, land acquisition costs would probably preclude any form of separated bikeway from Oceanside to Escondido (NCTD, ~~D~~EA/SEIR, page 1-6 through 1.7).

Page 8, paragraph 2

The project would begin at the Oceanside Transit Center, traveling south within the proposed Coastal Rail Trail ~~right-of-way~~ until ~~the~~ its junction ~~of~~ with Oceanside Boulevard. The trail would be temporarily located along South Cleveland Street from the Oceanside Transit Center to Oceanside

Boulevard. The trail would not be moved within the NCTD right-of-way until the proposed Coastal Rail Trail is completed. The Coastal Rail Trail is a project currently being proposed by the coastal communities of Oceanside, Carlsbad (designated lead agency), Encinitas, Solana Beach, Del Mar and San Diego and would be located within NCTD right-of-way from the Oceanside Transit Center to the City of San Diego's Santa Fe Depot Station and would consist mostly of a Class I bike trail. Upon completion of the ultimate trail alignment, the two trails would follow the same path from the Oceanside Transit Center to Oceanside Boulevard where the Oceanside-Escondido Trail would break off and travel east. From South Cleveland Street, the project follows Oceanside Boulevard to College Boulevard where it moves to the NCTD right-of-way. The trail separates from the NCTD right-of-way approximately 600 feet west of Noarth Melrose Drive where it again joins Oceanside Boulevard. The bike trail rejoins the rail line on the east side of North Melrose Drive. The project would separate from the rail right-of-way at Valpreda Street where it runs along a parcel owned by the City of San Marcos for approximately 600 linear feet. Then, it would again return to the right-of-way. The Bikeway would also separate from the rail line just east of Washington Avenue where it would travel directly east, cross Reidy Creek and travel along the north bank of Escondido Creek before ending ~~join North Washington Avenue and North Spruce Street before returning to the NCTD right-of-way~~ directly west of the Escondido Transit Center, where it would also connect to the Escondido Creek Bicycle Trail.

Page 8, paragraph 3

This project was originally planned to be designed and constructed within the same time frame as the Oceanside-Escondido Rail Project and therefore initial environmental studies included impacts and analyses for the bikeway project as well as the rail project. A Final EA/SEIR which served as environmental documentation for the rail project was certified by NCTD in ~~1996~~ March 1997. A stated on pages ES-5 and ES-6, of the EA/SEIR, information including impact analyses for the bikeway portion of the project were included in the EA/SEIR, however it was intended that the bikeway portion of the project be covered under its own CEQA/NEPA review effort. In addition to information contained in the EI/SEIR and technical appendices, a wetland delineation was conducted by Dudek & Associates in preparation for the US Army Corps of Engineers permit pursuant to Section 404 of the Clean Water Act. A cultural resources inventory and significance test was performed by Gallegos & Associates for a prehistoric resource site located within the project's area of potential effect which was originally identified in the 1996 Ogden Cultural Resources Report prepared for the rail project. This significance test resulted in negative findings.

Page 12, paragraph 2

- The project proponent shall implement the final Biological Mitigation and Monitoring Plan that has been approved by the Service and the Corps prior to impacts. A draft plan is contained in the ~~1996~~ 1997 NCTD EA/SEIR. The final mitigation plan will contain, but not be limited to, the following conditions.

Page 39, paragraph 3

Less than Significant Impact. Landslides typically occur in areas containing substantial slopes. The proposed project is located within flat, low lying areas. In areas where the project leaves the NCTD rail line and joins city streets, no encroachment of slopes greater than 30% would occur. Retaining walls and embankments are proposed in order to protect the corridor from surrounding slopes therefore adding assurance that the project would not be subject to landslides or mud flows as well as expose the public to dangerous geologic conditions (Section 4.4, ~~D~~EA/SEIR).

Page 39, paragraph 4

Less than Significant Impact. As stated in the ~~D~~EA/SEIR, several areas along the proposed project alignment have been determined moderate to high risk erosion potential areas. However, inherent erodibility of these areas would not be altered by the project since structural features would be sited in the 100-foot right-of-ways at the base of these slopes. Construction of the project would therefore not disrupt any adjacent slopes.

Page 40, paragraph 3

No Impact. Construction of the proposed project would involve the transport of gasoline and other fuels to the project site for the sole purpose of equipment fueling. However, once project construction is complete, the transport, use or disposal of hazardous materials would ~~occur~~ due to the lack of motorized vehicles on the bikeway.

Page 41, paragraph 2

No Impact. A review of federal, state and local hazardous materials lists was conducted in conjunction with the ~~1996~~1997 NCTD EA/SEIR. Prior to construction of the Coast Highway Station and the Maintenance Facility it is recommended that further hazardous materials testing occur. Construction of the bikeway project would not involve excavation, grading or filling within these two locations, therefore no impact with these potentially contaminated sites would occur. It should be noted that one underground storage tank is known to exist within the NCTD right-of-way within the City of Vista, specifically within the downtown redevelopment area. However, due to the existing redevelopment effort, it is anticipated that this underground storage tank would be removed from the project site prior to the anticipated bikeway construction period (pers. comm. Connely, August 1999).

Page 47, paragraph 3

City of Vista General Plan, Land Use Element. Civic Activity, Objective 40, Policies 40.1 through 40.6 state the need for civic facilities and their accessibility to the public. The proposed project

would follow a major transportation corridor, thus allowing for a sensible location from which to transport a large segment of people. The project would follow all ADA requirements in creating adequate disabled access to the trail. The trail width has been designed to accommodate wheelchair access. ~~Parking for the facility would be available at the various rail stations along the Oceanside-Escondido Rail Line.~~ Parking facilities for bikeway users will be made available at the City of San Marcos Civic Center Parking Structure upon completion of the project.

Page 48, paragraph 2

City of Escondido General Plan, Transportation/Circulation Element. Section D, Transportation/Circulation, Policy D1.2 states the need to support a balanced use of travel modes to address the transportation facilities including bicycle trails. Policy D5.5 states that the City shall cooperate with NCTD to assure that transit centers and major stops have adequate bicycle and pedestrian access. The proposed project would move the City closer to its goal of providing integrated transportation options to all segments of the population. The proposed trail would also allow for a multi-city transportation corridor within NCTD ~~jurisdiction~~ right-of-way.

Page 57, paragraph 2

Less than Significant Impact. A cumulative impact analysis, documented the additive effect of all projects in the same geographic region as the proposed project, was completed and included as Section 9.0 of the ~~1996~~ 1997 NCTD EA/EIR. This cumulative analysis assumed cumulative effects for the rail/bikeway project as a whole. This analysis discussed past, present and reasonably foreseeable future projects including the Loma Alta Creek Flood Control Project, El Corazon de Oceanside, Ivy Ranch, Rancho del Oro Village XII Project, Mottino Commercial Center, Vista Village Specific Plan, Discovery Hills, San Elijo Rancho Specific Plan Amendment, San Marcos Creek Flood Channel, CSUSM Master Plan, Paloma, Heart of the City Specific Plan, and the Hollandia Specific Plan. The EA/EIR discussed cumulative impacts in the areas of traffic and transportation, land use, visual quality, geology/soils, biological resources, cultural resources, paleontological resources, water resources, public health and safety, air quality, noise and vibration, energy and socioeconomics. The conclusions drawn from the previous analysis stated that due to proposed mitigation plans and programs, a less than significant cumulative impact would occur to the regional geology and soil conditions, biological resources, cultural resources, paleontological resources, water resources, public health and safety and noise and vibration. It was concluded that all other areas of concern would not result in cumulative impacts.

1 Civic Center Drive
San Marcos, CA 92069-2918

Telephone
760.744.1050
FAX: 760.744.7543

August 23, 1999

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION

The City of San Marcos (City) has completed a Draft Mitigated Negative Declaration (MND) for the Oceanside-Escondido Bikeway Project. The project would be located within the cities of Oceanside, Vista, San Marcos, Escondido and a portion of the unincorporated County of San Diego. The project alignment would run along the Coast Rail Trail from the Oceanside Transit Center to Oceanside Boulevard where the route would head east along Oceanside Boulevard. At College Boulevard, the bikeway would enter the North County Transit District rail right-of-way to the Escondido Transit Center.

The project would consist of a Class I bikeway 16 feet wide with 2 feet unpaved shoulders on each sides. Drinking fountains and benches would be constructed throughout the alignment. The bikeway would be accessible to bicyclists and pedestrians. The purpose of this project is to provide a continuous east-west, non-motorized vehicle route along the SR 78 corridor in order to aid in the improvement of regional air quality.

In compliance with the California Environmental Quality Act, the City has prepared a MND to address the potential environmental effects of the proposed project. The MND is available for a 30-day public review from August 25, 1999 to September 23, 1999. You are invited to review the document and submit written comments on the proposed MND by 5:00 p.m., September 23, 1999 to:

Omar Dayani, P.E.
City of San Marcos
1 Civic Center Drive
San Marcos, CA 92069
(760) 744-1050 extension 3255

Copies of the document are on file at the City of San Marcos, 1 Civic Center Drive, San Marcos, CA, and are available for public review from the hours of 8 a.m. to 5 p.m., Monday through Thursday and 9 a.m. to 5 p.m. every other Friday.

Sincerely,

Omar Dayani

Omar Dayani, P.E.
City of San Marcos

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APPENDICES

LIST OF FIGURES

SECTION 1.0
INTRODUCTION

1.1 PROJECT NEED AND OBJECTIVES

The City of San Marcos (City) is proposing the construction of a Class I bikeway. The bikeway is planned to be located within the North County Transit District (NCTD) Oceanside-Escondido Rail line right-of-way. In some areas of the proposed project, the bike trail would leave the NCTD right-of way and follow nearby city streets until rejoining with the rail line.

1.2 SUMMARY OF PROJECT DESCRIPTION

The bike trail would parallel the existing Oceanside-Escondido rail line. The facility would include resting spots with benches and pull-outs. There will be drinking fountains installed along the bikeway. City of San Marcos parking structure will be designated as the main parking facility for the bikeway.

1.3 CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) AUTHORITY TO PREPARE A MITIGATED NEGATIVE DECLARATION

The City of San Marcos is the lead California Environmental Quality Act (CEQA) agency responsible for the planning and construction of the proposed Bikeway project. Based on the findings of the Preliminary Environmental Review Checklist, the City has made the determination that a Mitigated Negative Declaration (MND) is the appropriate environmental document to be prepared in compliance with CEQA. As provided for by CEQA Section 21064.5, an MND may be prepared for a project subject to CEQA when an Initial Study has identified potentially significant effects on the environment. This document includes mitigation measures to clearly demonstrate that no significant environmental impacts would occur with project implementation.

This draft MND has been prepared by the City as the lead agency and in conformance with Section 15070, subsection (a), of the State of California Guidelines. The purpose of the MND and the Initial Checklist/Environmental Evaluation is to determine the potential significant impact associated with the proposed City of San Marcos bike trail and incorporate mitigation measures into the project design as necessary to reduce or eliminate the significant or potentially significant effects of the project (see *Section 3, Proposed Finding of No Significant Effect, and Mitigation Measures and Monitoring Program*).

1.4 NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) AUTHORITY TO PREPARE A CATEGORICAL EXEMPTION

Due to funding sources for the project, such as Congestion Management Air Quality (CMAQ) and Transportation Equity Act (TEA) funds provided by the Federal Highway Administration (FHWA), environmental documentation in accordance with the National Environmental Policy Act (NEPA) must be completed. In accordance with NEPA guidelines, Caltrans, FHWA's representing agency, which will serve as the lead agency for the project, has determined that a Categorical Exclusion (CE) is the appropriate environmental document per federal requirements. Per NEPA guidelines, a CE will be issued after all other environmental permits and documents such as this CEQA document, wetland permits through the US Army Corps of Engineers, a streambed alteration agreement through the California Department of Fish and Game, a water quality certification waiver through the Regional Water Quality Control Board, concurrence with the California Coastal Commission and concurrence with the US Fish and Wildlife Service are obtained and/or certified.

1.5 OTHER AGENCIES THAT MAY USE THE NEGATIVE DECLARATION AND PRELIMINARY ENVIRONMENTAL REVIEW

This MND is intended to be used by responsible and trustee agencies that may have review authority over the project. The City will obtain all permits as required by law permits. Based on the analysis in Sections 4 and 5 of this document, other permits by responsible agencies with jurisdiction over the proposed project include, California Department of Fish and Game, the United States Army Corps of Engineers, the United States Fish and Wildlife Service and the California Coastal Commission.

1.6 PUBLIC REVIEW PROCESS

In accordance with CEQA, a good faith effort has been made during the preparation of this MND to contact affected agencies, organizations and persons who may have an interest in this project. This MND has been distributed to the following organizations during the public review process designated for the project:

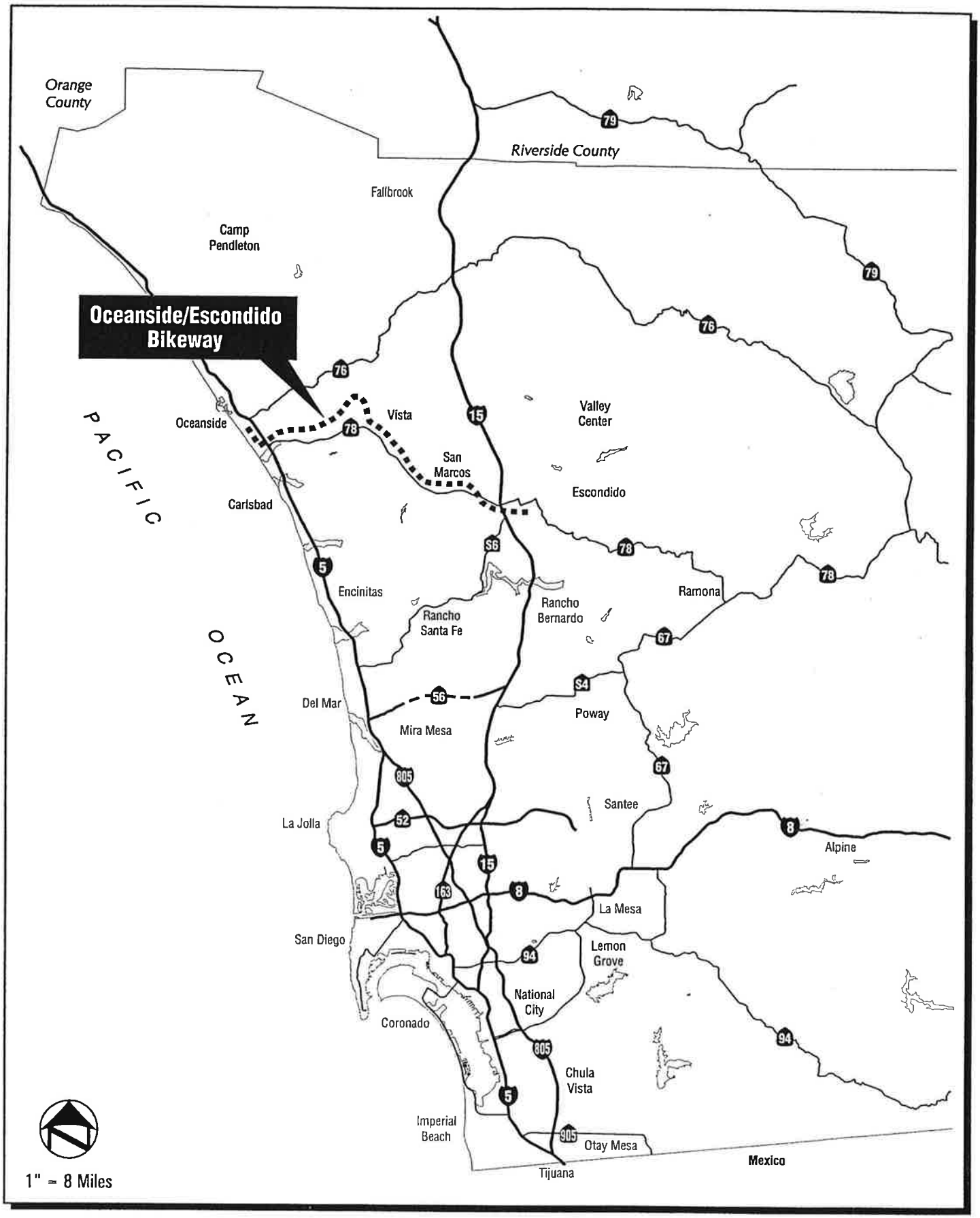
- California Coastal Commission
- California Department of Fish and Game
- California Native Plant Society
- California State Clearinghouse
- Caltrans
- City of Escondido, Department of Planning
- City of Oceanside

- City of San Marcos
- City of Vista
- County of San Diego
- Nature Conservancy
- North County Transit District
- Public Utility Commission
- San Diego Association of Governments (SANDAG)
- San Diego Audubon Society
- San Diego Museum of Natural History
- Sierra Club
- State of California Regional Water Quality Control Board
- Surfrider Foundation
- United States Fish and Wildlife Service
- United States Department of the Army Corps of Engineers

Comments may be made on the MND in writing before the end of the comment period. A 30-day review and comment period from August 24, 1999 has been established in accordance with Section 15072(a) of the CEQA Guidelines. Following the close of the public comment period, the City will consider this MND and comments thereto in determining whether to approve the proposed project.

Written comments on the MND should be sent to the following address by **5:00 P.M., September 22, 1999.**

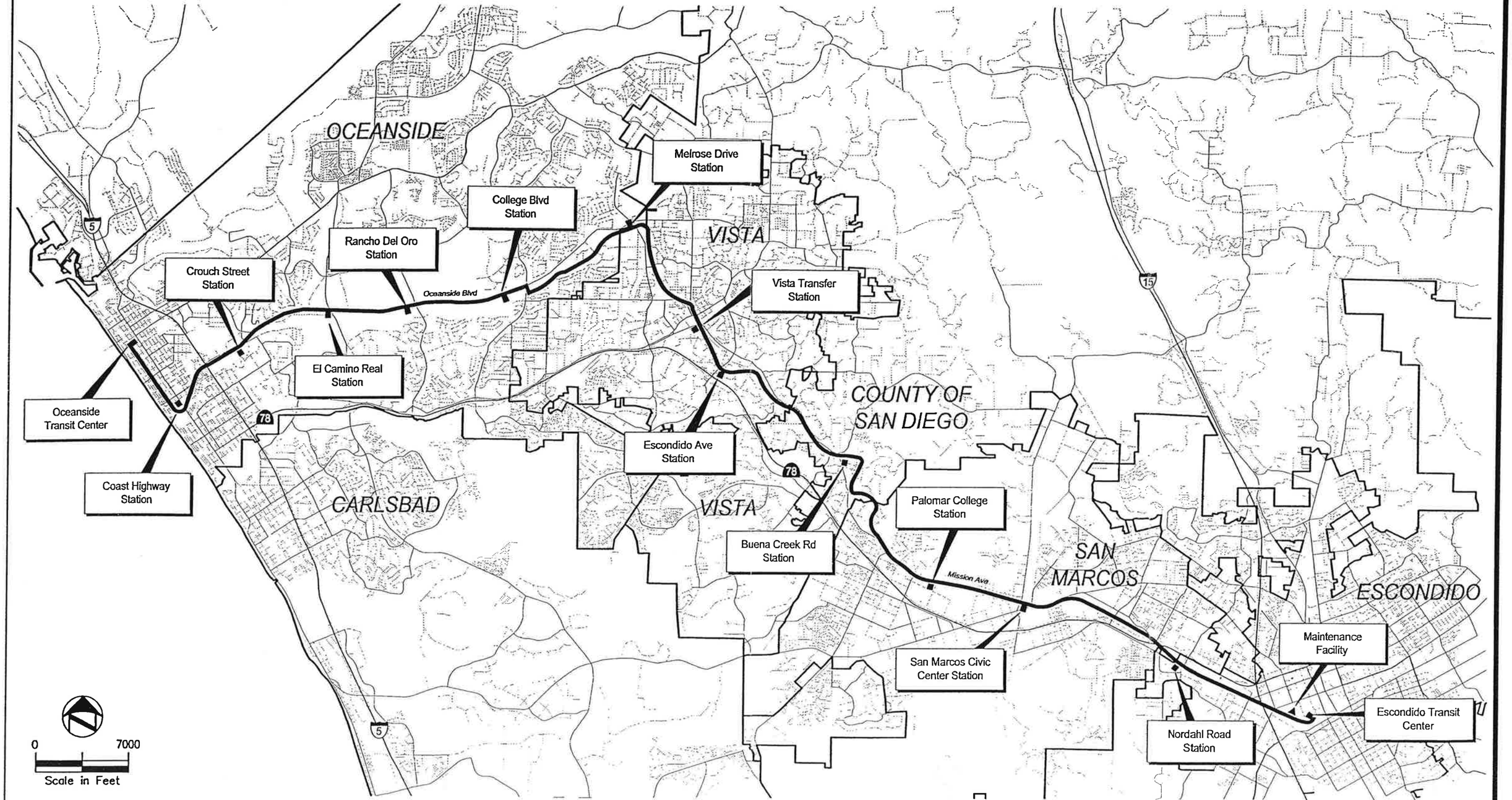
City of San Marcos
1 Civic Center Drive
San Marcos, CA 92069
Contact: Omar Dayani, P.E.
(760) 744-1050 x3255



City of San Marcos - Oceanside/Escondido Bikeway Mitigated Negative Declaration

Regional Map

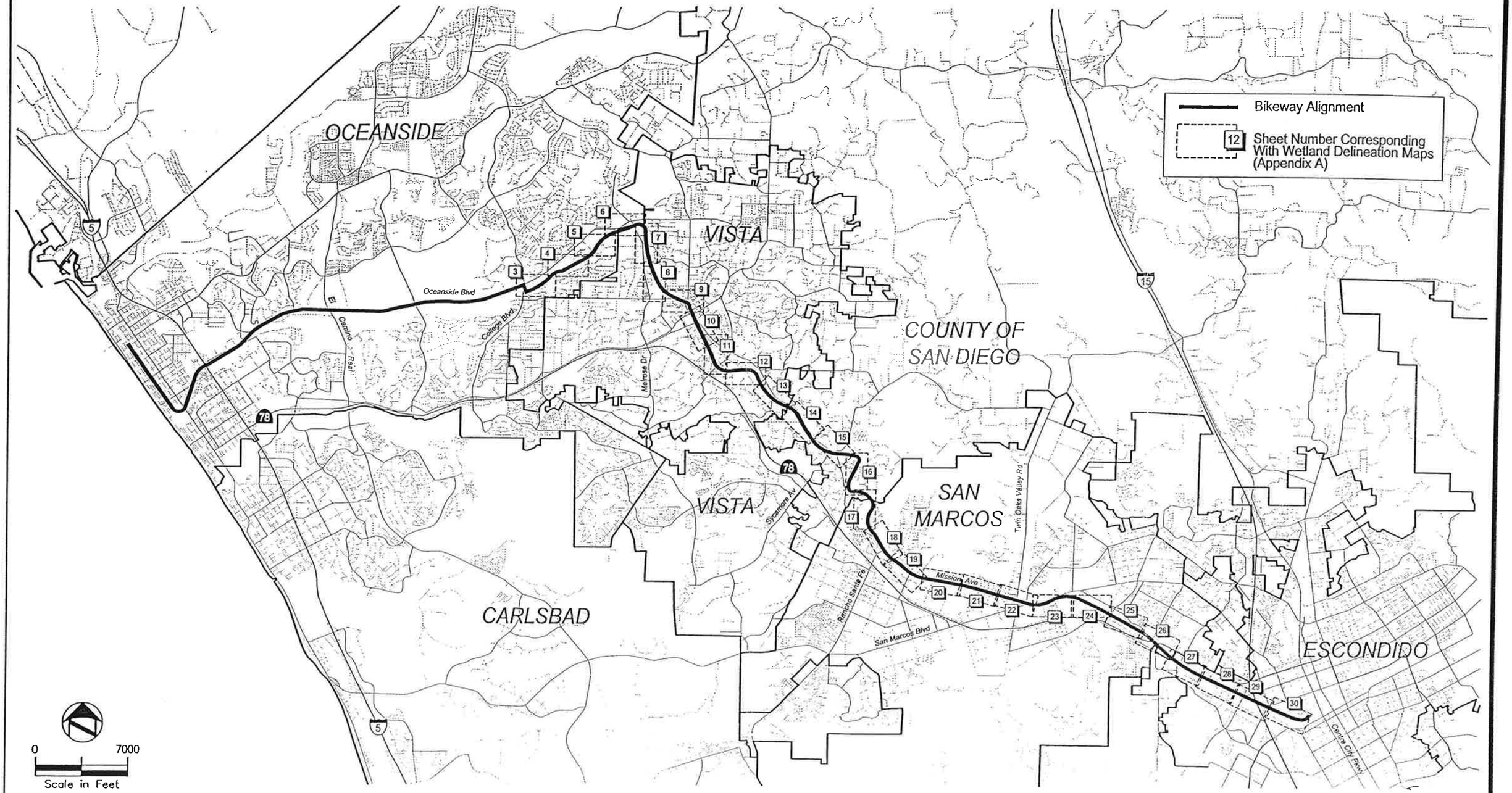
FIGURE 1



City of San Marcos - Oceanside/Escondido Bikeway - Mitigated Negative Declaration

Vicinity Map

FIGURE 2



City of San Marcos - Oceanside/Escondido Bikeway - Mitigated Negative Declaration

Index Map

FIGURE 3

2.3 PROJECT CHARACTERISTICS

As shown in *Figure 3*, the Oceanside-Escondido Bikeway Project would involve the construction of a Class I bikeway along a majority of the Oceanside-Escondido rail line. A Class I bikeway consists of a completely separate right-of-way designated for the exclusive use of bicycles and pedestrians with minimal cross-flows by motorists. The Bikeway would have 2-foot unpaved shoulders and two 8-foot bicycle lanes that would accommodate bikers of average ability, including handicapped riders. Modifications to this layout are incorporated in certain areas in order to avoid impact to sensitive biological resources. In these areas, the bikeway would consist of 1-foot shoulders and two 5-foot paved bicycle lanes.

The project would begin at the Oceanside Transit Center, traveling south within Coastal Rail Trail right-of-way until the junction of Oceanside Boulevard. The trail would be temporarily located along South Cleveland Street from the Oceanside Transit Center to Oceanside Boulevard. The trail would not be moved within the NCTD right-of-way until the Coastal Rail Trail is completed. The Coastal Rail Trail is a project currently being proposed by the coastal communities of Oceanside, Carlsbad (designated lead agency), Encinitas, Solana Beach, Del Mar and San Diego and would be located within NCTD right-of-way from the Oceanside Transit Center to the City of San Diego's Santa Fe Depot Station and would consist mostly of a Class I bike trail. Upon completion of the ultimate trail alignment, the two trails would follow the same path from the Oceanside Transit Center to Oceanside Boulevard where the Oceanside-Escondido Trail would break off and travel east. From South Cleveland Street, the project follows Oceanside Boulevard to College Boulevard where it moves to the NCTD right-of-way. The trail separates from the NCTD right-of-way approximately 600 feet west of North Melrose Drive where it again joins Oceanside Boulevard. The bike trail rejoins the rail line on the east side of North Melrose Drive. The project would separate from the rail right-of-way at Valpreda Street where it runs along a parcel owned by the City of San Marcos for approximately 600 linear feet. Then, it would again return to the right-of-way. The Bikeway would also separate from the rail line just east of Washington Avenue where it would join North Washington Avenue and North Spruce Street before returning to the NCTD right-of-way directly west of the Escondido Transit Center.

This project was originally planned to be designed and constructed within the same time frame as the Oceanside-Escondido Rail Project and therefore initial environmental studies included impacts and analyses for the bikeway project as well as the rail project. A Final EA/EIR which served as environmental documentation for the rail project was certified by NCTD in 1996. As stated on pages ES-5 and ES-6, of the EA/EIR, information including impact analyses for the bikeway portion of the project were included in the EA/EIR, however it was intended that the bikeway portion of the project be covered under its own CEQA/NEPA review effort. In addition to information contained in the EA/EIR and technical appendices, a wetland delineation was conducted by Dudek & Associates in

preparation for the US Army Corps of Engineers permit pursuant to Section 404 of the Clean Water Act. A cultural resources inventory and significance test was performed by Gallegos & Associates for a prehistoric resource site located within the project's area of potential effect which was originally identified in the 1996 Ogden Cultural Resources Report prepared for the rail project. This significance test resulted in negative findings.

SECTION 3.0
FINDINGS

The City finds that the project will not have a significant adverse effect on the environment based on results of the Initial Study/Environmental Checklist (see *Section 4*) and the Environmental Evaluation Discussion (see *Section 5*). Some potentially significant effects have been identified and mitigation measures have been incorporated into the project to ensure that these effects remain at less than significant levels. A Mitigated Negative Declaration is therefore proposed to satisfy the requirements of CEQA (PRC 21000 et. seq. 14 Cal Code Regs 15000 et. seq.). This conclusion is supported by the following:

3.1 NO SIGNIFICANT EFFECT FINDING

1. **Aesthetics:** No negative impacts to aesthetics would occur with project implementation (see *Section 5.1, Aesthetics*).

2. **Agricultural Resources:** No impacts to agricultural resources would occur with project implementation (see *Section 5.2, Agricultural Resources*).

3. **Air Quality:** Due to the short amount of time required for construction as well as the small amount of PM_{10} which would easily be dispersed, a less than significant impact to local air quality would occur. Regional air quality would actually improve with project implementation due to a decrease in motorized vehicle use (see *Section 5.5, Air Quality*).

4. **Biological Resources:** Measures have been incorporated into the project to reduce potential impact to biological resources to below a level of significance (see *Section 3.2, Mitigation Measures and Monitoring Program and Section 5.4, Biological Resources*).

5. **Cultural Resources:** Measures have been incorporated into the project to mitigate for potential impacts to cultural resources (see *Section 3.2, Mitigation Measures and Monitoring Program and Section 5.5, Cultural Resources*).

6. **Geology and Soils:** The project would not impact any sensitive geologic resources or subject anyone to geologic hazards (see *Section 5.6, Geology and Soils*).

7. **Hazards and Hazardous Materials:** Measures have been incorporated into the project to reduce impacts from potential hazards to below a level of significance (see *Section 3.2, Mitigation Measures and Monitoring Program and Section 5.7, Hazards and Hazardous Materials*).

8. **Hydrology and Water Quality:** Measures have been incorporated into the project to reduce potential impact to water resources during construction to below a level of significance (see *Section 3.2, Mitigation Measures and Monitoring Program and Section 5.8, Hydrology and Water Quality*).

9. **Land Use and Planning:** The proposed project would be compatible with existing and planned land uses in the project vicinity (see *Section 5.9, Land Use and Planning*).

10. **Mineral Resources:** The project would not require or impede on the extraction of mineral resources during construction or operation (see *Section 5.10, Mineral Resources*).

11. **Noise:** Measures have been incorporated into the project to reduce potential impact from construction noise to below a level of significance (see *Section 3.2, Mitigation Measures and Monitoring Program and Section 5.11, Noise*).

12. **Population and Housing:** The project would not affect local housing availability or population trends (see *Section 5.12, Population and Housing*).

13. **Public Services:** Project implementation would not affect local public services, therefore no impact would occur (see *Section 5.13, Public Services*).

14. **Recreation:** No negative impacts to recreational opportunities would occur with project implementation (see *Section 5.14, Recreation*).

15. **Transportation/Traffic:** Due to the small amount of construction vehicle trips necessary for project construction as well an increase in bicycle facilities, an implementation measure to reduce current traffic congestions, a less than significant impact would occur to local transportation systems (see *Section 5.15, Transportation/Traffic*).

16. **Utilities and Service Systems:** Due to the lack of utilities required for project operation, project implementation would not affect local utilities and service systems (see *Section 5.16, Utilities and Service Systems*).

3.2 MITIGATION MEASURES AND MONITORING PROGRAM

The City has summarized the various requirements to be imposed on the project to reduce impacts to less than significant.

Biological Resources

Four gnatcatchers are located east of College Boulevard within the vicinity of the southern perimeter of the NCTD right-of-way. Harassment of listed threatened or endangered species is considered to be incidental take under Section 9 of the Federal Endangered Species Act, therefore necessitating the minimization of habitat loss during construction and operation of the bikeway. In order to minimize habitat loss during construction and operation, the following measures have been included as conditions of the project.

- The project proponent shall implement the final Biological Mitigation and Monitoring Plan that has been approved by the Service and the Corps prior to impacts. A draft plan is contained in the 1996 NCTD EA/EIR. The final mitigation plan will contain, but not be limited to, the following conditions:

- Construction through sensitive areas shall occur between August 15 and February 15 to minimize potential impacts to nesting gnatcatchers, unless the noise from construction can be kept below 60 dBA Leq within the habitat.

- A biological monitor that is familiar with vocalization, visual recognition, and nesting habitat of the gnatcatcher shall be employed to delineate the boundaries of all the vireo and gnatcatcher territories adjacent to the ROW during the breeding season for all years in which project construction activities occur. The purpose of delineating territories is to monitor noise levels associated with construction activities. Noise monitoring shall be conducted throughout the breeding season (February 15 to August 15). Each noise monitoring period shall last al minimum of one hour at a minimum interval of twice per week. Noise levels shall be measured with a decibel meter and shall be conducted when construction activities are occurring.

- A report summarizing each noise monitoring period shall be submitted to the Service within 24 hours of each monitoring period. The report shall contain descriptions of all noise measurements, the location of measurements, and gnatcatchers sighted, and all corrective actions taken to avoid and reduce harassment of these two species. The location of the noise measurements and gnatcatcher sightings shall be recorded on an up-to-date (i.e., 1995 or later) large scaled aerial photograph of the project site.

- All habitat to be impacted shall be cleared outside of nesting season (i.e., September 15 to February 14) for all migratory birds unless the project biologist determines that the habitat is unoccupied by any migratory bird, including least Bell's vireo and gnatcatcher.

- All measures outlined in the 1996 NCTD Biological Assessment Project Description (when applicable to species east of College Boulevard [gnatcatcher]) shall be implemented.

- Compensation for lost habitat shall be in-kind and shall be located in areas that compliment the MHCP planing effort. Mitigation shall consist of offsite preservation and restoration. The USFWS and Corps must approve the mitigation sites prior to impacts. It is to be noted that coastal sage scrub and baccharis scrub shall be mitigated at a 2:1 ratio within the corresponding city of impact. The mitigation site must be either occupied by gnatcatchers or contribute significantly to the overall MHCP preserve.

Alteration of CDFG jurisdictional wetland habitat (0.50 acre) and Corps jurisdictional wetland habitat (0.38 of the 0.05 acre), is considered a significant impact, therefore the following mitigation has been incorporated.

- Mitigation for each type of wetland species would consist of preservation of 1.2 acres of like habitat through participation of the SANDAG/Caltrans wetland enhancement project along Pilgrim Creek. The Pilgrim Creek restoration project, currently being designated as a Corps approved mitigation bank, is located within the City of Oceanside adjacent to the U.S. Marine Corps Base, Camp Pendleton and the Oceanside Municipal Golf Course. The mitigation project entails restoration of 121 acres of former agricultural lands into a mix of native upland and wetland vegetation. Mitigation for each type of habitat would occur in the following ratios: ephemeral waters, 1:1; disturbed wetland, 2:1; freshwater marsh, 2:1; mule fat scrub, 3:1; and southern willow scrub 3:1. Incorporation of this mitigation scenario would reduce impacts to Corps and CDFG regulated wetland to a level less than significant.

- It should be noted that prior to commencement of the project, a Streambed Alteration Agreement, pursuant to Section 1601 of the California Fish and Game Code, will be obtained from CDFG. Authorization to utilize Nationwide Permit 26 pursuant to Section 404 of the Clean Water Act would be obtained from the Corps.

The Cities of San Marcos and Escondido have tree preservation ordinances which would apply to tree removal for project implementation. The County of San Diego advises consultation with two planning documents during revegetation plans for tree removal within the unincorporated county. These specifications are discussed in detail below.

City of San Marcos; City Municipal Code; Chapter 14.20, Article 1: This article states that the removal of vegetation from public property is considered a significant act and therefore necessitates a vegetation removal permit from the City Director. In order to reduce this impact to less than significant, the following mitigation measure will occur prior to commencement of the construction phase of the project.

- A vegetation removal permit will be obtained from the City Director prior to commencement of the project. This permit would outline specifications as to the amount and type of vegetation which could be removed.

City of Escondido; City Ordinance Code; Section 33-1068; Section 33-1086.B.: This section sets forth regulations to control habitat destruction, the clearing of land, and the removal of mature and protected trees. As stated in section b, number 6, Exceptions to required permits, the removal of trees for improvement projects constructed by the City as a part of a capital improvement program shall be reviewed by the Director on a case-by-case basis to determine if they are subject to the provisions of the tree removal ordinance. In order to comply with this ordinance, the following mitigation measure will occur prior to commencement of project construction.

- Prior to project construction, project proponents for the Cities of San Marcos and Escondido will submit a project description, design plans and any necessary environmental documentation to the Director for consideration for exemption from a tree removal permit. A tree removal permit would be obtained if the Director deems the project subject to such a mandate.

County of San Diego Community Design Plans and Greenbook Manual: These documents summarize specifications for replacement of trees removed in conjunction with a construction project. These documents would be consulted during design phases of the project in order to outline type, placement and other details required for tree replacement. No permit is required in order to remove trees within the unincorporated County of San Diego.

Cultural Resources

In order to mitigate for potential impacts to paleontological resources, the following mitigation measure would be implemented.

- A qualified cultural resource monitor will be onsite during all excavation work. If a questionable resource is discovered, the monitor will have the ability to stop work in order to allow for proposer significance testing of the material.

Hazards

Portions of the proposed project are located adjacent to potentially flammable materials such as brush, grass or trees. In order to prevent possible fire hazards from encounters with brush, grass or trees, the following mitigation measure shall be implemented in order to reduce the impacts to below a level of significance.

- A brush management plan shall be incorporated during project construction. Construction within areas of dense foliage during dry conditions should be avoided. In cases where avoidance is not feasible, necessary brush fire prevention and management practices shall be incorporated. Specifics of the brush management program will be determined as site plans for the project are finalized.

Hydrology and Water Quality

The project is anticipated to impact 0.05 acre of wetlands and waters of the U.S. Alteration of existing waters of the U.S. or wetlands is considered a significant impact, therefore mitigation is required.

- Due to regulation of these water bodies by the U.S. Army Corps of Engineers and California Department of Fish and Game, a wetland alteration agreement pursuant to Section 404 of the Clean Water Act and Streambed Alteration Agreement pursuant to Section 1601 of the Fish and Game Code would be obtained. In addition, the project would be subject to a water quality certification waiver pursuant to Section 401 of the Clean Water Act. This waiver would be obtained from the State Water Quality Control Board, Regional Water Quality Control Board, Region 9-San Diego.

In order to mitigate for potential impacts to local water quality during construction of the bikeway, the following mitigation measures would be implemented.

- Appropriate erosion control measures would be installed such as hay bales, sand bags, and silt curtains.

- Buffer zones would be established at the down gradient boundaries of disturbed areas to prevent wash-off into channels. Buffer zones may be vegetated (grass) or hay baled. Buffer zones serve to reduce overland flow velocities and trap eroded sediment that would otherwise migrate toward drainage channels.

- If necessary, siltation basins would be constructed in drainage channels to capture sediment.

- Stormwater management plans, as required by state and local regulation for construction sites shall be prepared.

- Right-of-way bridge piers and culverts constructed within channels would be designed to minimize disruption of flow regimes, channel scour and downstream deposition of sediment.

Noise

Construction-related noise impacts would temporarily affect nearby residents. In order to reduce noise impacts to surrounding sensitive receptors to a level below significance, the following mitigation measure shall be implemented.

- All construction shall occur between set construction hours. According to each city's ordinance, construction would occur during the following time constraints:

  City of Oceanside: Monday through Friday, 7 a.m. to 7 p.m.; Saturday pending prior approval from the City Engineer.

  City of Vista: Monday through Saturday, 7 a.m. to 7 p.m.

  City of San Marcos: Monday through Friday, 7:30 a.m. to 4:30 p.m.; Saturday pending special circumstances and approval from the construction manager.

  City of Escondido: Monday through Friday, 7 a.m. to 7 p.m.; Saturday pending prior approval from the City Engineer.

  County of San Diego: Monday through Friday, 7 a.m. to 7 p.m.; weekends pending prior approval from the Department of Public Works.

SECTION 4.0
ENVIRONMENTAL CHECKLIST

1. Project title: Oceanside-Escondido Bikeway Project

2. Lead agency name and address:
   City of San Marcos
   1 Civic Center Drive
   San Marcos, CA 92069

3. Contact person and phone number: City of San Marcos: Omar Dayani, P.E., (760) 744-1050 x3255; Caltrans: Richalene Kelsay (619) 688-3273

4. Project location: Along NCTD rail right-of-way within Oceanside, Vista, San Marcos, Escondido and County of San Diego

5. Project sponsor's name and address:

Caltrans	City of San Marcos
2829 Juan Street	1 Civic Center Drive
San Diego, CA 92101-5406	San Marcos, CA 92069

6. General plan designation: varies within each city

7. Zoning: varies within each city

8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or offsite features necessary for its implementation. Attach additional sheets if necessary.)

   The Oceanside-Escondido Bikeway Project would involve the construction of a Class I bikeway along the Oceanside-Escondido rail line. This Bikeway would be located within North County Transit District right-of-way except for the segment west of College Avenue as well as a segment near the planned railroad maintenance facility. The Bikeway would accommodate bikers of average ability, including handicapped riders. The Bikeway would have 2-foot unpaved shoulders and two 8-foot bicycle lanes. The trail would be aligned to use existing pedestrian crossing facilities at street intersections wherever possible.

9. Surrounding land uses and setting: Briefly describe the project's surroundings:
The project is located in the County of San Diego specifically within the cities of Oceanside, Vista, San Marcos and Escondido. The bikeway is largely planned to parallel the proposed North County Transit Development Board's Oceanside-Escondido line.

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)
California Department of Fish and Game: Section 1601 Streambed Alteration Agreement
U.S. Army Corps of Engineers: Section 404 Wetland Impact Permit
Regional Water Quality Control Board: Section 401 Water Quality Certification Waiver
U.S. Fish and Wildlife Service: Amendment to existing Biological Opinion issued for the parallel rail line project
City of Oceanside: Coastal Development Permit Exemption
Federal Highway Administration (Caltrans as acting agent): NEPA Categorical Exclusion, Coastal Commission Concurrence
Public Utility Commission
North County Transit District (NCTD)

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agricultural Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/ Soils
☐ Hazards & Hazardous Materials	☐ Hydrology/ Water Quality	☐ Land Use/ Planning
☐ Mineral Resources	☐ Noise	☐ Population/ Housing
☐ Public Services	☐ Recreation	☐ Transportation/ Traffic
☐ Utilities/ Service Systems	☐ Mandatory Findings of Significance	

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Omar Dayani

Signature

8/23/99

Date

Omar Dayani, P.E.

Printed name

City of San Marcos

For

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:
   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significant

Issues:

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I.	**AESTHETICS** – Would the project:				
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒
II.	**AGRICULTURE RESOURCES** – In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒
III.	**AIR QUALITY** – Where available, the significance criteria established by the applicable air quality management or air pollution district may be relied upon to make the following determinations. Would the project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒
c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
d)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e)	Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
IV.	**BIOLOGICAL RESOURCES** – Would the project:				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e)	Conflict with any local policies or ordinance protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☐
V.	**CULTURAL RESOURCES** – Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐
VI.	**GEOLOGY AND SOILS** – Would the project:				
a)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:	☐	☐	☐	☐
	i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
	ii) Strong seismic ground shaking?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
VII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☒	☐	☐

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII.	**HYDROLOGY AND WATER QUALITY** – Would the project:				
a)	Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or offsite?	☐	☐	☒	☐
d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	☐	☐	☐	☒
e)	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
f)	Otherwise substantially degrade water quality?	☐	☐	☐	☒
g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☐
IX.	**LAND USE AND PLANNING** – Would the project:				
a)	Physically divide an established community?	☐	☐	☐	☒
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☐

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
X.	**MINERAL RESOURCES** – Would the project:				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒
XI.	**NOISE** – Would the project result in:	☐	☐	☐	☐
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☒	☐
b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
XII.	**POPULATION AND HOUSING** – Would the project:				
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
XIII.	**PUBLIC SERVICES**				
a)	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
	Fire protection?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒
XIV. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐
XV. TRANSPORTATION/TRAFFIC – Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	☒
b) Exceed, either individually or cumulatively, a level of service standard established by the County Congestion Management Agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Result in inadequate parking capacity?	☐	☐	☒	☐
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒
XVI. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
e)	Result in determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider/s existing commitments?	☐	☐	☐	☒
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒
XVII.	**MANDATORY FINDINGS OF SIGNIFICANCE**				
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

SECTION 5.0
DISCUSSION OF ENVIRONMENTAL IMPACTS

5.1 AESTHETICS

a) Would the project have a substantial adverse effect on a scenic vista?

Less than Significant Impact. Construction of the proposed project would be consistent with visual policies of each of the local jurisdictions through which the bike trail passes. The design of all bike trail areas would appear as extensions of the existing rail line. In addition, a design goal for the project is to comply with existing landscape requirements for each of the jurisdictions through which the rail line corridor passes. Vegetation screening and sensitive design criteria are also proposed as part of the project. The lighting design for all facilities would conform with the Mount Palomar Observatory requirements for single spectrum lighting.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less than Significant Impact. The project would involve the removal of vegetation in various localities along the proposed bikeway alignment. The bikeway would also involve cut and fill slopes in addition to grading. It is anticipated that trees located within the proposed alignment would require removal. However, as stated in response 5.4-e, all vegetation would be replaced with a like species and size in conjunction with revegetation and landscape plans. As stated in Section 5.4-c, all wetland vegetation that is removed would be replaced at a 1:1 and in several cases a 2:1 or 3:1 ratio in accordance with the proposed mitigation scenario. Due to the low lying terrain, no significant rock outcroppings would be removed with project implementation. As stated in Section 5.5-a, historic buildings would not be affected by the bikeway project. All known historic rail road trestles and culverts along the alignment would remain undisturbed during project construction.

c) Would the project degrade the existing visual character or quality of the site and its surroundings?

Less than Significant Impact. The existing rail right-of-way is used exclusively by freight carriers and is not currently available for public use. Therefore, the corridor would not be considered a significant visual resource. In any event, the proposed project is altering the appearance of the existing rail right-of-way from a vacant, undeveloped corridor to that of a suburban bikeway. However, it is anticipated that project components would actually

improve the existing degraded nature of the corridor through the elimination of trash dumping, vandalism and transient housing.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

No Impact. The project would not involve the implementation of objects known to cause substantial light or glare; therefore, no additional impact would occur.

