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**PLANNING COMMISSIONERS**

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Chairperson

RAY L. BAKER  
Vice Chairperson

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Commissioner



ALVIN DEJOHNETTE  
Commissioner

JOANN STEPHAN  
Commissioner

ROBERT HARRIS  
Commissioner

RAFAEL BRUGUERAS  
Commissioner

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# PLANNING COMMISSION Regular Meeting

## Agenda

Thursday, June 25, 2020 at 7:00 PM

### TELECONFERENCED MEETING

[Pursuant to Governor Executive Order N-29-20]

**There Will Not Be a Physical Location for Attending the Meeting**

**The Public May Observe the Meeting and Offer Public Comment As Follows:**

#### **STEP 1**

Install the Free Zoom App or Visit the Free Zoom Website at [<https://zoom.us/>](https://zoom.us/)

#### **STEP 2**

Get Meeting ID Number, Password and On the List to Speak by emailing [zoom@moval.org](mailto:zoom@moval.org) or calling (951) 413-3206, no later than 6:00 p.m. on Thursday, June 25, 2020

#### **STEP 3**

**Select Audio Source**

*Computer Speakers/Microphone or Telephone*

#### **STEP 4**

**Public Comments May be Made Via Zoom**

*During the Meeting, the Mayor Will Explain the Process for Submitting Public Comments*

#### **ALTERNATIVE**

**If you do not wish to make public comments, you can view the meeting on Channel MVTV-3, the City's website at [www.moval.org](http://www.moval.org) or YouTube**

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*Upon request, this agenda will be made available in appropriate alternative formats to persons with disabilities, in compliance with the Americans with Disabilities Act of 1990. Any person with a disability who requires a modification or accommodation in order to participate in a meeting should direct such request to Guy Pegan, ADA Coordinator, at 951.413.3120 at least 72 hours before the meeting. The 72-hour notification will enable the City to make reasonable arrangements to ensure accessibility to this meeting.*

**CALL TO ORDER**

**ROLL CALL**

**PLEDGE OF ALLEGIANCE**

**APPROVAL OF AGENDA**

**PUBLIC COMMENTS PROCEDURE**

*During the public comment period for each item, as well as during the public comment period for items not on the agenda, the clerk will call upon each person who is on the Zoom application that has requested to speak. Each member of the public wishing to speak will have a maximum of 3 minutes to speak on any agenda item, except for the applicant for entitlement. The Commission may establish an overall time limit for comments on a particular Agenda item. Members of the public must direct their questions to the Chairperson of the Commission and not to other members of the Commission, the applicant, the Staff, or the audience. Those wishing to speak should follow the teleconference procedures. If you are absent at the time your name is called, you will forfeit the opportunity to speak on the items.*

**PUBLIC COMMENTS**

**CONSENT CALENDAR**

*All matters listed under Consent Calendar are considered to be routine and all will be enacted by one roll call vote. There will be no discussion of these items unless Members of the Planning Commission request specific items be removed from the Consent Calendar for separate action.*

No items for discussion.

**NON-PUBLIC HEARING ITEMS**

No items for discussion.

**PUBLIC HEARING ITEMS**

- 1. Case: PEN19-0151 – General Plan Amendment  
PEN19-0152 – Change of Zone  
PEN19-0150 – Tentative Parcel Map 37750
- Applicant: M&F Development Company, Inc.
- Property Owners: M&F Development Company, Fritz Duda Company, a Texas Corporation, Triple S Group, LLC, MBBB, LLC, and Irene Webb Salyer, Trustee of the Ernest Webb Credit Trust
- Representative: Albert A Webb Associates
- Location: Southeast corner of Ironwood Avenue and Day Street (APNs: 291-100-054 & 291-100-055)
- Case Planner: Gabriel Diaz

Council District: 2

Proposal Proposed General Plan Amendment and Change of Zone amending Figure 2-2 "Land Use Map" of the Moreno Valley General Plan and the City Zoning Atlas, respectively, and proposed Tentative Parcel Map to subdivide approximately 51.51-acres of land into four parcels, for property located at the southeast corner of Ironwood Avenue and Day Street

**OTHER COMMISSION BUSINESS**

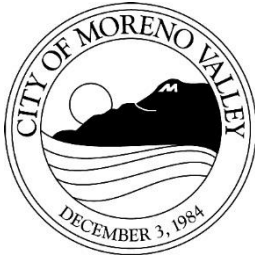
No items for discussion.

**STAFF COMMENTS**

**PLANNING COMMISSIONER COMMENTS**

**ADJOURNMENT**

Planning Commission Regular Meeting, July 9, 2020 at 7:00 P.M., City of Moreno Valley, City Hall Council Chamber, 14177 Frederick Street, Moreno Valley, CA 92553.



## PLANNING COMMISSION

### STAFF REPORT

Meeting Date: June 25, 2020

PROPOSED GENERAL PLAN AMENDMENT AND CHANGE OF ZONE AMENDING FIGURE 2-2 "LAND USE MAP" OF THE MORENO VALLEY GENERAL PLAN AND THE CITY ZONING ATLAS, RESPECTIVELY, AND A PROPOSED TENTATIVE PARCEL MAP TO SUBDIVIDE APPROXIMATELY 51.51-ACRES OF LAND INTO FOUR PARCELS.

Case: PEN19-0151 – General Plan Amendment  
 PEN19-0152 – Change of Zone  
 PEN19-0150 – Tentative Parcel Map 37750

Applicant: M&F Development Company, Inc.

Property Owners M&F Development Company, Fritz Duda Company, a Texas Corporation, Triple S Group, LLC, MBBB, LLC, and Irene Webb Salyer, Trustee of the Ernest Webb Credit Trust

Representative Albert A Webb Associates

Location: Southeast corner of Ironwood Avenue and Day Street (APNs: 291-100-054 & 291-100-055)

Case Planner: Gabriel Diaz

Council District: 2

Proposal Proposed General Plan Amendment and Change of Zone amending Figure 2-2 "Land Use Map" of the Moreno Valley General Plan and the City Zoning Atlas, respectively, and proposed Tentative Parcel Map to subdivide approximately 51.51-acres of land into four parcels, for property located at the southeast corner of Ironwood Avenue and Day Street

### SUMMARY

The applicant, M&F Development Company, Inc., has submitted a General Plan Amendment (Case No. PEN19-0151), to amend the General Plan land use designation boundaries to align with the zoning boundaries and correspond to the parcel boundaries proposed by Tentative Parcel Map No. 37750. The proposed General Plan amendment will result in a total increase of 0.12-acres to the Commercial (C) General Plan land use designation and a reduction of 0.12-acres to the Residential/Office (R/O) General Plan land use designation. The proposed Change of Zone Application (Case No. PEN19-0152), would amend the City Zoning Atlas to align with the General Plan land use boundaries and correspond to the parcel boundaries proposed by Tentative Parcel Map No. 37750. The proposed Change of Zone will result in a total reduction of 0.11-acres to the Community Commercial (CC) District and an increase of 0.11-acres to the Residential 15 (R15) District. The proposed Tentative Parcel Map No. 37750 (Case No. PEN19-0150), would subdivide two (2) existing parcels consisting of approximately 51.51 gross acres identified as Assessor Parcel Numbers 291-100-054 and 291-100-055 into four (4) parcels and a shared access easement. No grading or other improvements are proposed by this map. The proposed development is located on the southeast corner of Ironwood Avenue and Day Street.

This proposal requires approval of a General Plan Amendment, Change of Zone, Tentative Parcel Map, and Certification of a Mitigated Negative Declaration (MND), including approval of a Mitigation Monitoring and Reporting Program (MMRP), pursuant to the California Environmental Quality Act (CEQA).

## **PROJECT DESCRIPTION**

### **Project**

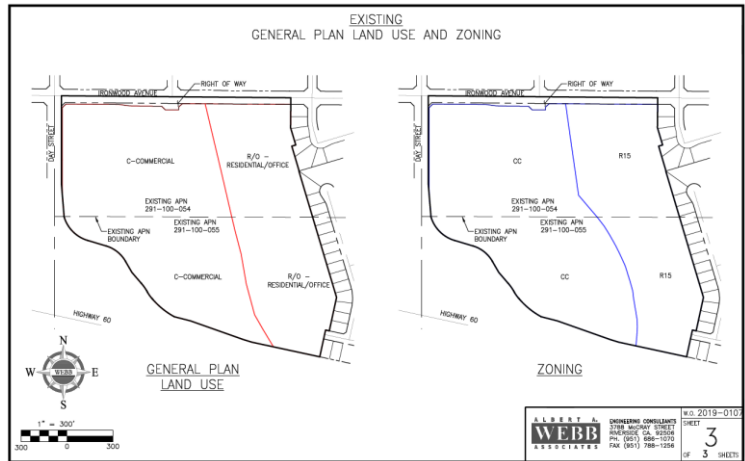
The applicant, M&F Development Company, Inc., proposes a General Plan Amendment and Change of Zone amending Figure 2-2 “Land Use Map” of the Moreno Valley General Plan and the City Zoning Atlas, respectively, and a Tentative Parcel Map Application to subdivide approximately 51.51-acres of land into four parcels as described further below.

### **General Plan Amendment**

The City of Moreno Valley General Plan land use designates the project site as Residential/Office (R/O) and Commercial (C). The primary purpose of areas designated Residential/Office is to provide areas for the establishment of office-based working environments or residential developments of up to 15 dwelling units per acre. The primary purpose of areas designated Commercial is to provide property for business purposes, including, but not limited to, retail stores, restaurants, banks, hotels, professional offices, personal services and repair services.

The applicant is proposing a General Plan Amendment (Case No. PEN19-0151) a proposal to amend the General Plan land use designation boundaries to align with zoning boundaries and correspond to the parcel boundaries proposed by Tentative

Parcel Map No. 37750. The proposed General Plan amendment will result in a total increase of 0.12-acres to Commercial (C) General Plan land use designation and a reduction of 0.12-acres to Residential/Office (R/O) General Plan land use designation, resulting in 19.88 gross acres designated Commercial (C) and 31.63 gross acres designated Residential/Office (R/O). The graphic below shows the existing discrepancy between the existing General Plan Land Use boundary line and the existing Zoning boundary line.



**Change of Zone**

The project site is currently zoned Residential 15 (R15) District and Community Commercial (CC) District. The primary purpose of the Residential 15 (R15) District is to provide a broad range of housing types for those not desiring detached dwellings on individual parcels, and with open space and recreational amenities not generally associated with typical suburban subdivisions. This district is intended as an area for development of attached residential dwelling units, as well as mobile home parks, at a maximum allowable density of fifteen (15) dwelling units per net acre in accordance with the provisions outlined in the City of Moreno Valley Zoning Code. The primary purpose of the Community Commercial (CC) District is to provide for the general shopping needs of area residents and workers with a variety of business, retail, personal and related or similar services.

The applicant is proposing a Change of Zone (Case No. PEN19-0152), to amend the City Zoning Atlas to adjust the boundaries of the Residential 15 (R15) District and Community Commercial (CC) District to align with the General Plan boundaries and correspond to the parcel boundaries proposed by Tentative Parcel Map No. 37750. The proposed Change of Zone will result in a total reduction of 0.11-acres to the Community Commercial (CC) District and an increase of 0.11-acres to the Residential 15 (R15) District. Resulting in 19.88 gross acres designated Community Commercial (CC) District and 31.63 gross acres designated Residential 15 (R15) District.

**Tentative Parcel Map**

The applicant is proposing Tentative Parcel Map No. 37750 (Case No. PEN19-0150), to subdivide two (2) existing parcels, Assessor Parcel Numbers 291-100-054 and 291-100-055, consisting of approximately 51.51 gross acres into four (4) parcels ranging in size from 7.51 to 17.52 gross acres, and a shared access easement. No grading or other improvements are proposed by this map.

### **Site/Surrounding Area**

The project site is located at the southeast corner of Ironwood Avenue and Day Street. The site is vacant highly disturbed from recent and historic disking and blading which has prevented any type of notable habitat succession from occurring on the Project site.

The Project site is within a heavily urbanized area, bordered to the north by single-family residential development zoned Residential 5 (R5) District and the Box Springs Elementary School zoned Public (P) District, to the east by single-family residential development zoned Residential 5 (R5) District, to the south by commercial shopping centers beyond zoned Specific Plan 200 Highway Commercial (SP200HC) District, to the west the Canyon Springs Plaza, a commercial shopping center, zoned Community Commercial (CC) District. The Project site is bounded on the west by Day Street, on the north by Ironwood Avenue, and on the south by State Route 60.

### **Access/Parking**

The proposed parcel map will provide legal access to all four parcels by creating a private access easement for ingress, egress, and public utility purposes. The access easement from Day Street will align with the driveway for the Canyon Springs Plaza to the west and the access easement from Ironwood Avenue will align with Athens Drive to the north. The Project will provide right-of-way (ROW) designation for a 66-foot road to extend Athens Drive south of Ironwood Avenue and will provide ROW designation for a 40-ft road for Project access from Day Street between State Route 60 (SR 60) and Ironwood Avenue. The new property line boundaries will be coterminous with the new General Plan land use designation and zoning boundaries. No grading or other improvements are proposed; therefore, no ground disturbance will occur at this time. Any future implementing projects will require separate analysis to determine the potential impacts of any such development project.

### **Project Design**

The project is designed in accordance with the provisions of Chapter 9.03 "Residential Districts," Chapter 9.04 "Commercial Districts," Chapter 9.16 "Design Guidelines," and Chapter 9.14 "Land Divisions" of the City's Municipal Code. The project as designed and conditioned complies with all applicable City zoning and development regulations.

### **REVIEW PROCESS**

In accordance with established procedures, the project application materials were circulated for review by all appropriate City Departments and Divisions, as well as

applicable outside agencies/entities (e.g. Utilities, ALUC, Tribes). In accordance with Municipal Code regulation the project was also reviewed through the Project Review Staff Committee (PRSC), in August and October 2019. Throughout this plan review process, comments and proposed conditions of approval regarding the project were provided in writing to the applicant. City staff worked closely with the applicant on details pertaining to project site and street improvements.

## **ENVIRONMENTAL**

An Initial Study was prepared by Albert A. Webb Associates in compliance with the California Environmental Quality Act (CEQA) Guidelines. The Initial Study examined the potential of the proposed project to have any significant impacts on the environment. The Initial Study (IS/MND) provides information in support of the finding that a Mitigated Negative Declaration serves as appropriate CEQA documentation for the proposed project in that the proposed project, with the implementation of mitigation measures identified, will not have a significant effect on the environment. Technical studies prepared in support of the IS/MND include the following: Habitat Assessment, Burrowing Owl Habitat Suitability, and Jurisdictional Delineation, Western Riverside County MSHCP Consistency Analysis, Focused Burrowing Owl Survey, Cultural Resources Assessment, Preliminary Drainage Study, and Trip Generation Memo. The electronic files for the IS/MND and appendices are attached to this report. Anyone wishing to view the documents can also do so at City Hall.

The public comment period for Notice of Availability for the Initial Study/Mitigated Negative Declaration began on June 5, 2020 and will end on June 25, 2020, which satisfies the required 20-day review period. As of the preparation of this report, no comments have been received. Should comments regarding the Notice of Availability be received prior to the Planning Commission they will be provided at the public hearing.