5.2 AGRICULTURE RESOURCES

a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The project is located within the NCTD rail right-of-way which is largely bordered by developed land uses. No portion of the project would disrupt existing farmland.

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact. As stated in response 5.2-a, no portion of the project is located within areas which are zoned for agricultural use, therefore no impact would occur.

c) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?

No Impact. As stated in responses 5.2-a and 5.2-b, no portion of the project is located within existing agricultural areas, therefore no conversion of existing farmland to urban uses is anticipated to occur.

5.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution district may be relied upon to make the following determinations.

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact. Short-term impacts from construction activities would be primarily associated with exhaust from construction equipment (including carbon monoxide, reactive organic compounds [ROG], nitrogren oxides [NOX], sulfur dioxide [SO2], and the movement of earth particulate matter less than 10 microns in size [PM10]). Due to the short time period necessary for construction of the bikeway, it is anticipated that any construction generated air pollution would be minimal and dispersed without significant effects. San Diego Air Basin Management Guidelines does not identify construction related emissions as significant impacts. Therefore, the project would not interfere with implementation of the regional air quality management plan.

The 1997 Regional Transportation Plan stressed completion of the Route 78 Bikeway as a major objective in improving bicycling as an effective transportation alternative. The proposed action is expected to help increase the bicycle modal split. Therefore, the implementation of the Bikeway would represent a positive impact on air quality.

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

No Impact. See response 5.3-a.

c) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

No Impact. See response 5.3-a.

d) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact. The project is anticipated to cause short-term construction related emissions including the release of carbon monoxide, reactive organic compounds [ROG], nitrogren oxides [NOX], sulfur dioxide [SO2], and earth particulate matter less than 10 microns in size [PM10]. However, due to the temporary nature of project construction, it is anticipated that a less than significant impact would occur. As stated in response 5.3-a, once the project is implemented, air quality impacts would not occur.

e) Would the project create objectionable odors affecting a substantial number of people?

No Impact. No portion of the project would involve the introduction of odor producing entities or structures, therefore no impact would occur.

5.4 BIOLOGICAL RESOURCES

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?

Less than Significant Impact with Mitigation Incorporated.

Methodology. The biological resource investigation and analyses that form the basis of this analysis include the 1996 Ogden Biological Resources Technical Report, the 1997 US Fish and Wildlife Service Biological Opinion and the 1999 Dudek & Associates Wetland Delineation and Impact Assessment. Vegetation mapping was utilized from the 1996 Ogden Biological Resources Technical Report and the 1999 Dudek Wetland Delineation and Impact Assessment. Sensitive species information contained in the Ogden 1996 Biological Resource Technical Report was also utilized. The project was originally planned to follow the entire rail right-of-way from the Oceanside Transit Center to the Escondido Transit Center. However, upon review of the biological impacts documented in the 1996 Ogden Biological Resources Technical Report, it was later determined that the bikeway would be located along Oceanside Boulevard west of College Boulevard. This would allow for the elimination of a portion of wetland, upland and sensitive species impacts.

Project Impacts. The project would directly impact 0.50 acres of wetlands (DUDEK, 1999). The project would also impact upland habitats (Ogden, 1996 and USFWS, 1997). As stated in the 1996 Ogden report, native grassland, consisting of 0.11 acre located near Nordahl Road, would also be impacted by the project (Ogden 1996). Impacts to baccharis scrub documented in the 1996 Ogden report would be eliminated due to the modification of the project alignment west of College Boulevard. It should be noted that 0.01 acre of coast live oak woodland and two isolated patches of coastal sage scrub are located adjacent to the bikeway alignment, however no direct impacts to these resources are anticipated to occur. The 1996 Ogden Report as well as the 1997 USFWS Biological Opinion document the existence of four California gnatcatchers (*Polioptila californica*) east of the College Boulevard/NCTD rail road junction. Due to the decision to move the bikeway out of the NCTD rail right-of-way and

onto a vacant City of San Marcos owned parcel, impacts to both upland and wetland habitat and therefore any sensitive species potentially utilizing San Marcos Creek habitat would not occur.

Significance of Project Impacts. The project would not have any direct or indirect impacts to any sensitive species due to the 0.50 acre of impact to wetlands. As stated in the 1996 Ogden report and the 1997 USFWS Biological Opinion, no evidence of the federally listed endangered Least Bell's vireo (*vireo bellii pusillus*) was observed within project wetland impact areas, therefore no direct or indirect impacts to sensitive wetland wildlife species would occur. Direct impacts to 0.50 acre of wetlands is considered a significant impact unless mitigation is incorporated. Mitigation for wetland impacts is discussed in Section 5.4-b.

Native grassland is also a regulated habitat, therefore necessitating mitigation of the 0.11 acre of impact. In order to mitigate for impacts to this sensitive habitat, the following mitigation measure has been incorporated into the project.

- Based on the proposed 2:1 mitigation ratio, 0.11 acre of impacts to native grassland would be mitigated through the conservation of 0.22 acre of native grassland within a designated open space area as part of the City of San Marcos' draft MHCP Plan.

Due to the proximity of the 0.01 acre of coast live oak woodland to the project alignment, indirect impacts may occur. In order to reduce the potential of impacts to coast live oak woodland, the following mitigation measures have been incorporated in the project.

- Prior to commencement of construction, the patch of coast live oak woodland will be staked by a qualified biologist. This effort would protect this resource from construction equipment or worker intrusion. If it is determined during construction of the project that these oak trees will be impacted, the project proponent will arrange to have them moved and transplanted either next to the bikeway or within a similar habitat near the immediate project site.

Due to the proximity of the isolated patches of coastal sage scrub to the project alignment, indirect impacts may occur. In order to reduce the potential of impacts to coastal sage scrub, the following mitigation measures have been incorporated in the project.

- Prior to commencement of construction, the isolated patches of coastal sage scrub will be staked by a qualified biologist. This effort would protect this resource from construction equipment or worker intrusion. If it is determined upon

commencement of alignment engineering that these patches would be impacted, alignment modifications such as reducing the width of the bikeway would be made.

The project would result in indirect impacts to four California gnatcatchers known to occupy habitat directly east of College Boulevard. Indirect impacts to this species would stem from construction equipment noise and human presence adjacent to their habitat. In order to reduce indirect impacts to the federally listed threatened California gnatcatcher to a level below significance, the following mitigation measures have been included in the project.

- Construction through sensitive areas shall occur between August 15 and February 15 to minimize potential impacts to nesting gnatcatchers, unless the noise from construction can be kept below 60 dBA Leq within the habitat.

- A biological monitor that is familiar with vocalization, visual recognition, and nesting habitat of the gnatcatcher shall be employed to delineate the boundaries of all gnatcatcher territories adjacent to the ROW during the breeding season for all years in which project construction activities occur. The purpose of delineating territories is to monitor noise levels associated with construction activities. Noise monitoring shall be conducted throughout the breeding season (February 15 to August 15). Each noise monitoring period shall last a minimum of one hour at a minimum interval of twice per week. Noise levels shall be measured with a decibel meter and shall be conducted when construction activities are occurring.

- A report summarizing each noise monitoring period shall be submitted to the USFWS within 24 hours of each monitoring period. The report shall contain descriptions of all noise measurements, the location of measurements, and gnatcatchers sighted, and all corrective actions taken to avoid and reduce harassment of these two species. The location of the noise measurements and gnatcatcher sightings shall be recorded on an up-to-date (ie. 1995 or later) large scaled aerial photograph of the project site.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?

Less than Significant With Mitigation Incorporated. As stated in the August 10, 1999 Dudek & Associates Wetland Delineation and Impact Assessment, included as Appendix A to this MND, the proposed project would impact 0.50 acre of wetlands associated with ephemeral waters of the U.S.(0.03 acre), disturbed wetlands (0.07 acre), freshwater marsh

(0.05 acre), mule fat scrub (0.18 acre) and southern willow scrub (0.17 acre). Alteration of 0.50 acre is considered a significant impact. Therefore, the following mitigation has been incorporated.

- Mitigation for each type of wetland species would consist of preservation of 1.2 acres of like habitat through participation of the SANDAG/Caltrans wetland enhancement project along Pilgrim Creek. The Pilgrim Creek restoration project, currently being designated as a Corps approved mitigation bank, is located within the City of Oceanside adjacent to the U.S. Marine Corps Base, Camp Pendleton and the Oceanside Municipal Golf Course. The mitigation project entails restoration of 121 acres of former agricultural land into a mix of native upland and wetland vegetation. Mitigation for each type of habitat would occur in the following ratios: ephemeral waters, 1:1; disturbed wetland, 2:1; freshwater marsh, 2:1; mule fat scrub, 3:1; and southern willow scrub 3:1. Incorporation of this mitigation scenario would reduce impacts to wetlands to a level less than significant.

  Prior to commencement of the project, a Streambed Alteration Agreement, pursuant to Section 1601 of the California Fish and Game Code, will be obtained from CDFG. Authorization to utilize Nationwide Permit 26 pursuant to Section 404 of the Clean Water Act would be obtained from the Corps.

c) ***Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?***

Less than Significant With Mitigation Incorporated. See response 5.4-b.

d) ***Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?***

Less than Significant Impact. The project may cause significant impacts to local wildlife during construction due to the noticeable presence of humans, equipment and an increase in noise. However, as stated in the 1996 OGDEN Biological Assessment, the project would not permanently block or substantially constrict wildlife movement along its length. Existing and proposed trestles per the planned rail portion of the project would provide sufficient wildlife crossing points.

e) Would the project conflict with any local policies or ordinance protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant With Mitigation Incorporated. The Cities of Vista and Oceanside do not have tree preservation policies or removal ordinances. Therefore, removal of any vegetation from the rail right-of-way within these cities would not be considered a significant impact. The Cities of San Marcos and Escondido have tree preservation ordinances which would apply to vegetation clearing for project implementation. Discussion of these ordinances have been included below.

City of San Marcos; City Ordinance Code; Chapter 14.20, Article 1: This article states that the removal of vegetation from public property is considered a significant act and therefore necessitates a vegetation removal permit from the City Director. In order to reduce this impact to less than significant, the following mitigation measure will occur prior to commencement of the construction phase of the project.

- A vegetation removal permit will be obtained from the City Director prior to commencement of the project. This permit would outline specifications as to the amount and type of vegetation which could be removed.

City of Escondido; City Ordinance Code; Section 33-1068; Section 33-1086.B.: This section sets forth regulations to control habitat destruction, the clearing of land, and the removal of mature and protected trees. As stated in section b, number 6, Exceptions to required permits, the removal of trees for improvement projects constructed by the City as a part of a capital improvement program shall be reviewed by the Director on a case-by-case basis to determine if they are subject to the provisions of the tree removal ordinance. In order to comply with this ordinance, the following mitigation measure will occur prior to commencement of project construction.

- Prior to project construction, project proponents for the Cities of San Marcos and Escondido will submit a project description, design plans and any necessary environmental documentation to the Director for consideration for exemption from a tree removal permit. A tree removal permit would be obtained if the Director deems the project subject to such a mandate.

County of San Diego Community Design Plans and Greenbook Manual: These documents summarize specifications for replacement of trees removed in conjunction with a construction project. These documents would be consulted during design phases of the project in order to outline type, placement and other details required for tree replacement. No permit is required in order to remove trees within the unincorporated County of San Diego.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. No adopted HCPs or NCCPs are located within the project study area. The project is located within the study are of the San Diego North County Multiple Habitat Conservation Program (MHCP). The MHCP has not yet been adopted or approved. A draft MHCP document was distributed by SANDAG in September 1998. Several specifications pertaining to the preservation of core gnatcatcher reserves are discussed in this document. However, most of these cores are located within the southeastern portion of the study area. Linkages between these cores are also discussed, again largely pertaining to the southeastern study area. It can be concluded that the proposed project would not conflict with preliminary guidelines and conservation goals incorporated in the draft MHCP.

5.5 CULTURAL RESOURCES

a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

No Impact. As stated in the June 1999 Gallegos & Associates *Cultural Resource Inventory and Significance Test For Prehistoric Site CA-SDI-14340*, included as Appendix B to this MND, one historical resource was determined to be within the area of potential effect of the bikeway. This site has been described as a small disturbed campsite/milling station with few tools and primarily debitage. This site was tested for significance per CEQA requirements and given the small number and limited range of tools, as well as the disturbed nature of the site, the resource was identified as not significant and therefore not eligible for inclusion on the National Register of Historic Places.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

No Impact. No archaeological resource defined per CEQA Section 15064.5 would be impacted by the proposed project.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant with Mitigation Incorporated. It is anticipated that grading in the form of cut and fill slopes could potentially be necessary for project implementation. It is not

anticipated that any cuts would involve a dept which could potentially impact sensitive paleontological resources. However, in order to mitigate for potential impacts to paleontological resources, the following mitigation measure would be implemented.

- A qualified cultural resource monitor will be onsite during all excavation work. If a questionable resource is discovered, the monitor will have the ability to stop work in order to allow for proposer significance testing of the material.

d) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant Impact. It is not anticipated that the project would disturb any human remains interred outside of a formal cemetery. However, as stated above, a qualified archaeologist shall be onsite in order to inspect any questionable material. If human remains are discovered, the monitor will have the ability to halt further excavation until Native American representatives and/or a coroner are consulted.

5.6 GEOLOGY AND SOILS

a) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

No Impact. The project is not located on the Alquist-Priolo Earthquake Fault Zoning Map as an area of potential risk. The proposed project is located within the regional vicinity of the Elsinore, San Jacinto and Rose Canyon Faults. However, due to the lack of active faults in the immediate vicinity of the proposed project, no impact beyond what is generally accepted in seismically active Southern California is likely to occur.

ii. Strong seismic ground shaking?

Less than Significant Impact. As stated in 5.3-a, a certain level of exposure to seismic ground shaking has the potential of occurring within seismically active Southern California. Prior to project construction, the City will

conduct testing of soil foundations to determine weakness in soil strength and if necessary design major structural elements in accordance with California earthquake standards. In addition, no Alquist-Priolo special study zones or active faults are located within the vicinity of the proposed project and therefore a less than significant risk of ground rupture from a major earthquake is anticipated to occur (SanGIS, Index to Earthquake Fault Zones).

iii. Seismic-related ground failure, including liquefaction?

Less than Significant Impact. The threat of liquefaction is apparent near waterways such as Loma Alta Creek, Buena Creek and San Marcos Creek where the ground water table is shallow. However, liquefaction hazard zones, currently delineated on the SanGIS Geologic Hazards Map, are not located within the project vicinity (SanGIS Index to Geologic Hazards, www.sangis.org).

iv. Landslides?

Less than Significant Impact. Landslides typically occur in areas containing substantial slopes. The proposed project is located within flat, low lying areas. In areas where the project leaves the NCTD rail line and joins city streets, no encroachment of slopes greater than 30% would occur. Retaining walls and embankments are proposed in order to protect the corridor from surrounding slopes therefore adding assurance that the project would not be subject to landslides or mud flows as well as expose the public to dangerous geologic conditions (Section 4.4, DEA/SEIR).

b) Would the project result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. As stated in the DEA/SEIR, several areas along the proposed project alignment have been determined moderate to high risk erosion potential areas. However, inherent erodibility of these areas would not be altered by the project since structural features would be sited in 100-foot right-of-ways at the base of these slopes. Construction of the project would therefore not disrupt any adjacent slopes.

c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in, on or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

Less than Significant Impact. See response 5.6-aiii.

d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks of life or property?

Less than Significant Impact. Due to the project's linear nature, several types of soils are likely to be encountered along the alignment. However, it can be inferred that due to the lowlying nature of much of the alignment coupled by the presence of water in many places, the project would largely rest on variety of sandy soils. Soils composed largely of sands are considered to be of medium expansion risk. Therefore, it is assumed that during final design of the project, site specific soil information would be studied in detail and modifications to the structural framework of the bikeway implemented.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal or wastewater?

No Impact. The project would not require sewer or wastewater disposal services, therefore no impact to existing or future service facilities would occur. It is anticipated that bikeway users would utilize public facilities located at each rail station, which is not considered to be a part of this project.

5.7 HAZARDS AND HAZARDOUS MATERIALS

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

No Impact. Construction of the proposed project would involve the transport of gasoline and other fuels to the project site for the sole purpose of equipment fueling. However, once project construction is complete, the transport, use or disposal of hazardous materials would occur due to the lack of motorized vehicles on the bikeway.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

No Impact. See response 5.7-a.

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. The proposed project would be located within 0.25 mile of Centennial High School in Oceanside. However, the bikeway would be located within existing bicycle lanes on Oceanside Boulevard. Therefore, no construction aside from implementation of interpretive placards and/or signs would occur. Due to the absence of construction for this portion of the bikeway, no potential hazard to schools would exist.

d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. A review of federal, state and local hazardous materials lists was conducted in conjunction with the 1996 NCTD EA/EIR. Prior to construction of the Coast Highway Station and the Maintenance Facility it is recommended that further hazardous materials testing occur. Construction of the bikeway project would not involve excavation, grading or filling within these two locations, therefore no impact with these potentially contaminated sites would occur. It should be noted that one underground storage tank site is known to exist within the NCTD right-of-way within the City of Vista, specifically within the downtown redevelopment area. However, due to the existing redevelopment effort, it is anticipated that this underground storage tank would be removed from the project site prior to the anticipated bikeway construction period (pers. comm. Connely, August 1999).

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The project would not subject users to safety hazards associated with public or private airports.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. See response 5.7-e.

g) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact. Due to the project's location within a corridor not utilized for emergency access, it is not anticipated that an emergency evacuation plan would be affected by the project during either project construction or operation. In areas where the bikeway follows existing city streets, it is assumed that adequate emergency access already exists along these streets and therefore no conflict would occur.

If a bikeway user or NCTD rail vehicle were to require emergency services, it is assumed that local emergency vehicles would be equipped with a card or device which would allow them to easily remove motor vehicle prevention pilings planned to be located at the entrances and exits of the bikeway. If a bikeway user was to require emergency services while using the portion of bikeway located on existing city streets, adequate emergency access exists within these areas. Therefore, it is not anticipated that the construction of the bikeway would inhibit emergency service vehicles and/or personnel from accessing a bikeway user or the NCTD right-of-way.

h) Would the project expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Less than Significant with Mitigation Incorporated. Portions of the proposed project are located adjacent to potentially flammable materials such as brush, grass or trees. In order to prevent possible fire hazards from encounters with brush, grass or trees, the following mitigation measure shall be implemented in order to reduce the impacts to below a level of significance.

- A brush management plan shall be incorporated during project construction. Construction within areas of dense foliage during dry conditions should be avoided. In cases where avoidance is not feasible, necessary brush fire prevention and management practices shall be incorporated. Specifics of the brush management program will be determined as site plans for the project are finalized.

5.8 HYDROLOGY AND WATER QUALITY

a) Would the project violate any water quality standards or waste discharge requirements?

Less than Significant with Mitigation Incorporated. The project is anticipated to impact 0.05 acre of wetlands and waters of the U.S. Alteration of existing waters of the U.S. or wetlands is considered a significant impact, therefore mitigation is required.

- Due to regulation of these water bodies by the U.S. Army Corps of Engineers and California Department of Fish and Game, a wetland alteration agreement pursuant to Section 404 of the Clean Water Act and Streambed Alteration Agreement pursuant to Section 1601 of the Fish and Game Code would be obtained. In addition, the project would be subject to a water quality certification waiver pursuant to Section 401 of the Clean Water Act. This waiver would be obtained from the State Water Quality Control Board, Regional Water Quality Control Board, Region 9-San Diego.

No appreciable urban contamination would occur due to exclusive use of the facility by non-motorized bicycles. Construction impacts due to grading, cutting and filling are anticipated to impact water quality through increased sediment load within the floodplain and adjacent waterways.

In order to mitigate for potential impacts to local water quality during construction of the bikeway, the following mitigation measures would be implemented.

- Appropriate erosion control measures would be installed such as hay bales, sand bags, and silt curtains.

- Buffer zones would be established at the down gradient boundaries of disturbed areas to prevent wash-off into channels. Buffer zones may be vegetated (grass) or hay baled. Buffer zones serve to reduce overland flow velocities and trap eroded sediment that would otherwise migrate toward drainage channels.

- If necessary, siltation basins would be constructed in drainage channels to capture sediment.

- Stormwater management plans, as required by state and local regulation for construction sites shall be prepared.

- Right-of-way bridge piers and culverts constructed within channels would be designed to minimize disruption of flow regimes, channel scour and downstream deposition of sediment.

b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of a local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less than Significant Impact. The ground water level is known to be shallow within project areas adjacent to creeks. However, due to the existing nature of most facilities, minimal cut and fill would be required, therefore reducing the risk of accidental groundwater encounter to below a level of significance.

c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or offsite?

Less than Significant Impact. Although the project would not involve the movement of an existing stream or river course, siltation and/or erosion may occur during project implementation. See response and mitigation measures 5.8-a.

d) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or offsite?

No Impact. The project would not alter the existing floodplain. Therefore, no change in potential creek water levels would occur. No part of the project involves damning, diking or berming of water bodies, therefore no change in the amount of surface water would occur. Per NEPA CE requirements, a Floodplain Risk Assessment and Findings will be prepared in order to document the absence of impacts to existing floodplains.

e) Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

No Impact. The project would cause runoff to occur, but due to the dimensions of the impervious portion of the bikeway, a substantial addition to local stormwater drainage

systems would not occur. Further, due to the non-motorized vehicle use of the bikeway, additional sources of polluted runoff would not occur.

f) Would the project otherwise degrade water quality?

No Impact. See responses 5.8-a, c and e.

g) Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary of Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. No portion of the proposed project would involve the construction of housing.

h) Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?

Less than Significant Impact. Design of the project involves placement of portions of the alignment within the 100 year flood zone of various drainages. However, the portions of the bikeway within the 100 year flood zones would not impede or redirect flood flows due to the minimal amount of impact to the existing hydrology and structure of the floodway.

i) Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

No Impact. No portion of the project would involve the construction of a levee or dam which could potentially place downstream people or structures at risk. In addition, as mentioned in response 5.8-h, the amount of impact to the existing floodplain would be minimal, therefore no people or structures would be placed in a flood risk zone.

j) Would the project be susceptible to inundation by seiche, tsunami, or mudflow?

No Impact. The project site is not located in an identified hazard area for seiche, tsunami or mudflow events.

5.9 LAND USE AND PLANNING

a) Would the project physically divide an established community?

No Impact: The proposed alignment of the project traverses many types of residential districts, some of which may be considered low-income neighborhoods. However, the project would be contained within the existing NCTD rail line right-of-way. In areas where the project leaves the NCTD right-of-way, the path would follow existing city streets. Therefore, the project would not disrupt or divide any existing low-income or minority housing communities.

Executive Order No. 12898 states that each Federal agency, to the extent practicable and permitted by law and consistent with the principles set forth in the report on the National Performance Review, shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions. A memorandum of understanding, which summarizes the less than significant impact to the above-stated mandate has been prepared and has been included as Appendix C to this MND.

b) Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Less than Significant Impact. The project site is located within the cities of Oceanside, Vista, San Marcos and Escondido as well as a portion of unincorporated San Diego County. A portion of the project is also located within the Coastal Zone within the City of Oceanside. Each jurisdiction's planning document and section which discuss bicycle facilities or other applicable topics are outlined below.

City of Oceanside General Plan, Land Use Element. Article 2.7, Community Facilities Management, Section 2.7121, Bicycle Facilities, outlines the goal to provide an integrated Bicycle Circulation System and Bicycle Facilities to promote the environmental and social benefits of commuter and recreational bicycling. This section further states that the bicycle circulation system and bicycle facilities shall provide mobility and safety to all persons and areas within the City of Oceanside. The proposed project would move the City of Oceanside closer to this goal through provision of new, designated bicycle facilities along the Coast Highway and to inland communities. This facility would provide both commuter and

recreational opportunities due to the proposed alignment's location within many types of developed and undeveloped land uses.

City of Oceanside General Plan, Recreational Trails Element. The Recreational Trails Element of the General Plan specifies the need for the Oceanside-Escondido Trail/Rail project due to the important link it would provide for east-west corridors. The Trails Element states a need for an integrated network of trails allowing for the efficient non-motorized movement between different areas of the City as well as neighboring communities.

City of Vista General Plan, Land Use Element. Civic Activity, Objective 40, Policies 40.1 through 40.6 state the need for civic facilities and their accessability to the public. The proposed project would follow a major transportation corridor, thus allowing for a sensible location from which to transport a large segment of people. The project would follow all ADA requirements in creating adequate disabled access to the trail. The trail width has been designed to accommodate wheelchair access. Parking for the facility would be available at the various rail stations along the Oceanside-Escondido Rail Line.

City of Vista General Plan, Bicycle, Hiking and Equestrian Trails Element. Several Standards and Policies included in the City of Vista Bicycle, Hiking and Equestrian Trails Element of the General Plan would be met with the implementation of the proposed project. The plan states that where possible, all bicycle trails should be separated from vehicular and pedestrian traffic by a physical separation or safe distance. All major through-bicycle routes should be marked by painted lanes and bicycle route signs. Rest areas should accompany major bicycle trails. All City through-routes should connect with County or other jurisdictions' systems where possible. It should be noted that the proposed project would coincide with these specifications outlined in this element of the General Plan. This portion of the General Plan also includes a clause which states that State and Federal money available for bicycle trail usage should be obtained and applied according to an adopted priority program. This project would concur with this effort as evident by the large majority of state and federal funds.

City of San Marcos General Plan, Circulation Element. *Section 7.0, Alternative Transportation Modes, Goals, Policies and Implementing Strategies, Goal 3, Policy 6* states the need to create a safe, convenient and effective bicycle system which encourages increased bicycle use. This policy outlines implementation strategies such as establishing a bicycle network plan linking residential with commercial land uses, integrating bicycle lanes with other transportation projects whenever possible and link bicycle routes with other planned projects within the County or other jurisdictions. The project would be in compliance with all outlined implementation strategies. This project is an example of interagency and jurisdiction coordination as well as an efficient use of an existing transportation corridor.

City of Escondido General Plan, Transportation/Circulation Element. Section D, Transportation/Circulation, Policy D1.2 states the need to support a balanced use of travel modes to address the transportation needs of all members of the community. The policy further states the need for new transportation facilities including bicycle trails. Policy D5.5 states that the City shall cooperate with NCTD to assure that transit centers and major stops have adequate bicycle and pedestrian access. The proposed project would move the City closer to its goal of providing integrated transportation options to all segments of the population. The proposed trail would also allow for a multi-city transportation corridor within NCTD jurisdiction.

City of Oceanside, Local Coastal Program. A portion of the project from the Oceanside Transit Center to the mobile home park located directly west of Interstate 5 is located within the Coastal Zone. This area is designated a special study overlay within the City of Oceanside General Plan. The project would be consistent with the City's LCP due to the proposed alignment's location within existing bicycle lanes (Hittleman, pers. comm.). Designating existing bicycle lanes as part of the Oceanside-Escondido Bikeway would not involve grading or remodeling of structures within the Coastal Zone. The only anticipated changes would be the addition of benches, signs, and interpretive placards.

c) Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. See response 5.4-f.

5.10 MINERAL RESOURCES

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. A portion of the project would intersect mineral resources within the City of San Marcos. However as depicted on the California Division of Mines and Geology, Generalized Mineral Land Classification Map of Wester San Diego County, the impact area has been designated MRZ-4. All resources not designated MRZ-2 are considered less than significant (California Department of Conservation, Division of Mines and Geology, 1996).

b) Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. The project would not impact a known mineral resource recovery site as delineated on a local general plan, specific plan or other land use plan, therefore no impact would occur.

5.11 NOISE

a) Would the project result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than Significant Impact. Impacts and corresponding mitigation measures for noise impacts to sensitive wildlife receptors can be found in response 5.7-a. Construction-related noise impacts would temporarily affect nearby residents. In order to reduce noise impacts to surrounding sensitive receptors to a level below significance, the following mitigation measure shall be implemented.

- All construction shall occur between set construction hours. According to each city's ordinance, construction would occur during the following time constraints:

  City of Oceanside: Monday through Friday, 7 a.m. to 7 p.m.; Saturday pending prior approval from the City Engineer.

  City of Vista: Monday through Saturday, 7 a.m. to 7 p.m.

  City of San Marcos: Monday through Friday, 7:30 a.m. to 4:30 p.m.; Saturday pending special circumstances and approval from the construction manager.

  City of Escondido: Monday through Friday, 7 a.m. to 7 p.m.; Saturday pending prior approval from the City Engineer.

  County of San Diego: Monday through Friday, 7 a.m. to 7 p.m.; weekends pending prior approval from the Department of Public Works.

b) Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

No Impact. Due to the transient nature of bikeway users, groundbourne vibration or noise would not occur with project implementation. In addition, no motorized vehicles would be allowed access to the bikeway, therefore further reducing the amount of noise prevalent on the bikeway.

c) Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than Significant Impact. It is anticipated that the project would involve the introduction of a noise source, voices of bicyclists and/or pedestrians, to the NCTD rail right-of-way. However, due to the distance of adjacent sensitive receptors as well as the rapid pace of travel of a majority of the bikeway users, a substantial increase in ambient noise levels is not anticipated to occur.

d) Would the project result in a substantial temporary of periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less than Significant Impact. See response 5.11-a.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The project corridor is not located with an airport land use plan. In addition, the project would not involve the implementation of new housing which could intern expose people to airport noise disturbances. It is not anticipated that a population influx would occur due to the project as it is assumed that bikeway users would consist largely of current residents of San Diego County.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. See response 5.11-e.

5.12 POPULATION AND HOUSING

a) Would the project induce substantial population growth in an area, either directly (for example, by proposing new homes or businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No impact. The project would not cause growth to occur in areas that are currently undeveloped. The project is planned to accommodate the needs of existing Oceanside, Vista, San Marcos, Escondido and County of San Diego residents. Any recreationalists from other cities are expected to visit the bike trail rather than permanently relocate to Oceanside, Vista, San Marcos, Escondido or the nearby unincorporated County. Therefore, the project does not represent an improvement of major infrastructure due to its recreational nature. Therefore, substantial growth inducement is unlikely to occur.

b) Would the project displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. The project would not displace existing housing due to the project's location within the undeveloped NCTD rail line right-of-way or within the boundaries of existing city streets.

c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. See response 5.12-b.

5.13 PUBLIC SERVICES

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

i. Fire protection?

Less than Significant Impact. The project would not create a long term fire hazard. Therefore, the need for increased fire protection would not occur.

However, project construction may increase the risk of fire in the immediate area, therefore, it is anticipated that with the proposed mitigation measure, this risk would be insignificant. See also response 5.7-h.

ii. Police protection?

No impact. Due to the non-population increasing nature of the project, an increase in local police protection would not occur.

iii. Schools?

No impact. The proposed project would not cause an increase in local population. Therefore, a demand on nearby school services would not occur.

iv. Parks?

No Impact. Due to the non-population inducing nature of the project, demands on existing public parks would not occur, therefore a need for new or improved park facilities would not be influenced by implementation of the proposed project.

v. Other public facilities?

No Impact. All construction, maintenance, management, and liability of the proposed project would be assumed by each city and the county for their jurisdictions' portion of the project alignment.

5.14 RECREATION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. As stated in response 5.13-aIV, the project is not considered to be a growth inducing piece of infrastructure, therefore no increase in local population is anticipated to occur. The project would not cause an increase in user levels at local and regional parks. If anything, the project may actually provide for an additional recreation option for local residents.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Less than Significant Impact. As discussed in Section 5.4-c, the project would involve the construction of a recreational facility which would require the alternation of approximately 0.50 acre of existing jurisdictional wetland. Impacts to existing wetland vegetation and corresponding mitigation measures are discussed in detail in response 5.4-c. Implementation of these mitigation measures would reduce potential impacts to below a level of significance.

As discussed in Section 5.5-c, potential impacts could occur to unknown paleontological resources during excavation phases of the project. Mitigation measures have been proposed which would reduce this potential impact to below a level of significance.

The project may also physically impact the environment due to an increase in brush fire potential. Impacts to existing brush fire hazards and corresponding mitigation measures are discussed in Response 5.7-f. Implementation of these mitigation measures would reduce potential impacts to below a level of significance.

It is anticipated that the project would also impact water quality standards during construction of the facility. Impacts to local water quality due to increased sediment load and corresponding mitigation measures are discussed in response 5.8-a. Implementation of these mitigation measures would reduce potential impacts to below a level of significance.

The overall intent of the proposed project is to allow for a continuous east-west corridor for non-motorized vehicle travel. This project would help reduce the overall impacts of motorized vehicle travel on the physical environment.

5.15 TRANSPORTATION/TRAFFIC

a) Would the project cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

No Impact. The proposed project would not cause an increase in traffic. As stated in the 1997 Regional Transportation Plan, the completion of this project is considered an integral mechanism for increasing the amount of bicycle travel along the SR78 east-west corridor.

b) Would the project exceed, either individually or cumulatively, a level of service standard established by the County Congestion Management Agency for designated roads or highways?

No Impact. See response 5.15-a.

c) Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The project would not impact air traffic patterns. Therefore, safety of local residents and/or businesses would occur.

d) Would the project substantially increase hazards due to a design feature (e.g., sharp curves of dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than Significant Impact. The project would involve crossing of the existing as well as proposed NCTD rail line. Crossings would occur at armored street crossings. It is assumed that bikeway users would cross the rail road tracks within the same corridor as pedestrians and automobiles. Therefore, a less than significant impact would occur.

e) Would the project result in inadequate emergency access?

Less than Significant Impact. See response 5.7-g.

f) Would the project result in inadequate parking capacity?

Less than Significant Impact. As stated previously, it is estimated that a large portion of bikeway users would consist of current residents of the Cities of Escondido, San Marcos, Vista, Oceanside and the surrounding unincorporated County of San Diego. Therefore, it is also inferred that a large majority of users would originate from their homes and would therefore not require the need for parking spaces. For users who may travel from their homes or neighboring cities via motorized transportation, parking spaces within the City of San Marcos Civic Center Parking Structure would be made available upon completion of the project.

g) Would the project conflict with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

No Impact. The project would not impact alternative transportation plans or programs due to the project's nature of an alternate transportation mode.

5.16 UTILITIES AND SERVICE SYSTEMS

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

No Impact. The project would not generate wastewater in need of treatment from local facilities. Project plans do not call for restroom facilities other than those associated with the planned NCTD rail stations. Any runoff water from drinking fountains which are planned as components of the project would utilize gravel seepage basins located onsite, therefore not necessitating local wastewater treatment service.

b) Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which would cause significant environmental effects?

No Impact. The project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities which would cause a significant environmental effect. Project design calls for the placement of drinking fountains throughout the alignment. However, it is not anticipated that the addition of these drinking fountains would necessitate new water or wastewater treatment facilities which would in turn cause significant environmental impacts.

c) Would the project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

No Impact. The project would require a drainage system in order to properly dispose of excess runoff. However, it is assumed that due to non-motorized vehicle use of the bikeway and therefore the absence of petro chemical contaminants, natural drainage systems such as seepage basins could be used. The introduction of these facilities would not cause significant environmental effects.

d) Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less than Significant Impact. The project would require the use of water resources in the form of drinking fountains located throughout the project alignment. This would necessitate use of existing public water supplies within each jurisdiction affected by the project. However, due to the small amount of water anticipated to be needed in association with these drinking fountains, a less than significant impact would occur.

e) Would the project result in determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider/s existing commitments?

No Impact. As stated in response 5.16-a, no portion of the project would require service from the local wastewater treatment facility due to the lack of sanitary services proposed with the project.

f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

No Impact. See responses 5.16-a, 5.16-d, 5.16-e.

g) Would the project comply with federal, state, and local statues and regulations related to solid waste?

No Impact. See responses to 5.16-a, 5.16-d, 5.16-e.

5.17 MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less than Significant with Mitigation Incorporated. The project could potentially impact unknown paleontological resources during earthmoving activities. In order to mitigate for potential impacts to paleontological impacts, the following mitigation measure would in order to reduce impacts to less than significant.

- A qualified cultural resource monitor will be onsite during all excavation work. If a questionable resource is discovered, the monitor will have the ability to stop work in order to allow for proposer significance testing of the material.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less than Significant Impact. A cumulative impacts analysis, documented the additive effect of all projects in the same geographic region as the proposed project, was completed and included as Section 9.0 of the 1996 NCTD EA/EIR. This cumulative analysis assumed cumulative effects for the rail/bikeway project as a whole. This analysis discussed past, present and reasonably foreseeable future projects including the Loma Alta Creek Flood Control Project, El Corazon de Oceanside, Ivy Ranch, Rancho del Oro Village XII Project, Mottino Commercial Center, Vista Village Specific Plan, Discovery Hills, San Elijo Rancho Specific Plan Amendment, San Marcos Creek Flood Channel, CSUSM Master Plan, Paloma, Heart of the City Specific Plan, and the Hollandia Specific Plan. The EA/EIR discussed cumulative impacts in the areas of traffic and transportation, land use, visual quality, geology/soils, biological resources, cultural resources, paleontological resources, water resources, public health and safety, air quality, noise and vibration, energy and socioeconomics. The conclusions drawn from the previous analysis stated that due to proposed mitigation plans and programs, a less than significant cumulative impact would occur to the regional geology and soil conditions, biological resources, cultural resources, paleontological resources, water resources, public health and safety and noise and vibration. It was concluded that all other areas of concern would not result in cumulative impacts.

This previous cumulative analysis assumed the project consisted of both the rail and trail components. It is therefore assumed that the same conclusions can be reached as the previous analysis. Although biological resource impacts associated with wetland alteration and potential take of four California gnatcatchers would be mitigated under separate mitigation plans as the rail portion of the project, it has been determined that the mitigation discussed in this MND would be adequate and would meet criteria set forth by the regulatory agencies.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

No Impact. The project would not involve the implementation of structures or facilities which could be considered to have permanent direct or indirect negative impacts on human

beings. The construction of the project could actually be argued to improve the lives of human beings both directly and indirectly through the promulgation of bicycles as a viable mode of transportation along the SR 78 (north county east-west) corridor. This project would thereby help reduce the amount of automobiles using this corridor and therefore help increase existing air quality. The project would also provide a new recreational facility for local residents. It is anticipated that once construction of the bikeway facility is complete, no negative direct or indirect impacts to humans would occur.

SECTION 6.0
REFERENCES

6.1 EARLIER ANALYSES CITED

(1) North County Transit District, Federal Transit Administration. *Oceanside-Escondido Rail Project Environmental Assessment/Subsequent Environmental Impact Report.* Written by Ogden Environmental and Energy Services. October 1996.

(2) Ogden Environmental and Energy Services, North County Transit District. *Oceanside-Escondido Rail Project Biological Resource Technical Report.* June 1996.

(3) Ogden Environmental and Energy Services, North County Transit District. *Oceanside-Escondido Rail Project Cultural Resources Technical Report.* June 1996.

6.2 REFERENCES AND BIBLIOGRAPHY

Broughton, Phil, Transportation Engineer, City of Escondido. Personal Communication. August 1999.

Dayani, Omar, Engineer, City of San Marcos. Personal Communication. February, March, April, May, June, July and August 1999.

California, State of. Building Standards Commission. *Uniform Building Code.* 1994.

California Department of Conservation, Division of Mines and Geology. *Update to Special Report 153, Mineral Land Classification: Aggregate Materials in Western San Diego County, Production-Consumption Region.* 1996.

California Department of Conservation, Division of Mines and Geology. *Special Report 100; Planning Scenario for a Major Earthquake in the San Diego-Tijuana Area.* 1990.

Connely, John. Planner, City of Vista. Personal Communication. July and August 1999.

Escondido, City of. *City Ordinance Code. Section 33-1068: Clearing of Land and Vegetation Protection.* 1996.

Federal Register. *Executive Order No. 12898 on Environmental Justice.*

Hanson, Karel. Project Manager, County of San Diego. Personal Communication. August 1999.

Hittleman, Jerry. Planner, City of Oceanside. Personal communication. March, April, May, June, July, August 1999.

Kelsay, Richalene. Associate Environmental Planner, Caltrans. Personal communication. July and August 1999.

Olivas, Nelson. Program Coordinator, Environmental Services Unit, Department of Public Works, County of San Diego. Personal communication. August 1999.

Rieger, John. Biologist. Caltrans. Personal communication. July and August 1999.

SanDAG. Regional Transportation Plan 1996-2020. 1997.

San Marcos, City of. *City Ordinance Code. Chapter 14.20: Planting, Trimming and Removal of Trees and Shrubs.*

SanGIS Interactive Maps Website. http://www.SanGIS.org. Accessed February and July, 1999.

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APPENDIX A

Wetland Delineation and Impact Assessment by Dudek & Associates Inc.

DUDEK
& ASSOCIATES, INC.
Professional Teams for Complex Projects

WETLAND DELINEATION AND IMPACT ASSESSMENT

FOR THE

OCEANSIDE-ESCONDIDO BIKEWAY PROJECT
SAN DIEGO COUNTY, CALIFORNIA

Attachment 5

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10 August 1999

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SUMMARY

The City of San Marcos (City), as the lead agency representing the Cities of Escondido, Vista, Oceanside and the County of San Diego, is proposing the construction of the Oceanside-Escondido Bikeway (Bikeway, formerly bike trail) to be located within the entire North County Transit District (NCTD) Oceanside-Escondido Rail line right-of-way (Figures 1-2). In some areas of the proposed project, the bike trail would leave the NCTD right-of way and follow nearby city streets until rejoining with the rail line. The Bikeway would accommodate bikers of average ability, including handicapped riders. The bike path itself would be 20 feet wide including two 8-foot paved bicycle lanes and two 2-foot paved shoulders. In locations where impacts to wetland resources would be unavoidable, the bike path would be reduced to 12 feet wide (5-foot bicycle lanes, 1-foot paved shoulders) in order to minimize such impacts.

Based on species composition and general physiognomy, three native plant communities or habitat types were identified in the project area, i.e., southern willow scrub (SWS), mule fat scrub (MFS), and freshwater marsh (FWM). Disturbed wetland (DW) also was identified. In addition, ephemeral, intermittent, and perennial waters of the U.S. were identified.

The following table summarizes anticipated project wetland impacts and suggests mitigation ratios and acreage.

Table 1. Summary of Project Impacts and Recommended Mitigation.

WETLAND TYPE	TOTAL ACREAGE SURVEYED	ANTICIPATED IMPACTS	SUGGESTED MITIGATION RATIO	SUGGESTED MITIGATION ACREAGE
Ephemeral Waters of the U. S.	0.22 ac	0.03 ac	1:1	0.03 ac
Intermittent/Perennial Waters of the U.S.	0.12 ac	----	----	----
Disturbed Wetland	0.37 ac	0.07 ac	2:1	0.14 ac
Freshwater Marsh	0.25 ac	0.05 ac	2:1	0.10 ac
Mule Fat Scrub	0.16 ac	0.06 ac	3:1	0.18 ac
Mule Fat Scrub (CDFG Only)	0.14 ac	0.12 ac	2:1	0.24 ac
Southern Willow Scrub	0.75 ac	0.17 ac	3:1	0.51 ac
TOTAL	2.01 ac	0.50 ac		1.20 ac

The City of San Marcos proposes to meet the wetland mitigation requirements of 1.20 acres by participating in the wetland mitigation program being implemented by Caltrans and the San Diego Association of Governments (SANDAG) along Pilgrim Creek in northern Oceanside.

1.0 BACKGROUND AND PURPOSE

The City of San Marcos (City), as the lead agency representing the Cities of Escondido, Vista, Oceanside and the County of San Diego, is proposing the construction of the Oceanside-Escondido Bikeway (Bikeway, formerly bike trail) to be located within the entire North County Transit District (NCTD) Oceanside-Escondido Rail line right-of-way (Figures 1-2). In some areas of the proposed project, the bike trail would leave the NCTD right-of way and follow nearby city streets until rejoining with the rail line. The Bikeway would accommodate bikers of average ability, including handicapped riders. The bike path itself would be 20 feet wide including two 8-foot paved bicycle lanes and two 2-foot paved shoulders. In locations where impacts to wetland resources would be unavoidable, the bike path would be reduced to 12 feet wide (5-foot bicycle lanes, 1-foot paved shoulders) in order to minimize such impacts.

The Bikeway alignment lies within the U.S. Geological Survey 7.5 minute series San Luis Rey, San Marcos, Valley Center, and Escondido quadrangles and is detailed in Figures 3-30 of this report. The project would begin at the Oceanside Transit Center, traveling south within Coast Rail Trail right-of-way until the junction of Oceanside Boulevard. The Bikeway would be temporarily located along South Cleveland Street from the Oceanside Transit Center to Oceanside Boulevard. The Bikeway would not be moved within the NCTD right-of-way until the Coast Bike Trail is completed. [The Coast Bike Trail is a project currently being proposed by the coastal communities of Oceanside, Carlsbad (designated lead agency), Encinitas, Solana Beach, Del Mar and San Diego.] Upon completion of the ultimate trail alignment, the trail and Bikeway would follow the same path from the Oceanside Transit Center to Oceanside Boulevard where the Oceanside-Escondido Bikeway would break off and travel east. From South Cleveland Street, the project follows Oceanside Boulevard to College Boulevard. The Bikeway also separates from the NCTD right-of-way approximately 600 feet west of North Melrose Drive where it again joins Oceanside Boulevard. The Bikeway rejoins the rail line on the east side of North Melrose Drive. The project would separate from the rail right-of-way at Valpreda Street where it would align with Mission Road until the junction of Woodland Parkway where it would return to the rail right-of-way. The project would then separate from the rail line just east of Washington Avenue where it would join North Washington Avenue and North Spruce Street before returning to the NCTD right-of-way directly west of the Escondido Transit Center.

The purpose of the Oceanside-Escondido Bikeway Project is rooted in the existing and increasing congestion projected for SR-78. Due to recent growth along the Oceanside-Escondido corridor, major roads such as Oceanside Boulevard in Oceanside, Mission Avenue in Oceanside and Mission Road in Vista, San Marcos, and Escondido are experiencing increasing levels of congestion. This congestion has intimidated many bicyclists from using existing bike lanes along these roadways. The proposed action is regarded as a viable means to provide an alternative mode of transportation to the automobile within the SR-78 corridor. Regional and local transportation planners have recognized the importance of providing a safe, usable bicycle route along the existing NCTD railroad corridor right-of-way. Implementation of the bike path would provide a safe alternate mode for commuting, short-distance trips, and recreation.