Mitigation measures are recommended for the proposed project in the following areas: biological resources, cultural resources, and tribal cultural resources and are incorporated into the Mitigation Monitoring and Report Program. The measures for cultural resources have been included to address input from the tribal agencies. The measures are intended to ensure that potential resources that might be discovered are protected. However, these measures are not required to address a known significant impact. Additionally, it should be noted that this project will not result in any physical improvements to the property. Any future implementing projects will require separate analysis to determine the potential impacts of any such development project.

## **NOTIFICATION**

The public hearing notice for this project was published in the local newspaper on June 5, 2020. Public notices were mailed to all property owners of record within 600 feet of the project site on June 11, 2020. The public hearing notice for this project was posted on site on June 12, 2020.

## **REVIEW AGENCY COMMENTS**



Staff has coordinated with outside agencies where applicable, as is the standard review process with these types of development applications. The City coordinated with all participating Native American tribal groups requesting consultation for this project and incorporated conditions of approval and mitigation measures. The Airport Land Use Commission reviewed the project, and found the project consistent with the 2014 March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan (“March ALUCP”).

Where applicable, conditions of approval have been included in the recommended Resolution to address concerns from the responding agencies.

### **STAFF RECOMMENDATION**

Staff recommends that the Planning Commission take the following actions:

- A. Staff recommends that the Planning Commission **APPROVE** Resolution No. 2020-25, and thereby **RECOMMEND** that the City Council:
  1. **CERTIFY** the Initial Study/Mitigated Negative Declaration prepared for General Plan Amendment PEN19-0151, Zone Change PEN19-0152, and Tentative Parcel Map PEN19-0150, on file with the Community Development Department, incorporated herein by this reference, completed in compliance with the California Environmental Quality Act Guidelines, and that the Planning Commission reviewed and considered the information contained in the Initial Study/ Mitigated Negative Declaration, and that the document reflects the City’s independent judgment and analysis; attached hereto as Exhibit A; and
  2. **ADOPT** the Mitigation Monitoring and Reporting Program prepared for General Plan Amendment PEN19-0151, Zone Change PEN19-0152, and Tentative Parcel Map PEN19-0150 pursuant to the California Environmental Quality Act (CEQA) Guidelines, and included as Exhibit A.
- B. Staff recommends that the Planning Commission **APPROVE** Resolution No. 2020-26, and thereby **RECOMMEND** that the City Council:
  1. **APPROVE** PEN19-0151 General Plan Amendment based on the findings contained in this resolution, and as shown on the attachment included as Exhibit A.
- C. Staff recommends that the Planning Commission **APPROVE** Resolution No. 2020-27, and thereby **RECOMMEND** that the City Council:
  1. **APPROVE** PEN19-0152 Change of Zone based on the findings contained in this resolution, and as shown on the attachment included as Exhibit A.

D. Staff recommends that the Planning Commission **APPROVE** Resolution No. 2020-28, and thereby **RECOMMEND** that the City Council:

1. **APPROVE** PEN19-0150 Tentative Parcel Map 37750, based on the findings contained in this resolution, and subject to the attached conditions of approval included as Exhibit A.

Prepared by:  
Gabriel Diaz  
Associate Planner

Approved by:  
Patty Nevins  
Planning Official

### **ATTACHMENTS**

1. Resolution 2020-25 - Mitigated Negative Declaration
2. Exhibit A - Initial Study
3. Appendix A - Habitat Assessment, Burrowing Owl Habitat Suitability, and Jurisdictional Delineation
4. Appendix B - Western Riverside County MSHCP Consistency Analysis
5. Appendix C - Focused Burrowing Owl Survey
6. Appendix D - Cultural Resources Assessment
7. Appendix E - Preliminary Drainage Study
8. Appendix F - Trip Generation Memo
9. Exhibit B - Mitigation Monitoring Program
10. Resolution 2020-26 - General Plan Amendment
11. Exhibit A - General Plan Map
12. Resolution 2020-27 - Change of Zone
13. Exhibit A - Change of Zone Map
14. Resolution 2020-28 - Tentative Parcel Map 37750
15. Exhibit A - Conditions of Approval
16. Exhibit B - Tentative Parcel Map 37750
17. Aerial Photograph
18. Existing General Plan Map
19. Existing Zoning Map
20. Public Hearing Notice
21. 600 Foot Radius Map

## RESOLUTION NO. 2020-25

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY, CALIFORNIA, RECOMMENDING THAT THE CITY COUNCIL CERTIFY THE MITIGATED NEGATIVE DECLARATION AND APPROVE THE MITIGATION MONITORING AND REPORTING PROGRAM FOR GENERAL PLAN AMENDMENT PEN19-0151, CHANGE OF ZONE PEN19-0152, AND TENTATIVE PARCEL MAP NO. 37750 PEN19-0150, LOCATED AT THE SOUTHEAST CORNER OF IRONWOOD AVENUE AND DAY STREET (APNS: 291-100-054 & 291-100-055)

**WHEREAS**, the M&F Development Company, Inc., has filed applications for the approval of a General Plan Amendment, PEN19-0151, Zone Change, PEN19-0152 and Tentative Parcel Map No. 37750, PEN19-0150. The proposed General Plan Amendment and Zone Change address a 0.23 acre discrepancy between General Plan Figure 2-2 “Land Use Map” and the Moreno Valley Zoning Atlas by adjusting the general plan land use boundaries and zoning boundaries to be consistent with one another and to align with proposed parcel map boundaries. The proposed Tentative Parcel Map No. 37750 would subdivide two existing parcels (APNS: 291-100-054 & 291-100-055) of approximately 51.51 total gross acres into four parcels and create legal shared access to all parcels. The project site is located at the southeast corner of Ironwood Avenue and Day Street; and

**WHEREAS**, the applications for the Project have been evaluated in accordance with established City of Moreno Valley (City) procedures, and with consideration of the Municipal Code, General Plan, and other applicable regulations; and

**WHEREAS**, an Initial Study, supporting technical studies, and Mitigated Negative Declaration for the Project were prepared, consistent with the California Environmental Quality Act (CEQA); and

**WHEREAS**, a 20-day public review period of the Initial Study and Mitigated Negative Declaration commenced on June 5, 2020 and concluded on June 25, 2020. The public Notice of Intent to adopt the Mitigated Negative Declaration was published in the local newspaper on June 5, 2020. Public hearing notice was sent to all property owners of record within 600 feet of the project site on June 11, 2020. The public hearing notice for this project was also posted on the project site on June 12, 2020; and

**WHEREAS**, the City, in conducting its own independent analysis of the Initial Study, determined that a Mitigated Negative Declaration is an appropriate environmental determination for the Project as there is substantial evidence that demonstrates the Project with mitigation would not result in any significant environmental impacts; and

**WHEREAS**, a Mitigation Monitoring and Reporting Program (MMRP) has been prepared in accordance with CEQA Guidelines, and is designed to ensure compliance with the identified mitigation measures outlined in the Mitigated Negative Declaration through Project implementation; and

**WHEREAS**, the City of Moreno Valley, Community Development Department, located at 14177 Frederick Street, Moreno Valley, California 92552 is the custodian of documents and other materials that constitute the record of proceedings upon which the decision to adopt the Mitigated Negative Declaration is based; and

**WHEREAS**, the Planning Commission of the City of Moreno Valley considered the Project, including all environmental documentation, at a public hearing held on June 25, 2020; and

**WHEREAS**, all legal prerequisites to the adoption of this Resolution have occurred; and

**WHEREAS**, the Planning Commission considered the Initial Study prepared for the Project for the purpose of compliance with the California Environmental Quality Act (CEQA), and based on the Initial Study including all supporting technical evidence, determined that the project impacts are expected to be less than significant with mitigation, and approval of a Mitigated Negative Declaration is an appropriate environmental determination for the Project.