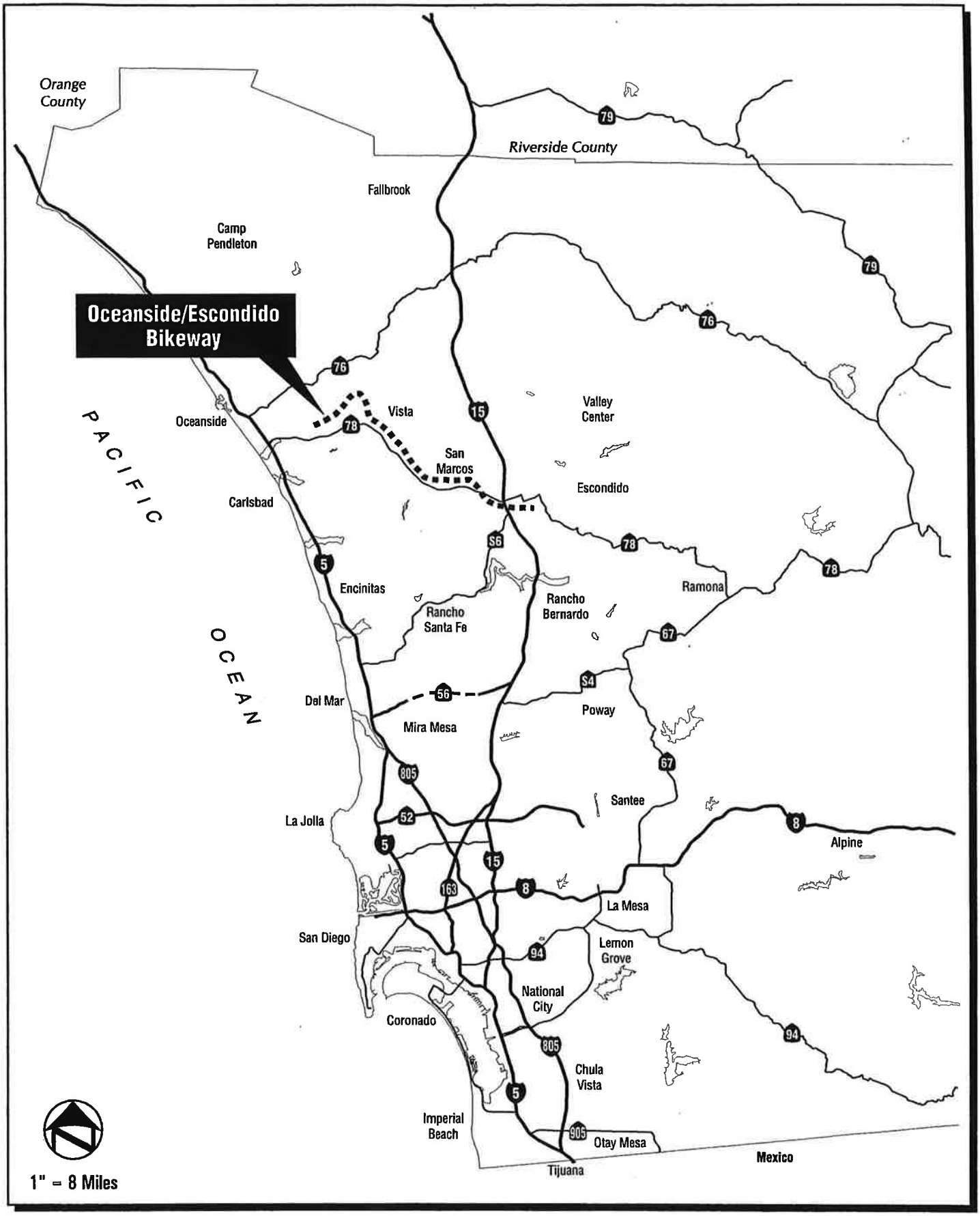
The purposes of this document are to: 1) identify and describe the wetland habitats within the Oceanside-Escondido Bikeway alignment which are regulated by the U.S. Army Corps of Engineers (Corps) and the California Department of Fish & Game (CDFG); 2) to identify wetland impacts to these jurisdictions associated with development of the Oceanside-Escondido Bikeway; and 3) to describe the Pilgrim Creek Mitigation Bank which would be utilized as compensation for project wetland impacts.

Documents researched in the preparation of this report include the *Draft Mitigated Negative Declaration for the Oceanside-Escondido Bikeway, City of San Marcos, California* prepared by Dudek & Associates, Inc. (DUDEK) dated 8 August 1999, the *Environmental Assessment/Subsequent Environmental Impact Report for the Oceanside-Escondido Rail Project* prepared by Ogden Environmental and Energy Services Co., Inc. (Ogden) dated October 1996, the *Biological Resources Technical Report for the Oceanside-Escondido Rail Project* prepared by Ogden dated October 1996, and the *Oceanside-Escondido Rail Project and Bike Path Conceptual Wetland Mitigation Plan* prepared by Ogden in September 1996.

2.0 WETLAND DELINEATION METHODS

A preliminary wetlands survey of the Oceanside-Escondido Bikeway alignment was conducted on April 14-16, 1999 by DUDEK environmental scientist/planner Jeff Thomas. The preliminary wetland survey results were reviewed with Mr. Terrence Dean of the Corps San Diego Regulatory Branch in a field meeting on 22 July 1999 to discuss potential problem areas with respect to Corps jurisdiction and possible impact avoidance/minimization measures. Following this meeting, Mr. Thomas conducted a formal wetland delineation on 23 and 27 July 1999, as summarized in this report. On July 29th, 1999, Mr. Dean and Mr. Thomas, with Mr. Omar Dayani of the City of San Marcos Engineering Department, visited all potential wetland impact areas associated with the Bikeway, reviewing wetland delineation and eliminating or reducing project impacts where feasible. (This process resulted in a significant decrease in wetland impacts, from a preliminary estimate of 1.86 acres of wetland impacts to 0.38 acre impact to Corps jurisdictional wetlands plus an additional 0.12 acre impact to CDFG jurisdictional wetlands.)

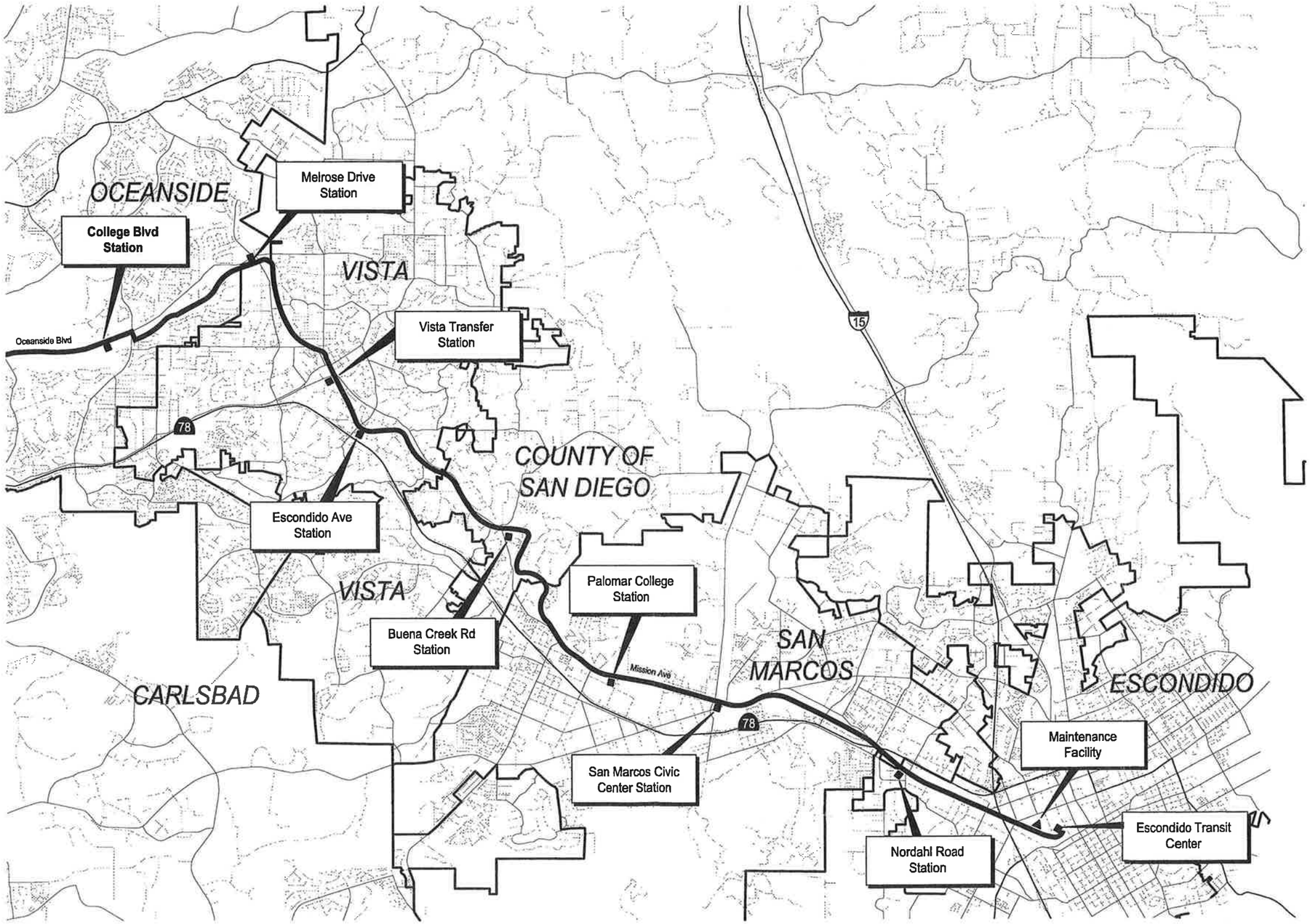
DUDEK's preliminary and follow-up formal wetlands delineation focused on wetland habitat and other waters located within an approximate 50-foot wide area between the existing railroad tracks and the outer edge of the NCTD right-of-way easement in which the Bikeway alignment was shown on the 30% design plans provided by the City. Wetland resources occurring on the other side of the railroad tracks opposite the Bikeway were not surveyed or mapped with the exception of impact avoidance opportunities. During DUDEK's wetland delineation survey, notes were taken on the wetland plant communities present. The boundaries of each wetland community were mapped on 200-scale (1"=200') City of San Marcos orthophoto maps of the Bikeway alignment obtained from Frederic R. Harris, Inc. Where needed for clarity, 50-scale (1"-=50') blow-ups of these maps were utilized (Figures 3-30).



City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Regional Map

FIGURE 1



SOURCE: SANDAG

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Vicinity Map

FIGURE 2

The *Corps of Engineers Wetland Delineation Manual* (1987) was used to determine whether Corps jurisdictional wetlands occurred within the project site. The manual requires that positive indicators of hydric soils, wetland hydrology, and hydrophytic vegetation all be present to classify an area as a jurisdictional wetland. "Waters of the United States," (waters) as defined by the ordinary high water mark of streams or drainages, also were identified and mapped in the field.

Where a predominance of hydrophytic vegetation was present, additional data on soils and hydrology were collected, and a routine wetland determination data form was completed (see Appendix A). Data were collected from 11 locations, which are identified on the wetland delineation maps (Figures 3, 5, 6, 8, 17, & 25).

To determine whether the plant community at each location met the hydrophytic vegetation criterion, the dominant species were listed along with their wetland indicator status from the *National List of Plant Species That Occur in Wetlands: California (Region 0)* (Reed 1988). For each location, if 50% or more of the dominant plant species were obligate wetland, facultative wetland, or facultative, as described in the list, the site was determined to meet the hydrophytic vegetation criterion.

To determine whether hydric soils were present, a pit was dug at each location to a depth of 16 inches. The texture, moisture content, and color of the soil were determined for each data point. The *Soil Survey of San Diego Area, California* (Bowman 1973) was reviewed to determine mapped soil types. The National List of Hydric Soils and the San Diego Area List of Hydric Soil Map Units also were reviewed to determine if mapped soil series occurred on the list.

Where water was present in the soil pit, the depth to standing water was recorded on the hydrology section of the routine wetland determination data sheet. Other characteristics of the study area related to hydrology, such as elevation, presence of drift line, soil saturation, and drainage patterns, also were noted.

3.0 RESULTS OF WETLAND DELINEATION

Based on species composition and general physiognomy, three native plant communities or habitat types were identified in the project area, i.e., southern willow scrub (SWS), mule fat scrub (MFS), and freshwater marsh (FWM). Disturbed wetland (DW) also was identified. In addition, ephemeral, intermittent, and perennial waters of the U.S. were identified. These habitat types are described below.

Six soil types were mapped within the wetland drainage areas including one Corralitos series loamy sand (Bowman mapping unit CsB), two Las Flores series loamy fine sands (LeE_3 and LeC_2), one Diablo series clay (DaC), one Auld series clay (AwC), and one Grangeville fine sandy loam (GoA). None of these soil series were found on the National List of Hydric Soils or the San Diego Area List of Hydric Soil Map Units.

3.0.1 General Description of Wetland Habitat

The spatial configuration of the delineated waters and wetlands is portrayed in Figures 3-30 and supplemented by photographs of individual wetland areas in Figures 31-33.

FRESHWATER MARSH (FWM)
Freshwater marsh is a wetland habitat type that develops where the water table is at or just above the ground surface, such as around the margins of lakes, ponds, slow-moving streams, ditches, and seepages. It typically is dominated by obligate wetland species such as tall, emergent monocots, including cattail (*Typha* sp.) and bulrush (*Scirpus* sp.).

Within the Bikeway alignment, this habitat is found in association with intermittent and perennial waters or in ponded areas with heavy clay soils. In the latter circumstance, less obligate and more facultative wetland species were noted (i.e., bristly ox-tongue [*Picris echioides*], jungle rice [*Echinochloa colona*] and others) alluding to the infrequency of inundation resulting from localized urban runoff.

MULE FAT SCRUB (MFS)
Mule fat scrub is a seral community that occurs mainly along major drainages and floodplains where the riparian woodland is open or disturbed. Frequent flooding and/or scouring apparently maintain this community in an early successional state. Characteristic shrubs in this community include stands of mule fat (*Baccharis salicifolia*) and/or coyote brush (*Baccharis pilularis*), with few scattered individual willows (*Salix* sp.).

Within the Bikeway alignment, mule fat scrub is variable from sparse to dense. It is dominated by mule fat with an understory that includes western ragweed (*Ambrosia psilostachya*), curly dock (*Rumex crispus*) and cocklebur (*Xanthium strumarium*). It is associated with seasonally moist areas found along NCTD dirt access roads, as well as in association with ephemeral or intermittent drainages conveying urban runoff. In a few cases, mule fat scrub was determined to be CDFG jurisdictional only due to the lack appropriate hydrology and/or soil conditions for Corps jurisdiction. These isolated patches are noted in the alignment figures and impact analysis.

SOUTHERN WILLOW SCRUB (SWS)
Holland (1986) describes southern willow scrub as "dense, broadleafed, winter-deciduous riparian thickets dominated by several species of willows (*Salix* sp.), with scattered emergent Fremont cottonwood (*Populus fremontii*) and western sycamore (*Platanus racemosa*)." The understory is usually depauperate owing to the dense canopy.

Southern willow scrub within the Bikeway alignment occurs in three distinct bands, one located just northeast of the Temple Heights Drive street crossing (Figure 5), one located along Buena Creek (Figure 15), and the other located southeast of the Woodland Parkway street crossing (Figure 25). This habitat type was observed to be commonly dominated by arroyo willow (*Salix lasiolepis*) with scattered mule fat.

DISTURBED WETLAND (DW)

Disturbed wetland is a variable low growing plant community similar in nature to freshwater marsh that occurs in riparian habitats, edges of catchment basins, and in canyons typically where historically ephemeral drainages are now subject to increased development/residential runoff combined with the establishment of exotic or native wetland species, in many instances ornamental landscape plants. These wetland areas also may be the result of some physical soil disturbance or minor earthwork that has altered site hydrology such as the vegetation scraping, as an example.

Within the Bikeway alignment, disturbed wetland areas were observed resulting from a variety of site conditions including groundwater seepage through an earthen flood control berm along a nearby perennial creek (as in Figure 3), ponding of seasonal flows within portions of or at the end of an ephemeral drainage course (as in Figure 6), or the collection of localized incidental urban runoff (as in Figures 8 or 9). Wetland plants observed within disturbed wetland areas includes a mix of facultative wetland and obligate species including salt grass (*Distichlis spicata*), western ragweed (*Ambrosia psilostachya*), yerba mansa (*Anemopsis californica*), alkali mallow (*Malvella leprosa*), bristly ox-tongue, jungle rice and others.

WATERS OF THE U.S.

Ephemeral, intermittent, and perennial waters of the United States were observed within or along the Bikeway alignment. Ephemeral waters can be found in many areas immediately adjacent to and parallel with the existing railroad alignment. Ephemeral waters were predominately found to be unvegetated incised earthen drainages or concrete brow- or V-ditches. Intermittent waters typically were found to run perpendicular to the railroad and Bikeway alignments. In fact, many of the proposed Bikeway span bridge crossings are located over intermittent channels. While a few of these intermittent channels are earthen-bottom drainages, most have concrete-lined bottoms as well as concrete slopes or banks. Perennial waters primarily include significant drainage channels such as Loma Alta Creek, San Marcos Creek, Buena Creek, Escondido Creek and the Reidy Canyon drainage. Of the portions of these perennial waters that were observed, Reidy Canyon and Escondido Creek were concrete-lined.

3.0.2 Wetland Determination and Delineation

Corps Jurisdiction

Corps jurisdiction was calculated based upon the area of wetland habitat and other waters delineated in the field by DUDEK, and includes 0.37 acre of DW, 0.25 acre of FWM, 0.16 acre of MFS, 0.75 acre of SWS and 0.34 acre of waters of the U.S. (including 0.22 acre of ephemeral waters and 0.12 acre of intermittent/perennial waters) for a total acreage of 1.87 acres.

CDFG Jurisdiction

CDFG jurisdiction was calculated based upon the acreage of riparian/wetland vegetation associated with streambeds. The areas of CDFG jurisdiction include the same extent of wetland areas identified

above for the Corps plus an additional 0.14 acre of MFS, for a total of 2.01 acres.

Wetland delineation data was recorded on a Routine Wetland Determination Data Form for each soil pit location. Copies of the data forms are provided for reference in Appendix A.

3.0.3 Wetland Functions and Values

A formal wetland functions and values analysis was not performed; however, based upon general observations, many of the wetland habitats occurring within the proposed Oceanside-Escondido Bikeway alignment are expected to have low value as wildlife habitat due to their limited size, limited ephemeral storm flow retention, lack of native plant diversity, isolation from significant drainages such as Loma Alta Creek, San Marcos Creek, and Buena Creek riverine systems, as well as the encroachment of surrounding urbania.

Abiotic functions of these drainages may include removal of toxic material from the water, nutrient recycling, groundwater recharge and limited retention of storm flows. It is expected that the primary function of these isolated wetland areas is the conveyance of storm flows to more significant downstream wetland areas.

No species of plants recognized as rare, threatened, endangered, or otherwise sensitive by the U.S. Fish and Wildlife Service, the California Department of Fish and Game, or the California Native Plant Society were observed.

4.0 DISCUSSION

As previously mentioned, the Corps visited and reviewed all potential wetland impact areas on 29 July 1999 with DUDEK and the City of San Marcos in order to eliminate or reduce project impacts where feasible through alteration of the project design or alignment. Due to the anticipated future needs of NCTD for a light rail system within their right-of-way, opportunities for wetland impact avoidance were found only in the area of San Marcos Creek (Refer to Figure 23); however, it was determined that numerous waters of the U.S. could be crossed without jurisdictional impacts through the construction or placement of pre-fabricated span bridges, so long as the footings of such structures were placed outside of jurisdictional waters. A total of eighteen Bikeway crossings are proposed to be built in this manner.

In one instance, the placement of a raised Bikeway path on a pier structure was proposed by the Corps in lieu of a lengthy span bridge (Figures 6, 6A). DUDEK quantified disturbed wetland impacts in this location based the placement of a conservative number of pier footings spaced twenty-feet apart. During final design, a span bridge may be designed which would eliminate these minor impacts.

In locations where impacts to wetland resources were found to be unavoidable, it was agreed that the Bikeway path would be reduced from 20 feet wide to 12 feet wide (5-foot bicycle lanes, 1-foot

paved shoulders) in order to minimize such impacts. Impact avoidance and reduction measures are noted where appropriate in Figures 3-30.

This process resulted in a significant decrease in wetland impacts, from a preliminary estimate of 1.86 acres of wetland impacts to 0.38 acre impact to Corps jurisdictional wetlands plus an additional 0.12 acre impact to CDFG jurisdictional wetlands.

4.0.1 Project Impacts

Implementation of the Oceanside-Escondido Bikeway will result in impacts to 0.07 acre of DW, 0.05 acre of FWM, 0.18 acre of MFS, 0.17 acre of SWS and 0.03 acre of ephemeral unvegetated waters of the U.S. for a total of 0.50 acre of wetland impacts. Impacts to waters and wetlands are regulated by the Corps and CDFG (0.38 acre impact to Corps jurisdictional wetlands, 0.50 acre impact to CDFG jurisdictional wetlands). Project impacts are summarized in Table 1.

4.0.2 Regulatory Requirements

U.S. ARMY CORPS OF ENGINEERS

The dredging or filling of material (temporary or permanently) into areas delineated as "waters of the United States" (waters) requires authorization from the Corps pursuant to Section 404 of the Clean Water Act. Waters as defined in CFR 328.2 includes all waters or tributaries to waters, including wetlands, streams, dry washes, seasonal drainages, and other aquatic habitats. Activities that involve regulated discharge of dredge or fill material include grading, placing of riprap for erosion control, pouring concrete, laying sod, and stockpiling excavated material. Activities that generally do not involve regulated discharge, if performed in a manner to avoid discharge, include driving pilings and some methods of vegetation clearing.

The Corps has 36 Nationwide or general permits (NWPs) that pre-authorize specific minor discharges; the most commonly utilized being Nationwide Permit No. 26 for headwaters and isolated waters discharge. In 1997, the Corps restricted the use of Nationwide Permit No. 26 to impacts no greater than 3 acres (versus the 10 acre limit previously used) and to less than 500 linear feet in length (cumulatively per project depending on the type of waters). Projects with impacts that are more significant than the threshold allowances of the NWPs require application for an individual permit. The individual permit process involves public review and comment on the proposed activity and can last 180 days or longer.

DUDEK believes that pre-notification to the Corps pursuant to issuance of a Nationwide Permit No. 26 is appropriate. DUDEK does not believe that this project would require an Individual Permit because anticipated Corps jurisdictional wetland impacts for the Oceanside-Escondido Bikeway totaling 0.38 acres are less than the three acre limit and all waters impacts are to ephemeral drainages.

CALIFORNIA DEPARTMENT OF FISH & GAME

The CDFG defines a stream as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes water courses having a surface or subsurface flow that supports riparian vegetation." A CDFG 1601 streambed alteration agreement is required prior to any alteration of wetlands within CDFG jurisdiction. This project qualifies for a 1601 agreement. The CDFG generally requires that any impacts to streambeds or adjacent riparian habitats be fully mitigated at a ratio of a minimum of 1:1 by area, to provide for "no net loss of wetlands." Mitigation ratios are negotiated on a project by project basis; however, FWM, MFS, and SWS habitats generally require 2:1 or 3:1 mitigation ratios. A streambed alteration application must be submitted to CDFG with a filing fee ranging between $662.00 and $1,191.00. It normally takes 30 days for the CDFG to process a 1601 application and finalize the agreement.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

A Section 401 water quality certification (or waiver) must be obtained from the California Regional Water Quality Control Board (RWQCB) for concurrence that the proposed fill is authorized. There is a minimum $500 filing fee required with the certification application. It normally takes 60 days for the RWQCB to process a 401 application. Typically, the RWQCB certification must be granted before the Corps will issue their permit. This project requires RWQCB certification and an application should be processed simultaneously with the Corps submittal. The Corps will not issue a permit/decision until the RWQCB takes action.

4.0.3 Mitigation Requirements

The following table suggests mitigation ratios and acreage. A total of 0.50 acre of wetland impacts are proposed to be mitigated through a 1.20 acres debit of the California Department of Transportation (Caltrans) Pilgrim Creek Mitigation Bank. Section 5.0 of this report discusses in detail the completion of the proposed mitigation effort.

Table 1. Summary of Project Impacts and Recommended Mitigation.

WETLAND TYPE	TOTAL ACREAGE SURVEYED	ANTICIPATED IMPACTS	SUGGESTED MITIGATION RATIO	SUGGESTED MITIGATION ACREAGE
Ephemeral Waters of the U. S.	0.22 ac	0.03 ac	1:1	0.03 ac
Intermittent/Perennial Waters of the U.S.	0.12 ac	----	----	----
Disturbed Wetland	0.37 ac	0.07 ac	2:1	0.14 ac
Freshwater Marsh	0.25 ac	0.05 ac	2:1	0.10 ac
Mule Fat Scrub	0.16 ac	0.06 ac	3:1	0.18 ac
Mule Fat Scrub (CDFG Only)	0.14 ac	0.12 ac	2:1	0.24 ac
Southern Willow Scrub	0.75 ac	0.17 ac	3:1	0.51 ac
TOTAL	2.01 ac	0.50 ac		1.20 ac

5.0 PROPOSED MITIGATION FOR IMPACTS

The City of San Marcos, as the lead agency for the Oceanside-Escondido Bikeway project, proposes to meet the wetland mitigation requirements of 1.20 acres by participating in the wetland mitigation program being implemented by Caltrans and the San Diego Association of Governments (SANDAG) along Pilgrim Creek in northern Oceanside. Caltrans and SANDAG have been working with Corps regulatory staff in Los Angeles to formally establish the mitigation bank at Pilgrim Creek. The Caltrans representative for the Pilgrim Creek Mitigation Bank has confirmed that adequate mitigation acreage will be available for purchase by the City of San Marcos to satisfy the Oceanside-Escondido Bikeway mitigation requirements. Furthermore, the Corps has visited and verbally approved of the mitigation bank. Final approval is anticipated within the coming month following review and signature of the legal open space deed restriction (Rieger: personal comm. on 1 August 1999).

The Pilgrim Creek Mitigation Bank is located in northern San Diego County in the City of Oceanside on Pilgrim Creek, a tributary of the San Luis Rey River. The mitigation site is part of the Pilgrim Creek watershed which encompasses an area of 15 square miles upstream from the Oceanside Municipal Golf Course. The site borders U.S. Marine Corps Base, Camp Pendleton on its north side, and is adjacent to Foss Lake on its western border and Douglas Drive on its southern border. The site encompasses 121 acres which were disturbed by past agricultural use. The large-scale mitigation work included restoration of existing wetlands and creation of wetland habitat. Approximately 40 percent of the 121 acres was converted to, or restored as, wetlands.

The majority of the wetland mitigation at Pilgrim Creek is being utilized by Caltrans to compensate for wetland impacts associated with the widening of State Route 76; however, the Pilgrim Creek site has been designed to accommodate approximately 20 acres of additional wetland creation which Caltrans desires to sell. All of the mitigation acreage available at Pilgrim Creek was installed in spring 1997. The purchase of mitigation credits from the Pilgrim Creek Mitigation Bank includes long-term management and monitoring that are and will continue to be provided by Caltrans. The City of San Marcos would purchase 1.20 acre of the available mitigation land to compensate for the area of wetlands impacted by the Bikeway project (0.50 acre) providing appropriate compensation at the mitigation ratios summarized in Table 1.

The Pilgrim Creek site was revegetated with cottonwood-willow riparian forest habitat, and as such, is more than appropriate to mitigate for the limited wetlands functions and values to be lost upon implementation of the Oceanside-Escondido Bikeway project. Specifically, the Pilgrim Creek site provides high value cottonwood-willow riparian forest designed to provide habitat for the endangered least Bell's vireo (*Vireo bellii pusillus*). According to Caltrans, at least four nesting least Bell's vireo were observed within the mitigation area just this past spring 1999.

7.0 LITERATURE CITED

Beauchamp, R. M. 1986. *A Flora of San Diego County, California.* Sweetwater Press, National City, California.

Bowman, R. H. 1973. *Soil Survey of San Diego Area, California, Part 1.* United States Department of Agriculture, Soil Conservation Service and Forest Service.

Dudek & Associates, Inc. *Draft Mitigated Negative Declaration for the Oceanside-Escondido Bikeway, City of San Marcos, California.* 8 August 1999.

Hickman, J. C. 1993. *The Jepson Manual: Higher Plants of California.* University of California Press, Berkeley. 1182 pp.

Holland, R. F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California. Nongame-Heritage Program.* California Department of Fish and Game.

Munz, P. 1974. *A Flora of Southern California.* University of California Press, Berkeley, California. 878 pp.

Ogden Environmental and Energy Services Co., Inc. *Oceanside-Escondido Rail Project and Bike Path Conceptual Wetland Mitigation Plan.* September 1996.

Ogden Environmental and Energy Services Co., Inc. *Biological Resources Technical Report for the Oceanside-Escondido Rail Project.* October 1996.

Ogden Environmental and Energy Services Co., Inc. *Environmental Assessment/Subsequent Environmental Impact Report for the Oceanside-Escondido Rail Project.* October 1996.

Reed, P. B. 1988. *National List of Plant Species That Occur in Wetlands: California (Region 0).* U.S. Fish and Wildlife Service Biological Report 88 (26.10).

U.S. Army Corps of Engineers. 1987. *Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1*, U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, Mississippi.

DW	Disturbed Wetlands	MFS	Mule Fat Scrub
FWM	Freshwater Marsh	31a	Photo Location & Figure No.

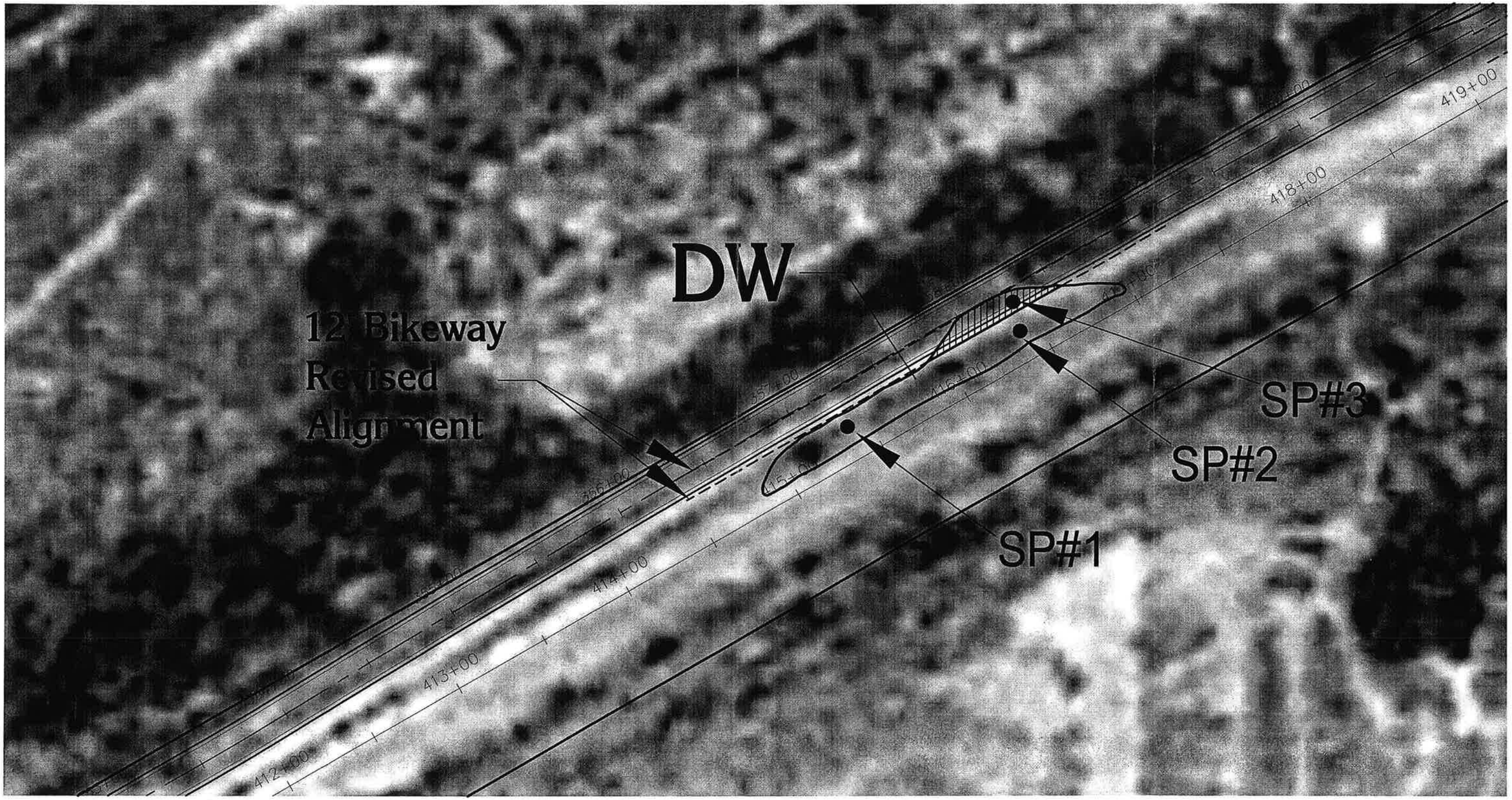
0 200
Scale In Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 3

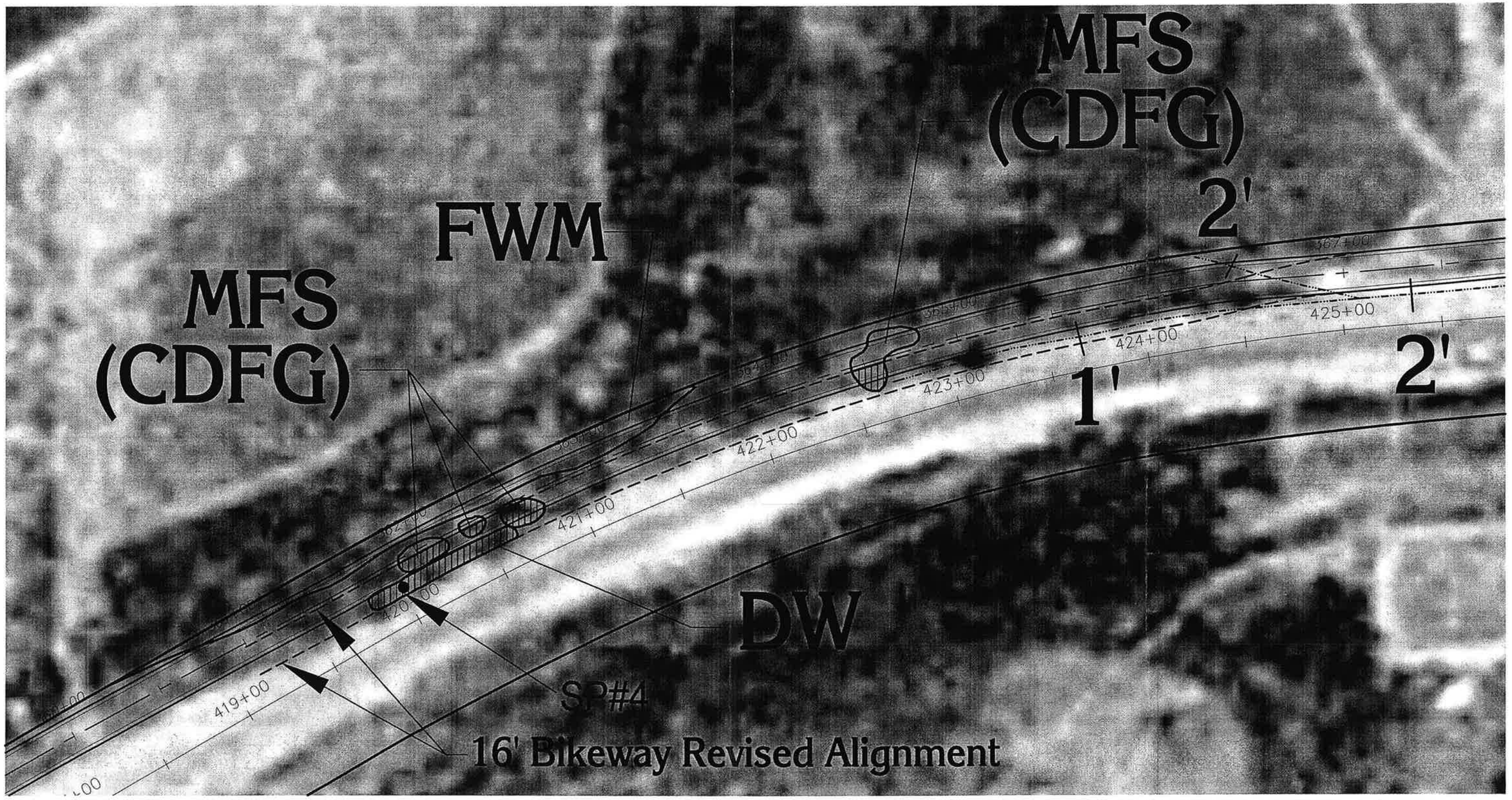


BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 3A



DW	Disturbed Wetlands	MFS	Mule Fat Scrub	●	Soil Pit Location
▥	Impact Area	FWM	Freshwater Marsh	⩘	Ephemeral Stream

0 50
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 3B

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 4

MFS Mule Fat Scrub

Ephemeral Waters

31a Photo Location & Figure No.

0 200

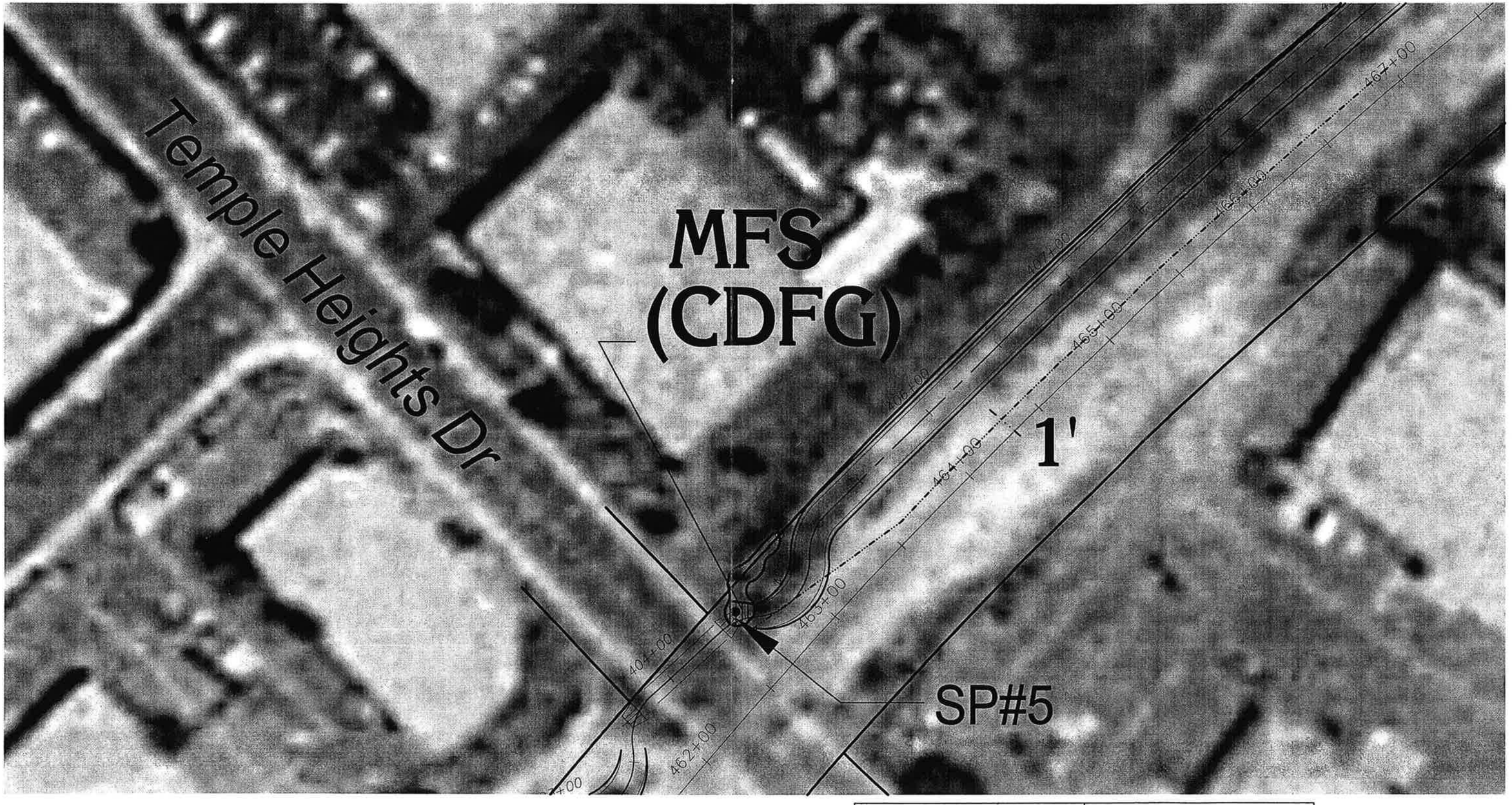
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 5



MFS Mule Fat Scrub
Impact Area
Soil Pit Location
Ephemeral Waters

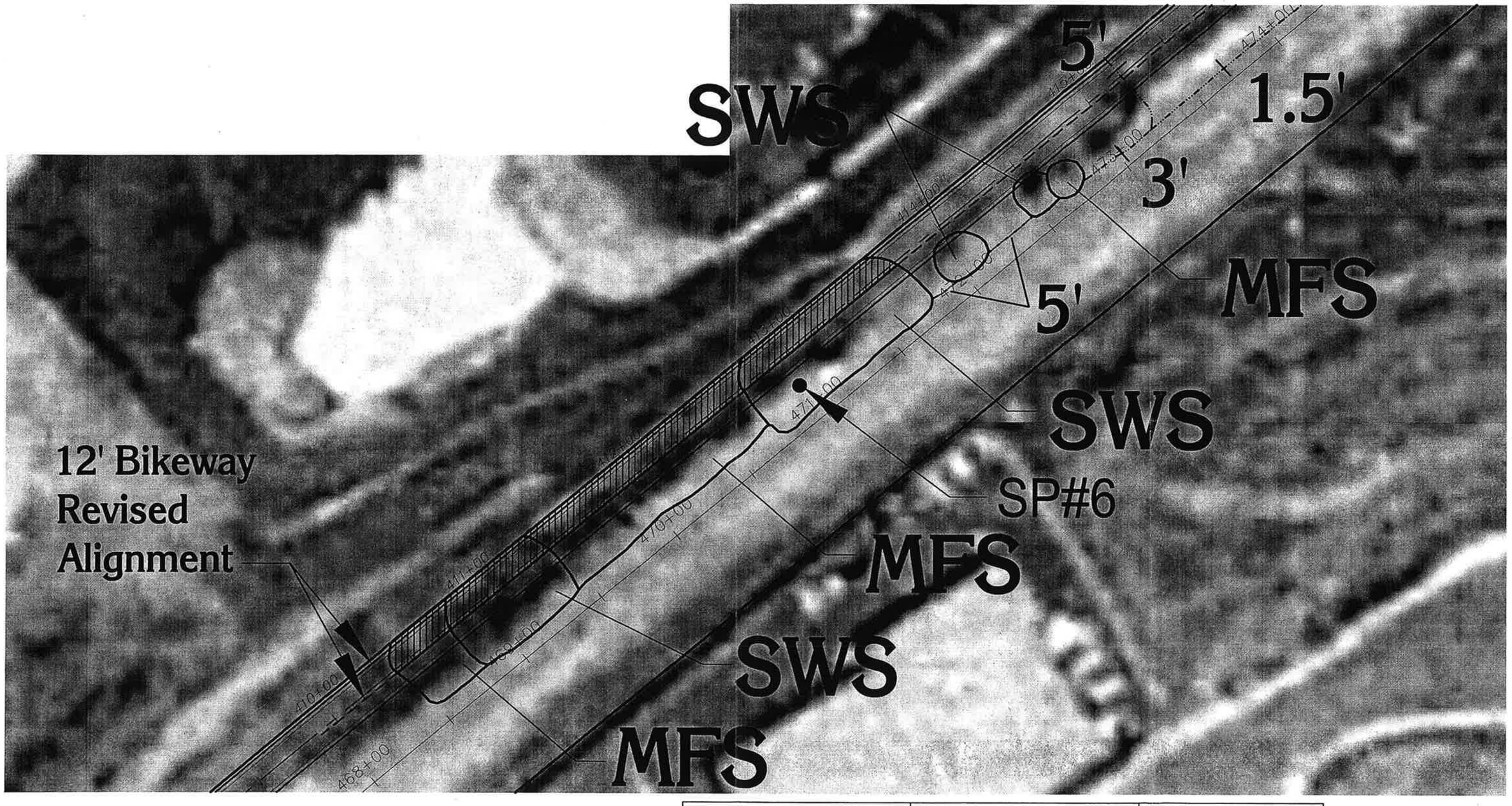
0 50
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE
5A



MFS Mule Fat Scrub
Impact Area

SWS Southern Willow Scrub
Ephemeral Waters

Soil Pit Location

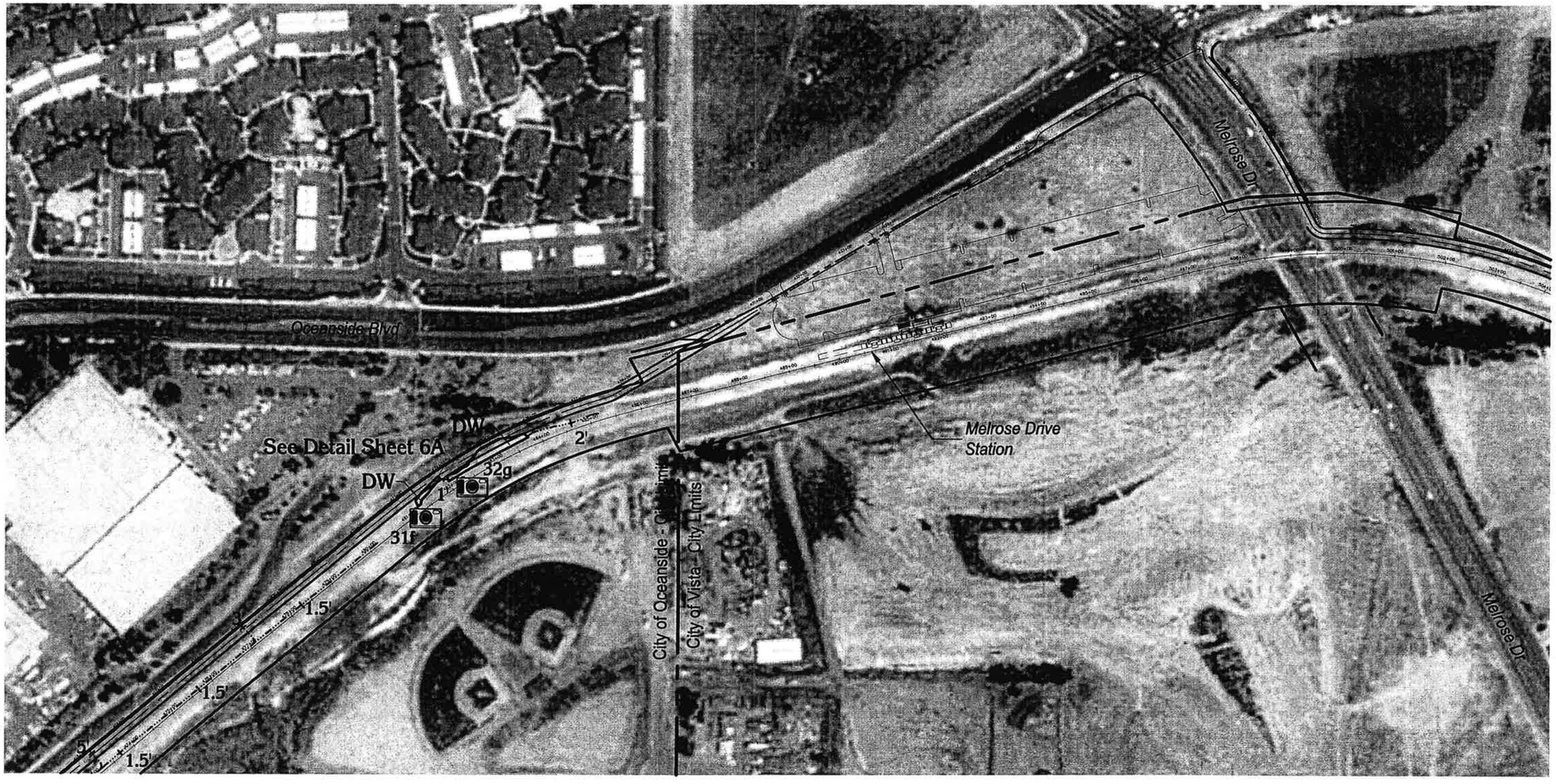
0 50
Scale In Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE
5B



DW	Disturbed Wetland		Ephemeral Waters	31a	Photo Location & Figure No.