**NOW, THEREFORE, THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY, CALIFORNIA, DOES HEREBY RESOLVE AS FOLLOWS:**

- A. This Planning Commission specifically finds that all of the facts set forth above in the Resolution are true and correct.
- B. Based upon substantial evidence presented to this Planning Commission during the above-referenced meeting on June 25, 2020, including written and oral staff reports and the record from the public hearing, this Planning Commission finds as follows:
  1. Independent Judgment and Analysis – City staff coordinated the preparation of the Initial Study/Mitigated Negative Declaration and related technical studies with Albert A. Webb Associates. The documents were properly circulated for public review in accordance with the California Environmental Quality Act Guidelines. The Initial Study/Mitigated Negative Declaration has been completed along with the Mitigation Monitoring and Reporting Program (MMRP) to ensure compliance with all mitigation through project implementation. All environmental documents that comprise the Mitigated Negative Declaration, including all technical studies, were independently reviewed by the City. On the basis of the whole record, there is no

substantial evidence that the Project as designed, conditioned and mitigated, will have a significant effect on the environment. The Mitigated Negative Declaration prepared and completed, in accordance with the CEQA Guidelines, reflects the independent judgment and analysis of the City.

**BE IT FURTHER RESOLVED** that the Planning Commission **HEREBY APPROVES** Resolution No. 2020-25 and **RECOMMENDS** that the City Council:

1. **CERTIFY** that the Mitigated Negative Declaration prepared for General Plan Amendment, PEN19-0151, Zone Change, PEN19-0152 and Tentative Parcel Map No. 37750, PEN19-0150 on file with the Community Development Department, incorporated herein by this reference, has been completed in compliance with the California Environmental Quality Act, that the Planning Commission reviewed and considered the information contained in the Mitigated Negative Declaration and that the Document reflects the City’s independent judgment and analysis; attached hereto as Exhibit A; and
2. **APPROVES** the Mitigation Monitoring and Reporting Program for General Plan Amendment, PEN19-0151, Zone Change, PEN19-0152 and Tentative Parcel Map No. 37750, PEN19-0150, attached hereto as Exhibit B.

**APPROVED** this 25<sup>th</sup> day of June, 2020.

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Patricia Korzec  
Chairperson, Planning Commission

ATTEST:

APPROVED AS TO FORM:

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Patty Nevins, Planning Official  
Secretary to the Planning Commission

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City Attorney

ATTACHMENTS:

- Exhibit A: Initial Study/Mitigated Negative Declaration
- Exhibit B: Mitigation Monitoring and Reporting Program

3  
Resolution No. 2020-25  
Date Approved:



# CITY OF MORENO VALLEY

## INITIAL STUDY FOR DAY STREET AND IRONWOOD AVENUE SUBDIVISION PROJECT



**DAY STREET AND IRONWOOD AVENUE SUBDIVISION PROJECT**  
**CASE NUMBER(S): PEN19-0151 (General Plan Amendment), PEN19-0152**  
**(Change of Zone), and PEN19-0150 (TPM No. 37750)**

**June 5, 2020**

**Lead Agency**  
**CITY OF MORENO VALLEY**  
 14177 Frederick Street  
 Moreno Valley, CA 92552

**Prepared By**  
**ALBERT A. WEBB ASSOCIATES**  
 Melissa Perez, Senior Planner  
 3788 McCray Street  
 Riverside, CA 92506  
 951-686-1070

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**APPENDICES (Separate Documents)**

- Appendix A – Habitat Assessment, Burrowing Owl Habitat Suitability, and Jurisdictional Delineation
- Appendix B – Western Riverside County MSHCP Consistency Analysis
- Appendix C – Focused Burrowing Owl Survey
- Appendix D – Cultural Resources Assessment
- Appendix E – Preliminary Drainage Study
- Appendix F – Trip Generation Memo





# INITIAL STUDY (IS) FOR DAY STREET AND IRONWOOD AVENUE SUBDIVISION PROJECT

## BACKGROUND INFORMATION AND PROJECT DESCRIPTION:

1. **Project Case Number(s):** PEN19-0151 (General Plan Amendment), PEN019-0152 (Change of Zone), and PEN19-0150 (TPM No. 37750),
2. **Project Title:** Day Street and Ironwood Avenue Subdivision
3. **Public Comment Period:** June 5, 2020 to June 25, 2020
4. **Lead Agency:** City of Moreno Valley  
Gabriel Diaz, Planning Division  
14177 Frederick Street  
Moreno Valley, CA 92552  
(951) 413-3226  
gabriel.d@moval.org
5. **Documents Available At:** The City of Moreno Valley Planning Division
6. **Prepared By:** Melissa Perez, Senior Environmental Planner  
Albert A. WEBB Associates  
3788 McCray Street  
Riverside CA, 92506  
(951)686-1070  
Melissa.perez@webbassociates.com

## 7. Project Sponsor:

### Applicant/Developer

C/O Paul Tanguay  
M & F Development Company, Inc.  
by Fritz Duda Company  
985 Damonte Ranch Pkwy, Ste 210  
Reno, NV 89521  
(775)233-9233  
[ptanguay@fritzduda.com](mailto:ptanguay@fritzduda.com)

### Property Owner

C/O Paul Tanguay  
M&F Development Company  
985 Damonte Ranch Pkwy, Ste 210  
Reno, NV 89521  
(775)233-9233  
[ptanguay@fritzduda.com](mailto:ptanguay@fritzduda.com)

### Property Owner

C/O Fritz Duda  
Fritz Duda Company  
13355 Noel Road, LB3, Ste 2225  
Dallas, TX 75240-6603  
(949)723-7100  
[FritzDuda@fritzduda.com](mailto:FritzDuda@fritzduda.com)

### Property Owner

Scott S. Webb  
Triple S. Group, LLC  
3788 McCray Street  
Riverside, CA 92506  
(951)686-1070  
[Scott.webb@webbassociates.com](mailto:Scott.webb@webbassociates.com)

**Property Owner**  
Matthew E. Webb  
MBBB, LLC

3788 McCray Street  
Riverside, CA 92506  
(951)686-1070  
[matt.webb@webbassociates.com](mailto:matt.webb@webbassociates.com)

**Property Owner**  
Irene Webb Salyer  
Irene Webb Salyer, Trustee of the Ernest  
Webb Credit Trust  
3788 McCray Street  
Riverside, CA 92506  
(951)686-1070

8. **Project Location:** Approximately 51.51 gross acres on the southeast corner of Day Street and Ironwood Avenue in the City of Moreno Valley, California (**Figure 1 – Vicinity Map** and **Figure 2 – Project Boundary**)

**Assessor Parcel Numbers (APN):** 291-100-054 and 291-100-055

Section 2, Township 3 South, Range 4 West, of the San Bernardino Baseline and Meridian, identified on the Riverside East Quadrangle California USGS 7.5 Quadrangle Map (**Figure 3, USGS Map**)

9. **General Plan Designation:** R/O (Residential Office) and C (Commercial)

R/O (Residential Office): The primary purpose of areas designated Residential/Office is to provide areas for the establishment of office-based working environments or residential developments of up to 15 dwelling units per acre. Development should not exceed a Floor Area Ratio of 1.00.

C (Commercial): The primary purpose of areas designated Commercial is to provide property for business purposes, including, but not limited to, retail stores, restaurants, banks, hotels, professional offices, personal services and repair services. Commercial development intensity should not exceed a Floor Area Ratio of 1.00 and the average floor area ratio should be significantly less.

10. **Specific Plan Name and Designation:** The Project is not located within a Specific Plan.

11. **Existing Zoning:** R15 (Residential 15 - Multifamily) and CC (Community Commercial)

R15 (Residential 15 - Multifamily): The primary purpose of the R15 district is to provide a broadened range of housing types for those not desiring detached dwellings on individual parcels, and with open space and recreational amenities not generally associated with typical suburban subdivisions. This district is intended as an area for development of attached residential dwelling units, as well as mobile home parks, at a maximum allowable density of fifteen (15) dwelling units per net acre in accordance with the provisions outlined in the City of Moreno Valley Zoning Code.

CC (Community Commercial): The primary purpose of the Community Commercial (CC) district is to provide for the general shopping needs of area residents and workers with a variety of business, retail, personal and related or similar services.

## 12. Surrounding Land Uses and Setting:

**Table A – Surrounding Land Uses and Setting**

	Land Use	General Plan	Zoning
<b>Project Site</b>	<b>Vacant</b>	<b>R/O (Residential/Office) and C (Commercial)</b>	<b>CC (Community Commercial) and R15 (Residential 15)</b>
North	Residential and School	R5 (Residential 5) and P (Public/Quasi-Public)	R5 (Residential 5) and P (Public District)
South	Commercial	C (Commercial)	SP 200 HC (Highway Commercial)
East	Residential	R5 (Residential 5)	R5 (Residential 5)
West	Commercial	C (Commercial)	CC (Community Commercial)

## 13. Description of the Site and Project:

### **Environmental Setting**

The Project site is located within the Western Riverside County MSHCP Reche Canyon/Badlands Area and is not located within an MSHCP Criteria Cell, Group, or area identified for conservation. Further, the Project site is not located in an amphibian, criteria area species, mammal, or narrow endemic pant survey area (JERICHO-A, p. 1).

Elevations range between 1,770 ft above mean sea level (AMSL) to 1,640 ft AMSL. The Project site is within a heavily urbanized area, bordered to the north by dense single-family housing and an elementary school, to the east by more dense single-family housing, and to the west and south by commercial shopping centers. The Project site is bounded on the west by Day Street, on the north by Ironwood Avenue, and on the south by SR60. (JERICHO-B, p.5). An aerial view of the Project site shows drainage/topographical features that traverse the Project site from north to south/southwest (JERICHO-A, pp. 4-5).

Historical images back to September of 1996 show consistent and ongoing clearing/grubbing activities on the Project site. The entire Project site is highly disturbed from recent and historic disking and blading which has prevented any type of notable habitat succession from occurring on the Project site. The disturbed areas on the Project site no longer comprises a native plant community. The Project site supports dense non-native grasslands with remnant native vegetation. (JERICHO-A, p. 5).

### **Project Description**

The following are the entitlement applications for consideration by the City of Moreno Valley:

- General Plan Amendment (Case No. PEN19-0151): Proposal to amend the General Plan land use designation boundaries to correspond to the parcel boundaries proposed by TPM No. 37750. The proposed General Plan amendment will result in a total increase of 0.12 acres to Commercial (C) GP land uses and a reduction of 0.12 acres to Residential/Office (R/O) GP land uses.

- Change of Zone (Case No. PEN19-0152): Proposal to amend the zoning boundaries to correspond to the parcel boundaries proposed by TPM No. 37750. The proposed zone change will result in a total reduction of 0.11 acres to the Community Commercial (CC) zoning designation and an increase of 0.11 acres to the Residential (R15) zoning designation.
- Tentative Parcel Map (TPM) No. 37750 (Case No. PEN19-0150): Proposal to subdivide two (2) existing parcels consisting of approximately 51.51 gross acres identified as Assessor Parcel Numbers 291-100-054 and 291-100-055 into four (4) parcels and a shared access easement. No grading or other improvements are proposed by this map.

The Applicant proposes to subdivide two existing parcels (APNs 291-100-054 and 291-100-055) into four parcels to resolve the split-zoning and split General Plan (GP) land use designations present on each parcel as well as to create legal shared access to all parcels as reflected in **Figure 4 – Tentative Parcel Map** and **Figure 5 – General Plan Amendment and Zone Change**. The parcel lines proposed by the Project are slightly different from the existing GP land use designation and zoning boundaries. The purpose of this change is to ensure legal access to all four parcels and to create a private access easement for ingress and egress and public utility purposes, by creating future shared access off of Day Street that aligns with the existing commercial development to the west and future shared access off of Ironwood Avenue that aligns with the existing Athens Drive to the north. The Project will provide right-of-way (ROW) designation for a 66-foot (ft) road to extend Athens Drive south of Ironwood Avenue and will provide ROW designation for a 40-ft road for Project access from Day Street between State Route 60 (SR 60) and Ironwood Avenue. The new property line boundaries will be coterminous with the new GP land use and zoning boundaries. No grading or other improvements are proposed by the Project, and therefore no ground disturbance will occur at this time. Any future implementing projects will require separate analysis to determine the potential impacts of any such development project.

**Table B – Existing GP Land Use and Zoning Designation Acreages**, identifies the way in which the existing two parcels are currently designated:

**Table B – Existing GP Land Use and Zoning Designation Acreages**

APN	GP Land Use Designation	Acres	Zoning Designation	Acres
291-100-054	C	17.17	CC	16.03
	R/O	8.90	R15	10.05
	ROW	1.90	ROW	1.90
<i>Parcel Total</i>		<i>27.98</i>		<i>27.98</i>
291-100-055	C	13.26	CC	14.64
	R/O	10.27	R15	8.89
<i>Parcel Total</i>		<i>23.53</i>		<i>23.53</i>
<b>Total Acres</b>		<b>51.50</b>		<b>51.50</b>

**Note**  
ROW=Right-of-Way

The Project will subdivide the two existing parcels into four parcels and includes a General Plan Amendment (GPA) and a Change of Zone (CZ) to align the four parcels with the proposed TPM boundary lines and GP land use and zoning designations as shown in **Table C – Proposed GP Land Use and Zoning Designation Acreages**, below.

**Table C – Proposed GP Land Use and Zoning Designation Acreages**

Proposed Parcels	GP Land Use Designation	Zoning Designation	Net Acres	Right-of-Way	Gross Acres
1	C	CC	13.04	1.07	14.11
2	R/O	R15	11.54	0.83	12.37
3	R/O	R15	7.51	0.00	7.51
4	C	CC	17.52	0.00	17.52
<b>Total Acres</b>			<b>49.61</b>	<b>1.90</b>	<b>51.51</b>

While the Project's total land use acreages for GP land use and zoning designations will be slightly different in order to allow for legal shared access and public utility easements, the acreages will remain substantially consistent as reflected in **Table D – Existing and Proposed Land Use Acreage Comparison** and **Table E – Existing and Proposed Zoning Acreage Comparison**, below.

**Table D – Existing and Proposed Total Land Use Acreage Comparison**

GP Land Use Designation	Existing Acreage	Proposed Acreage	Difference
C	30.44	30.56	▲0.12
R/O	19.17	19.05	▼0.12
ROW	1.90	1.90	--
<b>Total Acres</b>	<b>51.51</b>	<b>51.51</b>	--

**Note**

ROW=Right-of-Way

The proposed General Plan Amendment (GPA) will result in a total increase of 0.12 acres to Commercial (C) GP land uses and a reduction of 0.12 acres to Residential/Office (R/O) GP land uses.

**Table E – Existing and Proposed Total Zoning Acreage Comparison**

<b>Zoning Designation</b>	<b>Existing Acreage</b>	<b>Proposed Acreage</b>	<b>Difference</b>
CC	30.67	30.56	▼0.11
R15	18.94	19.05	▲0.11
ROW	1.90	1.90	--
<b>Total Acres</b>	<b>51.51</b>	<b>51.51</b>	--

**Note**

ROW=Right-of-Way

The proposed Zone Change (ZC) will result in a total reduction of 0.11 acres to the Community Commercial (CC) zoning designation and an increase of 0.11 acres to the Residential (R15) zoning designation.