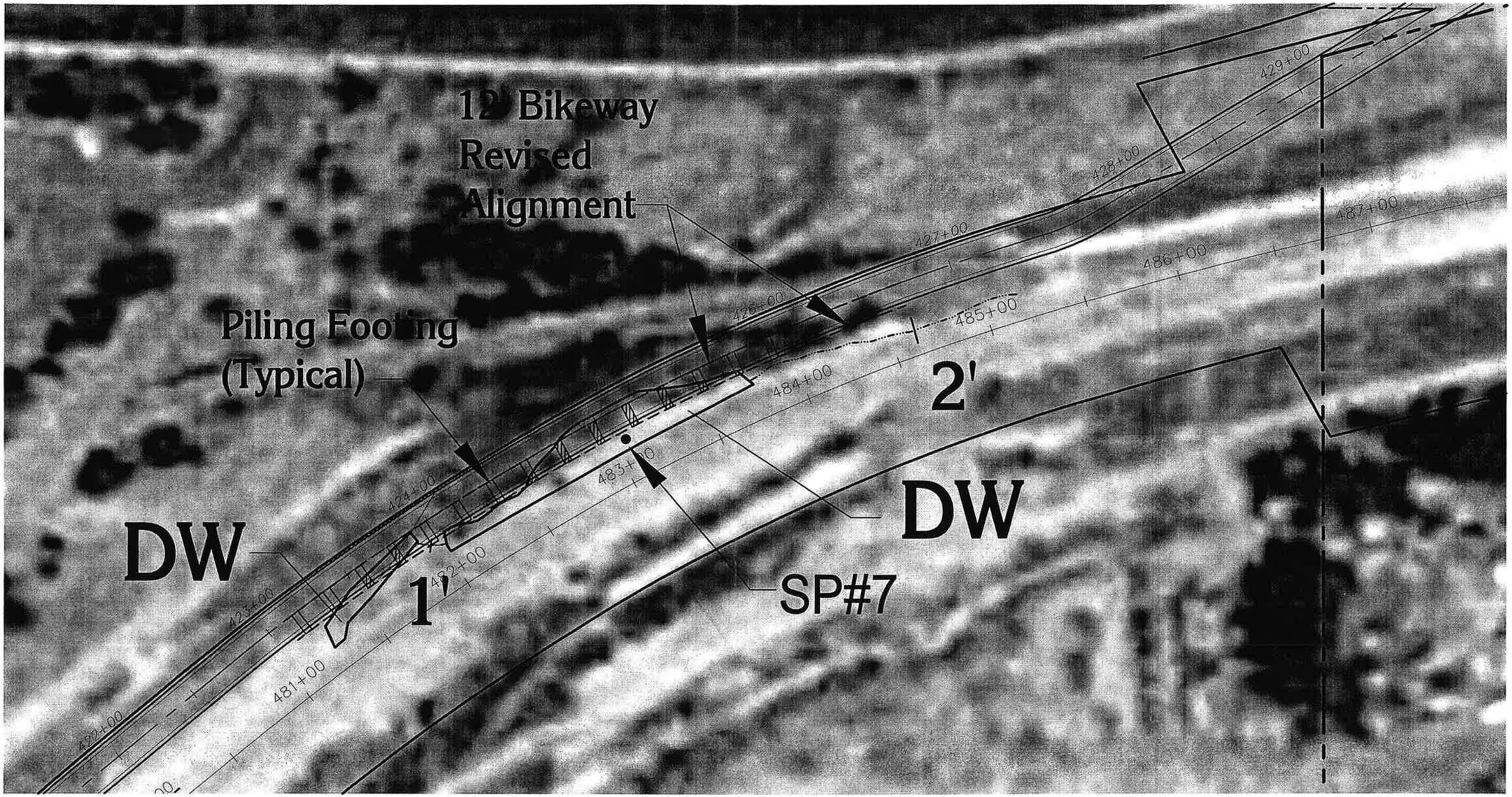
0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 6



DW Disturbed Wetland
Impact Area

Soil Pit Location
Ephemeral Waters

0 50
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE
6A

No Wetland Habitats observed in this area

0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 7

DW	Disturbed Wetlands	31a	Photo Location & Figure No.
FWM	Freshwater Marsh		

0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 8

FWM Freshwater Marsh

Impact Area

0 50

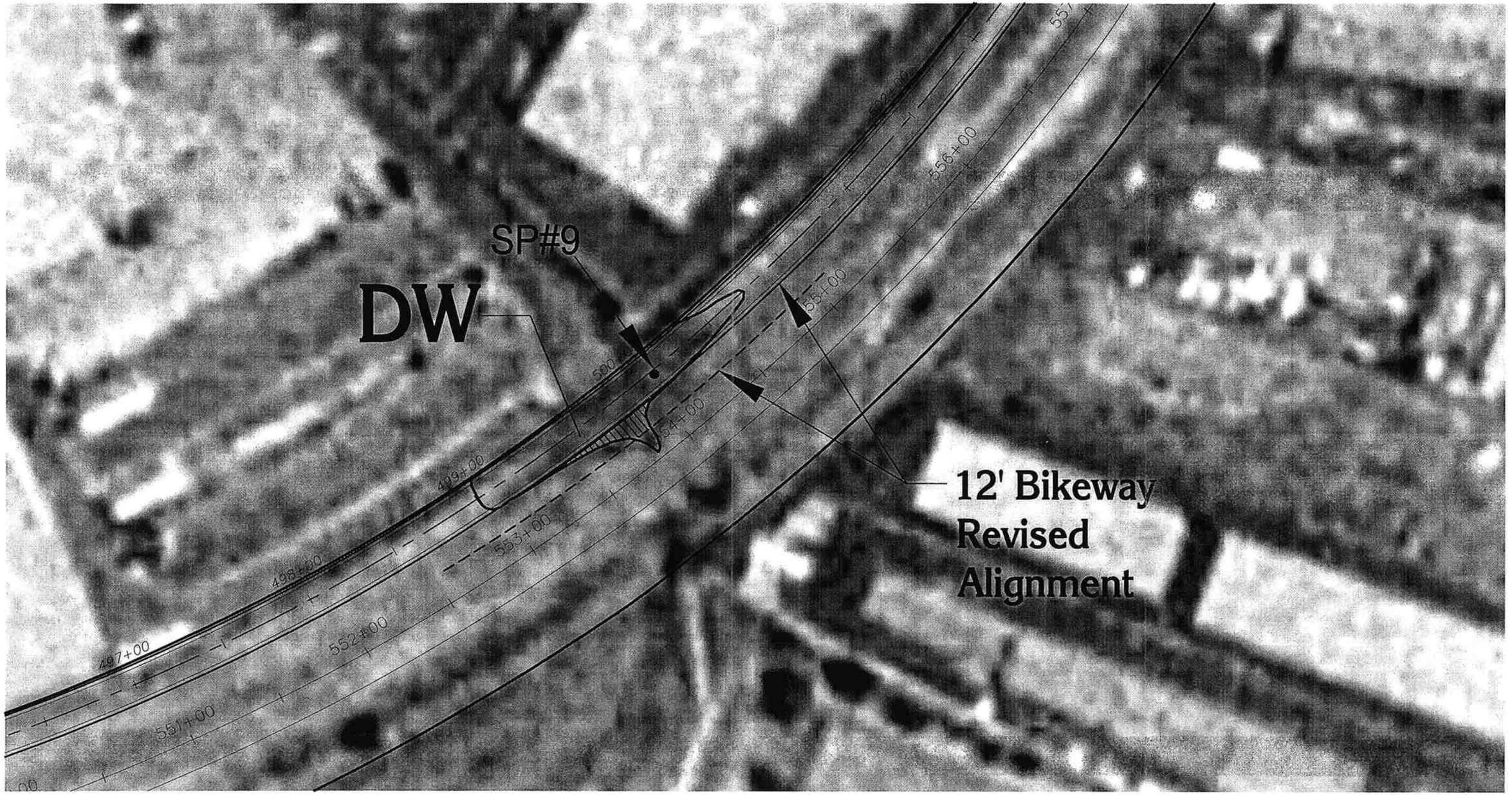
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 8A



DW Disturbed Wetlands
Impact Area

● Soil Pit Location

0 50
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE
8B

DW Disturbed Wetlands | U.S. Waters | 31a Photo Location & Figure No.

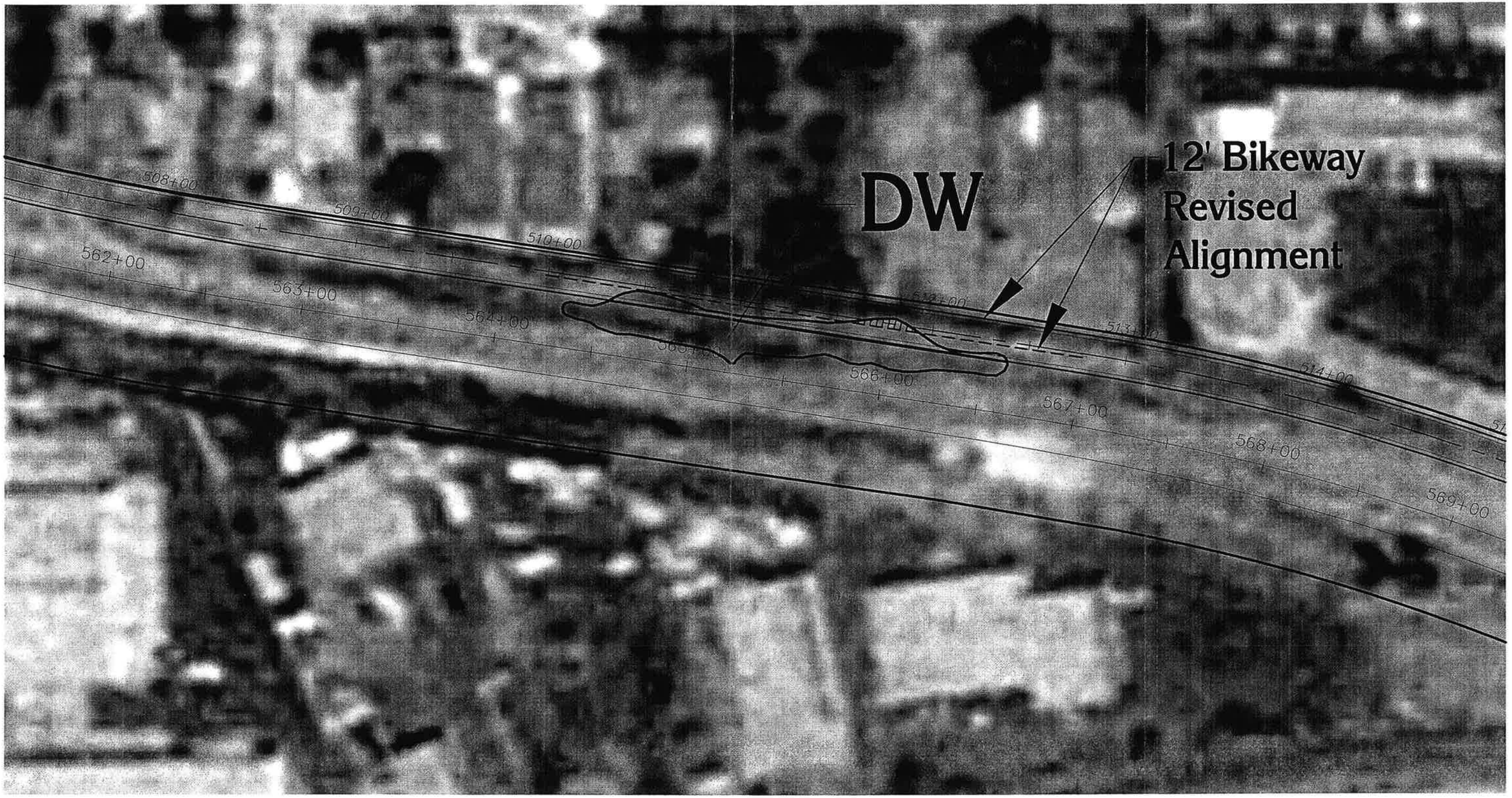
0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 9

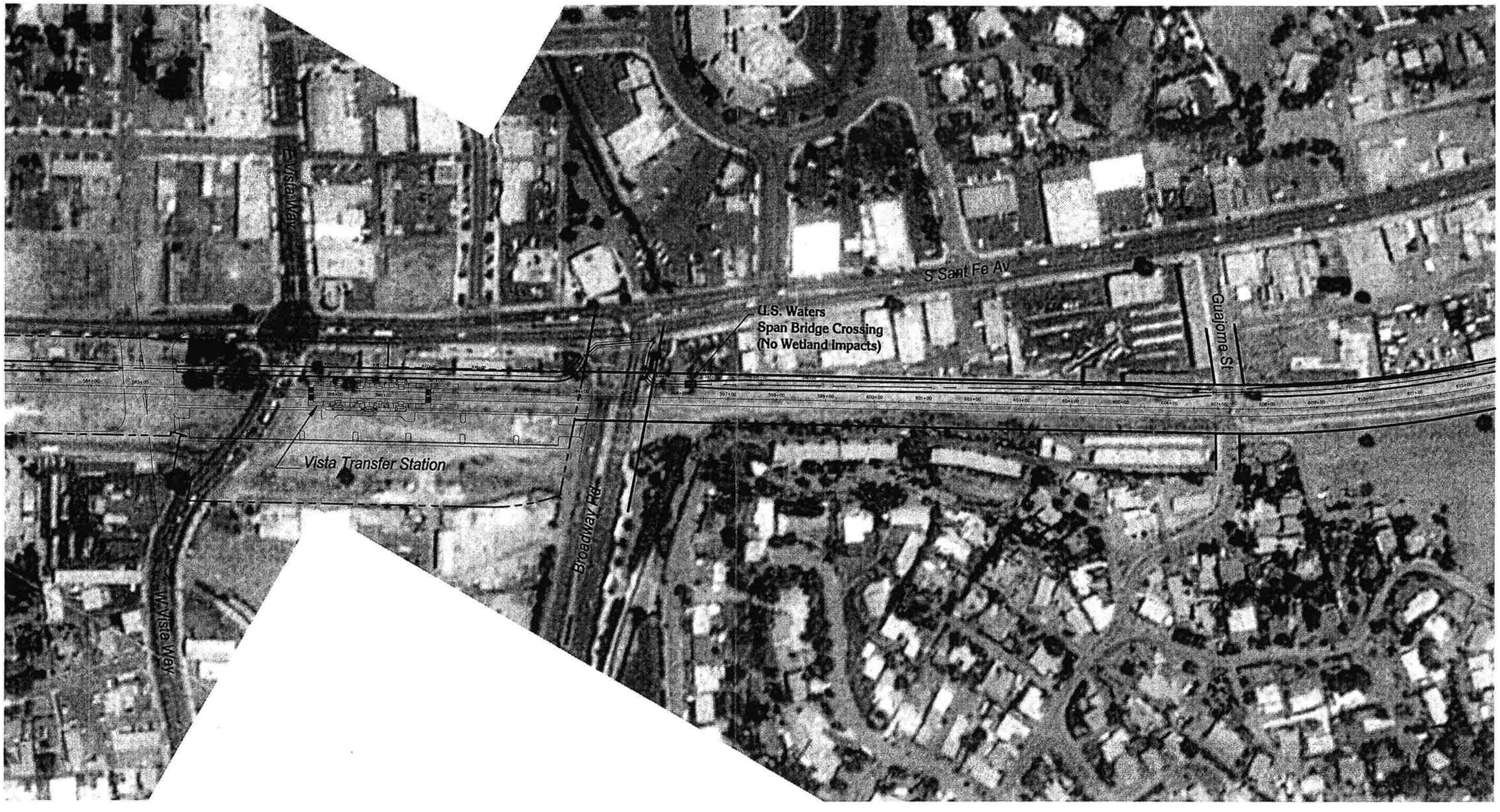


BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 9A

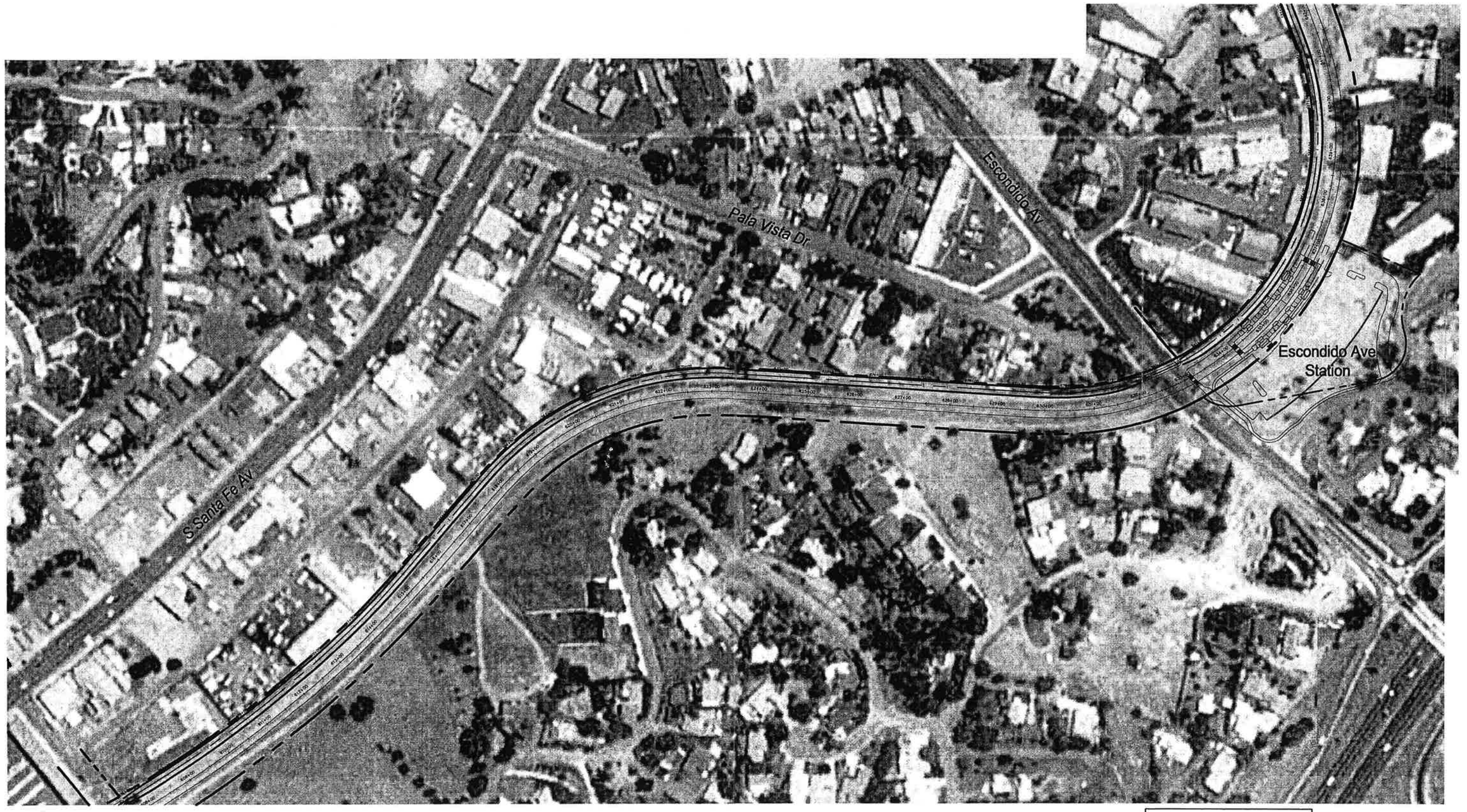


BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 10



No Wetland Habitats observed in this area

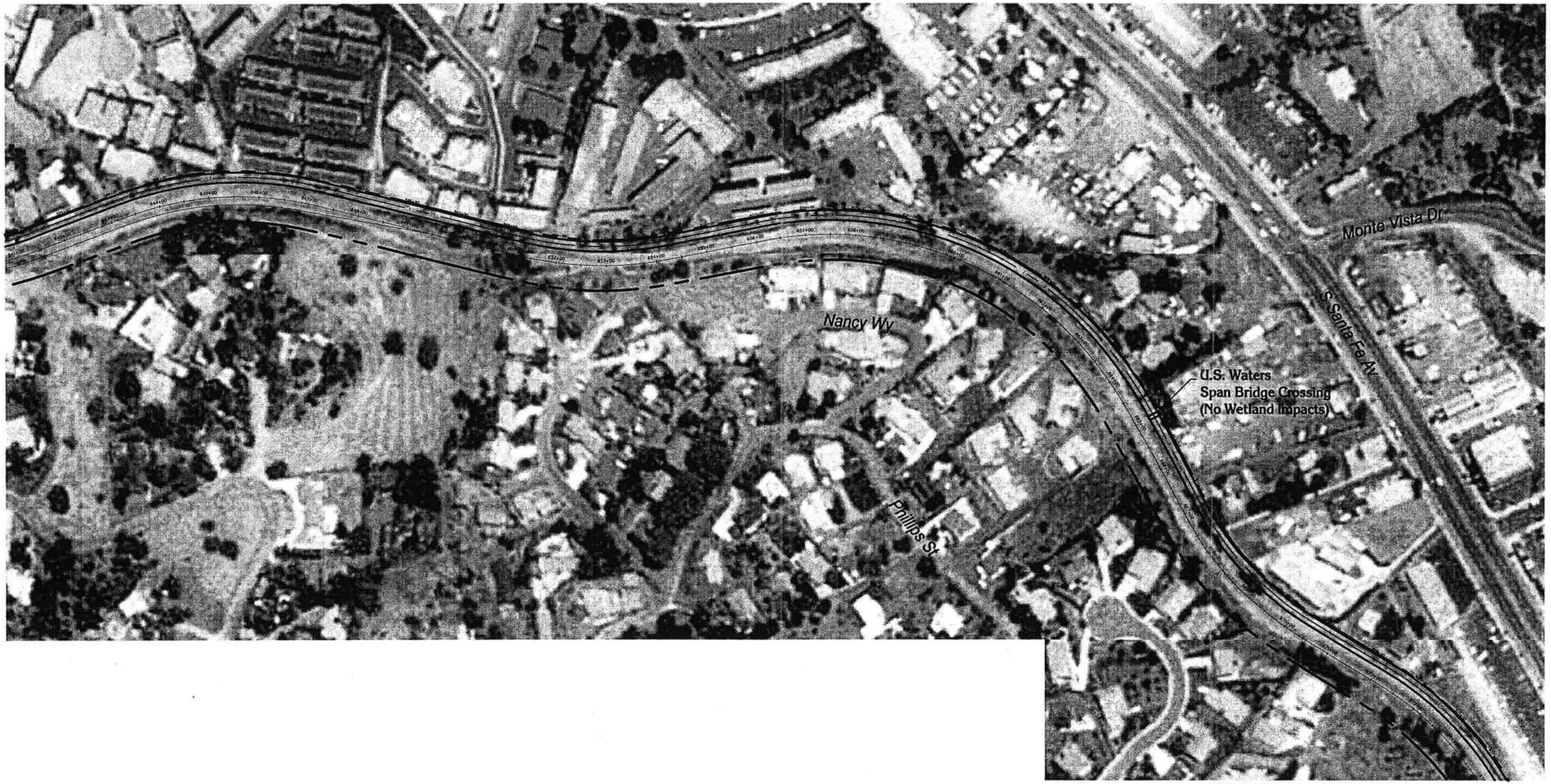
0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 11

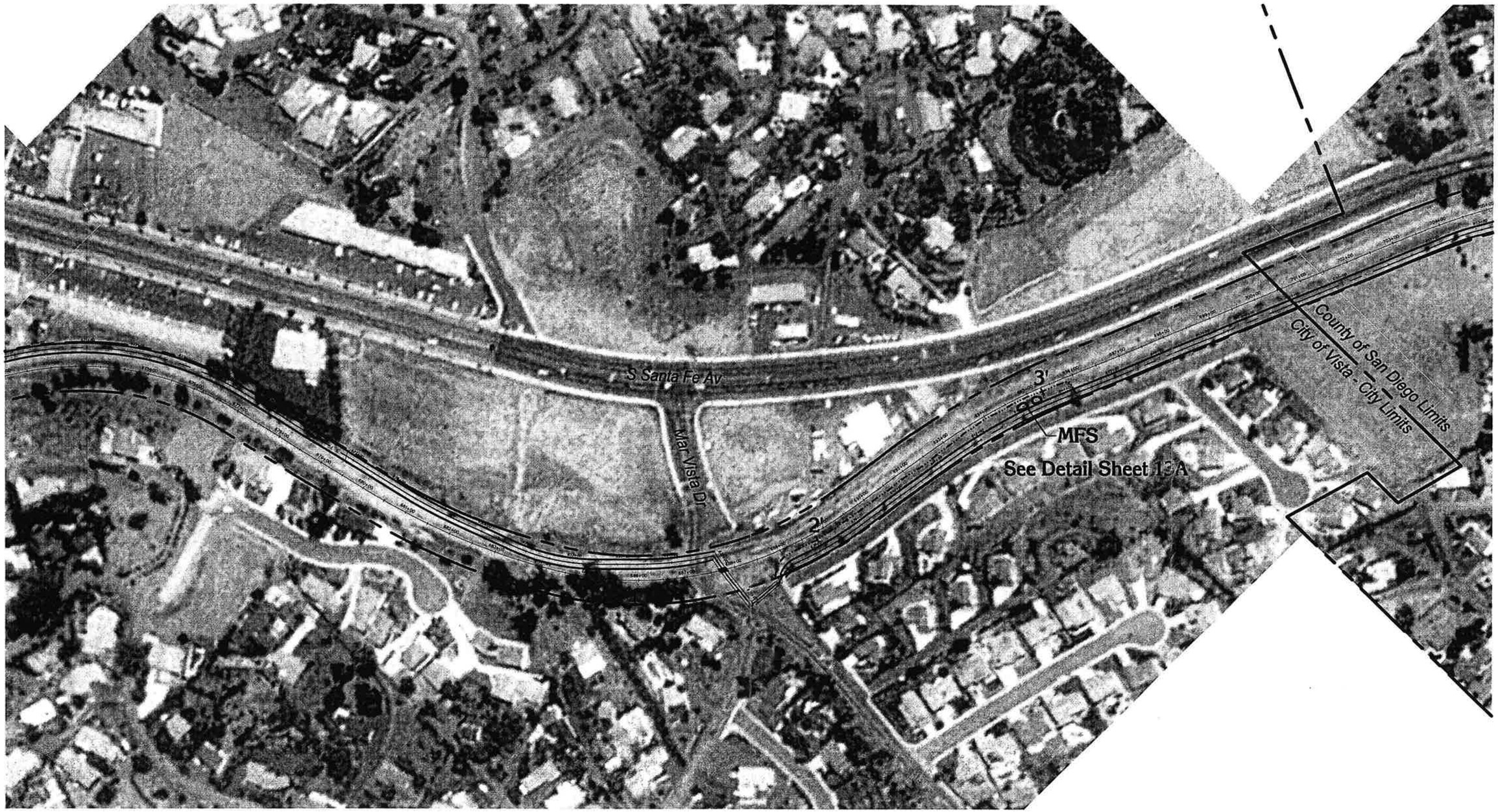


BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 12



MFS Mule Fat Scrub

Ephemeral Waters

0 200

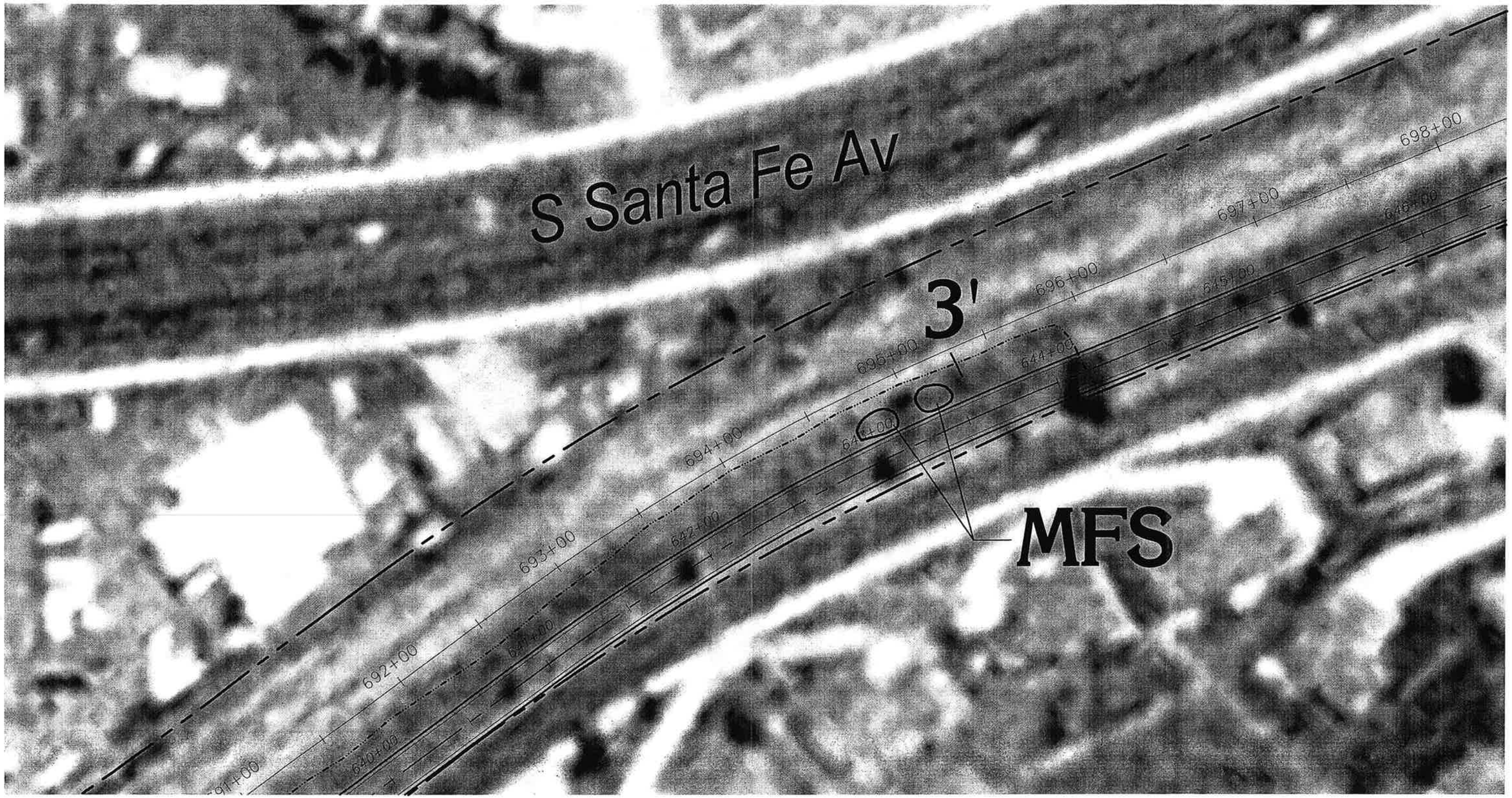
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 13



MFS Mule Fat Scrub

Ephemeral Waters

0 50

Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 13A

U.S. Waters

0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE
14

SWS Southern Willow Scrub U.S. Waters	Ephemeral Waters	31a Photo Location & Figure No.

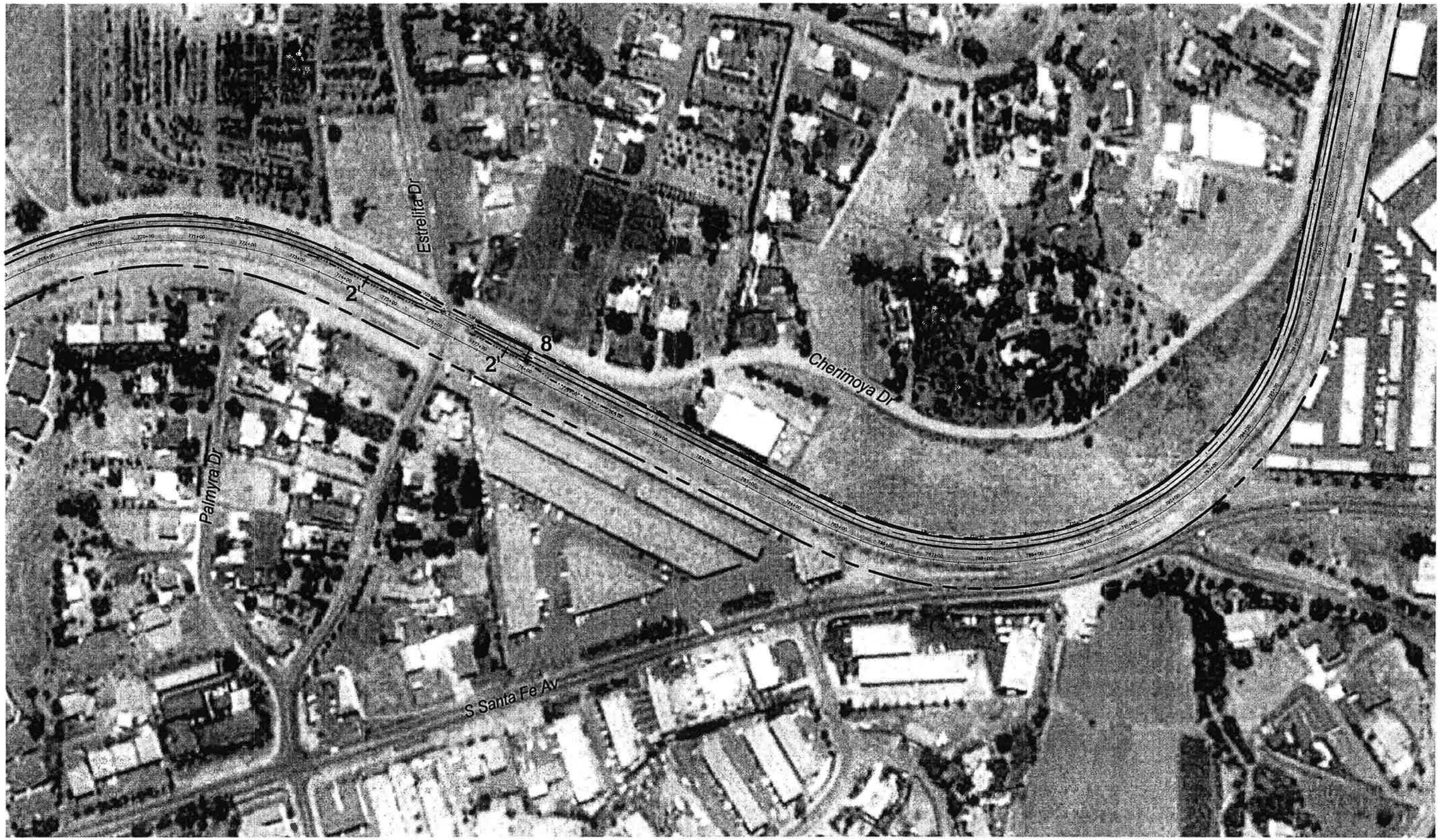
0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE
15



Ephemeral Waters

0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 16

MFS Mule Fat Scrub
U.S. Waters

Ephemeral Waters
Soil Pit Location

31a Photo Location & Figure No.

0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

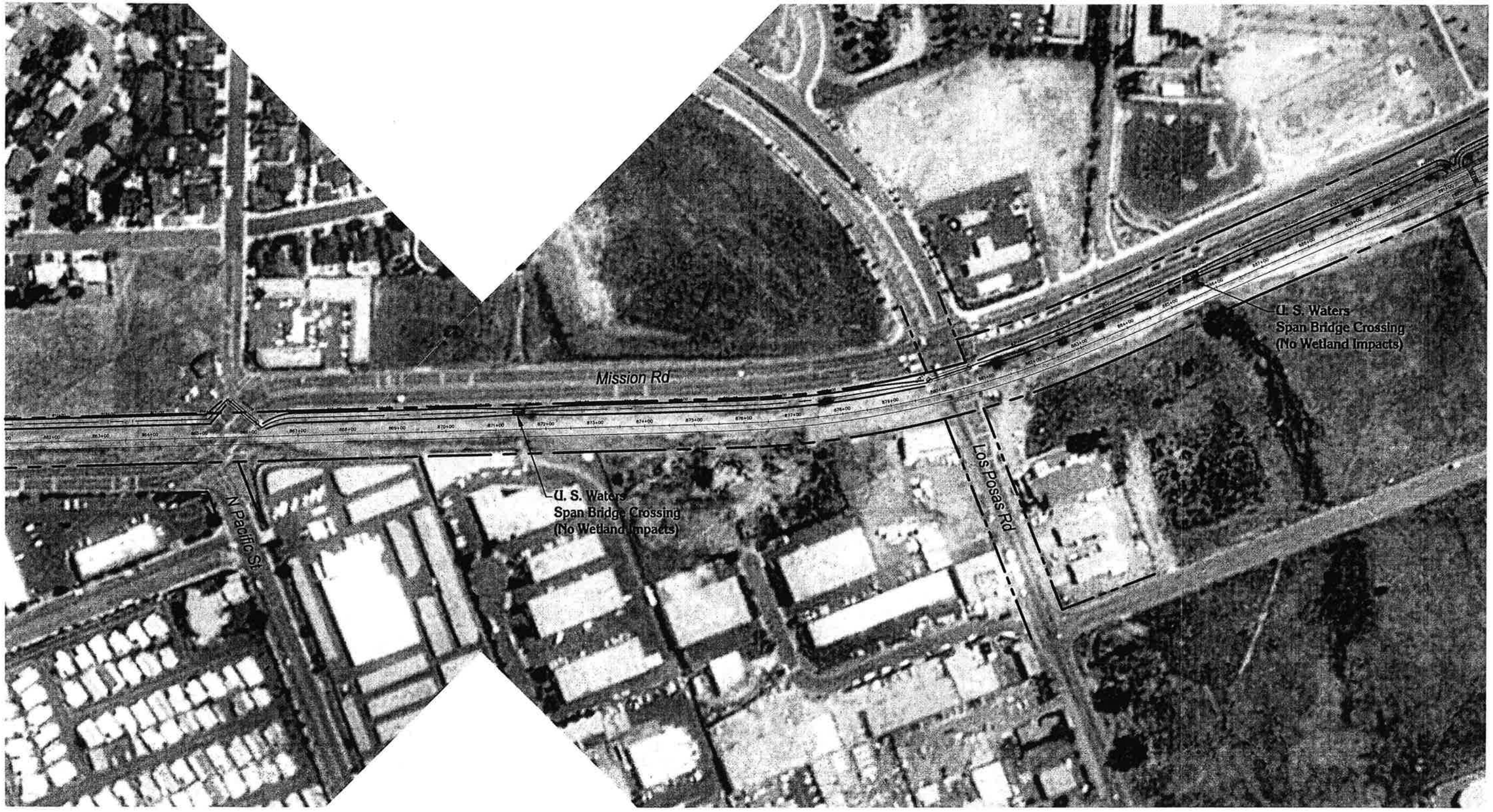
FIGURE
17

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 18

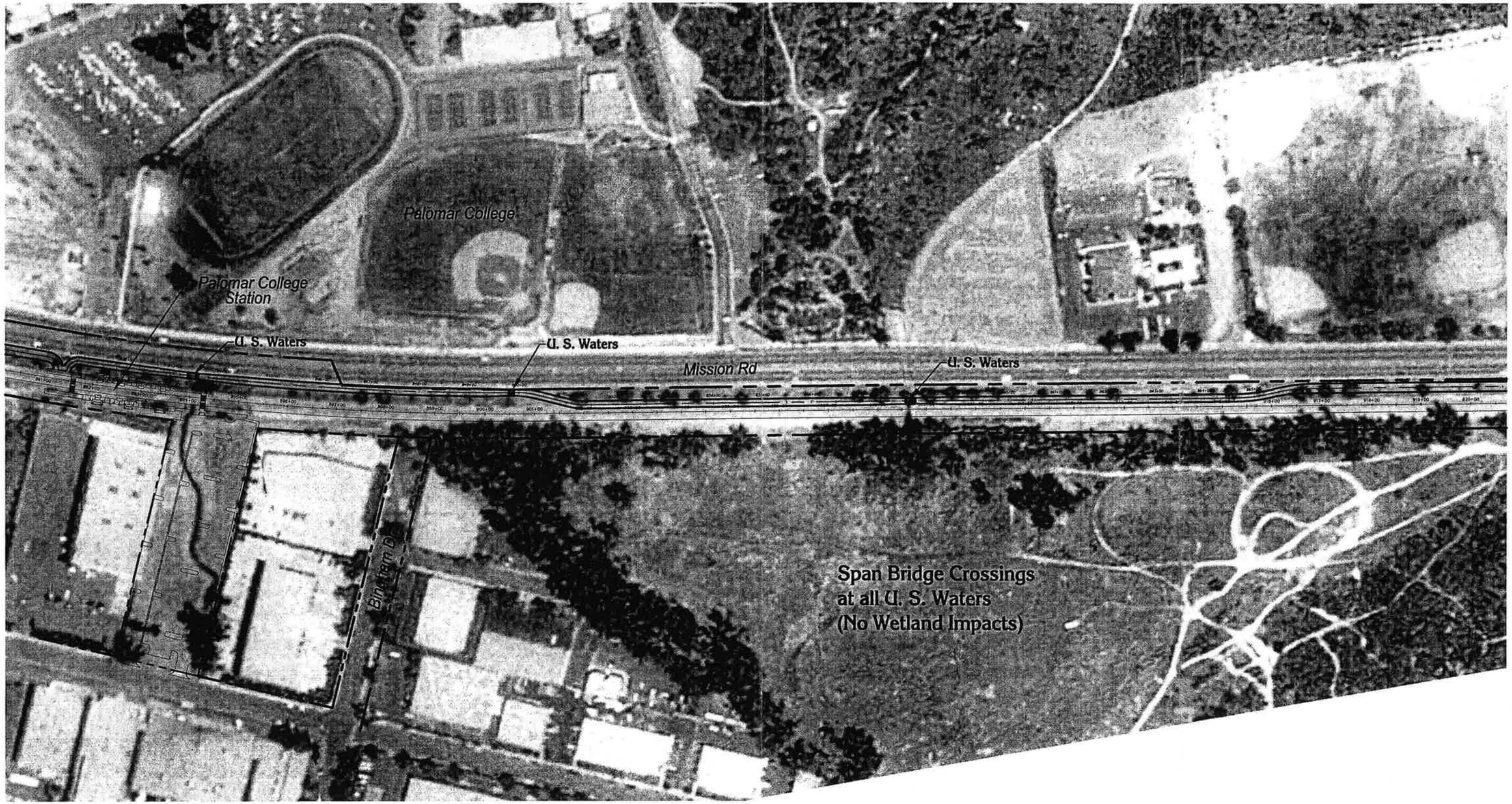


BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 19

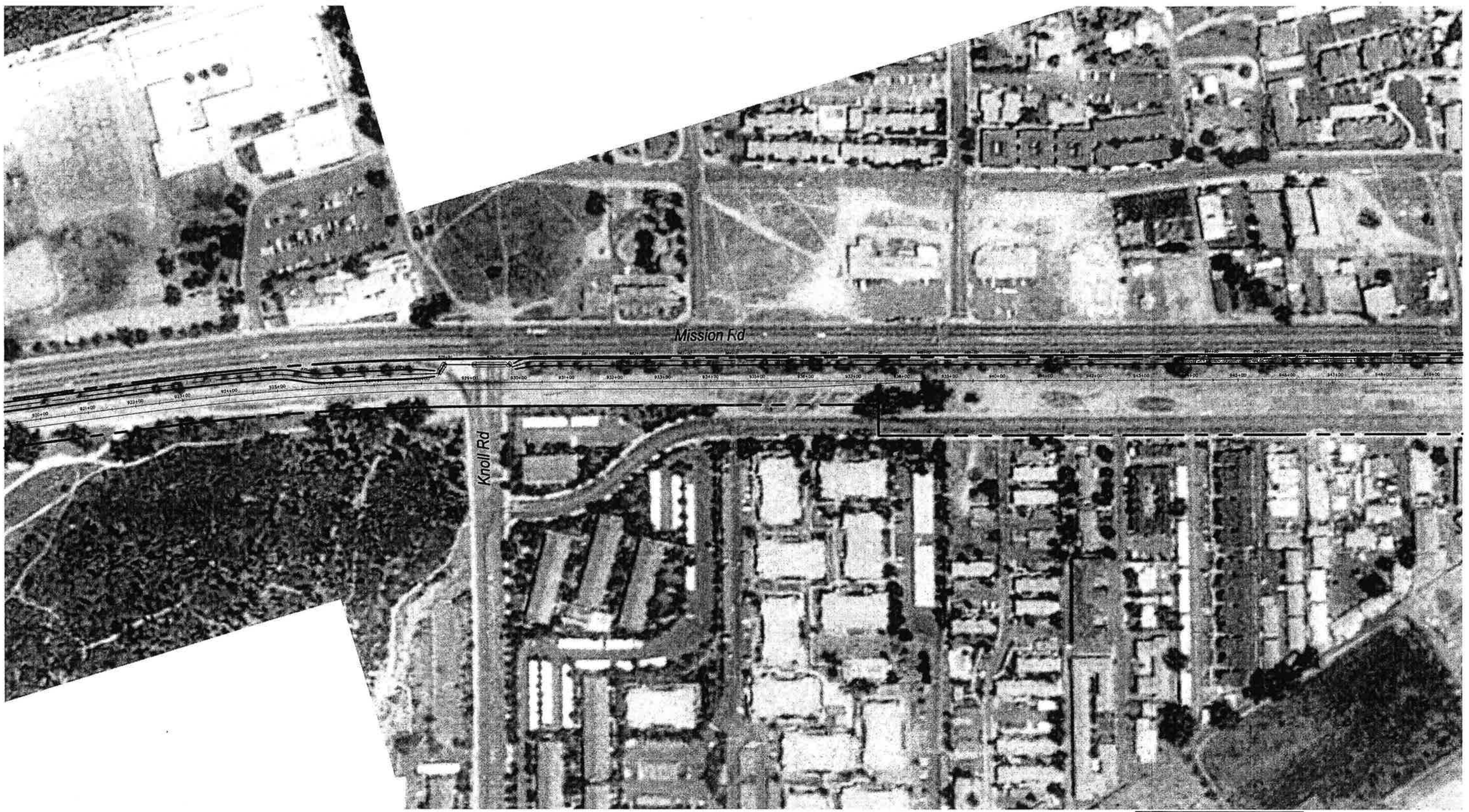


BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 20



No Wetland Habitats observed in this area

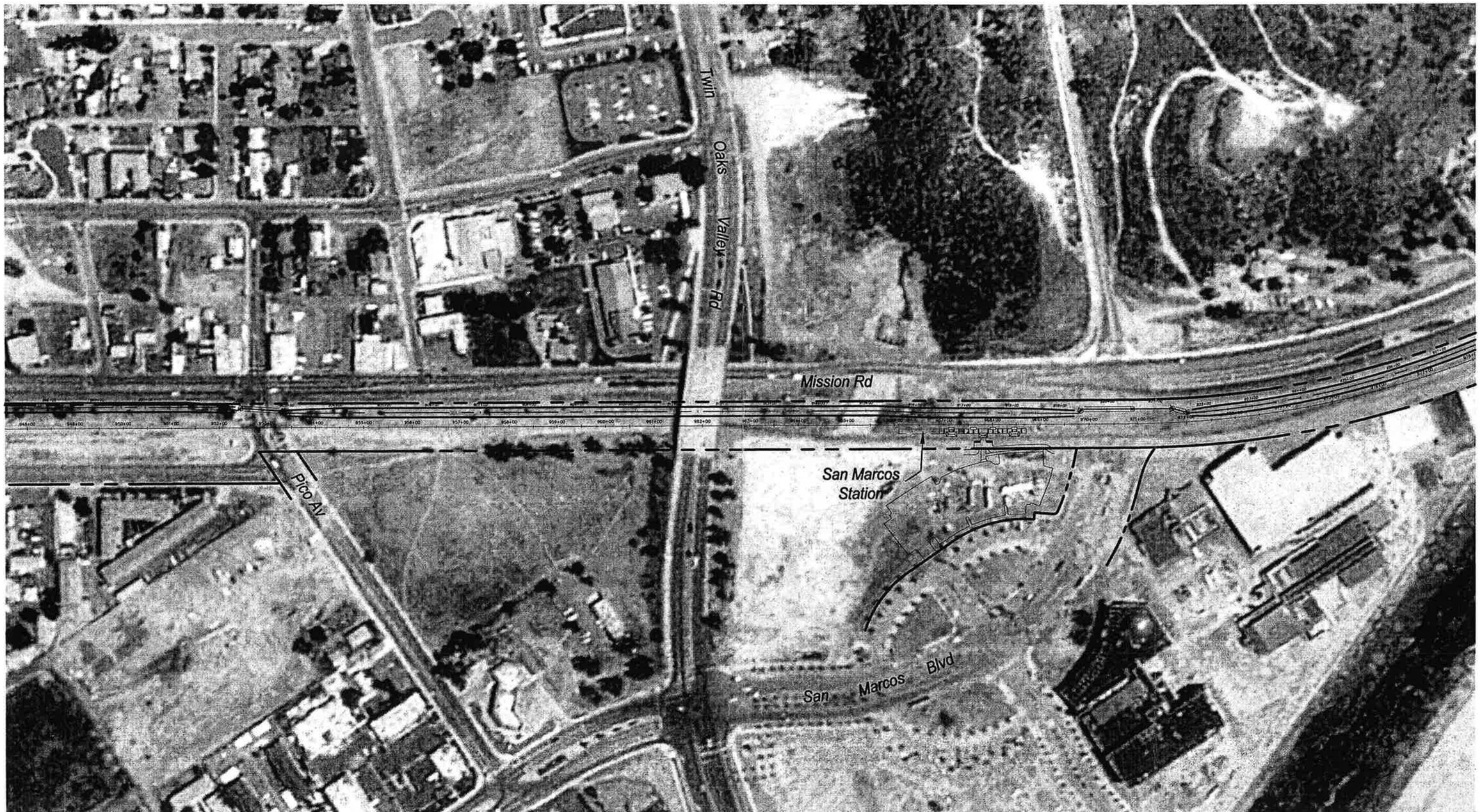
0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 21



No Wetland Habitats observed in this area

0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 22

SWS Southern Willow Scrub
U.S. Waters

31a Photo Location & Figure No.