The proposed GPA and ZC will bring the total 0.23 acre discrepancy between the current GP land use and zoning designations consistent with one another and remove the split general plan land use and split zoning designations.

14. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?**

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

The City provided notices pursuant to SB 18 and AB 52 requirements dated October 7, 2019 to: Pechanga Band of Luiseño Indians, Morongo Band of Mission Indians (MBMI), Soboba Band of Luiseño Indians, Rincon Band of Luiseño Indians, and Agua Caliente Band of Cahuilla Indians. All tribes with the exception of Agua Caliente Band of Cahuilla Indians requested additional documentation and/or consultation. As a result, on January 23, 2020 the City provided the tribes with copies of the Cultural Resources Assessment and Tentative Tract Map 37750 for their review. Ultimately, all tribes agreed to conditions of approval which have been incorporated as mitigation measures MM CULT-1 through MM CULT-4 and MM TCR-1 and MM TCR-2.

15. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):**
- a. Airport Land Use Commission (ALUC)

16. **Other Technical Studies Referenced in this Initial Study (Provided as Appendices):**

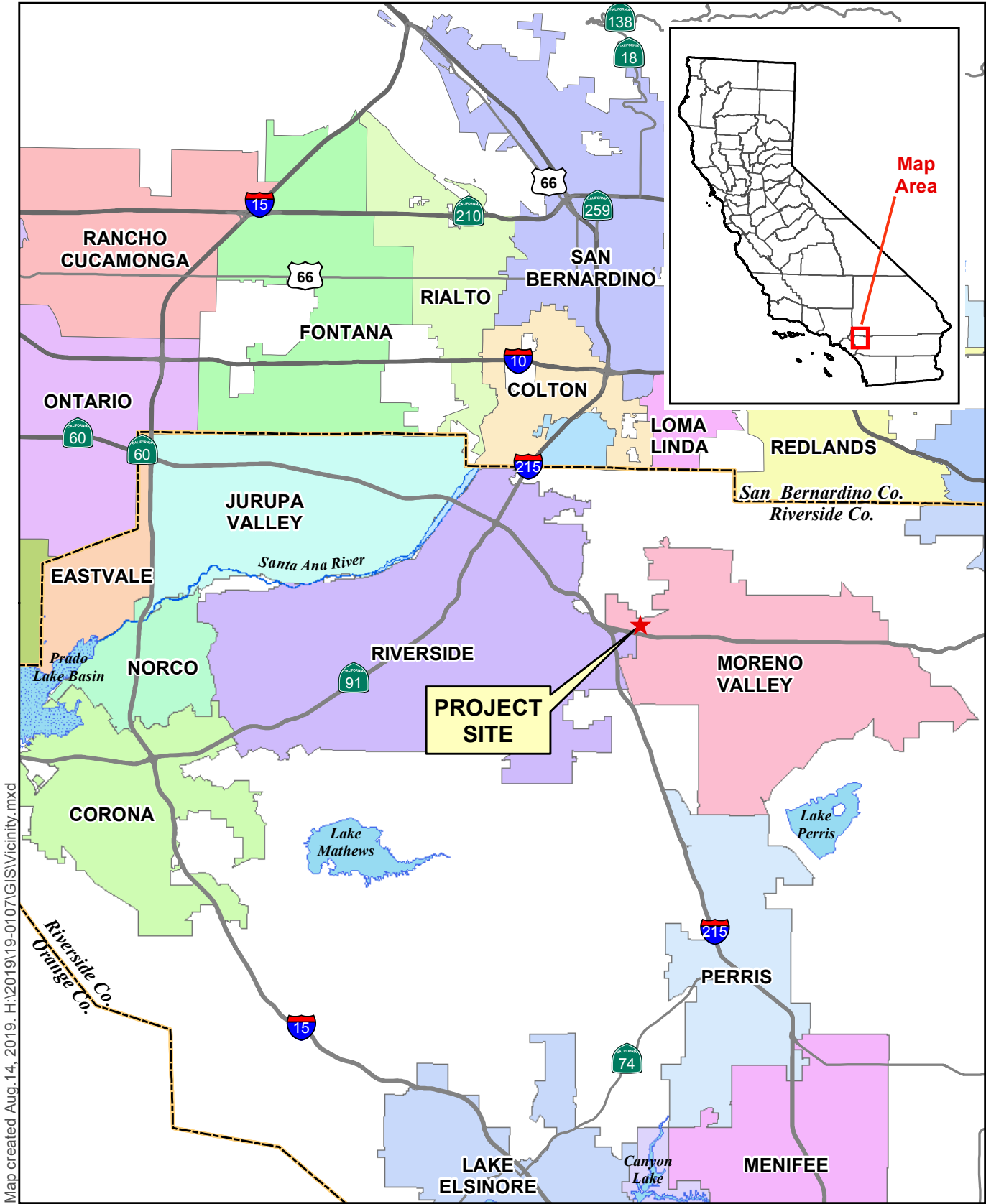
- a. Appendix A – Habitat Assessment, Burrowing Owl Habitat Suitability, and Jurisdictional Delineation
- b. Appendix B – Western Riverside County MSHCP Consistency Analysis
- c. Appendix C – Focused Burrowing Owl Survey
- d. Appendix D – Cultural Resources Assessment
- e. Appendix E – Preliminary Drainage Study
- f. Appendix F – Trip Generation Memo

17. **Acronyms:**

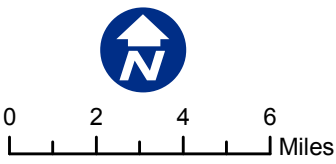
ADA -	American with Disabilities Act
ALUC -	Airport Land Use Commission
ALUCP -	Airport Land Use Compatibility Plan
AQMP -	Air Quality Management Plan
CEQA -	California Environmental Quality Act
CIWMD -	California Integrated Waste Management District
CMP -	Congestion Management Plan
DTSC -	Department of Toxic Substance Control
DWR -	Department of Water Resources
EIR -	Environmental Impact Report
EMWD -	Eastern Municipal Water District
EOP -	Emergency Operations Plan
FEMA -	Federal Emergency Management Agency
FMMP -	Farmland Mapping and Monitoring Program
GIS -	Geographic Information System
GHG -	Greenhouse Gas
GP -	General Plan
HCM -	Highway Capacity Manual
HOA -	Homeowners' Association
IS -	Initial Study
LHMP -	Local Hazard Mitigation Plan
LOS -	Level of Service
LST -	Localized Significance Threshold
MARB -	March Air Reserve Base
MARB/IPA-	March Air Reserve Base/Inland Port Airport
MSHCP -	Multiple Species Habitat Conservation Plan
MVFP -	Moreno Valley Fire Department
MVPD -	Moreno Valley Police Department
MVUSD -	Moreno Valley Unified School District
MWD -	Metropolitan Water District
NCCP -	Natural Communities Conservation Plan
NPDES -	National Pollutant Discharge Elimination System
OEM -	Office of Emergency Services
OPR -	Office of Planning & Research, State
PEIR -	Program Environmental Impact Report
PW -	Public Works
RCEH -	Riverside County Environmental Health
RCFCWCD -	Riverside County Flood Control & Water Conservation District
RCP -	Regional Comprehensive Plan

RCTC -	Riverside County Transportation Commission
RCWMD -	Riverside County Waste Management District
RTA -	Riverside Transit Agency
RTIP -	Regional Transportation Improvement Plan
RTP -	Regional Transportation Plan
SAWPA -	Santa Ana Watershed Project Authority
SCAG -	Southern California Association of Governments
SCAQMD -	South Coast Air Quality Management District
SCE -	Southern California Edison
SCH -	State Clearinghouse
SKRHCP -	Stephens' Kangaroo Rat Habitat Conservation Plan
SWPPP -	Storm Water Pollution Prevention Plan
SWRCB -	State Water Resources Control Board
USFWS -	United States Fish and Wildlife
USGS -	United States Geologic Survey
VMT -	Vehicle Miles Traveled
VVUSD -	Valley Verde Unified School District
WQMP -	Water Quality Management Plan
WRCOG -	Western Riverside Council of Government





Map created Aug. 14, 2019. H:\2019\19-0107\GIS\Vicinity.mxd



**Figure 1 – Vicinity Map**  
Day Street and Ironwood Avenue Subdivision



Attachment: Exhibit A - Initial Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map

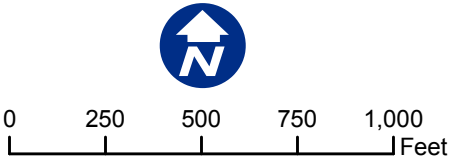


H:\2019\19-0107\GIS\Aerial.mxd; Map created 14 Aug 2019

**LEGEND**

Project Site

Sources: Riverside Co. GIS, 2019 (streets) and 2016 (imagery).

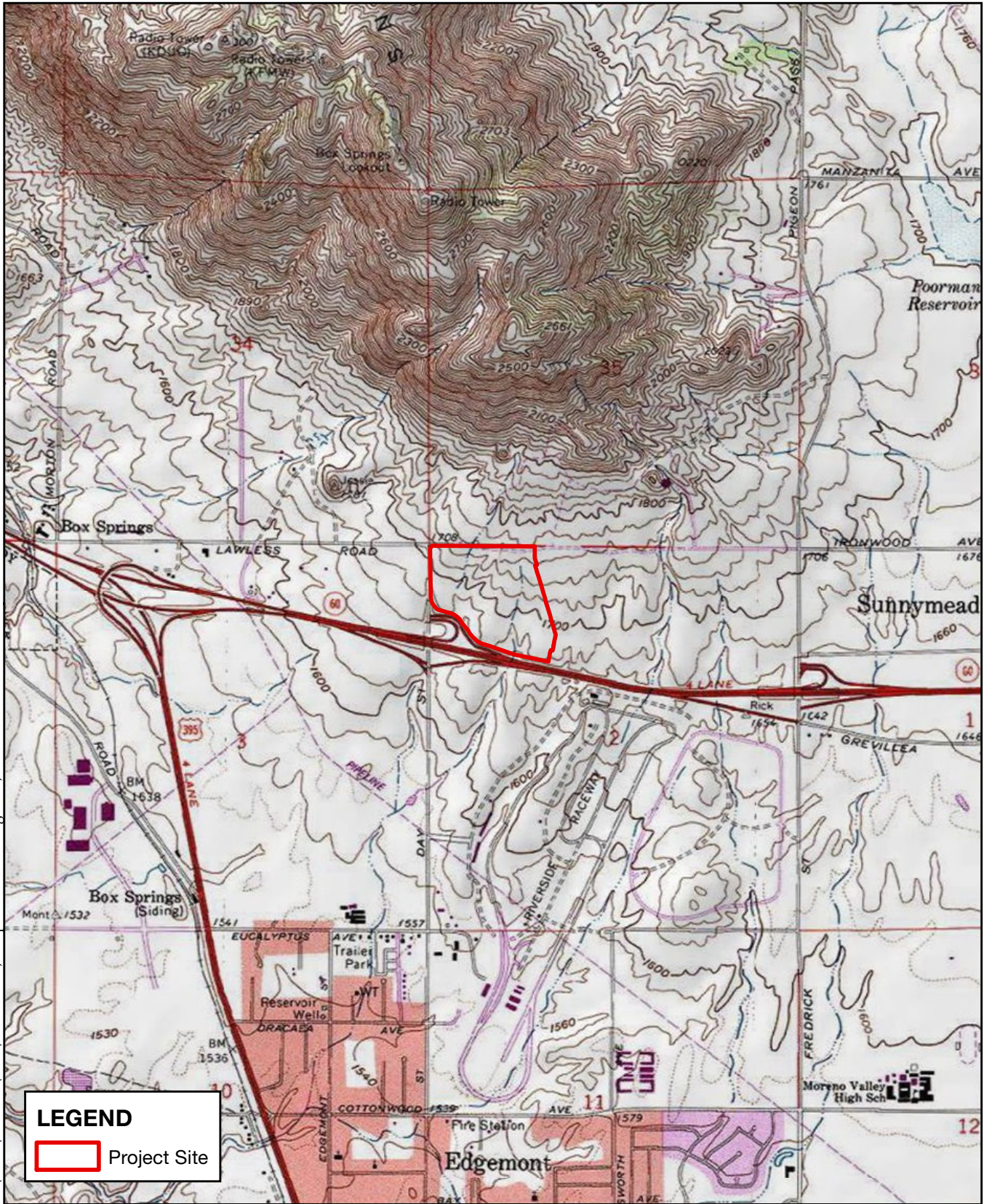


**Figure 2 - Aerial Map**  
Day Street and Ironwood Avenue Subdivision

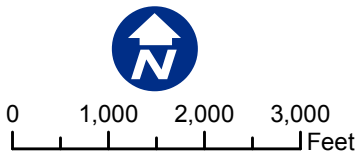


Attachment: Exhibit A - Initial Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map

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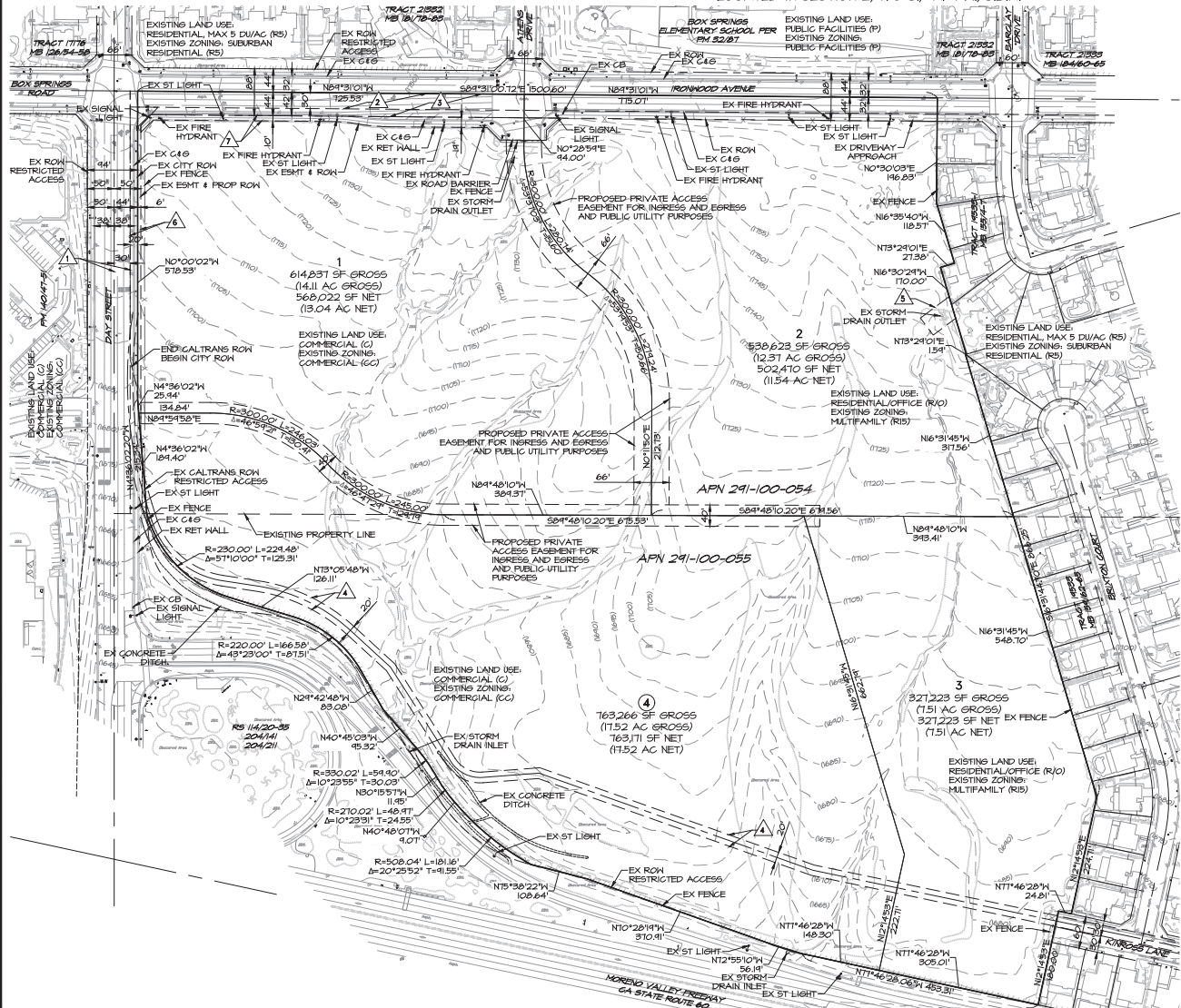
Sources: ESRI / USGS 7.5min Quad  
DRG: Riverside East