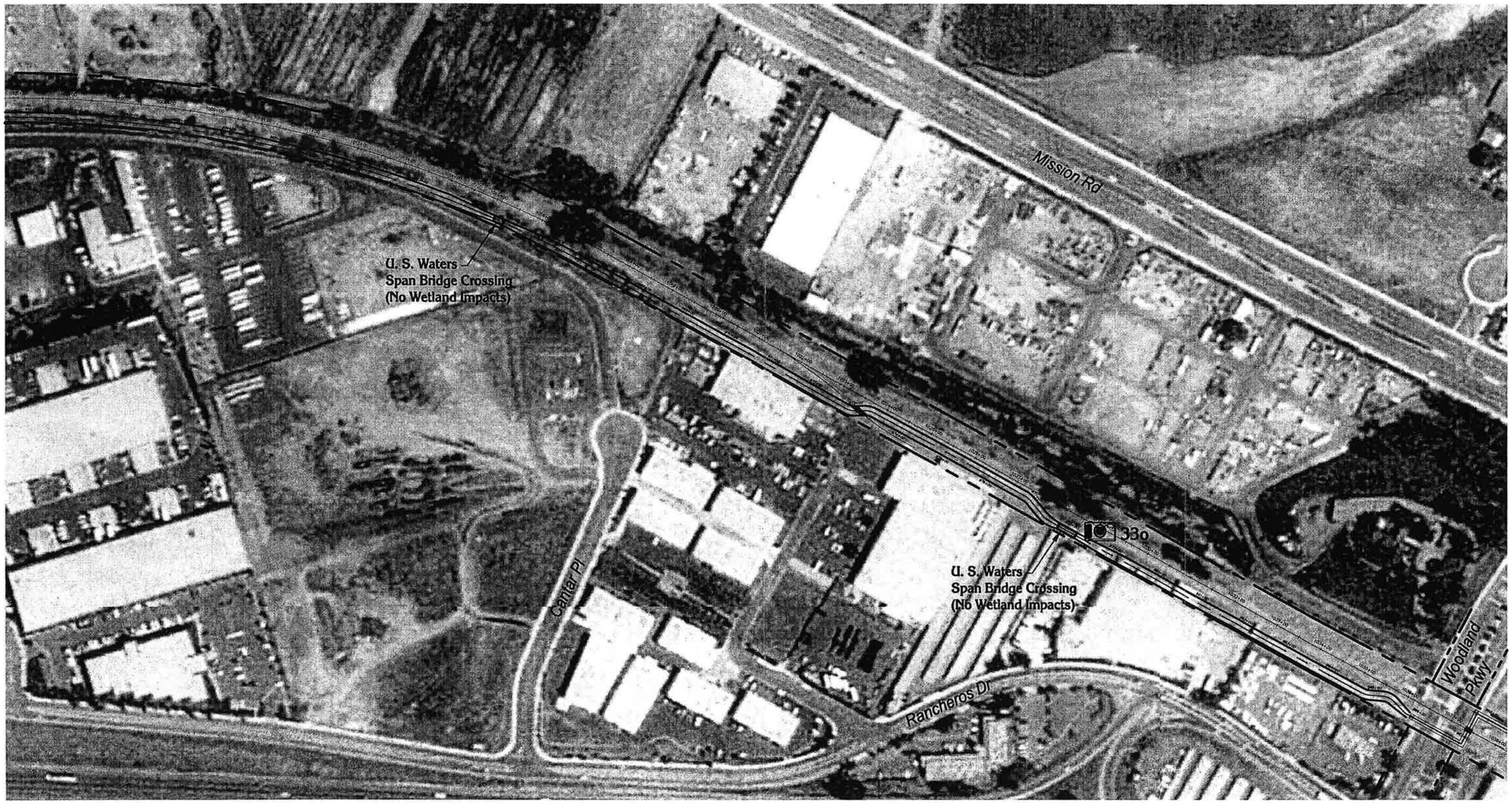
0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 23



U. S. Waters | 31a Photo Location & Figure No.

0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 24

SWS	Southern Willow Scrub	31a	Photo Location & Figure No.
FWM	Freshwater Marsh		

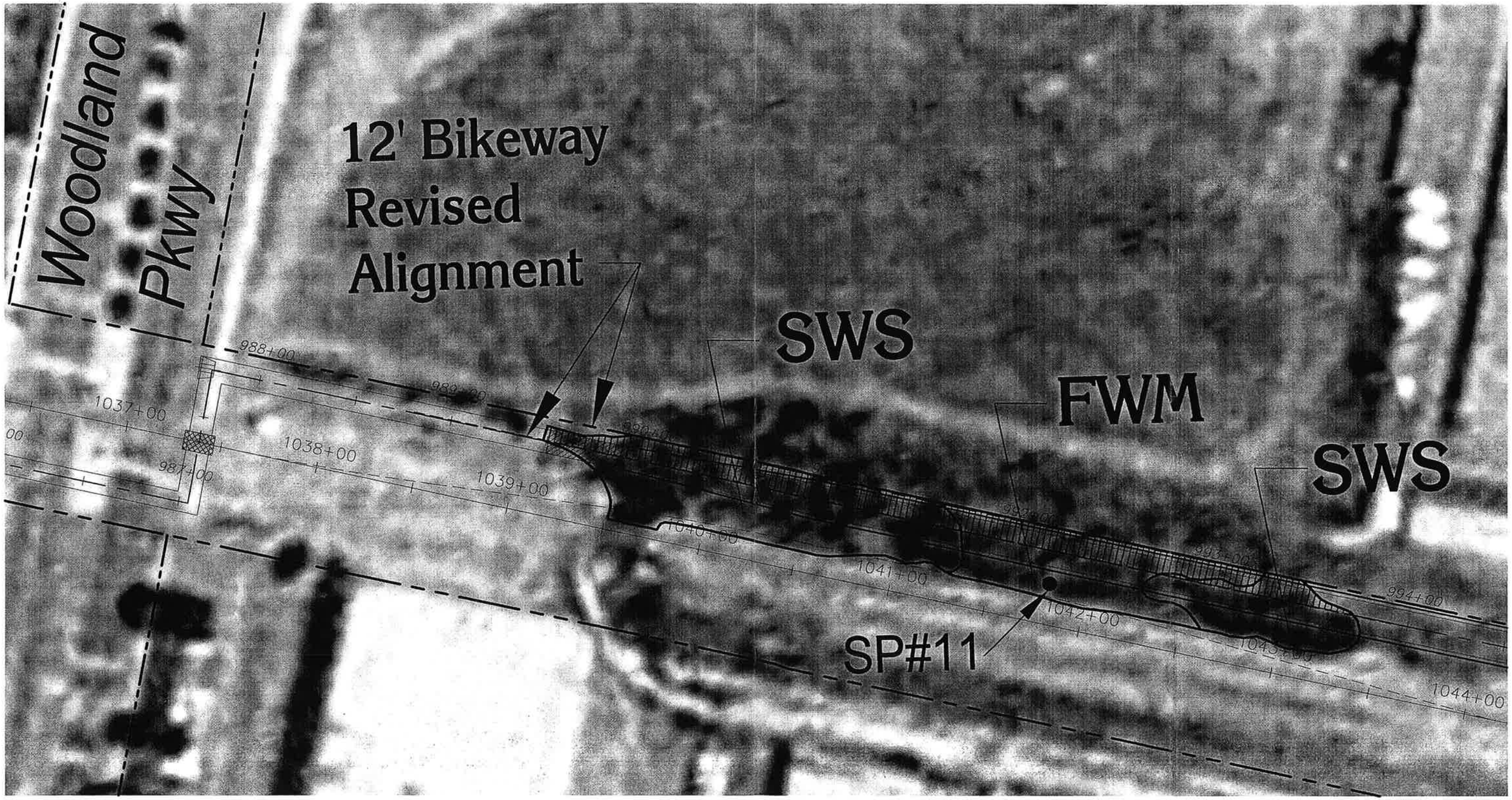
0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 25



SWS	Southern Willow Scrub	FWM	Freshwater Marsh
	Impact Area	●	Soil Pit Location

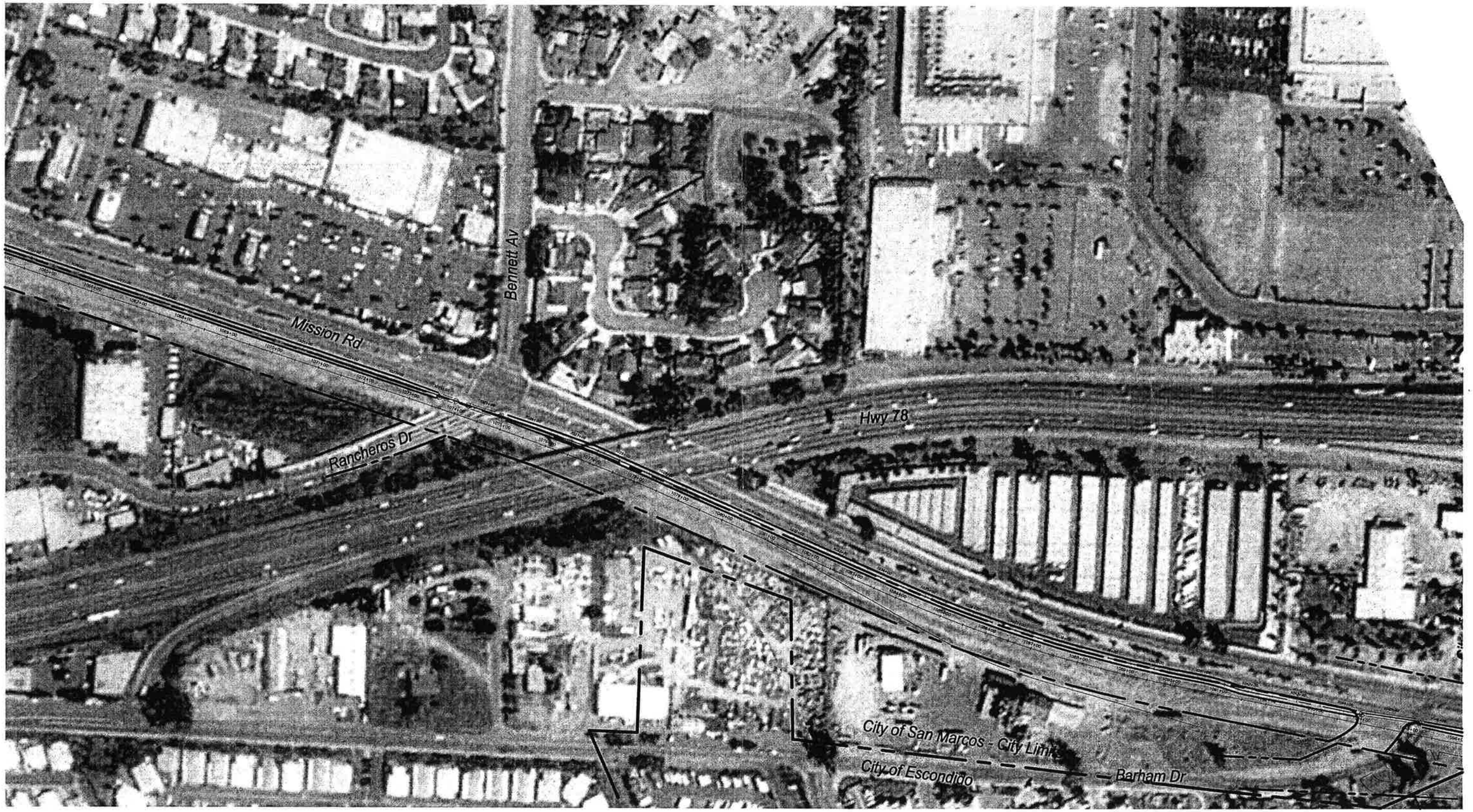
0 50
Scale In Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bike Trail Alignment

FIGURE 25A



No Wetland Habitats observed in this area

0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 26

No Wetland Habitats observed in this area

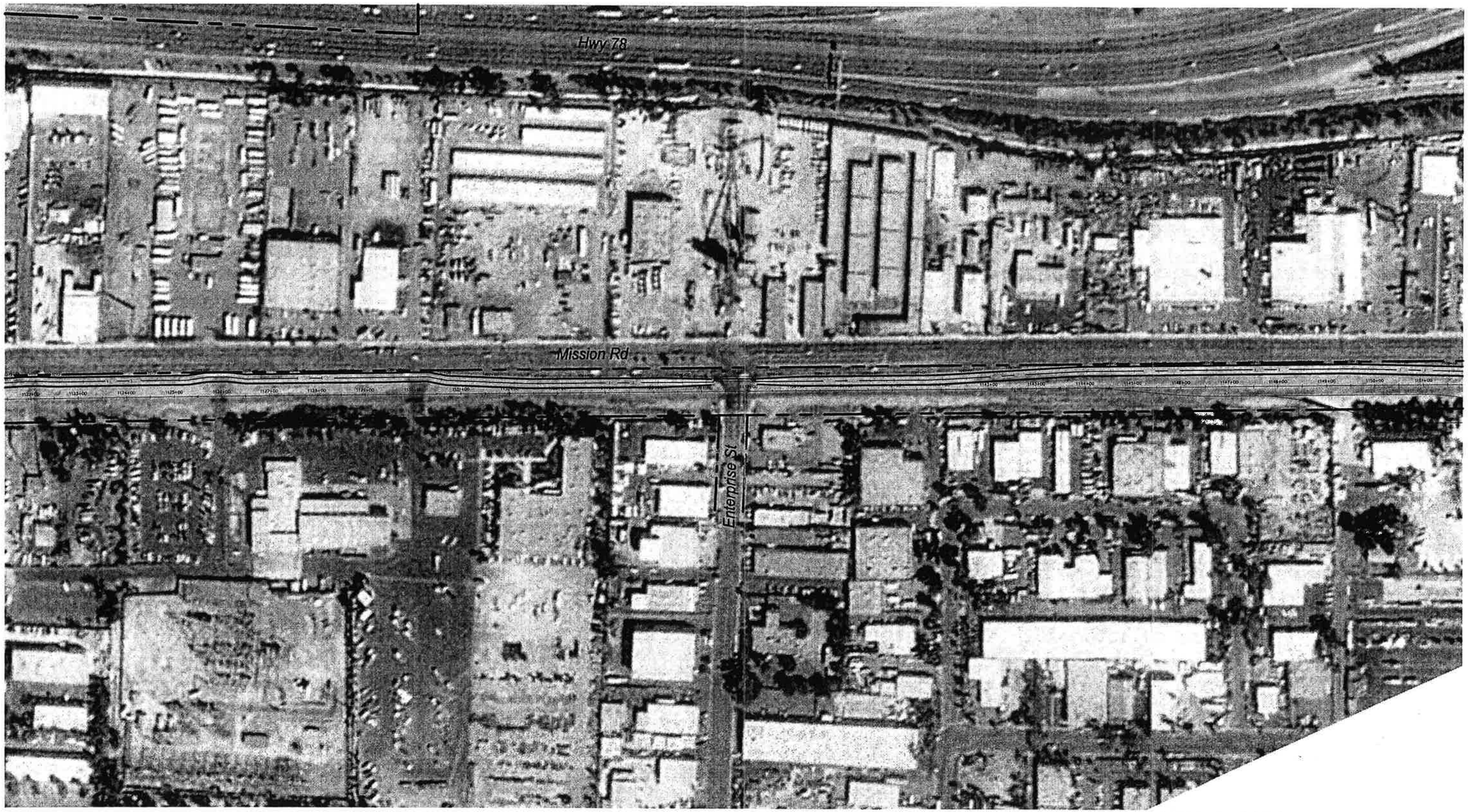
0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 27



No Wetland Habitats observed in this area

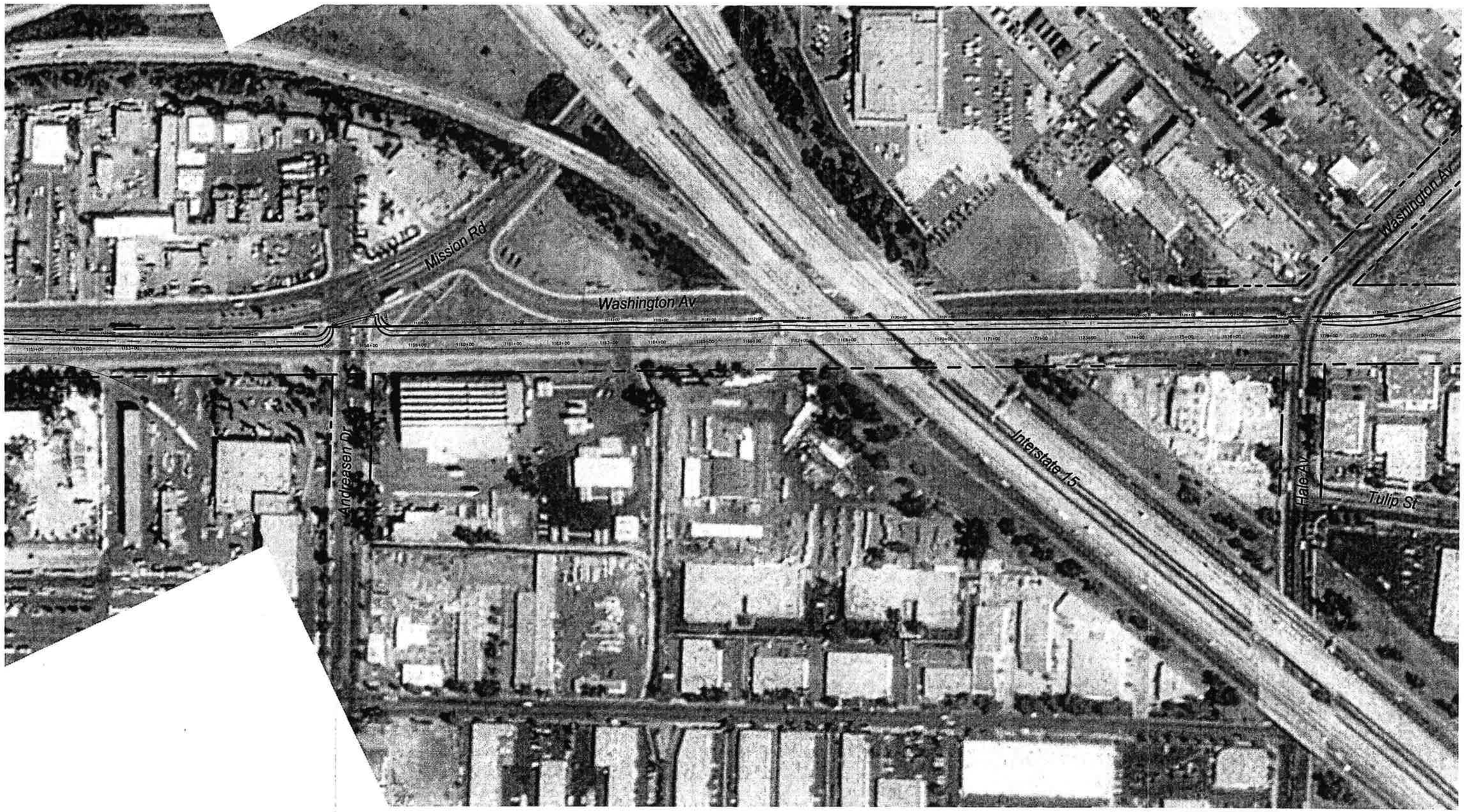
0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 28



No Wetland Habitats observed in this area

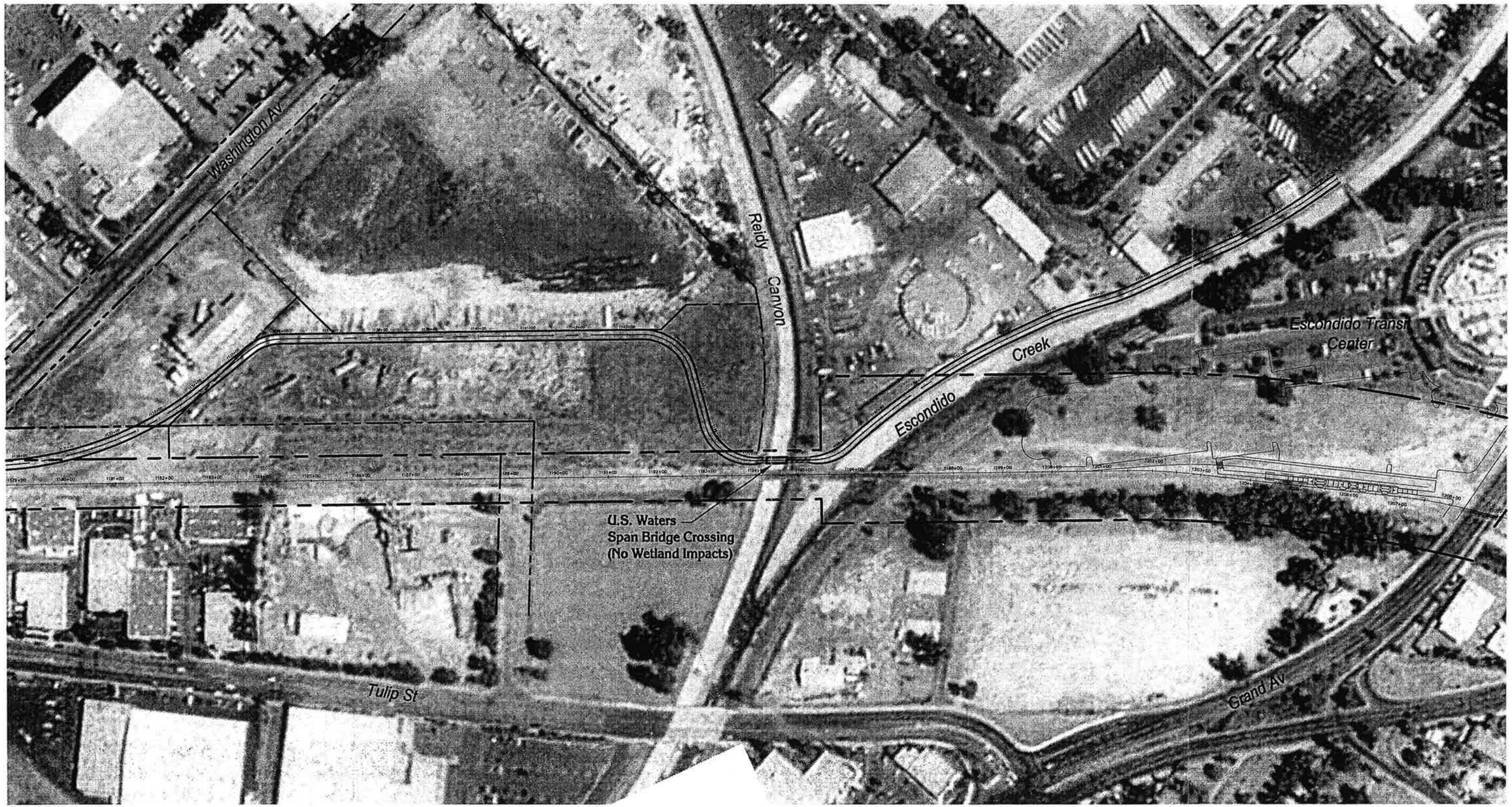
0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE 29



U. S. Waters

0 200
Scale in Feet

BASE PHOTO: San Diego Aerial Image Database 94/95

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

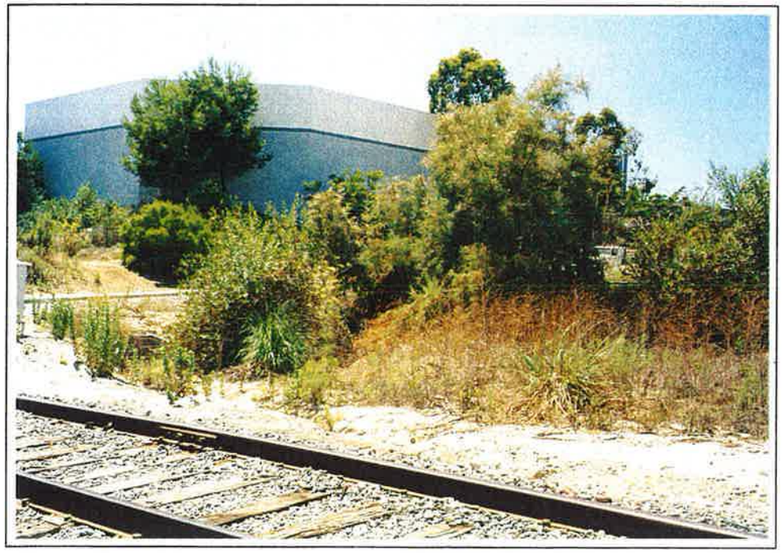
Wetland Impacts occurring within Oceanside/Escondido Bikeway Alignment

FIGURE
30

a: West-facing view of freshwater marsh and span bridge crossing location.

b: East-facing view of disturbed wetland.

c: Northeast-facing view of disturbed wetland and mule fat scrub (CDFG only).



d: Northwest-facing view of mule fat scrub (CDFG only) and ephemeral waters.

e: Northeast-facing view of southern willow scrub and mule fat scrub.

f: Northeast-view of disturbed wetland.

City of San Marcos - Oceanside/Escondido Bikeway - Wetland Delineation Report

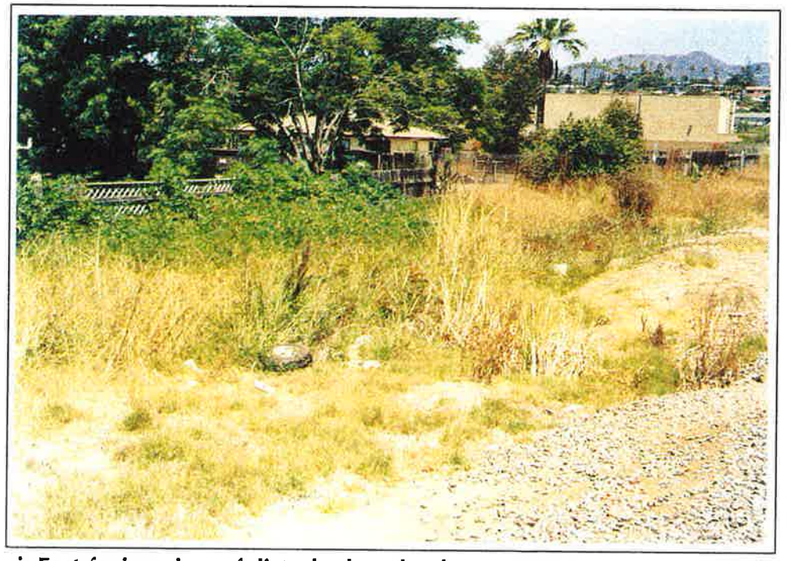
Photos of Wetland Impact Areas

FIGURE 31

g: Northeast-facing view of disturbed wetland.

h: Southeast-facing view of freshwater marsh.

i: East-facing view of disturbed wetland.



j: East-facing view of disturbed wetland.

k: Northwest-facing view of southern willow scrub at span bridge crossing location.

l: East-facing view of ephemeral waters within bikeway alignment.

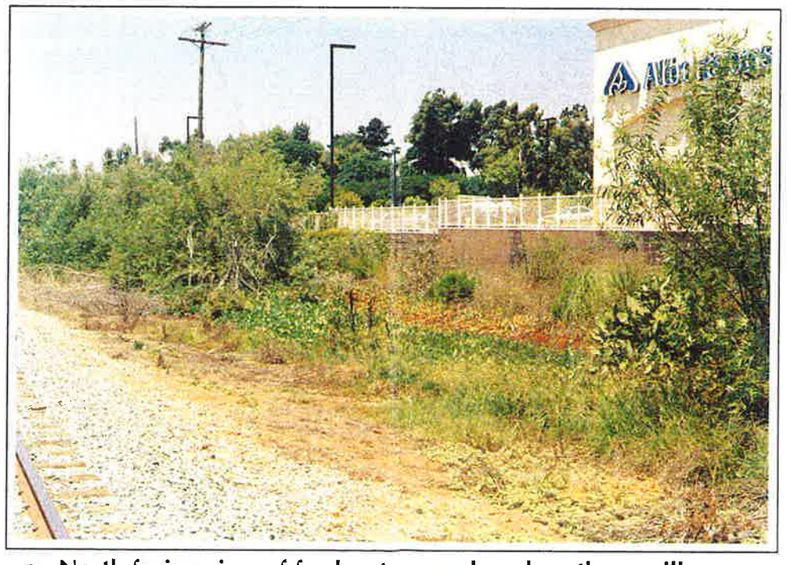
Photos of Wetland Impact Areas

FIGURE 32

m: Northeast-facing view of mule fat scrub.

n: East-facing view of span bridge crossing location.

o: northwest-facing view of typical span bridge crossing location.



p: North-facing view of freshwater marsh and southern willow scrub.

APPENDIX A

Routine Wetland Determination Data Forms

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: OCEANSIDE-ESCONDIDO BIKEWAY	Date: 7/23/99
Applicant/Owner: CITY OF SAN MARCOS	County: SAN DIEGO
Investigator: JEFF L. THOMAS	State: CALIFORNIA
Do Normal Circumstances exist on the site? Yes (No)	Community ID: DISTURBED WETLAND
Is the site significantly disturbed (Atypical Situation)? (Yes) No	Transect ID:
Is the area a potential Problem Area? Yes (No)	Plot ID: 1
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. ANEMOPSIS CALIFORNICA	HERB	OBL.	9.		
2. DISTICHUS SPICATA	HERB	FACW	10.		
3. AMBROSIA PSILOSTACHYA	HERB	FAC	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 3/3 = 100%

Remarks: THIS SAMPLING POINT MEETS THE VEGETATION CRITERION.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

X No Recorded Data Available

Field Observations:

Depth of Surface Water: ___ (in.)

Depth to Free Water in Pit: ___ (in.)

Depth to Saturated Soil: ___ (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- 1. X Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: SAMPLING POINT IS LOCATED NEXT TO AN EPHEMERAL DRAINAGE. THIS AREA APPEARS TO BE FED BY A POSSIBLE SEEP FROM LOMA ALTA CREEK. THIS SAMPLING POINT IS BELIEVED TO MEET THE HYDROLOGY CRITERIA.

OCEANSIDE-ESCONDIDO BIKEWAY

J. THOMAS
7/23/99
PLOT I.D.#1

SOILS

Map Unit Name (Series and Phase): CORRALITOS LOAMY SAND, 0-5% SLOPES
Drainage Class: EXCESSIVELY DRAINED
Taxonomy (Subgroup): TYPIC XEROPSAMMENT
Field Observations Confirm Mapped Type? (Yes) No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-6"	A_1	10YR 3/1	—	—	SANDY CLAY W/ROCK
6"-?	A_2	TOO HARD TO PENETRATE			Rock?

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: THIS SAMPLING POINT DOES NOT APPEAR TO MEET THE HYDRIC SOILS CRITERION.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? Yes (No)

Is this Sampling Point Within a Wetland? (Circle) (Yes) No

Remarks: UPON REVIEW WITH THE CORPS, IT IS BELIEVED THAT THE SAMPLING POINT IS LOCATED WITHIN A WETLAND AREA SUBJECT TO SEEPAGE FROM THE ADJACENT LOMA ALTA CREEK. GIVEN THE TIME YEAR, THE HYDRIC SOIL CONDITION MAY NOT BE EVIDENT. OTHER NEARBY SAMPLING POINTS ARE DISPLAYING HYDRIC SOIL CONDITIONS.

Approved by HQUSACE 2/92

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: OCEANSIDE-ESCONDIDO BIKEWAY Applicant/Owner: CITY OF SAN MARCOS Investigator: JEFF L. THOMAS	Date: 7/23/99 County: SAN DIEGO State: CALIFORNIA
Do Normal Circumstances exist on the site? Yes (No) Is the site significantly disturbed (Atypical Situation)? (Yes) No Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: DISTURBED WETLAND Transect ID: Plot ID: 2

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. DISTICHLIS SPICATA	HERB	FACW	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 1/1 = 100%

Remarks: THIS SAMPLING POINT MEETS THE VEGETATION CRITERION.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

X No Recorded Data Available

Field Observations:

Depth of Surface Water: — (in.)

Depth to Free Water in Pit: — (in.)

Depth to Saturated Soil: 4-5" (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- X Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- X Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- X Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: THIS SAMPLING POINT IS LOCATED IN AN AREA IN WHICH WATER IS SEEPING INTO FROM THE ADJACENT CREEK. THIS SAMPLING POINT MEETS THE HYDROLOGY CRITERION.

OCEANSIDE-ESCONDIDO BIKEWAY

J. THOMAS
7/23/99
PLOT I.D. #2

SOILS

Map Unit Name (Series and Phase): CORRALITOS LOAMY SAND, 0-5% SLOPES, EXCESSIVELY DRAINED

Drainage Class: DRAINED

Taxonomy (Subgroup): TYPIC XEROPSAMMENT

Field Observations Confirm Mapped Type? (Yes) No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-8	A_1	10YR 3/1	5Y 4/1	COMMON/DISTINCT	SANDY CLAY LOAM
8-16	A_2	5Y 4/1	—	—	

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- X Reducing Conditions
- X Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: THIS SAMPLING POINT MEETS THE SOILS CRITERION.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? (Yes) No

(Circle)
Is this Sampling Point Within a Wetland? (Yes) No

Remarks: WETLAND SUPPORTED FROM GROUND WATER SEEPAGE THROUGH BERM ADJACENT TO LOMA ALTA CREEK.

Approved by HQUSACE 2/92

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: OCEANSIDE-ESCONDIDO BIKEWAY Applicant/Owner: CITY OF SAN MARCOS Investigator: JEFF L. THOMAS	Date: 7/23/99 County: SAN DIEGO State: CALIFORNIA
Do Normal Circumstances exist on the site? Yes (No) Is the site significantly disturbed (Atypical Situation)? (Yes) No Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: DISTURBED WETLAND Transect ID: Plot ID: 3

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. DISTICHLIS SPICATA	HERB	FACW	9.		
2. BACCHARIS SALICIFOLIA	SHRUB	FACW	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 2/2 = 100%

Remarks: THIS SAMPLING POINT MEETS THE VEGETATION CRITERION.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

X No Recorded Data Available.

Field Observations:

Depth of Surface Water:	—	(in.)
Depth to Free Water in Pit:	8	(in.)
Depth to Saturated Soil:	2	(in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- X Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- ? X Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- X Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: THIS SAMPLING POINT MEETS THE HYDROLOGY CRITERION.

OCEANSIDE-ESCONDIDO BIKEWAY

J. THOMAS
7/23/99
PLOT I.D. #3

SOILS

Map Unit Name (Series and Phase): CORRALITOS LOAMY SAND, 0-5% SLOPES, EXCESSIVELY
Drainage Class: DRAINED
Taxonomy (Subgroup): TYPIC XEROPSAMMENT
Field Observations Confirm Mapped Type? (Yes) No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-16	A	5GY 4/1	—	—	SANDY CLAY LOAM

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- X Sulfidic Odor
- ___ Aquic Moisture Regime
- X Reducing Conditions
- X Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: THIS SAMPLING POINT MEETS THE SOILS CRITERION.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? (Yes) No

Is this Sampling Point Within a Wetland? (Yes) No (Circle)

Remarks:

Approved by HQUSACE 2/92

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: OCEANSIDE-ESCONDIDO BIKEWAY	Date: 7/23/99
Applicant/Owner: CITY OF SAN MARCOS	County: SAN DIEGO
Investigator: JEFF L. THOMAS	State: CALIFORNIA
Do Normal Circumstances exist on the site? Yes (No)	Community ID: DISTURBED WETLAND
Is the site significantly disturbed (Atypical Situation)? (Yes) No	Transect ID:
Is the area a potential Problem Area? Yes (No)	Plot ID: 4
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. DISTICHLIS SPICATA	HERB	FACW	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 1/1 = 100%

Remarks: THIS SAMPLING POINT MEETS THE VEGETATION CRITERION.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

X No Recorded Data Available

Field Observations:

Depth of Surface Water: ___ (in.)

Depth to Free Water in Pit: 12" (in.)

Depth to Saturated Soil: AT SURFACE (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- X Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- FAINT ? X Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- X Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: THIS SAMPLING POINT MEETS THE HYDROLOGY CRITERION.

OCEANSIDE-ESCONDIDO BIKEWAY

J. THOMAS
7/23/99
PLOT I.D. #4

SOILS

Map Unit Name (Series and Phase): CORRALITOS LOAMY SAND, 0-50% SLOPES
Drainage Class: EXCESSIVELY DRAINED
Taxonomy (Subgroup): TYPIC XEROPSAMMENT
Field Observations Confirm Mapped Type? (Yes) No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-16	A	5GY 5/1	5GY 4/1	MANY/~~DISTINCT~~ FAINT	LOAMY SAND

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- X Sulfidic Odor
- ___ Aquic Moisture Regime
- X Reducing Conditions
- X Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- X Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks:
THIS SAMPLING POINT MEETS THE SOILS CRITERION.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? (Yes) No

Is this Sampling Point Within a Wetland? (Circle) (Yes) No

Remarks:
THIS SAMPLING POINT IS FED BY A GROUNDWATER SEEP, AND POSSIBLY BY SUPPLEMENTAL SURFACE RUNOFF ALONG THE TOE OF THE LOMA ALTA CREEK BERM.

Approved by HQUSACE 2/92

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: OCEANSIDE-ESCONDIDO BIKEWAY	Date: 7/23/99
Applicant/Owner: CITY OF SAN MARCOS	County: SAN DIEGO
Investigator: JEFF L. THOMAS	State: CALIFORNIA
Do Normal Circumstances exist on the site? (Yes) No	Community ID: ~~FRESHWATER MARSH~~
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID: MULE FAT SCRUB
Is the area a potential Problem Area? Yes (No)	Plot ID: 5
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. BACCHARIS SALICIFOLIA	SHRUB	FACW	9.		
2. TAMARIX sp.	SHRUB	FACW	10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 2/2 = 100%

Remarks: THIS SAMPLING POINT MEETS THE VEGETATION CRITERION.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

X No Recorded Data Available

Field Observations:

Depth of Surface Water: — (in.)

Depth to Free Water in Pit: — (in.)

Depth to Saturated Soil: — (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- X Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: THIS SAMPLING POINT IS LOCATED ADJACENT TO AN EPHEMERAL UNVEGETATED CHANNEL, BUT IS BEYOND ITS LIMITS. THEREFORE, THE SAMPLING POINT DOESN'T MEET THE HYDROLOGY CRITERION.

OCEANSIDE-ESCONDIDO BIKEWAY

J. THOMAS
7/23/99
PLOT I.D.: #5

SOILS

Map Unit Name (Series and Phase): LAS FLORES LOAMY FINE SAND, 9-30% SLOPES SEVERELY ERODED Drainage Class: MODERATELY WELL-DRAINED

Taxonomy (Subgroup): HAPLIC NATRIXERALF Field Observations Confirm Mapped Type? (Yes) No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-16	A	7.5YR 4/2	—	—	SANDY LOAM

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks: THIS SAMPLING POINT DOES NOT MEET THE SOILS CRITERION.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

Is this Sampling Point Within a Wetland? (Circle) Yes (No)

Remarks: THIS SAMPLING POINT IS NOT LOCATED WITHIN A CORPS JURISDICTIONAL WETLAND.

Approved by HQUSACE 2/92

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: OCEANSIDE-ESCONDIDO BIKEWAY Applicant/Owner: CITY OF SAN MARCOS Investigator: JEFF L. THOMAS	Date: 7/23/99 County: SAN DIEGO State: CALIFORNIA
Do Normal Circumstances exist on the site? (Yes) No Is the site significantly disturbed (Atypical Situation)? Yes (No) Is the area a potential Problem Area? Yes (No) (If needed, explain on reverse.)	Community ID: SOUTHERN WILLOW SCRUB Transect ID: Plot ID: 6

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. SALIX LASIOLEPIS	TREE	FACW	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 1/1 = 100%

Remarks:
THIS SAMPLING POINT MEETS THE VEGETATION CRITERION.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

X No Recorded Data Available

Field Observations:

Depth of Surface Water:	—	(in.)
Depth to Free Water in Pit:	—	(in.)
Depth to Saturated Soil:	—	(in.)

Wetland Hydrology Indicators:
Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- X Water Marks
- X Drift Lines
- X Sediment Deposits
- X Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks:
THIS SAMPLING POINT IS CLEARLY WITHIN AN AREA OF HYDROLOGIC INFLUENCE, THEREFORE IT MEETS THE CRITERION.

OCEANSIDE-ESCONDIDO BIKEWAY

J. THOMAS
7/23/99
PLOT I.D.#6

SOILS

Map Unit Name (Series and Phase): LAS FLORES LOAMY FINE SAND, 9-30% SLOPES SEVERELY ERODED Drainage Class: MODERATELY WELL-DRAINED

Taxonomy (Subgroup): HAPLIC NATRIXERALF Field Observations Confirm Mapped Type? Yes (No)

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/1	5GY 4/1	MANY/DISTINCT	CLAY SOIL (INCLUSION?)

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- X Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: THIS SAMPLING POINT MEETS THE SOILS CRITERION.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? (Yes) No

Is this Sampling Point Within a Wetland? (Circle) (Yes) No

Remarks:

Approved by HQUSACE 2/92

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: OCEANSIDE-ESCONDIDO BIKEWAY	Date: 7/23/99
Applicant/Owner: CITY OF SAN MARCOS	County: SAN DIEGO
Investigator: JEFF L. THOMAS	State: CALIFORNIA
Do Normal Circumstances exist on the site? (Yes) No	Community ID: DISTURBED WETLAND
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? (Yes) No	Plot ID: 7
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. MALVELLA LEPROSA	HERB	FAC	9.		
2.			10.		
3.			11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 1/1 = 100%

Remarks: THIS SAMPLING POINT MEETS THE VEGETATION CRITERION.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

X No Recorded Data Available

Field Observations:

Depth of Surface Water: ___ (in.)

Depth to Free Water in Pit: ___ (in.)

Depth to Saturated Soil: ___ (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- ___ Water Marks
- ___ Drift Lines
- X Sediment Deposits
- X Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: THIS SAMPLING POINT MEETS THE HYDROLOGY CRITERION.

OCEANSIDE-ESCONDIDO BIKEWAY

J. THOMAS
7/23/99
PLOT I.D.# 7

SOILS

Map Unit Name (Series and Phase): LAS FLORES LOAMY FINE SAND, ERODED 5-9% SLOPES
Drainage Class: MODERATELY WELL-DRAINED
Taxonomy (Subgroup): HAPLIC NATRIXERALF
Field Observations Confirm Mapped Type? (Yes) No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-16	A	7.5YR 4/2	—	—	SILTY SANDY LOAM

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: THIS SAMPLING POINT DOES NOT MEET THE SOILS CRITERION.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? Yes (No)

Is this Sampling Point Within a Wetland? (Circle) (Yes) No

Remarks:

UPON REVIEW WITH THE CORPS, IT WAS DETERMINED THAT THIS LOCATION IS A CORPS-JURISDICTIONAL DISTURBED WETLAND ~~WERE~~ THAT REPRESENTS AN ATYPICAL SITUATION BECAUSE OF THE LACK OF HYDRIC SOILS.

Approved by HQUSACE 2/92

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: OCEANSIDE-ESCONDIDO BIKEWAY	Date: 7/23/99
Applicant/Owner: CITY OF SAN MARCOS	County: SAN DIEGO
Investigator: JEFF L. THOMAS	State: CALIFORNIA
Do Normal Circumstances exist on the site? (Yes) No	Community ID: FRESHWATER MARSH
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No)	Plot ID: 8
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. TYPHA LATIFOLIA	HERB	OBL	9.		
2. POLYPOGON MONSPELIEN.	HERB	FACW+	10.		
3. PICRIS ECHIOIDES	HERB	FAC	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 3/3=100%

Remarks: THIS SAMPLING POINT MEETS THE VEGETATION CRITERION.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

X No Recorded Data Available

Field Observations:

Depth of Surface Water:	— (in.)
Depth to Free Water in Pit:	— (in.)
Depth to Saturated Soil:	— (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- ___ Saturated in Upper 12 Inches
- X Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- X Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: THIS SAMPLING POINT MEETS THE HYDROLOGY CRITERION.

OCEANSIDE-ESCONDIDO BIKEWAY

J. THOMAS
7/23/99
PLOT I.D.# 8

SOILS

Map Unit Name (Series and Phase): LAS FLORES LOAMY FINE SAND, ERODED 5-9% SLOPES Drainage Class: MODERATELY WELL-DRAINED

Taxonomy (Subgroup): HAPLIC NATRIXERALF Field Observations Confirm Mapped Type? Yes (No)

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	—	—	HEAVY CLAY

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: THIS SAMPLING POINT DOES NOT APPEAR TO MEET THE SOILS CRITERION.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? Yes (No)

Is this Sampling Point Within a Wetland? (Circle) (Yes) No

Remarks: WHILE HYDRIC SOILS COULD NOT BE DETECTED, IT IS EVIDENT THAT WATER PONDS IN THIS LOCATION FOR EXTENDED PERIODS DURING THE WINTER/SPRING MONTHS. THEREFORE, THIS SAMPLING POINT IS BELIEVED TO BE LOCATED WITHIN A CORPS JURISDICTIONAL WETLAND.

Approved by HQUSACE 2/92

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: OCEANSIDE-ESCONDIDO BIKEWAY	Date: 7/23/99
Applicant/Owner: CITY OF SAN MARCOS	County: SAN DIEGO
Investigator: JEFF L. THOMAS	State: CALIFORNIA
Do Normal Circumstances exist on the site? Yes (No)	Community ID: DISTURBED WETLAND
Is the site significantly disturbed (Atypical Situation)? (Yes) No	Transect ID:
Is the area a potential Problem Area? Yes (No)	Plot ID: 9
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. CYPERUS INVOLUCRATUS	HERB	OBL	9.		
2. PICRIS ECHIOIDES	HERB	FAC	10.		
3. RUMEX CRISPUS	HERB	FACW	11.		
4. ECHINOCHLOA COLONA	HERB	FACW	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 4/4 = 100%

Remarks: THIS SAMPLING POINT MEETS THE VEGETATION CRITERION.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

X No Recorded Data Available

Field Observations:

Depth of Surface Water:	— (in.)
Depth to Free Water in Pit:	— (in.)
Depth to Saturated Soil:	— (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- X Saturated in Upper 12 Inches
- X Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- X Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- ___ Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: URBAN RUNOFF COLLECTION.
THIS SAMPLING POINT MEETS THE HYDROLOGY CRITERION.

OCEANSIDE-ESCONDIDO BIKEWAY

J. THOMAS
7/23/99
PLOT I.D.# 9

SOILS

Map Unit Name (Series and Phase): DIABLO CLAY, 2-9% SLOPES
Drainage Class: WELL-DRAINED
Taxonomy (Subgroup): CHROMIC PELLOXERERT
Field Observations Confirm Mapped Type? (Yes) No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 4/1	—	—	HEAVY SILTY CLAY

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- X ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: THIS SAMPLING POINT DOES NOT APPEAR TO MEET THE SOILS CRITERION.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? Yes (No)

(Circle)
Is this Sampling Point Within a Wetland? (Yes) No

Remarks: THIS SAMPLING POINT IS LOCATED IN AN AREA OF VEGETATIVE DISTURBANCE. IT HAS A CLAYEY SOIL WHICH APPEARS TO COLLECT AND HOLD URBAN RUNOFF FOR EXTENDED PERIODS. THEREFORE, THIS SAMPLING POINT IS BELIEVED TO BE LOCATED WITHIN A CORPS JURISDICTIONAL WETLAND.

Approved by HQUSACE 2/92

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: OCEANSIDE-ESCONDIDO BIKEWAY
Applicant/Owner: CITY OF SAN MARCOS
Investigator: JEFF L. THOMAS

Date: 7/23/99
County: SAN DIEGO
State: CALIFORNIA

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? Yes (No)
Is the area a potential Problem Area? (Yes) No
(If needed, explain on reverse.)

Community ID: MULE FAT SCRUB
Transect ID:
Plot ID: 10

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. BACCHARIS SALICIFOLIA	SHRUB	FACW
2. PLANTAGO LANCEOLATA	HERB	FAC
3. CONYZA CANADENSIS	HERB	FAC
4.		
5.		
6.		
7.		
8.		

Dominant Plant Species	Stratum	Indicator
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 2/3 = 66%

Remarks: THE OBSERVED PLANTAGO OCCURS AT ONE END OF THE SURVEYED AREA. THIS SAMPLING POINT IS BELIEVED TO MEET THE VEGETATION CRITERION.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
X No Recorded Data Available

Field Observations:

Depth of Surface Water: — (in.)
Depth to Free Water in Pit: — (in.)
Depth to Saturated Soil: — (in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
X Saturated in Upper 12 Inches
X Water Marks
___ Drift Lines
X Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: THERE IS EVIDENCE OF THE PONDING OF WATER. THEREFORE, THIS SAMPLING POINT MEETS THE HYDROLOGY CRITERION.

OCEANSIDE-ESCONDIDO BIKEWAY

J. THOMAS
7/23/99
PLOT I.D.# 10

SOILS

Map Unit Name (Series and Phase): AULD CLAY, 5-9% SLOPES
Drainage Class: WELL-DRAINED
Taxonomy (Subgroup): TYPIC CHROMOXERERT
Field Observations Confirm Mapped Type? (Yes) No

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/2	—	—	HARD CLAY

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- ___ Aquic Moisture Regime
- ___ Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: THIS SAMPLING POINT DOES NOT MEET # SOILS CRITERION.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? Yes (No)

Is this Sampling Point Within a Wetland? (Circle) Yes (No)

Remarks: THIS SAMPLING POINT WAS REVIEWED WITH THE CORPS IN THE FIELD. THE WETLAND VEGETATION OBSERVED IS BELIEVED TO HAVE DEVELOPED FROM THE COLLECTION OF SHEET FLOWS FROM AN ADJACENT SLOPE. THIS SAMPLING POINT WAS NOT FOUND TO BE A CORPS JURISDICTIONAL WATERS OR WETLAND.

Approved by HQUSACE 2/92

DATA FORM

ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: OCEANSIDE-ESCONDIDO BIKEWAY	Date: 7/23/99
Applicant/Owner: CITY OF SAN MARCOS	County: SAN DIEGO
Investigator: JEFF L. THOMAS	State: CALIFORNIA
Do Normal Circumstances exist on the site? (Yes) No	Community ID: FWM/SWS
Is the site significantly disturbed (Atypical Situation)? Yes (No)	Transect ID:
Is the area a potential Problem Area? Yes (No)	Plot ID: 11
(If needed, explain on reverse.)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. ANEMOPSIS CALIFORNICA	HERB	OBL	9.		
2. CYPERUS INVOLUCRATUS	HERB	OBL	10.		
3. DISTICHLIS SPICATA	HERB	FACW	11.		
4.			12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 3/3 = 100%

Remarks: THIS SAMPLING POINT MEETS THE VEGETATION CRITERION.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
- ___ Stream, Lake, or Tide Gauge
- ___ Aerial Photographs
- ___ Other

X No Recorded Data Available.

Field Observations:

Depth of Surface Water:	— (in.)
Depth to Free Water in Pit:	— (in.)
Depth to Saturated Soil:	— (in.)

Wetland Hydrology Indicators:

Primary Indicators:
- ___ Inundated
- X Saturated in Upper 12 Inches
- X Water Marks
- ___ Drift Lines
- ___ Sediment Deposits
- X Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):
- X Oxidized Root Channels in Upper 12 Inches
- ___ Water-Stained Leaves
- ___ Local Soil Survey Data
- ___ FAC-Neutral Test
- ___ Other (Explain in Remarks)

Remarks: THIS SAMPLING POINT MEETS THE HYDROLOGY CRITERION.

OCEANSIDE-ESCONDIDO BIKEWAY

J. THOMAS
7/23/99
PLOT I.D.# 11

SOILS

Map Unit Name (Series and Phase): ORANGEVILLE FINE SANDY LOAM, 0-2% SLOPES
Drainage Class: POORLY DRAINED
Taxonomy (Subgroup): AQUIC HAPLOXEROLL
Field Observations Confirm Mapped Type? Yes (No)

Profile Description:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
0-16	A	10YR 3/3	10YR 3/2	MANY/FAINT	SILTY CLAY LOAM

Hydric Soil Indicators:

- ___ Histosol
- ___ Histic Epipedon
- ___ Sulfidic Odor
- X Aquic Moisture Regime
- X Reducing Conditions
- ___ Gleyed or Low-Chroma Colors
- ___ Concretions
- ___ High Organic Content in Surface Layer in Sandy Soils
- ___ Organic Streaking in Sandy Soils
- ___ Listed on Local Hydric Soils List
- ___ Listed on National Hydric Soils List
- ___ Other (Explain in Remarks)

Remarks: THIS SAMPLING POINT MEETS THE SOILS CRITERION.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? (Yes) No

(Circle)
Is this Sampling Point Within a Wetland? (Yes) No

Remarks:

Approved by HQUSACE 2/92

APPENDIX B

Cultural Resources Inventory and Significance Test for Prehistoric Site CA-SDI-14340 by Gallegos & Associates

DUDEK
& ASSOCIATES, INC.
Professional Teams for Complex Projects

CULTURAL RESOURCE INVENTORY AND SIGNIFICANCE TEST FOR PREHISTORIC SITE CA-SDI-14340, SAN MARCOS, CALIFORNIA

Prepared for:
City of San Marcos
Engineering Department

Prepared by:
Gallegos & Associates

June 1999

CULTURAL RESOURCE INVENTORY AND SIGNIFICANCE TEST FOR PREHISTORIC SITE CA-SDI-14340, SAN MARCOS, CALIFORNIA

Prepared for:
City of San Marcos
Engineering Department
1 Civic Center Drive
San Marcos, California 92069-2918

Prepared by:
Gallegos & Associates
5671 Palmer Way, Suite A
Carlsbad, California 92008
(760) 929-0055
PJ. 11-99

National Archaeological Data Base Information

Area of Potential Effect: 37 +/- acres
USGS 7.5' Quadrangles: Escondido, Rancho Santa Fe, San Luis Rey and San Marcos
Sites Newly Recorded: None
Sites Tested: CA-SDI-14340
Isolates Recorded: P-37-016512 and P-37-016531
Key Words: Bedrock milling, ceramic, biface, ground stone, radiocarbon date

Sinéad Ní Ghabhláin
Project Archaeologist

Tracy Stropes
Lithic Analyst

Dennis R. Gallegos
Project Manager

June 1999

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EXECUTIVE SUMMARY

TITLE:	Cultural Resource Inventory and Significance Test for Prehistoric Site CA-SDI-14340 San Marcos, California
AUTHORS:	Sinead Ni Ghabhlain, Tracy Stropes and Dennis R. Gallegos Gallegos & Associates 5671 Palmer Way, Suite A Carlsbad, California 92008
DATE:	June 1999
SOURCE OF COPIES:	South Coastal Information Center San Diego State University San Diego, California 92182-0136

ABSTRACT:

This cultural resource study was prepared by Gallegos & Associates for the City of San Marcos. The project is the construction of a bike trail which follows the existing Atchison, Topeka and Santa Fe Railroad between the cities of Oceanside, Vista, San Marcos and Escondido. This cultural resource study provided a review of previous work, a literature review and a field survey for Alternate 1. Cultural resources within or adjacent to the rail line area of potential effect (APE) include: CA-SDI-5633, CA-SDI-14325 and CA-SDI-14340. As a result of previous field work (ERCE 1989,1990 and James et al. 1996), this study identified only CA-SDI-14340 within the rail line APE. No cultural resources were identified within Alternate 1 APE.

Testing to determine site significance and eligibility to the National Register of Historic Places included excavation of 14 shovel test pits (STP's) and 4 1x1 m units. In addition, the two milling features with two elements each were photographed and illustrated.

As a result of STP and unit excavation, 386 artifacts, 6.25 grams of bone and 6.7 grams of shell were recovered. Artifacts included: 2 bifaces, 2 flake tools, 5 core/cobble tools, 3 cores, 371 debitage, 2 manos and 1 ceramic.

The initial recording (Rogers n.d.) for this site was on the knoll, south of the rail line APE and the portion of the site tested. The southern knoll has been graded and developed for a trailer park. The northern site area is developed, and the east site boundary is truncated by a large drainage ditch. Additional disturbance includes the existing rail line, access road and channeling of San Marcos Creek.

Given the type of artifacts recovered, the milling features, and radiocarbon date, this site is a Late Period campsite where primarily seed and plant processing activities were conducted. The AMS radiocarbon analysis produced a date of occupation between AD 1515 to 1695.

As the test program has identified CA-SDI-14340 as a small disturbed campsite/milling station with few tools and primarily debitage. Given the small number and limited range of tools, as well as the previous disturbance, site CA-SDI-14340 is identified as not significant under CEQA and not eligible to the National Register of Historic Places.

SECTION 1
INTRODUCTION

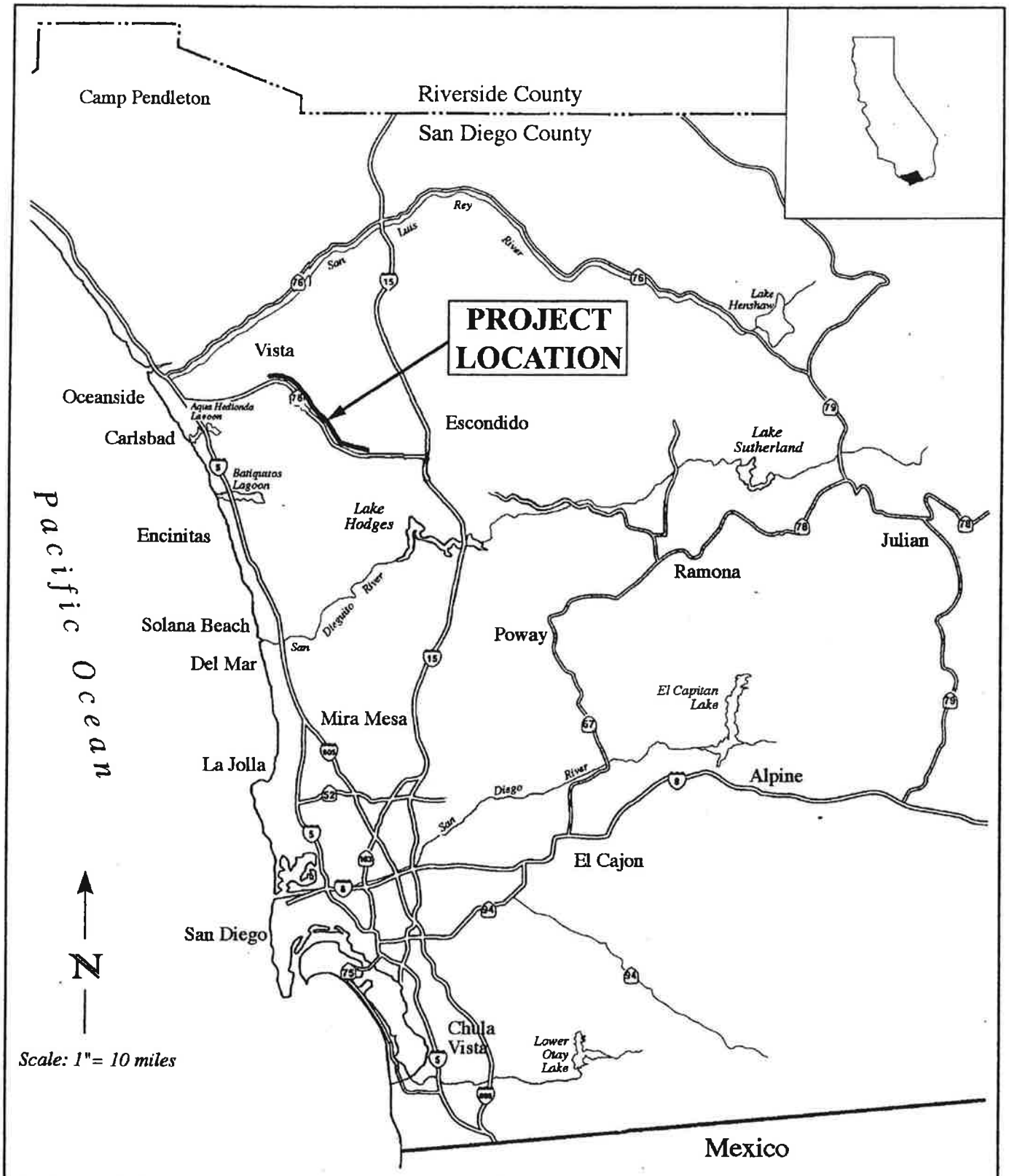
1.1 PROJECT BACKGROUND

The purpose of the Oceanside-Escondido Bike Trail Project is rooted in the existing and increasing congestion projected for SR-78. The proposed action is regarded as a viable means to provide an alternative mode of transportation to the automobile within the SR-78 corridor. Regional and local transportation planners have recognized the importance of providing a safe, usable bicycle route along the existing NCTD railroad corridor right-of-way.

Due to the recent growth along the Oceanside-Escondido corridor, major roads such as Oceanside Boulevard in Oceanside, Mission Avenue in Oceanside and Mission Road in Vista, San Marcos, and Escondido are experiencing increasing levels of congestion. This congestion has intimidated many bicyclists from using existing bike lanes along these roadways. Implementation of the bike path would provide a safe alternate mode for commuting, short distance trips, and recreation.

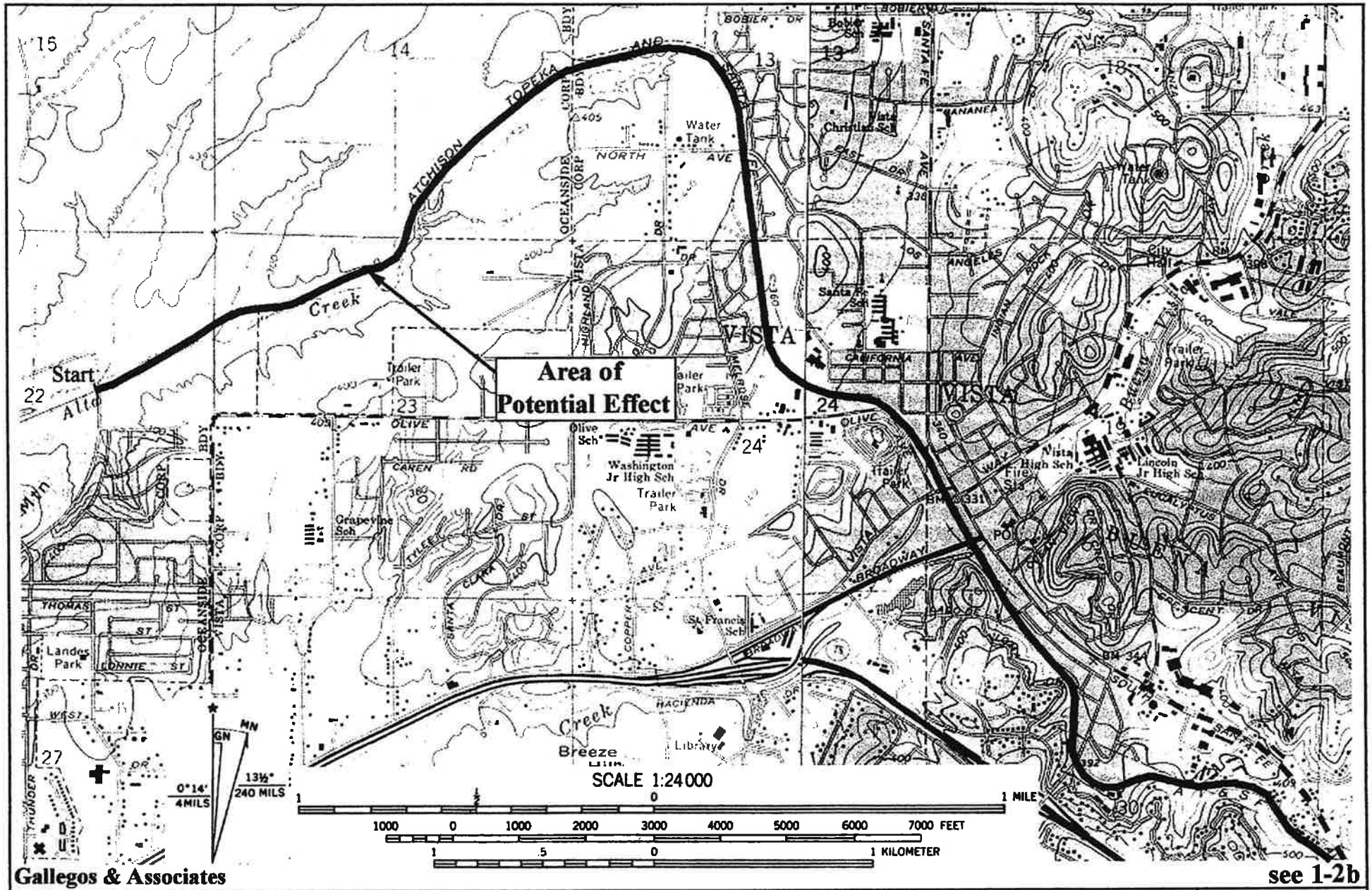
This project is located within the communities of Oceanside, Vista, San Marcos and Escondido, as well as within a portion of the unincorporated County of San Diego. The project alignment generally follows the North County Transit District (NCTD) rail line (see Figures 1-1 and 1-2 a-d). Alternate 1 was added to avoid biological concerns. Alternate 1 begins at Valpreda Road and ends just east of Bougher Road in San Marcos.

The Oceanside-Escondido Bike Trail Project would involve the construction of a Class 1 bike path along the entire Oceanside-Escondido rail line. This portion of the trail would be temporarily located along surface streets and selected portions of the Oceanside-Escondido rail line. This project would be located within NTCD Coaster right-of-way from Oceanside to Escondido and would consist of a Class 1 bike trail. The bike trail begins in Oceanside and follows the Atchison Topeka and Santa Fe Railroad line to Mission Road in San Marcos. The bike path would accommodate bikers of average ability, including handicapped riders. The bike path would have 2-foot paved shoulders and two 6-foot bicycle lanes.



Gallegos & Associates

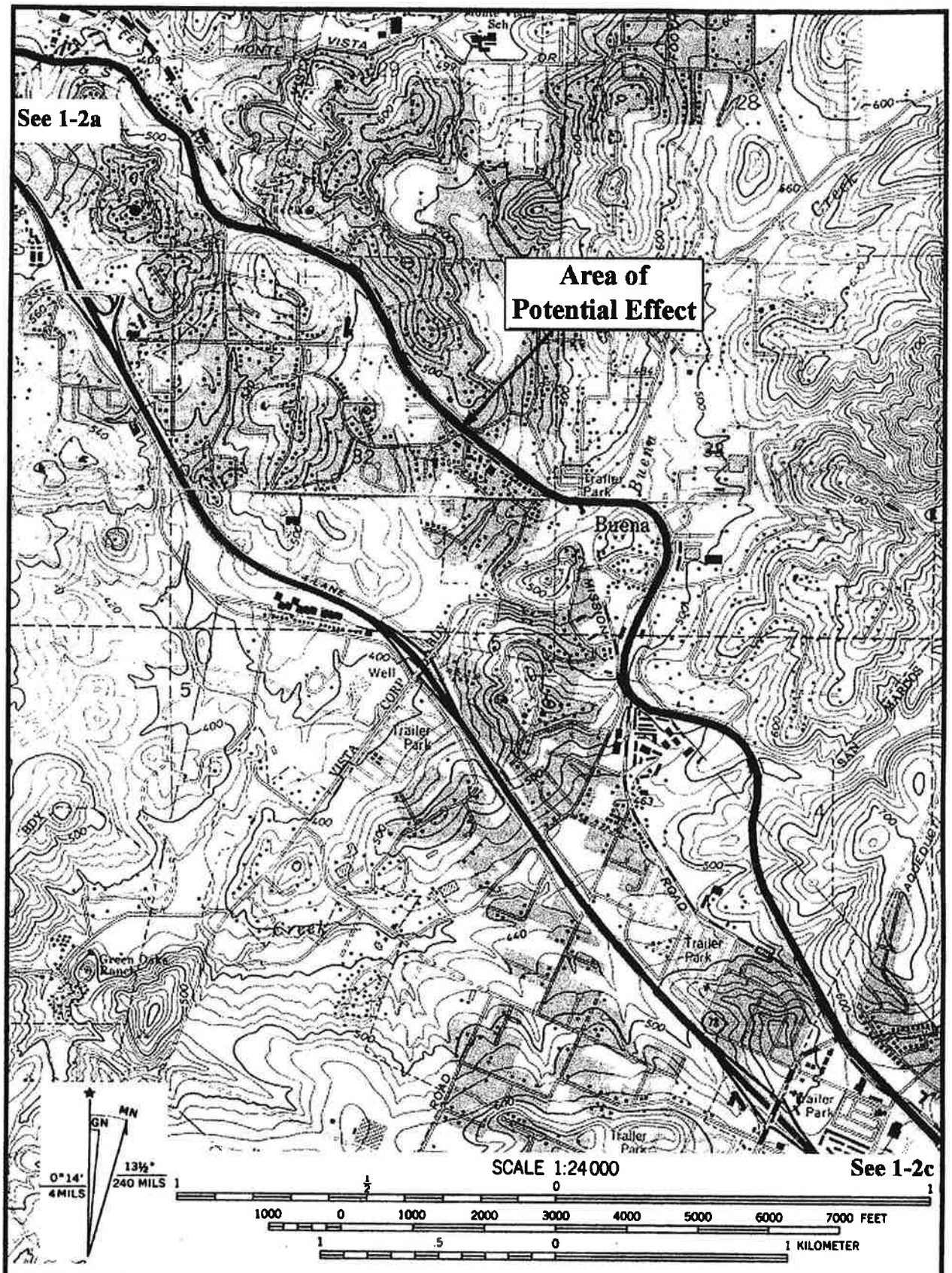
Regional Location of Project	FIGURE **1-1**



Gallegos & Associates

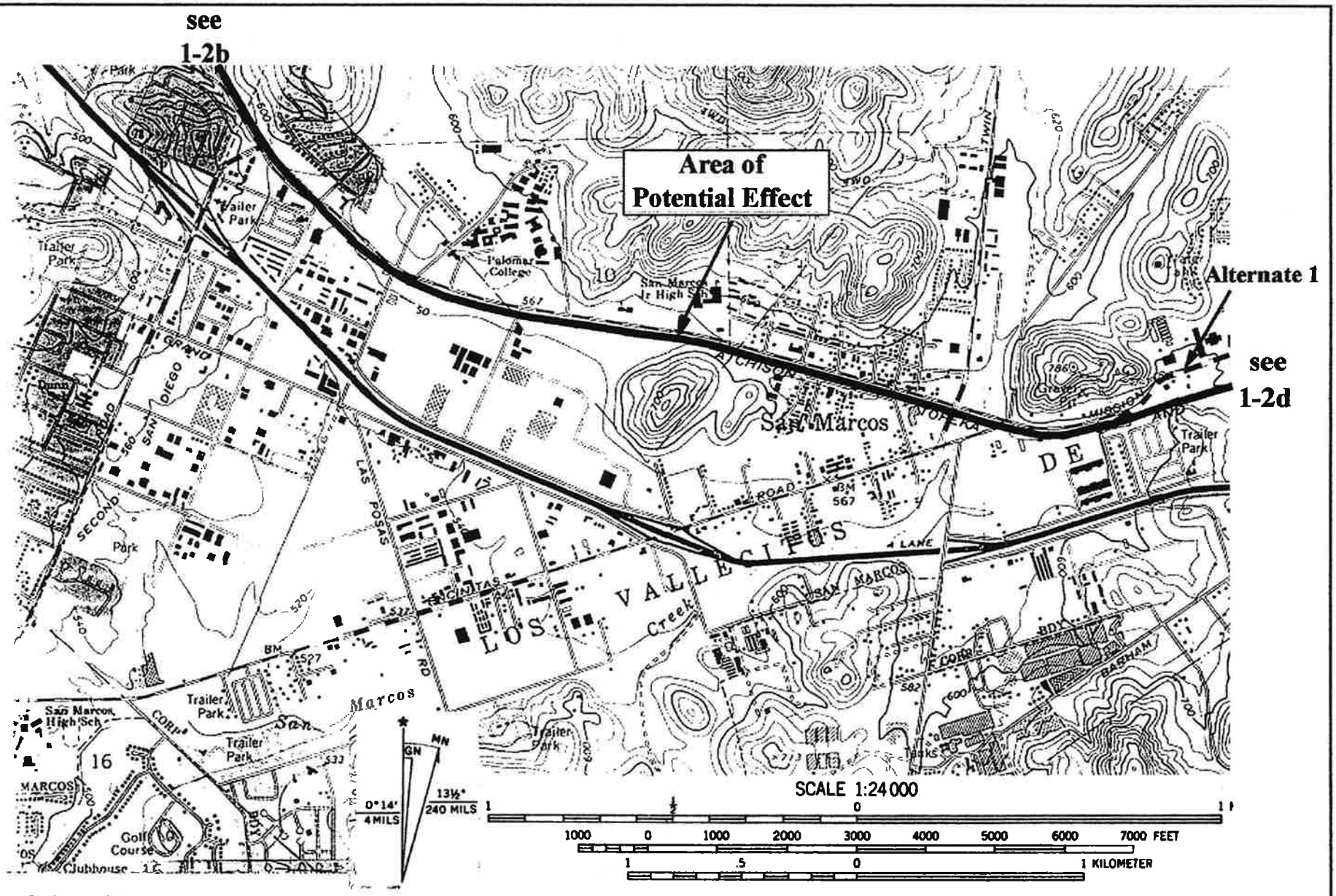
Area of Potential Effect
as Shown on USGS 7.5' San Luis Rey Quadrangle

FIGURE
1-2a



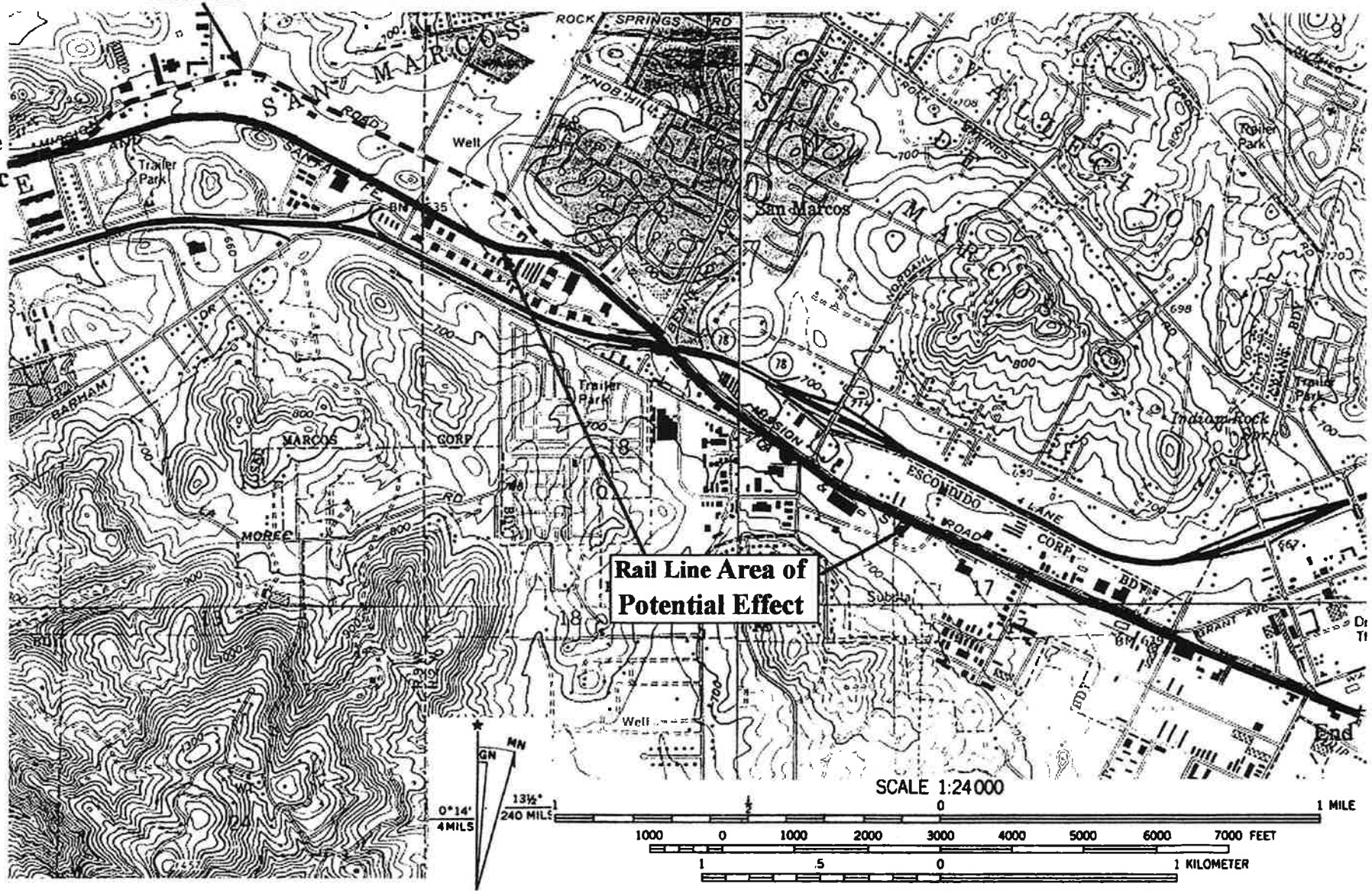
Area of Potential Effect
as Shown on USGS 7.5' San Luis Rey Quadrangle

FIGURE
1-2b



Gallegos & Associates

Area of Potential Effect as Shown on San Marcos USGS 7.5' Quadrangle	FIGURE **1-2c**



Gallegos & Associates

Area of Potential Effect as Shown on San Marcos, Valley Center, Escondido and Rancho Santa Fe USGS 7.5' Quadrangles	FIGURE **1-2d**

The objectives of the present project were threefold: to identify cultural resources which may be impacted by the proposed project; determine if cultural resources are within the APE; and if within the APE, assess the significance and eligibility of cultural resources under CEQA and federal guidelines.

1.2 ENVIRONMENTAL SETTING

The proposed bike trail parallels the Atchison, Topeka and Santa Fe Railroad between the cities of Oceanside and Escondido, passing through the developed urban areas of Oceanside, Vista, San Marcos and Escondido. The railroad line is located in relatively flat land at an altitude of between 500 and 600 ft.

The regional topography is dominated by the San Marcos and Merriam Mountains to the north and the peaks of Cerro de las Posas, Double Peak and Mt. Whitney to the south. The cities of San Marcos and Escondido developed within wide fertile valleys with gently sloping knolls to the north and south. San Marcos Creek flows south through Twin Oaks Valley and Vallecitos de San Marcos into Lake San Marcos and flows west to Batiquitos Lagoon.

The geology of the region consists of Jurassic marine sedimentary and metasedimentary rocks and Mesozoic granitics (Kennedy and Tan 1996). Quarternary alluvial and colluvial deposits are also found. Granitic rock outcrops and boulders, common within the study area, were frequently used in prehistoric times for grinding grain, as evidenced by the abundance of bedrock mortars and grinding slicks.

Soils in the project area belong to three principal associations: the Ramona-Placentia Association, the Fallbrook/Vista Association and the Escondido Association (United States Department of Agriculture 1973). All are well-to-moderately-drained sandy loams developed from granitic alluvium or decomposed granodiorite.

Much of the land adjacent to the railroad line is disturbed by development. The Atchison, Topeka and Santa Fe Railroad was constructed in the late 1880s and much of the disturbance noted within the right-of-way (ROW) directly relates to this construction. In the vicinity of the railroad line, urban development, including industrial and residential developments and the construction of roads and freeways, has been extensive. Prior to

urban development, agriculture and pastoral farming in the fertile valleys adjacent to the railroad line caused some disturbance to cultural resources.

1.3 BACKGROUND - PREHISTORY

The body of current research of prehistoric occupation in San Diego County recognizes the existence of at least two major cultural traditions, discussed here as Early Period/Archaic and Late Period, based upon general economic trends and material culture. Within San Diego County, the Archaic generally includes the period from 9500 to 1300 years ago, while the Late Period includes from 1300 years ago to historic contact. The Historic Period covers the time from Spanish contact to present.

1.3.1 Early Period/Archaic

The Early Period/Archaic, for this discussion, includes the San Dieguito and La Jolla complexes, which are poorly defined, as are the interrelationship between contemporaneous inland, desert, and coastal assemblages (Gallegos 1987a). Initially believed to represent big game hunters, the San Dieguito are better typified as a hunting and gathering society. These people had a relatively diverse and non-specialized economy in which relatively mobile bands accessed and used a wide range of plant, animal, and lithic resources. Movement of early groups into San Diego County may have been spurred by the gradual desiccation of the vast pluvial lake system that dominated inland basins and valleys during the last altithermal period. This hypothesis is supported by the similarity between Great Basin assemblages and those of early Holocene Archaic sites in San Diego County. Several researchers recognized the regional similarity of artifacts and grouped these contemporaneous complexes under the nomenclature of either the Western Pluvial Lakes Tradition or the Western Lithic Co-tradition (Bedwell 1970; Davis et al. 1969; Rogers 1939; Warren 1967, Moratto 1984).

The origin of coastal populations and subsequent interaction between the coastal population and Great Basin/desert groups is a subject of some debate (Gallegos 1987b). Whatever their origin, the first occupants immediately exploited the coastal and inland resources of plants, animals, shellfish, and fish (Moriarty 1967; Kaldenberg 1982; Gallegos 1991; Kyle et al. 1998).

The development of a generalized economic system indicates that the San Dieguito and related groups can be placed within the general Archaic pattern. Archaic cultures occur within North America at slightly different times in different areas, but are generally correlated with local economic specialization growing out of the earlier Paleo-Indian Tradition (Willig and Aikens 1988). Archaic cultures are often represented by more diverse artifact assemblages and more complex regional variation than occur in Paleo-Indian traditions. This is generally thought to have resulted from the gradual shift away from a herd-based hunting focus to a more diverse and area specific economy.

The earliest sites are found near coastal lagoons and river valleys of San Diego County. These sites are the Harris Site CA-SDI-149, Agua Hedionda Sites (CA-SDI-210/UCLJ-M-15 and CA-SDI-10695), Rancho Park North (CA-SDI-4392/SDM-W-49), and Remington Hills (CA-SDI-11069) dating 8000 to 9500 years B.P. The northern San Diego County coastal lagoons supported large populations, circa 6000 years ago, as shown by the numerous radiocarbon dated sites adjacent to these lagoons. After 3000 years ago, there is a general absence of archaeological sites in north San Diego County to circa 1500 years ago. This reduction in number of archaeological sites can be attributed to the siltation of coastal lagoons and depletion of shellfish and other lagoon resources (Warren and Pavesic 1963; Miller 1966; Gallegos 1985). Archaeological sites dated to circa 2000 years ago are found closer to San Diego Bay, where shellfish were still abundant and may well represent what can be considered the end of the La Jolla Complex (Gallegos and Kyle 1988).

The La Jolla and Pauma complexes which are identified as following the San Dieguito Complex may simply represent seasonal or geographic variations of the somewhat older and more general San Dieguito Complex. Inland La Jolla occupation sites have been reported in transverse valleys and sheltered canyons (True 1959:225-263; Warren et al. 1961:1-108; Meighan 1954:215-227). These non-coastal sites were termed "Pauma Complex" by True (1959), Warren (1961), and Meighan (1954). Pauma Complex sites by definition have a predominance of grinding implements (manos and metates), lack shellfish remains, have greater tool variety, seem to express a more sedentary occupation, and have an emphasis on both gathering and hunting (True 1959; Warren 1961; Meighan 1954).

Archaic sites from 9500 to 1300 years ago within San Diego County include coastal habitation sites, inland hunting and milling camps, and lithic quarry sites. Material cultural assemblages during this long period are remarkably similar in many respects. These

deposits may well represent a process of relative terrestrial economic stability and presumably slow cultural change. Though various culture traits developed or disappeared during the long span of 9500 to 1300 years ago, there is a clear pattern of cultural continuity during this period.

1.3.2 Late Period

During the Late Period, a material culture pattern similar to that of historic Native Americans first becomes apparent in the archaeological record. The economic pattern during this period appears to be one of more intensive and efficient exploitation of local resources. The prosperity of these highly refined economic patterns is well evidenced by the numerous Kumeyaay/Diegueño and Luiseño habitation sites scattered over San Diego County. This increase in Late Period site density probably reflects better preservation of the more recent archaeological record and a gradual population increase within the region. Artifacts and cultural patterns reflecting this Late Prehistoric pattern include small projectile points, pottery, the establishment of permanent or semi-permanent seasonal village sites, a proliferation of acorn milling sites in the uplands, the appearance of obsidian from Obsidian Butte, and interment by cremation.

Many of the Late Prehistoric culture patterns in southern California were shared with groups along the eastern periphery of the region. Even in the most recent periods, the Native Americans of southern California incorporated many elements of their neighbors' culture into their own cultures. This transference and melding of cultural traits between neighboring groups makes positive associations of archaeological deposits with particular ethnographically known cultures difficult. This is particularly true of the groups within San Diego County. Though significant differences exist between Luiseño and Kumeyaay/Diegueño cultures (including linguistic stock), the long interaction of these groups during the Late Period resulted in the exchange of many social patterns. Archaeologists must rely heavily on ethnographic accounts of group boundaries as recorded during the historic period, although it is not known how long these boundaries had been in place or the validity of these boundaries as presently reported. Florence Shipek Ph.D. (1993) identifies the northern and southern Kumeyaay tribal boundary as:

> In 1769, Kumeyaay national territory starting at the coast about 100 miles south of the Mexican border (below Santo Tomas), thence north to the coast at the drainage divide south

> of the San Luis Rey River including its tributaries. Using the U.S. Geological Survey topographic maps, the boundary with the Luiseño then follows that divide inland. The boundary continues on the divide separating Valley Center from Escondido and then up along Bear Ridge to the 2240 contour line and then north across the divide between Valley Center and Woods Valley up to the 1880 Ft. peak, then curving around east along the divide above Woods Valley...

The project area falls near the boundary between the Kumeyaay and Luiseño. The numerous Late Prehistoric sites within San Diego County identifies intense human activity for many centuries. As a result of contact with Spanish, Mexican and American settlers, Native American populations were decimated by resettlement and disease. Presently, Native Americans are found throughout San Diego County, especially within the 17 San Diego County reservations.

Further readings on Kumeyaay (Diegueño) and Luiseño Native Americans include: Almstedt 1974; Barrows 1900; Bean 1972; Bean and Saubel 1972; Burrus 1967; Cuero 1968; Drucker 1939; Dubois 1908; Gifford 1918; Harrington 1978; Hedges 1986; Heizer and Almquist 1971; Heizer and Whipple 1957; Hooper 1920; Keneally 1965; Kroeber 1970; Langdon 1970; Merrill 1973; Pourade 1960; Priestley 1937; Robinson 1969; Rudkin 1956; Shipek 1977, 1980, 1986a,b, 1987, 1988, 1989a,b, 1991, 1993; Sparkman 1908; Spicer 1962; Spier 1923; Strong 1929; Tibesar 1955; Underhill 1941; White 1963; Wolcott 1929; and Woodward 1934.

1.4 HISTORICAL BACKGROUND (Taken from Gallegos et al. 1993)

An abbreviated history of Spanish, Mexican and American settlement in San Diego County is presented for the purpose of providing a background for discussion of the presence, chronological significance and historical relationship of historical resources within the project area. The history of San Diego County is commonly presented in terms of Spanish, Mexican and American political domination. A discussion of historic land use and occupation under periods of political rule by people of European and Mexican origin is justified on the basis of characteristics associated with each period, when economic, political and social activities were influenced by the prevailing laws and customs. Certain themes are common to all periods, such as the development of transportation, settlement, and

agriculture. Robinson (1979) provides a comprehensive account of public and privately owned land in California, with a discussion of laws, activities and events related to the development of the State.

Spanish Period (1769-1821)

The Spanish Period represents: exploration; establishment of the San Diego Presidio, and the San Diego and San Luis Rey missions; the introduction of horses, cattle, and agricultural goods; and, a new method of building construction and architectural style. Spanish influence continued past 1821, when California became a part of Mexico. With Mexican rule, missions continued to operate as in the past, and laws governing the distribution of land were also retained for a period of time.

Mexican Period (1821-1848)

The Mexican Period includes the initial retention of Spanish laws and practices until shortly before secularization of the San Diego Mission in 1834, a decade after Spanish rule. Although several grants of land were made prior to 1834, after secularization, vast tracts of land were dispersed through land grants. Cattle ranching prevailed over agricultural activities and the development of the hide and tallow trade increased during the early part of this period. The Pueblo of San Diego was established and transportation routes were expanded. The Mexican Period ended as a result of the Mexican-American War.

American Period (1848 to Present)

The American Period began when Mexico ceded California to the United States under the Treaty of Guadalupe Hidalgo. Terms of the treaty brought about creation of the Lands Commission, in response to the Act of 1851, that was adopted as a means of validating land ownership throughout the state through settlement of land claims. Few Mexican ranchos remained intact because of legal costs and lack of sufficient evidence to prove title claims. Much of the land that once constituted rancho holdings became available for settlement by emigrants to California. The influx of people to California and the San Diego region was the result of various factors, including the discovery of gold in the state; conclusion of the Civil War; availability of free land through passage of the Homestead Act; and, later, importance of the county as an agricultural area supported by roads, irrigation systems, and connecting railways. The growth and decline of towns occurred in response to an increased population and the economic boom and bust cycle in the late 1800s.

Native American/Spanish/Mexican/American Interaction

Native American history relates closely to all periods of occupation discussed above. In San Diego County, significant contact between the European and Native American cultures did not occur until 1769 when Europeans arrived by land and sea to establish a mission and military post near present day Old Town. Subsequent Spanish colonization activities resulted in a drastic disruption of Native American lifestyles that continued under Mexican and American rule. The effects of colonization on Native Americans is complex and long-term. Characteristics include: initial disruption limited to areas in proximity to the Spanish settlement and to land used by the missionaries for the production of crops and for cattle grazing; increased interaction between missionaries and Native Americans as exploration progressed and mission activities expanded which resulted in forced labor to erect buildings, plant and harvest crops, and carry out other chores required to maintain a functional mission; effort on the part of missionaries to alter social, political and religious beliefs and practices; Native American protests resulting in sporadic warfare in attempts to regain traditional lands; accelerated loss of land and independence in the 1800s as grants of land, many extensive, were made by the Mexican government; return to former lifestyles by many mission dwellers when secularization of the missions was accomplished in 1834; participation, primarily as workers, in a variety of activities related to ranching, farming, and construction brought on by increased settlement of land by immigrants to California after American rule began; establishment, between 1875 and 1931, of seventeen Indian reservations within San Diego County.

1.5 Record Search, Literature Review and Survey Results

A record search, conducted at the South Coastal Information Center, SDSU, identified three prehistoric sites (CA-SDI-5633, -14325, and -14340) adjacent to the APE (Figures 1-3 and 1-4). Previous studies for the Oceanside to Escondido Rail Project had identified cultural resources within the APE (ERCE 1989, 1990 and James et al. 1996). Shovel test pits had been excavated at three prehistoric sites within the APE for the present study to determine if the sites extended into the APE (James et al. 1996). The results of these previous studies are reviewed in Sections 3, 4 and 5. Alternate 1 is presently paved and identified as Mission Road from Valpreda to Bougher roads. The record search identified no previously recorded sites within the proposed Alternate 1. The field survey for Alternate 1 was also negative.

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SECTION 2
RESEARCH DESIGN AND METHODS

2.1 RESEARCH QUESTIONS

The research design was tailored to sites within the APE, wherein 1x1 m units would be excavated. Only prehistoric site CA-SDI-14340 was found to be in the APE. Section 3 provides the results of previous work (ERCE 1989, 1990 and James et al. 1996), as well as the results of the present study. The research design developed for testing the significance of prehistoric site CA-SDI-14340 employs regional and locally specific questions incorporating localized study topics and data needs to approach these questions. A wide range of research questions or topics are possible for site CA-SDI-14340, however, five research domains were selected on the basis of previous work, data available to address these questions, and overall contribution to the archaeological record. The specific research questions focus on chronology, lithic technology, food procurement strategy, and trade and travel.

2.1.1 Chronology

What was the period of use and/or occupation of site CA-SDI-14340 ?

When Rogers first recorded prehistoric site SDM-W-271 (CA-SDI-14340) in the 1920s (Rogers n.d.) he described a San Dieguito (Early Period) and Luiseño (Late Period) camp extending over 1.5 acres on both sides of the San Marcos Creek on adjacent knolls:

> *"The San Dieguito people first camped in this region on the north hill top and occasionally on the south hill. After a long vacancy, the Luiseño came into the valley and settled to a limited degree on the low, flat-top hill on the south side of the creek".*

Both Early and Late Period occupation is therefore recorded for CA-SDI-14340, a locus of SDM-W-271. Testing of this locus should provide an opportunity to establish the period of occupation of this site.

Data Needs

Shell, bone, and/or charcoal for radiocarbon dating, in association with diagnostic artifacts, will be necessary to address the site chronology questions.

2.1.2 Lithic Technology

Several flake-tool reduction strategies are identified for the southern California coastal region. These include split-cobble core reduction; bipolar core reduction; and biface reduction, using two types of cores. The decision to use one type instead of another is dependent on at least two factors: 1) the form of the material to be reduced (small cobble, large cobble, layered); and 2) the intended product (i.e., biface tool, scraper, hammerstone).

In this region, expedient use of locally available cobbles is expected to predominate the assemblage for flake tools, core/cobble tools, and for some of the ground stone tools. This assumption needs to be tested and several study topics can be formulated for the retrieval of data needed to address this topic.

Study Topics

(a) Which technological reduction strategies are present based on the debitage at the site?

(b) Which reduction strategies were used to produce which tools ? Are they the same of different ?

(c) If ground stone tools are present, are the cobble materials local or non-local ?

(d) Is there evidence that ground stone tools were produced at the site, or were they produced elsewhere prior to being carried to the site ?

(e) How do the technologies and stages of tool reduction relate to site function and tools found on the site ?

Data Needs

(a) Collection of a statistically valid sample of cores and debitage.

(b) A detailed analysis of cores and debitage for technological attributes and reduction sequence classification.

(c) Identification of the technological attributes and reduction sequences used to produce tools.

2.1.3 Food Procurement Strategy

Does site CA-SDI-14340 represent a specialized food processing site or conversely, does it represent a campsite wherein a wide range of foods were gathered and processed?

Data Needs

Data necessary to address the question of economic strategy includes floral and faunal remains to permit the reconstruction of diet or dietary practices and preferences of the site occupants. The presence of particular species of plants and animals allows for a more complete appraisal of the various environmental niches exploited by the site occupants. On the basis of previous work, sufficient faunal material may not be present to fully address this question.

Methods for interpreting the data include: protein residue analysis of selected artifacts to identify floral and faunal material being processed; speciation of the recovered faunal assemblage, with special attention to evidence of such treatment as butchering or evidence of cooking, and finally, the identification of species within preferred habitats and the placement of these speciated remains within the ecological model for the purpose of reconstructing the habitat(s) exploited by the site occupants.

The artifacts recovered from the site can also provide inferential information regarding subsistence exploitation. For example, if plant material is not found, the presence of mortars, manos, and metates provides evidence that floral and faunal material was processed at the site. Immunological studies of residues on tools from the site may provide data relating to both the use of the tools and to resources exploited.

2.1.4 Trade and Travel

To what extent are trade and travel evidenced at site CA-SDI-14340? Early travelers and ethnographers noted the presence of Native American trails and trade activities between different cultural groups in the southern California region. The procurement of lithic resources, such as serpentine, chalcedony, chert, jasper, obsidian, and steatite may identify contact with other cultural groups, as these materials are not available in the local area. Although trade items were often of a perishable nature, what archaeological evidence exists at CA-SDI-14340 to demonstrate trade and/or travel?

Study Topics

(a) Is there evidence for trading contacts or travel at CA-SDI-14340?

(b) What was the nature of culture contact - continuous, sporadic, limited?

(c) What are the inferred trade routes or avenues of trade?

(d) What economic needs, if any, were met through contact and trade?

Data Needs

(a) Recovery and analysis of an adequate sample of cultural material that includes trade goods. These items include serpentine, steatite, obsidian, desert lithic material, and beads.

(b) Identification of the source of trade items.

2.2 METHODOLOGY

2.2.1 Field Data Recovery Methods

Testing was completed in April and May of 1999. Project personnel included Sinéad Ní Ghabhláin, Larry Tift, Mike Caldwell, Jeff Couch, Tracy Stropes and Richard Bark.

The testing program included two phases of field work: a) excavation of a series of shovel test pits (STPs) to determine if previously recorded cultural resources lie within the APE for the current project and, if so; b) excavation of 1x1 m test units to determine the significance of the cultural resource.

- **SHOVEL TEST PITS**

Shovel test pits (approximately 35 cm in diameter) were excavated in 10 cm levels. Depending on local conditions, STPs were spaced at 10 or 20 m intervals. Soil was screened through one-eighth inch mesh and cultural material recovered was placed in resealable plastic bags, and labeled by site number, STP number, level, and date. Data relating to soil matrix and recovered artifacts were recorded.

- UNITS

Each 1x1 m test unit was excavated in 10 cm levels using the natural surface contour. All soil was screened through one-eighth inch mesh, and artifacts and ecofacts were collected by 10 cm levels. Cultural material recovered was placed in resealable plastic bags, and labeled by site number, unit number, level, and date. The units were excavated to sterile subsoil or bedrock and the natural contours of the underlying bedrock were followed. Following excavation, side-wall profiles were drawn and photographed for each unit.

2.3 LABORATORY METHODS

Gallegos and Associates' standard system of cleaning, cataloging, and analysis of cultural remains was used for artifacts recovered during these studies. These procedures included cleaning and separating artifacts and ecofacts by material class for each unit level prior to cataloging. Each item, or group of items, was counted, weighed and/or measured and given consecutive catalogue numbers marked directly on the artifact, or on an attached label. Additionally, each item was analyzed for specific characteristics peculiar to each material class. All cataloged items were divided into typological categories and placed within appropriately labeled boxes for interior storage at Gallegos and Associates' cultural resource laboratory.

2.4 SPECIAL STUDIES

2.4.1 Radiocarbon Dating

A small amount of shell was recovered from CA-SDI-14340 and a single shell was submitted to Beta Analytic for Accelerator Mass Spectrometry (AMS) dating.

2.4.2 Lithic Analysis

Lithic analysis was completed by Tracy Stropes. This study combined morphological, functional, and technological attributes. The analysis was geared to addressing the research questions concerned with chronology, subsistence, and technology. Exotic materials (i.e. obsidian, chert) were identified along with their probable place of origin.

Lithic cultural remains can be interpreted in at least three different ways (Binford and Binford 1969): as temporally-sensitive artifacts; as functionally-defined tools; and as debris or discards. The first interpretation, temporally-sensitive artifacts, is imposed by the archaeologist on the collection. This is not to say that temporally-sensitive artifacts had no function in prehistoric society, but rather that their greatest value, to the researcher, lies in their placement within regional chronologies.

In the second interpretation, functionally-defined tools, the artifacts are separated into related task-specific groups to determine the activities taking place at the site. The information derived from the last class, manufacturing debris, relates to the procurement of lithic materials, their relative importance, and the methods of producing the tools needed for subsistence and the items for trade.

The lithic tool analysis was based primarily on a functional analysis. Functional analysis is concerned with the technology of prehistoric peoples. It is an attempt to define the types of activities that took place at a site and is especially important when looking at artifacts from special purpose sites. Numerous activities leave no trace in the archeological record except by the tools used in those activities. Thus, defining tools used for flint-knapping, seed-grinding, etc., as well as those whose functions were socio/religious (e.g., shell beads, ochre, quartz crystals, etc.) is of major importance in determining what activities were being performed by the prehistoric occupants and the relative importance of those activities (Binford 1965).

The functional analysis of prehistoric artifacts is dependent on the use-wear present as the result of utilization of the tool in some task or from the manufacturing of the item. In a functional analysis, the morphological attributes of a tool, as seen by the analyzer, are given secondary consideration. That is, form as it applies to a template or norm is not considered. Instead, those attributes that result from use are given priority in determining the class in which the artifact belongs. By using such an approach, the preconceived ideas of the analyzer are not superimposed on that of the prehistoric use of the tool (Spaulding 1953; Doran and Hodson 1975).

It is recognized that technology is not a static phenomenon, but that through time, is one in which innovations and changes occur. These are discernible in the archaeological record as they affect different lithic tool types. The preference in the Late Prehistoric Period for the use of ceramic vessels for storage and cooking in place of basketry is one such technological

change. When such a change occurs, the object becomes, for the archaeologist, a time marker. Artifacts, then, along with a functional interpretation, can have the added value of indicating a temporal period.

Some items were not used but were merely by-products of the manufacturing of other tools. These are of importance in determining what manufacturing took place and to what degree. The information derived from manufacturing debris relates to the procurement of lithic materials, their relative importance, and the methods of producing the items.

The lithic artifacts, then, were divided into two primary categories: lithic tools and lithic debitage. The method involves scanning all of the items with a 10X magnification, either a jeweler's loupe or a microscope. Use-wear or manufacturing marks observable under magnification then determines the major category and type within that category. In the class of functionally-defined tools, the artifacts are separated into related task-specific groups to determine the activities taking place at the site.

Major classes include ground stone tools (manos, metates, pestles, mortar/bowls), flaked stone tools (including points and bifaces), core/cobble tools, debitage, and miscellaneous items. Chipped stone tools were further subdivided into projectile points and flake tools (scrapers, cutting tools, drill/reamers, engravers, or combinations thereof).

Projectile Points

Certain lithic items are of importance to the regional chronology of the area. These are items whose shapes are as much a product of a culturally-defined "right" template (Binford and Binford 1969) as they are a product of function. Generally, the projectile points found in the region (e.g., Desert Side-notched, Cottonwood Triangular) are assumed to represent specific time periods; however, the chronology for this specific area is incomplete and relies on those from nearby areas. Projectile points that have been determined to be time-sensitive artifacts were described and compared to the regional chronology. Additional time-sensitive items include discoidals, cogged stones, steatite and slate ornaments, and other social/religious items.

Flaked Stone Tools

Flaked stone artifacts include those (excluding bifaces and points) formed from flakes, items usually classified as scrapers, knives, drill/reamers, gravers, or multiple tools combining two or more of these. Flake tools are those used in tasks where force was of secondary importance and where control was of more importance (e.g., drilling a hole in a bead, final shaping of an incised line, dehairing a pelt, etc.). The wear-pattern of these tools along with angle and shape of the utilized edge aid in determining the material upon which the tool was used, and possibly the specific task for which it was used.

Within the flaked stone tools, four major types are present with identification relying on use-wear rather than edge modification, although edge modification was also considered. They can be classified as flakes used for

(1) scraping -- having primarily unifacial wear and/or edge modification,
(2) cutting -- having primarily bifacial wear and/or edge modification,
(3) drilling/reaming -- having primarily use-wear around and/or on a tip, and
(4) engraving denoted by use-wear, generally unifacial, on a small (< 1.0 cm) straight edge.

The edge-modified flakes form a separate category in that the type of modification exhibited on them may be the result of any one of several causes. These are flakes that have no use-wear present. They may have been pressure-flaked for shaping or dulling (as in backed-cutting tools to protect the hand). The retouch may be the result of platform-preparation and hence, the flake would be debitage rather than a tool. The perceived modification may be the result of "trampling." That is, a flake may have been inadvertently walked on or a tool dropped on it, or it may have hit a hard surface during the flaking process. This latter explanation is the least likely, but has been known to have occurred during replicative flint-knapping by the author.

Ground Stone Tools

These tools were used primarily for vegetal processing; however, ethnographic records indicate that bone, clay for pottery, and pigments for paint were also ground with these implements (Gayton 1929; Kroeber 1970; Spier 1978). Ground stone tools were first separated into four groups: manos, metates, pestles, and mortar/bowls, recognizing, of course, that manos and metates as well as pestles and mortars are in actuality complex tools having two primary parts. The attributes selected for discussing the ground stone tools are those most amenable to comparisons with similar artifacts from other sites in the region.

Manos: Attributes of importance in the classification of manos include cobble or shaped, number of used faces (bifacial or unifacial to determine extent of usage, end-battering (presence/absence resulting from roughening grinding surfaces), outline, and cross-section. Form can aid in identifying the type of metate used with the mano. Shaping is of importance in determining the length of occupation of the site; the time to shape a mano would not be taken if the user only meant to use the mano for a day or two and then discard it. Shaping denotes an unnecessary amount of time expended to make an object aesthetically pleasing.

Metates: Ground stone fragments were identified as metate fragments on the presence of at least one concave ground surface. Both slab (thin and very portable) and block (thick and heavy) metates are present. Some were used unifacially and others bifacially, denoting the amount of time spent grinding.

Pestles: In addition to the universal attributes, attributes of importance in the classification of pestles include shaped or cobble. Shaping of pestles, as with manos, suggests an extended stay on a site by the prehistoric inhabitants.

Core/cobble Tools

Core/cobble tools are those in which the parental mass rather than the removed flake becomes the tool. These are expedient tools that may have served more than one function during their use-life. Typically, they are classified as hammerstones, scraper planes, cores, or choppers. In reality, they probably were used for more than one task and were cycled unilaterally through several tasks. They are expedient tools, easy to manufacture, and discarded when the occupants moved to a new location.

Manufacturing Debris

For flaked stone, manufacturing debris or debitage consists of unworked flakes struck off purposefully during the sharpening of both core/cobble tools and flake tools, and shatter resulting from the work. An analysis of the debris can define the technology practices by the prehistoric knappers.

Miscellaneous

Miscellaneous artifacts include those items that are more esoteric in nature and those items that cannot be placed in the above categories. These generally denote status (as in beads, pendants) or ritual/ceremonial activities (as in shaman crystals, hematite or red paint stone, discoidals). Other items classified under the miscellaneous category include tarring pebbles, boiling stones, and manuports.

SECTION 3
CA-SDI-5633 TEST RESULTS

3.1 INTRODUCTION

CA-SDI 5633/W-1573 is located adjacent to the intersection of Las Posas and Mission Roads south of the Atchison Topeka and Santa Fe Railroad line (Figure 1-3). It was first recorded in 1977 by Randy Franklin as a series of bedrock milling features on a small knoll. Franklin (1977) noted 6 to 7 grinding slicks on bedrock outcrops extending over an area of approximately 25 square meters.

3.2 PREVIOUS STUDIES

In 1990, CA-SDI-5633 was tested by Gallegos and Pigniolo for the Copley project to determine site significance under CEQA (Gallegos and Pigniolo 1990). This test included the excavation of 26 shovel test pits, two 1x1 m test units, surface collection of cultural materials and laboratory analysis of artifacts (Figure 3-1). A total of 1589 artifacts were recovered. The presence of an Early Period biface in addition to diagnostic Late Period artifacts – projectile points and sherds of Tizon Brown Ware indicates that this is a multi-component site. Testing identified an extensive subsurface cultural deposit 50x55 m in extent and 90 cm in depth. A historic component, consisting of early domestic refuse was also identified.

As a result of testing, CA-SDI-5633 was identified as important under CEQA and recommendations for mitigation of development impacts included avoidance, or the completion of a data recovery program.

The 1990 test was conducted to the south of the present project corridor. As a result, additional testing was required to determine if CA-SDI-5633 extended into the APE for the Oceanside to Escondido Rail Project. Further testing within the ROW for Atchison

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and Topeka Railroad was carried out in 1996 by Ogden Environmental Inc (James et al. 1996). A total of seven STP's were excavated, two north of the tracks and five south (Figure 3-2). One STP on the south edge of the right-of-way was positive. Both STP's excavated north of the tracks, adjacent to the alignment for the proposed bike trail, were negative.

3.3 PRESENT TEST

As the 1996 test did not extend into the present APE, four additional STPs were excavated to determine if the cultural deposit extended into the APE for the bike trail. Datum was established as the fourth ornamental conifer east of the intersection of Mission and Las Posas roads, approximately 10 m south of Mission Road.

- **STP A**

STP A was located 20 m east of datum. It was excavated to a depth of 60 cm. The soil matrix consisted of a lightly compacted sandy loam with some angular clasts. The soil changed at approximately 60 cm to a yellow-brown, moderately compacted coarse silt. One debitage was recovered in the 0-10 cm level. Some patches of decomposing granite were noted in the upper 10 cm, suggesting the soil above 60 cm may be fill.

- **STP B**

STP B was located 30 m east of datum. It was excavated to a depth of 50 cm. The upper 15 cm of soil was a dark-brown organic-rich soil, possible mulch. Below this organic layer was a loosely-compacted homogenous red-brown clayey loam. One piece of modern glass was recovered in the upper 10 cm.

- **STP C**

STP C was located 10 m west of datum. It was excavated to a depth of 30 cm. The upper 25 cm of soil consisted of highly compacted decomposing granite. Below 25 cm the matrix changed to a moderately-compacted silty loam, which appears to be subsoil. No artifacts were recovered.

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- **STP D**

STP D was located 20 m east of datum. It was excavated to a depth of 30 cm. The soil matrix consisted of a loose sandy loam with gravel. No cultural material was recovered.

3.4 SUMMARY

Considerable disturbance has taken place as a result of the construction of the railroad and Mission Road. The APE cuts through a low berm north of the railroad tracks. This berm appears to consist primarily of fill soils brought to the site for the purpose of seeding a lawn and planting a row of ornamental trees. The native subsoil is sterile of cultural material.

The single piece of debitage was recovered in the 0-10 cm level from fill soils. As such, it does not indicate the presence of a cultural deposit in this portion of the APE. As an intact cultural deposit was not identified within the APE for the bike trail, no further testing is recommended at this location.

SECTION 4
CA-SDI-14325 TEST RESULTS

4.1 PREVIOUS STUDIES

CA-SDI-14325 is located on the southeast corner of Barham Drive and Mission immediately south of the AT&SF railroad tracks.

The site was first recorded in 1989 by Pigniolo and Briggs as a series of bedrock milling features within two loci. Locus A, the present site area, was located south of the railroad tracks east of Barham Drive, while Locus B was located north of the tracks, west of Barham Drive. Locus B has since been destroyed by the widening of Mission Road (James et al. 1996, Ogden 1996).

A resurvey of the site in 1996 by James et al. identified at least 28 distinct grinding slicks over an area 21x40 m. The area of the site within the right-of-way of the the AT&SF was subsequently tested using 11 STPs, 3 within the area of Locus B, the remainder within Locus A. None of the STPs produced cultural material.

As the portion of CA-SDI-14325 within the proposed alignment for the bike trail has been tested previously with negative results, no further testing of this locus is recommended.

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SECTION 5
CA-SDI-14340/SDM-W-271 TEST RESULTS

5.1 SITE LOCATION AND DESCRIPTION

Site CA-SDI-14340 was first recorded by Malcolm Rogers in the 1920s as a San Dieguito and Luiseño camp extending over 1.5 acres on both sides of San Marcos Creek on adjacent knolls, one-half mile east of "New San Marcos". Roger's identified a locus of SDM-W-271 on a flat top hill to the south of San Marcos Creek; "...the Luiseño came into the valley and settled to a limited degree on the low, flat-top hill on the south of the creek". The flat hill top, to which Roger's refers, appears to be the knoll overlooking San Marcos Creek, now occupied by a trailer park (Figure 5-1).

In 1976, Carrico reported that the northern portion of the site had been destroyed by development. A survey for the Oceanside to Escondido Rail Project identified prehistoric cultural material along the southern edge of the railroad right-of-way, including bedrock milling on a granitic boulder outcrop to the south of the railroad line (Ogden 1996).

The present test was restricted to the APE for the proposed San Marcos Bike Trail, and was therefore confined to the railroad right-of-way, south of the tracks. A finger of the knoll extends into the right of way and the milling features were identified on the slope of this knoll. A number of large granitic boulders extend upslope.

The soil adjacent to the railroad line has been scraped and some of this soil may have been shoved to the south, augmenting the existing soil in that location. On the north side of the railroad line, a berm, consisting of large granitic boulders and soil, has been constructed to channel San Marcos Creek and to protect the tracks. The soil in this berm appears to be fill and there is a steep drop-off from the berm to the creek. A steep bank and fence line restricted access north of San Marcos Creek. It is possible that the original site area continued up to the creek and possibly extended to the other side. However, considerable disturbance has occurred as a result of construction of the railroad line and channeling of San Marcos Creek, as well as commercial development north and south of the railroad line.

The cultural deposit within the APE, therefore, appears to be confined to a strip 10-15 m in width, adjacent to the southern fence line. The proposed bike trail cuts through this deposit

between 12 and 15 m south of the tracks. Given the development both north and south, testing of the site area was restricted within the existing right-of-way.

Vegetation south of the railroad tracks consists of introduced and native grasses. Ground visibility was poor south of the APE and good to excellent within the APE. South of the fence delimiting the trailer park property, the north facing slope has been graded and heavy vegetation of bermuda grass blankets the slope, obscuring ground visibility. Stands of poison oak further impede access and visibility. Considerable disturbance is evident to the east of the primary site area, where a drainage has been constructed, and banks of fill soil built to channel water into the creek. To the west of the knoll, disturbance in the form of grading is also evident. Stands of Eucalyptus trees are located on both sides of the creek and fir trees are located close to the fence line, within the trailer park property.

5.2 PREVIOUS WORK

Previous work by Ogden (1996) indicated a cultural deposit within the APE for the proposed Bike Trail. Initial work included the excavation of nine STPs at 20 m intervals along an east-west line (Figure 5-1). STPs 2 and 7 were negative and STP 9 had low density lithics in fill soil. The remainder of the STPs were positive and produced low density lithics. STP 5 produced a moderate amount of lithic debitage in addition to some bone. As a result of this test, James et al. (1996) identified an intact subsurface cultural deposit 60 cm in depth and extending at least 150x45 m from the edge of a low knoll east to a small drainage (Figure 5-1). The southern boundary was not established.

5.3 TEST RESULTS – PRESENT STUDY

Five STPs and four 1x1 m units were excavated during the present study in order to assess the importance of the cultural deposit identified by Ogden (1996) (Figure 5-1).

A site datum was established 2 m north of the largest milling feature and 5.6 m south of the tracks. A survey of the site area identified two milling features on boulders close to the north edge of the base of the knoll (Figure 5-2). Feature A is one saucer mortar and one slick. Feature B is one oval basin and one slick. All boulders both north and south of the

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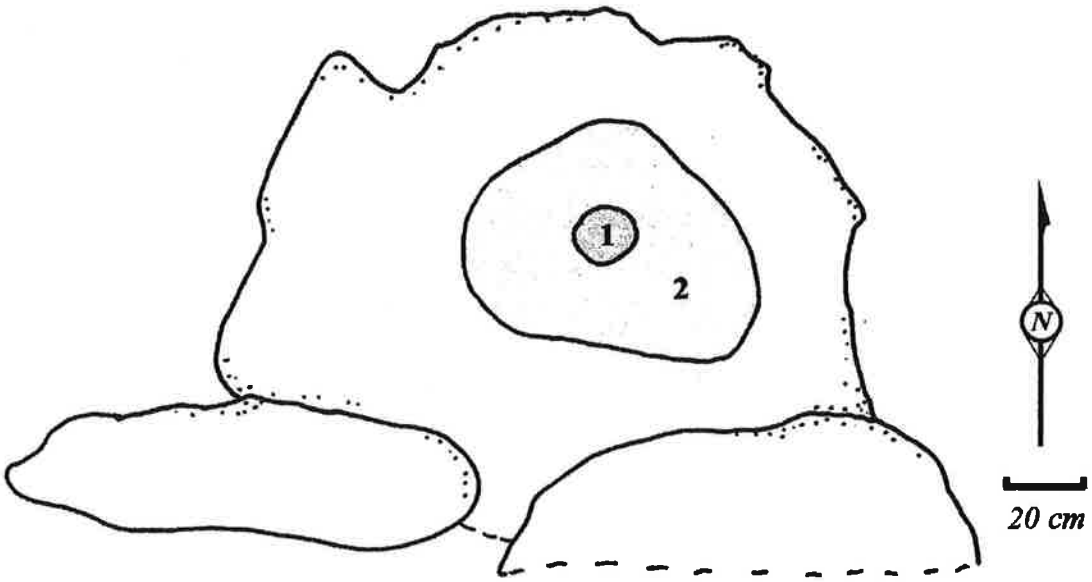
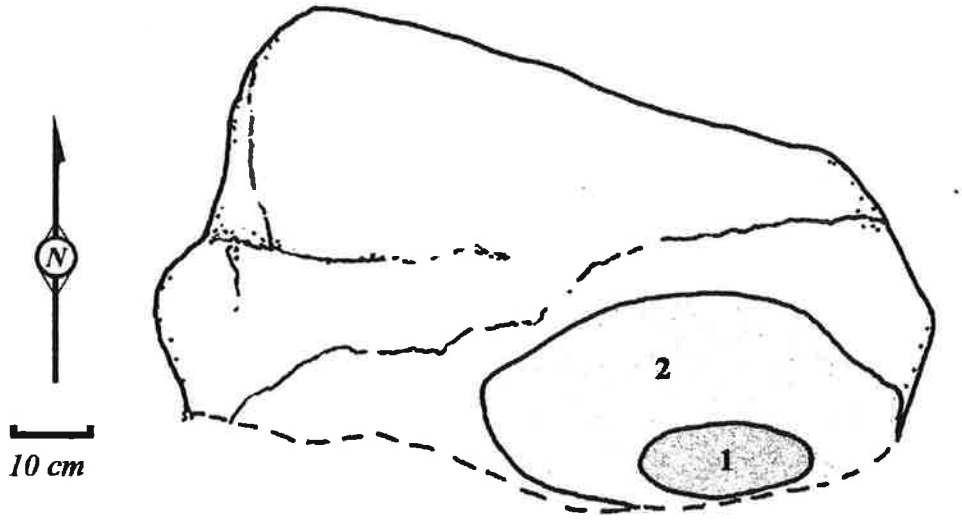


Feature A

1 = Saucer Mortar

2 = Slick



Feature B

1 = Oval Basin

2 = Slick

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CA-SDI-14340, Milling Features A and B	FIGURE **5-2**

fence defining the ROW were checked for milling features. Few surface lithics were identified during the site survey, possibly due to poor ground visibility. Given the ground cover by grasses, particular attention was paid to exposed areas of the site, including the graded slope adjacent to the tracks.

5.3.1 STPs

As the datum and actual location of the previous work was unknown, and results of that test were unavailable, five additional STPs were excavated within the primary site area to better define the optimum location for test units.

STP A was located 40 m east of datum and 11 m south of the tracks (Figure 5-1). This STP identified a cultural deposit 80 cm in depth. A total of 4 debitage, 1 core and 1 core/cobble tool were recovered from STP A (Table 5-1). The soil matrix consisted of a dark brown gravelly loam. No change in soil was evident within the 80 cm excavated.

STP B was located 20 m east of site datum and 10 m south of the tracks. This STP terminated on bedrock at 70 cm. Three pieces of debitage were recovered (see Table 5-1).

STP C was located 55 m east of site datum and 9 m south of the tracks. This STP was terminated at 60 cm. One piece of debitage was recovered (see Table 5-1).

STP D was located 17 m west of site datum and 6 m south of the tracks. This STP terminated on bedrock at 47 cm. One piece of debitage was recovered (see Table 5-1).

STP E was located 27 m west of site datum and 10 m south of the tracks. This STP was terminated at 50 cm and no artifacts were recovered (see Table 5-1).

5.3.2 UNIT EXCAVATION

- **Unit 1**

Unit 1 was located 33.5 m east of datum and 11 m south of the tracks, (see Figure 5-1). The unit was excavated to a depth of 130 cm, terminating on decomposing granitic bedrock. The soil matrix consists of a dark grayish brown sandy loam with gravel content increasing with depth. Considerable rodent disturbance was noted throughout the unit. At a depth of

Table 5-1
Cultural Material from CA-SDI-14340

Cultural Material	STP A	STP B	STP C	STP D	Unit 1	Unit 2	Unit 3	Unit 4	Surface	Total
Biface	0	0	0	0	1	0	1	0	0	2
Utilized flake tool	0	0	0	0	0	1	0	1	0	2
Core/cobble tool	1	0	0	0	2	0	0	2	0	5
Core	1	0	0	0	1	0	0	0	1	3
Debitage	4	3	1	1	161	2	80	119	0	371
Mano	0	0	0	0	0	0	1	1	0	2
Ceramic	0	0	0	0	0	0	1	0	0	1
Bone*	0	0	0	0	0.5	0	4.75	1.0	0	6.25
Shell*	0	0	0	0	5.7	0	0	1.0	0	6.7
Total	6	3	1	1	165	3	83	123	1	386

*weight in grams

approximately 100-110 cm there was a change to a darker brown soil with high gravel content and some decomposing granite (Figure 5-3).

A total of 165 artifacts, 0.5 grams of bone and 5.7 grams of shell were recovered from Unit 1 (see Table 5-1). The artifacts include 161 debitage, 2 core/cobble tools, 1 core and 1 biface. The cultural material was fairly evenly distributed between 0 and 90 cm. A drop off in artifact density was noted below 90 cm (Table 5-2). The larger artifacts, the core, core/cobble tools and the biface, were all recovered between 90 and 120 cm, however, this may be due to the differential movement of heavier artifacts through the soil as a result of bioturbation. A small amount of rodent bone was recovered between 50 and 90 cm and a small amount (5.7 g) of marine shell was recovered between 20 and 90 cm.

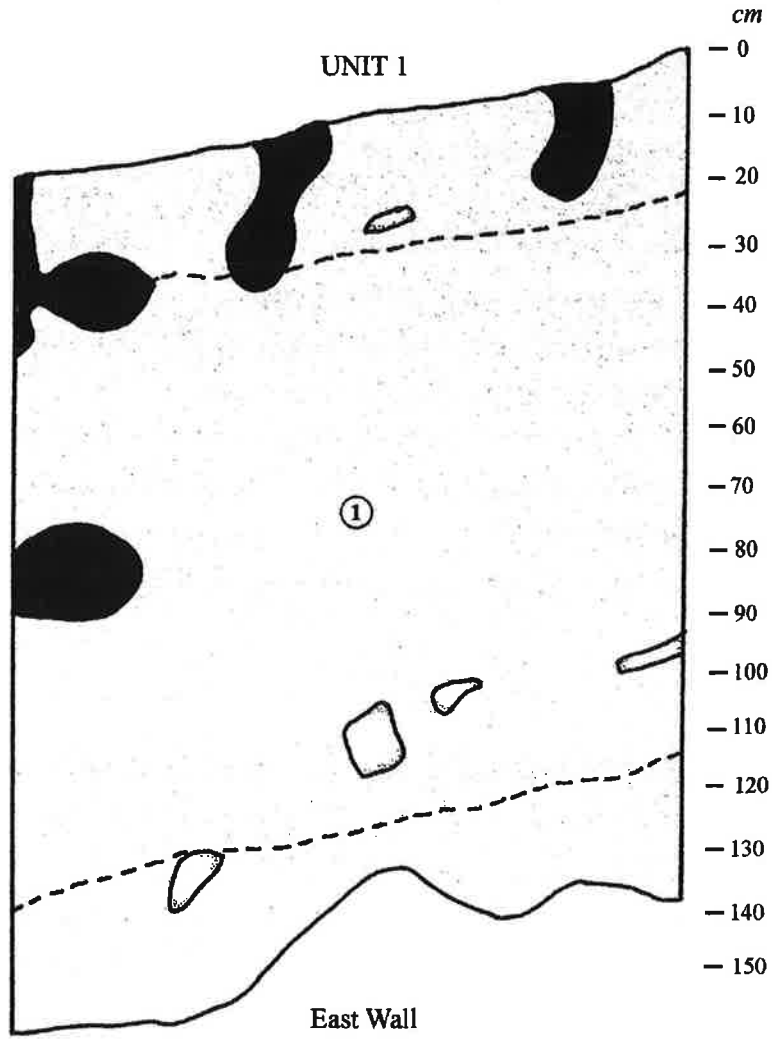
- **UNIT 2**

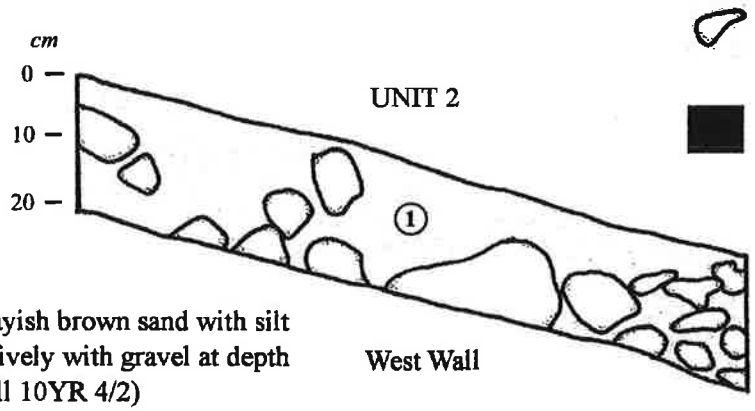
Unit 2 was located 8.3 m east of datum and 12 m south of the tracks, within the boulder area. The soil matrix consists of a brown sandy loam with gravel and angular cobbles (Figure 5-3). Unit excavation was terminated at 20 cm on bedrock. Two debitage and 1 flake tool were recovered from 0-10 cm. No artifacts were recovered from 10-20 cm (Table 5-3).

- **UNIT 3**

Unit 3 was located 26 m east of datum and 10.2 m south of the tracks (see Figure 5-1). The unit was excavated to a depth of 80 cm, terminating on decomposing bedrock. The soil consists of light brown to dark gray sandy loam with gravel content increasing with depth (Figure 5-4). Heavy rodent disturbance was noted in the upper 40 cm of the unit. At 50 cm an increase in gravel content and larger bedrock clasts was noted.

A total of 83 artifacts and 4.75 grams of bone were recovered from Unit 3 (Table 5-4). The artifacts consisted of 80 debitage, 1 biface, 1 mano, and one piece of ceramic. The cultural material was fairly evenly distributed between 0-80 cm, however a drop off in artifacts was noted at the 20-30 cm level. The majority of the bone was recovered in the 10-20 cm level which may simply represent a rodent burrow death.





= Rock

= Rodent Disturbance

① Dark grayish brown sand with silt progressively with gravel at depth (Munsell 10YR 4/2)

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CA-SDI-14340, Units 1 and 2, Sidewall Profiles	FIGURE **5-3**

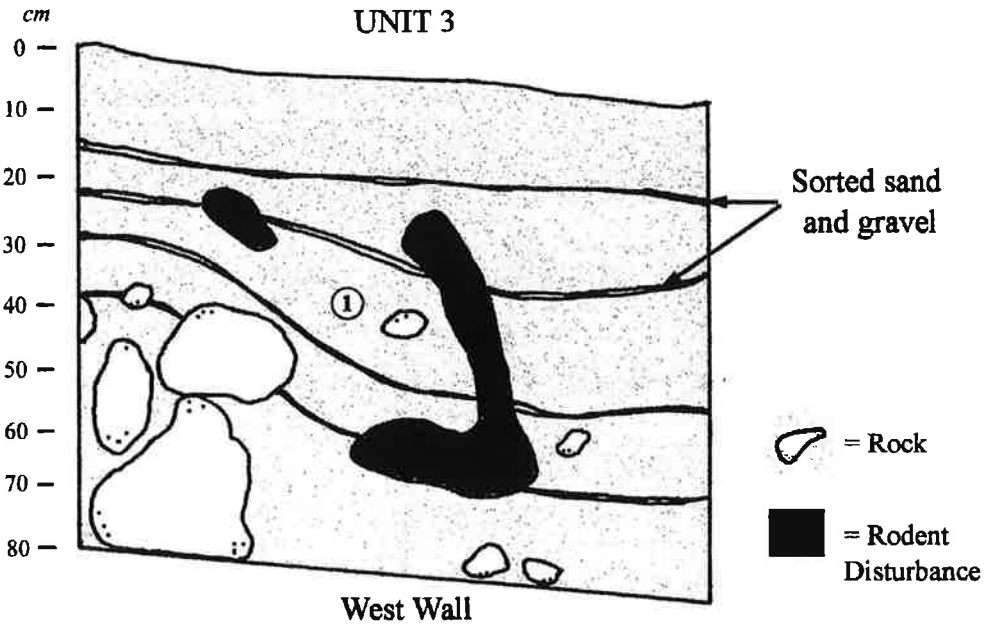
Table 5-2
Unit 1 Cultural Material by Depth

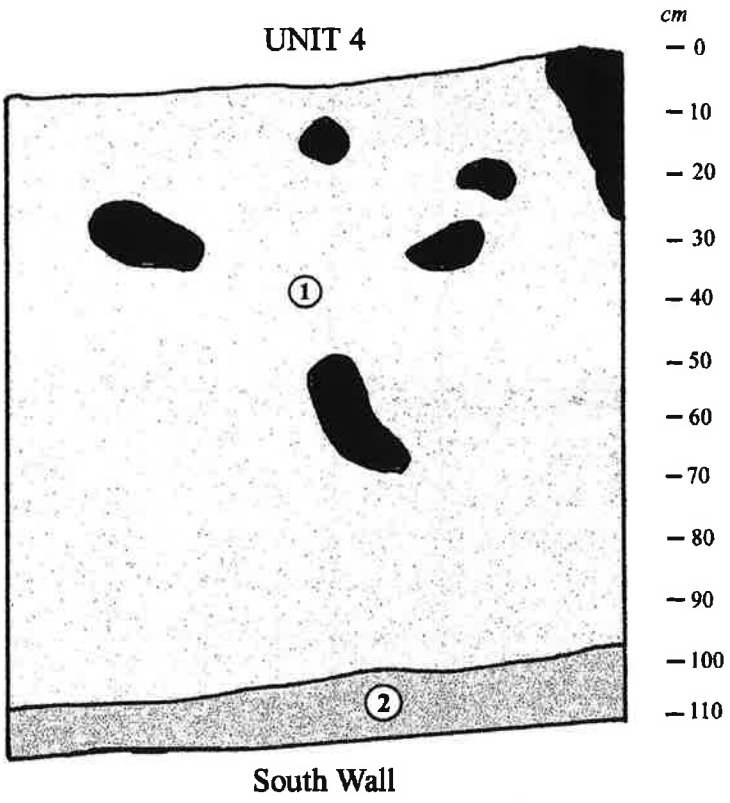
Cultural Material	Depth (in cm)													
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-110	110-120	120-130	Total
Biface	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Core	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Core/cobble tool	0	0	0	0	0	0	0	0	0	1	0	1	0	2
Debitage	13	18	17	15	17	13	16	16	8	4	6	13	5	161
Bone*	0	0	0.1	0	0	0.05	0.2	0.1	0.05	0	0	0	0	0.5
Shell*	0	0	0.5	1.6	0.05	3.5	0	0	0.05	0	0	0	0	5.7
Total	13	18	17	15	17	13	16	16	8	5	8	14	5	**165**

* weight in grams

Table 5-3
Unit 2 Cultural Material by Depth

Cultural Material	Depth (in cm) 0-10	**Total**
Utilized flake tool	1	1
Debitage	2	2
Total	3	**3**





① Dark grayish brown sand with silt progressively with gravel at depth (Munsell 10YR 4/2)

② Yellowish brown decomposing granite (Munsell 10YR 4/5)

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CA-SDI-14340, Units 3 and 4, Sidewall Profiles	FIGURE **5-4**

Table 5-4
Unit 3 Cultural Material by Depth

Cultural Material	Depth (cm) 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	Total
Biface	0	0	0	1	0	0	0	0	1
Debitage	10	13	1	14	16	8	11	7	80
Mano	0	0	0	0	0	0	1	0	1
Ceramic	0	0	0	0	1	0	0	0	1
Bone*	0.1	3.8	0.6	0.1	0.1	0.05	0	0	4.75
Total	10	13	1	15	17	8	12	7	**83**

*weight in grams

- UNIT 4

Unit 4 was located 62 m east of datum and 16 m south of the tracks (see Figure 5-1). The unit was excavated to a depth of 110 cm, terminating on decomposing bedrock. At the 30-40 cm level, a metal pipe was encountered in the north half of the unit. The remaining south half of the unit was then excavated leaving the north half undisturbed. The soil consists of gray brown to red brown sandy loam with gravel content increasing with depth. At a depth of approximately 100-110 cm there was a change to a darker reddish brown soil with high gravel content and some decomposing bedrock, and the unit was terminated (see Figure 5-4).

A total of 123 artifacts 1 gram of bone and 1 gram of shell were recovered from Unit 4 (Table 5-5). The artifacts consisted of 119 debitage, 1 utilized flake tool, 2 core/cobble tools and 1 mano. The cultural material was fairly distributed between 0-110 cm levels. A notable drop in artifacts is noted between the 0-50 cm (85 artifacts) levels and 60-110 cm (38 artifacts) levels. However, this is expected due to the decrease in volume of dirt recovered from the remaining 50% of the undisturbed potion of Unit 4.

5.4 LITHIC ANALYSIS by Tracy Stropes

The lithic assemblage from CA-SDI-14340 is composed of 1 complete bifacial tool, 1 bifacial projectile fragment, 2 flake tools, 5 core/cobble tools, 3 cores, 2 manos and 371 pieces of debitage.

- **Bifacial Tool**

A volcanic bifacial specimen was recovered from the 100-110 cm level of Unit 1. Specimen CA-SDI-14340-25 (Figure 5-5) measures 100.9x84.9x22 mm with a weight of 273.2 g. The specimen has been bifacially worked along the majority of its margins and the facets along the working edges have been ground flat. Fracture patterns and ground facets along the working face indicate the specimen was likely used to saw items such as bone or vegetable materials. Specimens with similar form and wear patterns have been recovered from sites CA-SDI-6134 and CA-SDI-10672 (Morrato et al. 1994). This tool form has predominantly occurred in association with Milling Stone (Middle Holocene) period sites in San Diego as well as Orange County (Morrato et al. 1994).

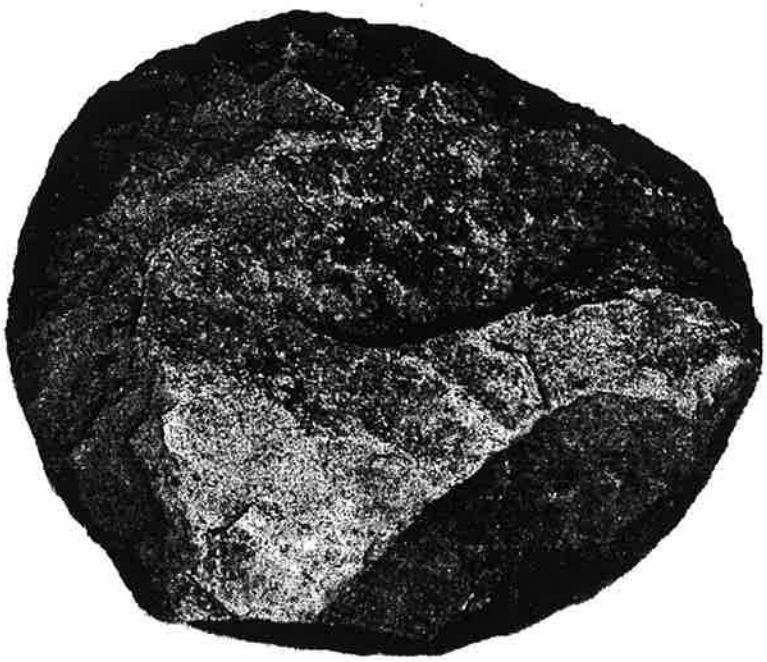
Table 5-5
Unit 4 Cultural Material by Depth

Cultural Material	Depth (cm) 0-10	10-20	20-30	30-40	40-50	50-60*	60-70*	70-80*	80-90*	90-100*	100-110*	**Total**
UFT	0	0	0	0	0	1	0	0	0	0	0	1
Core/cob tool	0	0	0	1	0	0	0	0	0	0	1	2
Debitage	25	17	15	10	16	8	6	2	8	4	8	119
Mano	0	0	0	1	0	0	0	0	0	0	0	1
Bone**	1	0	0	0	0	0	0	0	0	0	0	1
Shell**	0	0	0	0.7	0	0.3	0	0	0	0	0	1
Total	25	17	15	12	16	9	6	2	8	4	9	123

* 50% of 1x1 m unit excavated

** weight in grams

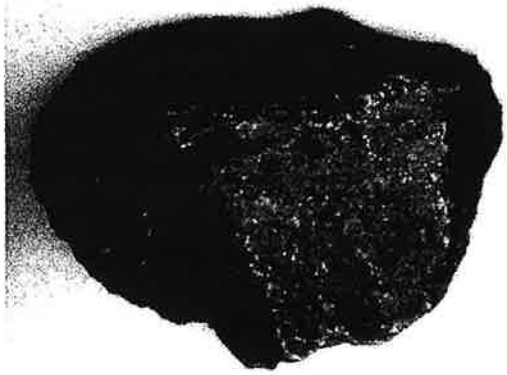
Bifaces



14340-25

Projectile Point
14340-49

Utilized Flake Tools



14340-29

14340-67

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Scale: 1:1

CA-SDI-14340, Bifaces and Utilized Flake Tools

FIGURE
5-5

- **Projectile Fragment**

A single projectile fragment was recovered from the 30-40 cm level of Unit 3. Specimen 14340-49 (see Figure 5-5) has been pressure flaked and is the remaining lateral margin of a projectile point. The specimen is composed of chert (possibly from southern Orange County) and measures 31.5x8.9x3.39 mm with a weight of 0.8 g. The shape size and weight of the specimen indicate that it is an arrow point fragment (Fenenga 1954). The specimen appears to have been broken by secondary thermal damage. The atlatl and dart were replaced by the bow and arrow, circa 1500 years ago in San Diego County (Moratto et al. 1994). This change required the transition to smaller projectile points. The presence of the arrow point at this site possibly indicates an age of less than 1500 years for CA-SDI-14340.

- **Flake Tools**

Two flake tools (see Figure 5-5) were recovered from the excavations at CA-SDI-14340. Specimen CA-SDI-14340-29 is a metavolcanic side-scraper measuring 59.7x48.8x15.2 mm with a weight of 51.6 g. Specimen 14340-67 is also a metavolcanic side-scraper measuring 35.9x33.12x13.1 mm with a weight of 20.4 g. Side-scrapers are those flake tools which exhibit use or modification along the lateral margin of the flake from which they were produced. Both specimens maintain a relatively concave edge and a high angled working face. It is likely that these specimens were used in a scraping motion of some degree on an opposing curved surface such as a vegetable product of some kind or for the production of arrow, dart, and/or spear shafts. These specimens are relatively small which may indicate more controlled/precise scraping activities.

- **Core/Cobble Tools**

Five core/cobble tools (Figure 5-6) were recovered during excavations at CA-SDI-14340. The specimens include two angular hammers, two core/scrapers, and one anvil.

Specimen 14340-21 is a metavolcanic angular hammer measuring 65.4x53x46.9 mm with a weight of 210.3 g (see Figure 5-6). Specimen 14340-70 is a fragmentary volcanic angular hammer measuring 49.31x42.4x23.7 mm with a weight of 55.1g (see Figure 5-6). Angular hammers are those hammers which maintain a battered margin formed by two

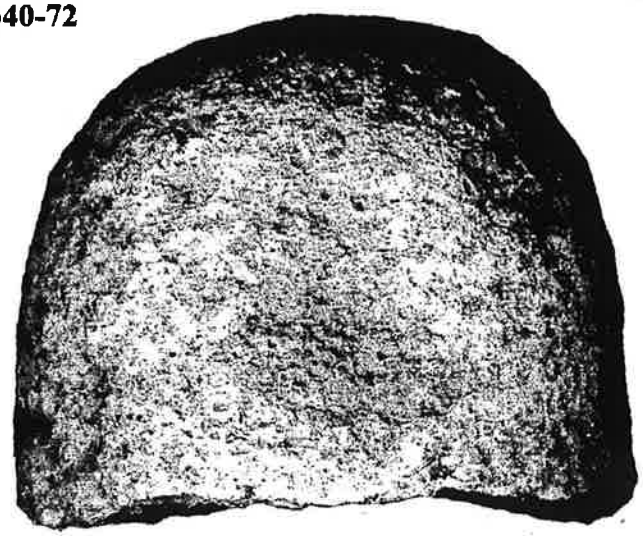
Core/Cobble Tools

14340-21

14340-70

14340-72

14340-35



14340-26

Gallegos & Associates

Scale: 1:1

CA-SDI-14340, Core/Cobble Tools	FIGURE **5-6**

faces at an angle less than 180 degrees and near or less than 90 degrees. The angularity of the working face of both specimens 21 and 70 suggests use as ground stone pecking hammers used to sharpen and shape grinding surfaces (Pritchard-Parker and Reid 1992).

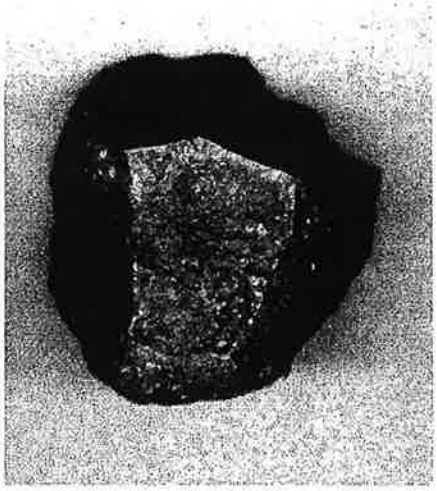
Specimen 14340-35 is a metavolcanic core/scraper measuring 56.2x41.3x22.9 mm with a weight of 64.4 g (see Figure 5-6). Specimen 14340-72 is a volcanic core/scraper measuring 61.8x49.5x30.5 mm with a weight of 105.4 g (see Figure 5-6). Core scrapers are scrapers that were formed out of the parental mass of stone from which flakes for other tools had been removed. As is often the case with core/cobble tools, core scrapers could have been recycled unilaterally back into cores or a myriad of other tools at any given time as dictated by the task at hand. Specimens 14340-35 and 14340-72 are very small however. It is likely that these tools were produced because the core could no longer produce a useful cutting edge. The artifacts maintain a high angled working element on the face indicative of a scraping application. The small size of these scrapers may also indicate more controlled activities such as wood, leather or fine lapidary work.

Specimen CA-SDI-14340-26 is a volcanic anvil measuring 72.3x86.4x48 mm with a weight of 468.6 g (see Figure 5-6). The specimen was produced from a thermally fractured mano. It is possible that the specimen was taken from a fire pit or gleaned from another archaeological site. Anvils are known to have been used for flint knapping (bipolar) and for the hulling of nuts and shellfish. Anvils are part of a complex (two part) tool system that employs both the hammer (the hand held portion of the tool set) and the anvil (the stationary portion of the tool set). The wear pattern that develops (a pitted, semi-circular concavity) on an anvil specimen is generally observed to be the same regardless of materials being processed.

- **Cores**

Three cores (Figure 5-7) were recovered from CA-SDI-14340. The specimens include two unidirectional cores and one multidirectional core (Table 5-6). All of the specimens are interior cores having no cortex on the sides or the platforms. Specimens 14340-24 and 14340-34 are both somewhat pyramidal with singular unprepared platforms. Specimen 14340-37 is amorphous with flakes likely removed where there was a good angle and enough mass to facilitate ease of flake production. All cores appear to be the remaining nuclei of the original mass likely discarded because the cores could no longer produce a viable cutting edge safely or expediently.

Cores



14340-24

14340-34

14340-37

Gallegos & Associates

Scale: 1:1

CA-SDI-14340, Cores	FIGURE **5-7**

Table 5-6
Cores from CA-SDI-14340

Cat. No.	Proveniance		Material	Length	Width	Thickness	Weight
24	Unit 1	100-110	Metavolcanic	44.2	44.6	35.1	93.6
34	STP A	50-60	Volcanic	44.3	40.1	29.6	43.8
37	Surface	0	Volcanic	81.4	65.8	53.4	244.2

- **Debitage**

The 371 (Table 5-7) pieces of debitage consist of 174 volcanic, 157 metavolcanic, 13 Piedra de Lumbre (PDL), 12 quartz, 11 quartzite, 2 obsidian, 1 granitic and 1 crypto-crystaline silicate. The majority of flakes (84.91 %) from CA-SDI-14340 were recovered from the 0-80 cm level (Table 5-7). For the present collection, Unit 1 was selected for analysis based on depth of unit, quantity of data, and relative integrity of strata. A total of 161 flakes were subjected to analysis. Two reduction strategies were discernible from the present collection; interior core and bifacial reduction. The interior reduction flakes are represented in 26.09 % of the overall sample combined (Table 5-6). Interior edge preparation flakes with obtuse angled platforms, interior flakes with obtuse angled single facet platforms and interior flakes with obtuse angled multi facet platforms represent these percentages. These flake types are representative of both interior unidirectional and multidirectional cores. The majority of flakes that retain cortex exhibit incipient cone cortex representative of a cobble based raw material source. It is likely that these cores are the end products of a cobble core reduction continuum and that the preliminary stages of reduction were performed at another loci. This is indicated by the lack of cortex on the cores, debitage and overall collection. The bifacial reduction strategy is represented in 18% of the overall combined sample (Table 5-8). The biface reduction flakes only represent a small portion of the observable flake types produced during a complete bifacial reduction and comprise only a fraction of the percentage of the collection overall. It is likely that the bifacial debitage represented at the site was produced during the maintenance or wear/attrition of bifacial tools that were produced at another location. It is also possible that the early stage bifacial reduction flakes present at the site are partially represented by flakes produced from the reduction of multidirectional cores. The remaining percentage of flakes consists chiefly of non-diagnostic flake fragments and shatter. An observable drop in artifact quantities is present in the 80-120 cm level of Unit 1. However, the technology and material types remain relatively consistent throughout the units. The debitage sample is small however, and conclusions based on this sample may only be speculative. The majority of the lithic materials represented at CA-SDI-14340 are from locally available resources with the exception of six Piedra de Lumbre and two obsidian flakes. The material was either traded for, or physically procured by the inhabitants of CA-SDI-14340.

Table 5-7
Material by Level for CA-SDI-14340

Depth (cm)	Metavolcanic	Quartzite	Quartz	Volcanic	CCS	PDL	Granitic	Obsidian	**Total**	**Percent**
0-10	23	2	2	24	0	0	0	0	51	13.75%
10-20	23	0	1	25	0	2	0	0	51	13.75%
20-30	17	0	2	14	0	1	0	0	34	9.16%
30-40	16	1	2	16	0	3	1	1	40	10.78%
40-50	23	5	0	21	0	1	0	0	50	13.48%
50-60	10	3	1	15	0	1	0	0	30	8.09%
60-70	13	0	1	16	0	2	0	1	33	8.89%
70-80	10	0	1	13	0	2	0	0	26	7.01%
80-90	6	0	1	8	0	1	0	0	16	4.31%
90-100	0	0	0	7	1	0	0	0	8	2.16%
100-110	8	0	0	6	0	0	0	0	14	3.77%
110-120	5	0	1	7	0	0	0	0	13	3.50%
120-130	3	0	0	2	0	0	0	0	5	1.35%
Total	157	11	12	174	1	13	1	2	**371**	**100.00%**
Percent	42.32%	2.96%	3.23%	46.90%	0.27%	3.50%	0.27%	0.54%	**100.00%**	

Table 5-8
Unit 1: Flake Types By Depth

	Depth in cm														
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	100-110	110-120	120-130	Total	%
INTERIOR															
Interior flake with geologic cortex platform	0	1	0	1	0	0	0	0	0	0	0	0	0	2	1.24%
Interior flake with incipient cone cortex platform	1	0	0	1	2	0	0	0	0	0	0	1	0	5	3.11%
Interior flake with single-facet platform	2	3	4	1	3	2	5	3	4	1	2	2	1	33	20.50%
Interior flake with multi-facet platform	0	0	0	1	1	2	1	0	1	0	0	0	1	7	4.35%
Interior flake with platform absent	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.62%
Edge preparation flake	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0.62%
BIFACE PERCUSSION															
Alternate flake without remnant flake scar	0	1	0	0	1	0	0	0	0	0	0	1	0	3	1.86%
Alternate flake with remnant flake scar	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.62%
Bifacial edge preparation flake without remnant flake scar	0	0	0	0	0	0	0	1	0	2	0	0	0	3	1.86%
Margin removal flake without remnant flake scar	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0.62%
Early stage bifacial percussion flake without remnant flake scar	1	0	1	3	1	0	1	3	0	0	0	1	0	11	6.83%
Late stage bifacial percussion without remnant flake scar	0	0	0	0	0	1	0	0	1	0	0	0	0	2	1.24%
BIFACE PRESSURE															
Early stage bifacial pressure flake without remnant flake scar	0	1	0	1	1	0	0	0	0	0	0	0	2	5	3.11%
Early stage bifacial pressure flake with remnant flake scar	0	0	1	0	0	0	0	0	0	0	1	0	0	2	1.24%
Late stage bifacial pressure without remnant flake scar	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.62%
UNIDENTIFIABLE															
Shatter	1	1	2	4	1	1	3	2	0	0	0	1	0	16	9.94%
Flake fragment with incipient cone cortex	1	1	0	0	0	0	0	0	0	0	0	1	0	3	1.86%
Flake fragment with no cortex	6	9	9	3	6	5	6	7	2	1	3	6	1	64	39.75%
Total	13	18	17	15	17	13	16	16	8	4	6	13	5	**161**	**100.00%**
%	8.07%	11.18%	10.56%	9.32%	10.56%	8.07%	9.94%	9.94%	4.97%	2.48%	3.73%	8.07%	3.11%	**100.00%**	

- **Manos**

Two fragmentary mano specimens were recovered from CA-SDI-14340. Both of the specimens present are bifacial in form. None of the manos exhibit shaping and all were produced from naturally occurring cobbles of locally available granitics. Only one of the specimens exhibits a singular pecked or repecked ground surface (Specimen 14340-58). The overall curvature of each mano face is low which indicates that the opposing milling surface which the manos were ground against (i.e. metate, milling slick) was shallow in form. Specimen 14340-73 is too small to determine definitive attributes. All manos collected were thermally damaged to varied degrees. It is possible that the manos present were used in rock hearth/earth ovens after their utility as manos had been exhausted.

5.5 FAUNAL ANALYSIS

A limited amount of invertebrate fauna was recovered from of CA-SDI-14340. A total of 5.7 grams of shell was recovered from the 20-90 cm levels of Unit 1. The majority of identifiable species were *Chione* sp. (4.6 grams). This may indicate exploitation of nearby bay/lagoon/estuaries. The remaining portion of the shell recovered from CA-SDI-14340 was unidentifiable.

A total of .5 grams of bone were recovered from the 30-90 cm level of Unit 1. Nine fragments of bone were identified as small mammal. Small mammal bones are all non-diagnostic vertebrate fragments, whose sizes are between a mouse and a jackrabbit. None of the specimens appear to be burned. Its is possible that the specimens are representative of various small mammal species exploited at the site. However, its is more likely that the species represent various burrow deaths of smaller mammals.

5.6 OBSIDIAN SOURCING

The two obsidian fragments recovered from CA-SDI-14340 were submitted to Richard Hughes Ph. D. for sourcing. The result of this analysis identified both samples to the Coso Volcanic Field, Mono Craters, Mono Glass Mountain, and Fish Springs volcanic glasses.

5.7 RADIOCARBON DATING RESULTS

One shell fragment from the 50 to 60 cm level Unit 1 was submitted for AMS radiocarbon dating. The results of this analysis produced a date of AD 1515 to 1695 (Appendix E). This date is also supported by a piece of pottery and a small arrow point.

5.8 SUMMARY

The area of intact cultural deposit is confined to the lower slope of the knoll which protrudes into the railroad right-of-way. On the northern edge of this knoll, two boulders have milling features. The soil adjacent to the tracks has been scraped away and may have been deposited on the lower slope of the knoll, augmenting the cultural deposit. Some of the cultural deposit within the right-of-way may be the result of slopewash, as many of the surface boulders appear to be the result of grading.

Soils containing the cultural deposits consist of sandy loam with a high gravel content which increases with depth. There is evidence of considerable bioturbation of the soil matrix principally as a result of rodent burrows.

Five STPs and four units were excavated within the area of intact cultural deposit during the present test excavation, and a total of 386 artifacts (371 debitage, 1 biface tool, 1 bifacial projectile point fragment, 2 utilized flake tools, 5 core/cobble tools, 2 manos, 1 ceramic and 3 cores) were recovered. Faunal material included 6.79 g of shell and 6.25 g of bone. The cultural deposit was identified to a depth of 130 cm in Unit 1.

Previous testing defined the site size as 45x150m (James et al. 1996). The southern boundary, outside the railroad right-of-way was not identified. The present test has served to better characterize the nature of the cultural deposit at CA-SDI-14340. As considerable disturbance has resulted due to the construction of the railroad and the channeling of the creek, it was not possible to identify cultural deposits adjacent to the tracks or on the north side of the creek. The intact site area is therefore redefined as extending approximately 75 m east-west by 15 m north-south. The site may extend further to the south, but the area outside the right-of-way is a manufactured slope and has not been tested due to disturbance and limited access. The original description of SDM-W-271/CA-SDI-14340 by Rogers suggests that the main site area was on the knoll top, which is outside the APE and has been developed for a trailer park.

The portion of site CA-SDI-14340 within the railroad right-of-way may represent a secondary locus of SDM-W-271, focused on plant collecting and processing. Two boulders with grinding slicks and one saucer-shaped mortar indicate that milling of seeds and other vegetable matter was carried out at this locus.

Tools recovered during testing include a bifacial tool, a bifacial projectile fragment, two flake tools, two angular hammers, two core scrapers, two manos and an anvil. Fracture patterns and ground facets along the working face of the large bifacial tool (CA-SDI-14340-25) suggest that it was used to saw items such as bone or vegetable materials. The side scrapers (CA-SDI-14340-29 and CA-SDI-14340-67) were most likely used in scraping a curved surface, such as for an arrow, dart or spear shaft. The angular hammers (CA-SDI-14340-21 and CA-SDI-14340-70) may have served as ground stone pecking hammers, used to sharpen and shape grinding surfaces, and therefore are indirectly related to the processing of seeds and plants. The wear pattern on the anvil (CA-SDI-14340-26) may have been used either for flintknapping or for the hulling of nuts or shellfish, while the small core scrapers suggest that wood, leather or fine lapidary work was carried out on site. The anvil was produced from a broken mano, which is highly polished on one face and may have been used with a shallow metate or bedrock slick. In addition, two mano fragments were also recovered.

Analysis of the debitage recovered from Unit 1 suggests that the preliminary stages of cobble core reduction and biface reduction were not performed on site, but at some other location. It is likely that the bifacial reduction debitage represented at the site was the result of wear or attrition of bifacial tools produced at another locality.

A cultural deposit was identified to a depth of 130 cm in Unit 1. The heavier artifacts were recovered from the 90-120 cm levels, however this may be due to the differential movement of heavier artifacts through the soil as a result of bioturbation. The technology and material types remain consistent throughout the deposit (Table 5-6). One tool, the large bifacial saw (CA-SDI-14340-25) has been found in association with Millingstone Period (Middle Holocene) sites in San Diego and Orange County, and suggests an Early Period/Archaic component to this site. The obsidian from a Coso volcanic source is also suggestive of a Middle Holocene occupation.

Analysis of the tools and debitage indicate that a variety of activities relating to seed and plant collecting, and processing were carried out at CA-SDI-14340. This site may represent a locus of the larger occupation site (SDM-W-271) recorded by Rogers on the knoll top, south of San Marcos Creek. The construction of the trailer park on the knoll to the south appears to have destroyed the greater part of this site, and CA-SDI-14340 may represent all that remains of the original site. Although Rogers identified both San Dieguito and Luiseño components to SDM-W-271, the lithic technology represented at CA-SDI-14340 appears consistent with Late Period core and biface reduction.

SECTION 6
ASSESSMENT OF SIGNIFICANCE

6.1 INTRODUCTION

This section provides a summary discussion of the testing results at site CA-SDI-14340, applicable federal and state mandates, a discussion of CEQA significance, and eligibility to the National Register of Historic Places. Sites CA-SDI-5633 and CA-SDI-14325 were tested to determine site boundary and found to be outside the rail line APE, therefore these sites will not be addressed with respect to significance and eligibility to the National Register of Historic Places. No cultural resources were identified within Alternate 1.

6.2 FEDERAL MANDATES

Federal laws, procedures, and policies which affect cultural resources include the Antiquities Act of 1906 (Public Law 59-209), Public Law 96-95, Executive Order 11593, Archaeological Resources Protection Act, National Historic Preservation Act of 1966 (Public Law 89-665, as amended) Public Law 93-291, the National Environmental Policy Act of 1969 (Public Law 91-190), and the Federal Land Policy Management Act (Public Law 94-579).

6.3 CALTRANS POLICIES REGARDING SECTION 106 PROJECTS

The following discussion is taken from Caltrans, *Guidance for Consultants- The Section 106 Processes* (1991:9-9):

> Considerations for the protection of historic properties are included in the decision-making process of transportation projects. Legislative and executive mandates on the need to preserve and enhance cultural resources have been expressed in the: Department of Transportation Act of 1966; Federal-aid Highway Act of 1968; NEPA of 1969; NHPA of 1966; Executive Order 11593 of 1971; Archaeological and Historic Preservation Act of 1979; and the Surface Transportation and Uniform Relocation Assistance Act of 1987. Regulations by the Council on Environmental quality (40 CFR, Part 1500-1508) and the ACHP (36 CFT Part 800) have been promulgated to ensure that effects on historic properties are considered

in the development of federal undertakings. Section 106 studies are undertaken within the larger framework of NEPA requirements.

For Caltrans projects with federal participation, under ACHP regulations, the FHWA Division Administrator is the agency official responsible for coordinating with the ACHP and SHPO. Caltrans acts as a coordinator in this process, but the final responsibility to carry out this regulation belongs to FHWA. This responsibility is not a "rubber stamp" of conclusions reached by Caltrans officials, but an independent evaluation of each undertaking. Consequently, FHWA remains involved throughout the entire process in order to make an independent finding and fulfill all legal responsibilities.

In order to protect historic properties and ensure consistent compliance with Section 106, Caltrans has established policies and procedures for managing cultural resources under its jurisdiction. Caltrans' Environmental Policy directive is found in the Environmental handbook, Volume 2, Chapter 1, page 1-5, which states, in part:

> *It is Caltrans policy to exercise all practical measures to avoid and, if avoidance is not possible, to minimize adverse effects of transportation projects upon significant cultural resources.*

Significant cultural resources are those eligible to the National Register (36 CFR 60.4), and correspond to the definition of a "historic property" (36 CFR 800.2[e]). These include resources important in American history, architecture, archaeology, and culture (including Native American resources), and are represented by sites, buildings, structures (including bridges), districts, or objects of national, state or local importance.

6.4 SITE SIGNIFICANCE/IMPORTANCE CRITERIA

Determination of what is, and what is not an important resource is not a straight forward task. As suggested by Moratto and Kelly (1976), the significance of archaeological resources should be assessed in several terms including research value to the scientist,

aesthetic/cultural value to the community at large, and Native American values. The importance of an archaeological resource must be demonstrated. According to Section 15064.5 of CEQA, the term historical resources shall include the following:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4850 et seq.).

(2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4852) including the following:
   (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
   (B) Is associated with the lives of persons important in our past;
   (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
   (D) Has yielded, or may be likely to yield, information important in prehistory or history.

(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

(b) A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

(1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.

(2) The significance of an historical resource is materially impaired when a project:

(A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
(B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
(C) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

(3) Generally, a project that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historical resource.

(4) A lead agency shall identify potentially feasible measures to mitigate significant adverse changes in the significance of an historical resource. The lead agency shall ensure that any adopted measures to mitigate or avoid significant adverse changes are fully enforceable through permit conditions, agreements, or other measures.

(5) When a project will affect state-owned historical resources, as described in Public Resources Code Section 5024, and the lead agency is a state agency, the lead agency shall consult with the State Historic Preservation Officer as provided in Public Resources Code Section 5024.5. Consultation should be coordinated in a timely fashion with the preparation of environmental documents.

Recognizing that cultural resources often contain information that archival research cannot answer, there is a distinct potential for each resource to provide important information relevant to several theoretical and regional research questions. As part of the test plan, research questions concerning chronology, lithic technology, food procurement strategy, and trade and travel were addressed.

Current archaeological methods allow a great deal of information to be extracted from cultural resources, providing certain criteria are met. Generally speaking, archaeological sites that are useful for addressing important research questions must retain a minimum amount of stratigraphic integrity and/or an assemblage that can be confidently assigned to a

cultural group. If these criteria are not in place, cultural materials recovered within the course of an excavation cannot be differentiated by time period or by culture. This greatly diminishes the value of the resource as a record of the human story.

6.5 SIGNIFICANCE AND ELIGIBILITY DISCUSSION FOR SITE CA-SDI-14340

Testing at CA-SDI-14340, as part of this study, included excavation of five STPs and four 1x1 m test units. Artifacts recovered from test excavation include 371 debitage fragments, 3 cores, 5 core/cobble tools, 2 manos, 1 ceramic, 2 flake tools, 1 bifacial tool, 1 bifacial projectile point fragment, 6.7 grams of marine shell and 6.25 grams of bone. Bedrock milling included two features. Feature A is one saucer mortar and one slick. Feature B is one oval basin and one slick.

6.5.1 Site Integrity

As a result of the construction of the railroad, the channeling of the creek and the construction of a culvert, disturbance of CA-SDI-14340 is evident within the project APE. Bioturbation is also evident within the deposit.

6.5.2 Areal Extent and Depth

The present test has identified milling features and a cultural deposit measuring approximately 75x15 m. The site was initially recorded on the knoll to the south, outside of the project right-of-way, but this area has been destroyed by construction of a trailer park. The site may have also extended to the north of San Marcos creek, outside the project right-of-way, however this area is also developed. The depth of the deposit varied from 20 to 130 cm with primarily debitage throughout the deposit.

6.5.3 Chronology

Results of radiocarbon (AMS) dating of a piece of shell *Chione* sp. recovered from the 50-60 cm level of Unit 1 identified occupation of CA-SDI-14340 circa AD 1515 to 1695. The lithic technology represented and the diagnostic artifacts, also supports a Late Period occupation. Diagnostic artifacts include one piece of pottery and one arrow point.

6.5.4 Site Function

The tool and debitage sample recovered during the present test is small, but a number of preliminary conclusions regarding site function can be made.

Analysis of the tools recovered indicates that a range of seed and plant processing activities took place at CA-SDI-14340. Two boulders with two grinding slicks, one oval basin and one mortar and tools relating to milling (manos), scraping, sawing and hulling were recovered. Analysis of debitage suggests that the preliminary stages of cobble/core reduction and biface reduction were not performed on site, but at some other location.

A small amount of shell (6.7 grams) and bone (6.25 grams) was recovered. The shell was small unidentifiable fragments with perhaps 50% *Chione* sp. The bone was primarily rodent bone taken from one locality (rodent burrow death). Given the late date of occupation and the potential for good preservation, shellfish and terrestrial mammals constituted a minor part of the diet.

CA-SDI-14340 may represent a locus of habitation site SDM-W-271 which was recorded on top of the knoll now occupied by a trailer park. The locus tested as part of this study was primarily used for seed/ plant processing

6.5.5 Trade and Travel

The only non-local items recovered were two small obsidian fragments. Sourcing of these two items identified trade and or travel to the Coso Volcanic Field.

6.5.6 Native American Heritage Value

No ritual objects, features of a sacred nature, or human remains were encountered during excavation.

6.5.7 Research Value

The test program has identified CA-SDI-14340 as a small campsite/milling station which was probably associated with the larger habitation site on the knoll recorded by Rogers (n.d.). The larger habitation site has been destroyed by development.

Given the excavation of five STP's and four 1x1 m units and the recovery of primarily debitage with few tools, this Late Period campsite/milling station has been recorded. Additional excavation is not likely to provide additional (new) information to address important research questions, therefore the remaining portion of CA-SDI-14340 is recommended as not significant under CEQA and not eligible to the National Register of Historic Places.

SECTION 7

REFERENCES CITED

Almstedt, Ruth F.
1974 *Bibliography of the Diegueño Indians.* Ramona: Ballena Press.

Barrows, David Prescott
1900 *Ethnobotany of the Cahuilla Indians of Southern California.* University of Chicago Press, Chicago, Illinois.

Bean, Lowell J.
1972 *Mukat's People.* University of California Press. Berkeley, Los Angeles, California.

Bean, Lowell J. and Katherine Siva Saubel
1972 *Temalpakh: Cahuilla Indian Knowledge and Usage of Plants.* Malki Museum Press, Banning, California.

Bedwell, S.F.
1970 Prehistory and Environment of the Pluvial Fork Rock Lake Area of South Central Oregon. Unpublished Ph.D. dissertation, Department of Anthropology, University of Oregon, Eugene.

Binford, Lewis R.
1965 Archaeological Systematics and the Study of Cultural Processes. *American Antiquity* 31:203-120.

Binford, Lewis R. and S. Binford
1969 *New Perspectives in Archaeology.* Aldine, Chicago.

Burrus, Ernest J.
1967 *Diario del Capitan Comandante Fernando de Rivera y Moncada con un Apendice Documental.* Edicion Prologo (Español y Ingles) y notas por . Burrus. Ediciones Jose Porrua Turanzas, Madrid: Coleccion Chimalistac de Libros y Documentos Acerca de la Nueva Español, Vol. 24 y 25.

Cuero, Delfina
1968 *The Autobiography of a Diegueño Woman: As Told to Florence C. Shipek.* Dawson's Book Shop, Los Angeles, California.

Davis, Emma L., C. W. Brott and D. L. Weide
1969 The Western Lithic Co-tradition. *San Diego Museum Papers* No. 6.

Doran, J. E. and F. R. Hodson
1975 *Mathematics and Computers in Archaeology.* Harvard University Press, Cambridge.

Drucker, Phillip
1939 *Culture Element Distributions: Southern California.* University of California Publications in Anthropological Records, Berkeley, California: University of California Press.

Dubois, Constance Goddard
1908 *The Religion of the Luiseño and Diegueño Indians of Southern California.* University of California Publications in American Archaeology and Ethnology, Vol. 8, No. 3.

ERC Environmental and Energy Services Company, Inc.
1989 The Oceanside-Escondido Rail Project, Cultural Resources Technical Report. Ms. on file at the South Coastal Information Center, San Diego State University, San Diego, California.

1990 Cultural Resource Survey of the Oceanside to Escondido Rail Project, San Marcos Loop Segment, San Marcos, California. Ms. on file at the South Coastal Information Center, San Diego State University, San Diego, California.

Fenenga, Frank
1954 The Weights of Chipstone Points: A Clue to Their Functions. Southwestern Journal of Anthropology 9(3): 309-323. Albuquerque.

Franklin, Randy
1977 Site Record Form for CA-SDI-5633. Ms. on file at the South Coastal Information Center, San Diego State University, San Diego, California.

Gallegos, Dennis R.
1985 Batiquitos Lagoon Revisited. *Casual Papers of the Cultural Resource Management Center. Vol. 2, No. 1*, San Diego State University, San Diego, California.

1987a A Review and Synthesis of Environmental and Cultural Material for the Batiquitos Lagoon Region. In *San Dieguito-La Jolla: Chronology and Controversy*, San Diego Archaeological Society, San Diego, California.

1987b San Dieguito-La Jolla: Chronology and Controversy. San Diego County Archaeological Society Research Paper 1. San Diego.

1991 Antiquity and Adaptation at Agua Hedionda, Carlsbad, California. In: *Hunter - Gatherers of Early Holocene Coastal California,* Ed. by Jon M. Erlandson and Roger H. Colton. Institute of Archaeology, University of California, Los Angeles.

Gallegos, Dennis R. and Carolyn Kyle
1988 Five Thousand Years of Maritime Subsistence at Ballast Point Prehistoric Site SDI-48 (W-164), San Diego, California. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.

1990 The Copley Project, San Marcos California. Cultural Resource Survey and Testing Program at CA-SDI-5633. On file at the South Coastal Information Center, San Diego State University, San Diego, California.

Gallegos, Dennis R., Roxana Phillips, James D. Eighmey
1993 Cultural Resource Literature Review for the San Dieguito River Valley Regional Open Space Park Focused Planning Area, San Diego County, California. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.

Gayton, A.H.
1929 Yokuts and Western Mono Pottery-Making. *University of California Publications in American Archaeology and Ethnology* 24(3):239-255.

Gifford, Edward W.
1918 Clans and Moieties in Southern California. *University of California Publications in American Archaeology and Ethnology* 14:167-174, Berkeley.

Harrington, J.P.
1978 *Chinigchinich.* Malki Museum Press, Banning, California.

Hedges, Kenneth E.
1986 *Santa Ysabel Ethnobotany.* San Diego Museum of Man, Ethnic Technology Notes, 20:58. San Diego, California.

Heizer, R. F. and A. F. Almquist
1971 *The Other Californians: Prejudice and discrimination Under Spain, Mexico, and the United States to 1920.* University of California, Berkeley and Los Angeles.

Heizer, R. F. and M. A. Whipple
1957 *California Indians.* University of California Press, Berkeley.

Hooper, Lucille
1920 The Cahuilla Indians. *University of California Publications in American Archaeology and Ethnology* 16:315-380, Berkeley.

James, Delman et al.
1996 Site Record Update for SDM-W-271, CA-SDI-5633, -8386, -12096, -12097 and -14325. On file at the South Coastal Information Center, San Diego State University, San Diego, California.

1996 Primary Site Record for CA-SDI-14325. On file at the South Coastal Information Center, San Diego State University, San Diego, California.

Kaldenberg, Russell L.
1982 Rancho Park North, A San Dieguito-La Jolla Shellfish Processing Site on Coastal Southern California. *Occasional Paper* No. 6. Imperial College Museum Society, El Centro, California.

Keneally, Finbar, OFM
1965 *The Writings of Fermin Francisco de Lasuen.* Academy of American Franciscan History, Washington, D.C.

Kennedy, Michael P. and Siang S. Tan
1996 Geologic Maps of the Oceanside, San Luis Rey, and San Marcos 7.5' Quadrangles. California Department of Conservation. Division of Mines and Geology.

Kroeber, Alfred L.
1970 *Handbook of the Indians of California.* Reprinted. California Book Company, Berkeley. Originally published in 1925, Bureau of American Ethnology, Bulletin 78.

Kyle, Carolyn E, Adella B. Schroth and Dennis R. Gallegos
1998 Remington Hills Archaeological Data Recovery Program for Prehistoric Site CA-SDI-11079, Otay Mesa, San Diego, California. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.

Langdon, Margaret
1970 *A Grammar of Diegueño, The Mesa Grande Dialect.* Berkeley: University of California Press.

Meighan, Clement W.
1954 A Late Complex in Southern California Prehistory. *Southwestern Journal of Anthropology* 10:215-217.

Merrill, Ruth Earl
1973 *Plants Used in Basketry by California Indians.* University of California Publications in American Archaeology and Ethnology, Vol. 20, 1923; reprinted by Ballena Press.

Miller, Jacqueline N.
1966 The Present and Past Molluscan Faunas and Environments of Four Southern California Coastal Lagoons. M.A. Thesis, University of California, San Diego, California.

Moratto, Michael
1984 *California Archaeology.* Academic Press, Orlando, Florida.

Moratto, Michael J. and Roger Kelly
1976 Optimizing Strategies for Evaluating Archaeological Significance. In: *Advances in Archaeological Method and Theory*, edited by Michael B. Schiffer, Vol. 1, pp. 1-30. Academic Press.

Moratto, Michael, Adella Schroth, John Foster, Dennis Gallegos, Roberta Greenwood, Gwendolyn Romani, Melinda Romano, Laurence Shoup, Mark Swanson and Eric Gibson
1994 Archaeological Investigations at Five Sites on the Lower San Luis Rey River, San Diego County, California. Report on file, South Coastal Information Center, San Diego State University, San Diego, California.

Moriarty, James R. III
1967 Transitional Pre-Desert Phase in San Diego County. *Science* 155 (3762):553-555).

Ogden Environmental and Energy Services
1996 Cultural Resources Technical Report for the Oceanside-Escondido Rail Project. Ms. on file at the South Coastal Information Center, San Diego State University, San Diego, California.

Pourade, R. F.
1960 *The History of San Diego: The Explorers.* Union-Tribune Publishing Company, San Diego, California.

Priestly, Herbert Ingraham
1937 *A Historical, Political and Natural Description of California 1775 by Pedro Fages.* University of California Press, Berkeley.

Pritchard-Parker, M. and D. Reid
1992 A Replicative Experiment in Metate Roughening: Pecking Versus Pounding. Paper presented at the Annual Meeting of the Society for California Archaeology. Pasedena, California.

Robinson, Alfred
1969 *Life in California During a Residence of Several Years in that Territory.* Da Capo Press, New York.

Robinson, Marjorie McMorrow
1979 *Land in California.* University of California Press.

Rogers, Malcolm
n.d. Site record form for SDM-W-217. On file at the San Diego Museum of Man.

1939 Early Lithic Industries of the Lower Basin of the Colorado and Adjacent Desert Regions. *San Diego Museum Papers*, No. 3.

Rudkin, Charles, trans. and ed.
1956 *Observations on California 1772-1790 by Father Luis Sales O. P.* Dawson's Book Shop, Los Angeles, California.

Shipek, Florence
1977 A Strategy for Change: The Luiseño of Southern California. Ph.D. dissertation, on file at University of Hawaii, Oahu, Hawaii.

1980 Prepared Direct Testimony: Part One: Value of Aboriginal Water Rights of the San Luis Rey River Reservations, 1851. Part Two: History of Agriculture and Irrigation for the La Jolla, Pala, Pauma, Rincon, and San Pasqual Indians of Southern California. Submitted to U.S. Court of Claims for San Luis Rey River Reservation Water Case, Docket 80A-1.

1986a The Antiquity of the Kumeyaay: Myth and Geologic Reality. In *Occasional Papers on Linguistics, No. 13.* Papers from the 1983, 1984, 1985 Hokan-Penutian Language Conferences. Southern Illinois University, Carbondale, Illinois.

1986b The Impact of Europeans Upon the Kumeyaay. In *The Impact of European Exploration and Settlement of Local Native Americans.* Cabrillo Historical Association. Revised for 1992 republication.

1987 Saints or Oppressors, Franciscan Missionaries of California: Teachers of Agriculture or Exploiters. In *The Missions of California.* Eds. Ruperto Costo and Jeannette Henry Costo. American Indian Historical Society, San Francisco, California.

1988 *Pushed Into the Rocks: Southern California Indian Land Tenure 1769-1986.* University of Nebraska Press, Lincoln, Nebraska.

1989a Mission Indians and Indians of California Claims Cases. In *American Indian Quarterly*, Vol. 13(4): 409-420.

1989b An Example of Intensive Plant Husbandry: The Kumeyaay of Southern California. In *Foraging and Farming: The Evolution of Plant Exploitation.* Eds. David R. Harris and Gordon C. Hilman. Unwin Hyman, London.

1991 *Delfina Cuero: Her Autobiography; An Account of the Rest of Her Life and Her Ehnobotanic Contributions.* Ballena Press, Menlo Park, California.

1993 Kumeyaay Plant Husbandry: Fire, Water and Erosion Control Techniques. In *Before the Wilderness: Environmental Management by Native Californians.* Ballena Press, Menlo Park, California.

Sparkman, Philip Stedman

1908 The Culture of the Luiseño Indians. *University of California Publications in American Archaeology and Ethnology*, 8(4):187-234, Berkeley.

Spaulding, A. C.

1953 Statistical Techniques for the Discovery of Artifact Types. *American Antiquity* 18:305-313.

Spicer, Edward H.

1962 Cycles of Conquest: The Impact of Spain, Mexico, and the United States on the Indians of the Southwest, 1533-1960. Tucson: University of Arizona Press.

Spier, Leslie

1923 *Southern Diegueño Customs,* Vol. 20, No. 16. University of California Publications in American Archaeology and Ethnology.

Spier, Robert F.G.

1978 Foothill Yokuts. *Handbook of the North American Indians*, Vol. 8, California, ed. By R.F. Heizer, pp. 471-484. Smithsonian Institution, Washington, D.C.

Strong, William D.
1929 Aboriginal Society in Southern California. *University of California Publications in American Archaeology and Ethnology*, 26(1):1-358, Berkeley.

Tibesar, Antonine
1955 *Writings of Junipero Serra* (4 vols.) Academy of American Franciscan History, Washington, D.C.

True, Delbert L.
1959 An Early Complex in San Diego County, California. In: *American Antiquity*, 23(3):255-264.

Underhill, Ruth
1941 "Indians of Southern California." (Sherman Pamphlets, No. 2), Bureau of Indian Affairs.

United States Department of Agriculture
1973 Soil Survey: San Diego Area, California. Soil Conservation Service and Forest Service.

USGS
1901 Escondido 15' quadrangle
1948 San Marcos 7.5' quadrangle
1968 San Marcos 7.5' quadrangle

Warren, Claude L.
1967 The San Dieguito Complex: A Review and Hypothesis. *American Antiquity* 32(2):168-185.

Warren, Claude L. and Max G. Pavesic
1963 Appendix I: Shell Midden Analysis of the Site SDi-603 and Ecological Implications for Cultural Development on Batiquitos Lagoon, San Diego County, California. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.

Warren, Claude L., D. L. True and A. R. Eudey
1961 Early Gathering Complexes of Western San Diego County, California: Results and Interpretation of an Archaeological Survey. In: *Archaeological Survey Annual Report 1960-1961*. University of California Press, Los Angeles, California.

White, Raymond C.
1963 Luiseño Social Organizations. *University of California Publications in American Archaeology and Ethnology*, 48(2):1-194, Berkeley.

Willig, Judith A., C. Melvin Aikens and John L. Fagan
1988 Early Human Occupation in Far Western North America: The Clovis-Archaic Interface. In: *Nevada State Museum Anthropological Papers* No. 21, Carson City, Nevada.

Wolcott, Marjorie Tisdale
1929 Pioneer Notes from the Diaries of Judge Benjamin Hayes. Los Angeles, California.

Woodward, Arthur
1934 Notes on the Indians of San Diego County from the Manuscripts of Judge Benjamin Hayes. *The Masterkey* 8(5): 140-150. Southwest Museum, Los Angeles, California.

APPENDIX C

Memo to
Gary Vettese, Caltrans
(*Re: Oceanside-Escondido Bikeway Project*
Pursuant to Executive Order No. 12898)

16 August 1999

DUDEK
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Professional Teams for Complex Projects

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& ASSOCIATES, INC.
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MEMORANDUM

August 16, 1999

To : Gary Vettese, Local Assistance Program, Caltrans
CC : Richalene Kelsay, Environmental Review, Caltrans
Omar Dayani, Engineering, City of San Marcos

From : June Collins, DUDEK

Re* : *Oceanside-Escondido Bikeway Project Pursuant to Executive Order No. 12898

Executive Order No. 12898 states that each Federal agency, to the extent practicable and permitted by law and consistent with the principles set forth in the report on the National Performance Review, shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions. This order further states that each Federal agency shall conduct its programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under such programs, policies, and activities, because of their race, color, or national origin.

The proposed Oceanside-Escondido Bikeway Project alignment would traverse many types of residential districts, some of which may be considered low-income neighborhoods. However, the project would be contained within the existing North County Transit District (NCTD) rail line right-of-way. Construction of the portions of the project within NCTD right-of-way would not involve the removal of structures. In areas where the project leaves the NCTD right-of-way, the path would follow existing bicycle lanes within city streets. These portions of the project would not involve any removal or construction of structures.

For the reasons stated above, it is anticipated that the project would not disrupt or divide an existing low-income or minority community.