**Figure 3 - USGS Map**  
Day Street and Ironwood Avenue Subdivision



IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA  
**TENTATIVE PARCEL MAP NO. 37750**  
 LOCATED IN SECTION 2, T. 3 S., R. 4 N., S.B.M.



PARCEL NUMBER	GROSS (SF)	GROSS (AC)	NET (SF)	NET (AC)	PROPOSED GENERAL PLAN LAND USE	PROPOSED ZONING
1	614,831	14.11	568,022	13.04	COMMERCIAL (C)	COMMERCIAL (CC)
2	538,623	12.31	502,410	11.54	RESIDENTIAL OFFICE (R/O)	MULTI-FAMILY RESIDENTIAL (R-15)
3	321,223	7.51	321,223	7.51	RESIDENTIAL OFFICE (R/O)	MULTI-FAMILY RESIDENTIAL (R-15)
4	763,266	17.52	763,211	17.52	COMMERCIAL (C)	COMMERCIAL (CC)
<b>TOTAL</b>	<b>2,243,814</b>	<b>51.51</b>	<b>2,160,866</b>	<b>49.61</b>		

**OWNER (1 OF 5)**  
 MIF DEVELOPMENT COMPANY  
 3425 VIA LIDO, SUITE 250  
 NEWPORT BEACH, CA 92663  
 CONTACT: PAUL C. BERNARD  
 PHONE: (444) 723-1100  
 PBERNARD@FRITZDUDA.COM

**OWNER (2 OF 5)**  
 TRIPLE 5 GROUP, LLC  
 3788 MCGRAY STREET  
 RIVERSIDE, CA 92506  
 CONTACT: SCOTT S. HEBB  
 PHONE: (951) 686-1070  
 SCOTT.HEBB@HEBBASSOCIATES.COM

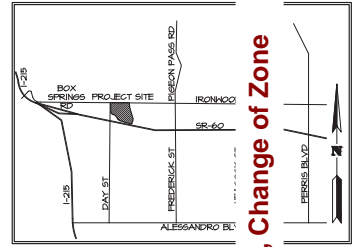
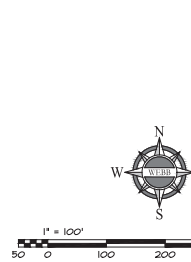
**OWNER (3 OF 5)**  
 HEBB, LLC  
 3788 MCGRAY STREET  
 RIVERSIDE, CA 92506  
 CONTACT: MATTHEW E. HEBB  
 PHONE: (951) 686-1070  
 MATTHEW.HEBB@HEBBASSOCIATES.COM

**OWNER (4 OF 5)**  
 IRENE HEBB SALTER, TRUSTEE OF THE IRENE HEBB CREDIT TRUST  
 3788 MCGRAY STREET  
 RIVERSIDE, CA 92506  
 CONTACT: IRENE SALTER  
 PHONE: (951) 686-1070  
 REKANDIRENE@YAHOO.COM

**OWNER (5 OF 5)**  
 FRITZ DUDA COMPANY,  
 A TEXAS CORPORATION  
 13355 NOEL ROAD, LBS, SUITE 2225  
 DALLAS, TEXAS 75240  
 CONTACT: FRITZ DUDA  
 PHONE: (444) 723-1100  
 FRITZDUDA@FRITZDUDA.COM

**ABBREVIATIONS**  
 AC ACRES  
 APN ASSESSOR'S PARCEL NUMBER  
 CA CALIFORNIA  
 C69 CURB AND GUTTER  
 EX EXISTING  
 L LENGTH  
 N NORTH  
 R RADIUS  
 NET RETAINING  
 RIGHT OF WAY  
 SF SQUARE FEET  
 ST STREET  
 T TANGENT  
 W WEST

**LEGEND**  
 - - - EXISTING RETAINING WALL  
 - - - EXISTING FENCE  
 - - - EXISTING RIGHT OF WAY  
 - - - EXISTING ROW RESTRICTED ACCESS  
 - - - EXISTING EASEMENT  
 - - - PROPOSED EASEMENT  
 - - - EXISTING STREET LIGHT  
 - - - EXISTING FIRE HYDRANT  
 - - - EXISTING CONTOURS  
 - - - EXISTING LOT LINE  
 - - - PROPOSED LOT LINE  
 - - - PROJECT BOUNDARY



**APPLICANT**  
 MIF DEVELOPMENT COMPANY  
 3425 VIA LIDO, SUITE 250  
 NEWPORT BEACH, CA 92663  
 CONTACT: PAUL C. BERNARD  
 PHONE: (444) 723-1100  
 PBERNARD@FRITZDUDA.COM

**ENGINEER**  
 ALBERT A. HEBB  
 3788 MCGRAY ST  
 RIVERSIDE, CA 92506  
 CONTACT: SARAH HEBB  
 PHONE: (951) 686-1100  
 SARAH.HEBB@HEBBASSOCIATES.COM

**TOPOGRAPHY SOURCE**  
 TOPOGRAPHY FLOWN BY INLAND AERIAL SURVEYS, INC. ON 05/09/2014

**LAND USE**  
 EXISTING GENERAL (C) (COMMERCIAL), EXISTING ZONING: CC (COMMERCIAL)  
 PROPOSED GENERAL (C) (COMMERCIAL), PROPOSED ZONING: CC (COMMERCIAL)

**APN**  
 291-100-054 AND 291-100-055

**ACREAGE**  
 51.51 GROSS ACRES  
 49.61 NET ACRES

**SCHOOL DISTRICT**  
 MORENO VALLEY

**UTILITY PROVIDERS**  
 WATER: EASTERN I WATER DISTRICT  
 SEWER: EASTERN I WATER DISTRICT  
 ELECTRICAL: SOUTHERN NIA GAS COMPANY  
 GAS: SOUTHERN NIA GAS COMPANY  
 CABLE: AT&T CHARTER AT&T CHARTER

**PROJECT DESCRIPTION**  
 THIS TENTATIVE PARCEL MAP PROPOSES TO SUBDIVIDE APNS 291-100-054 AND -055 LOCATED AT THE SOUTH STREET AND IRONWOOD AVENUE IN THE CITY OF MORENO VALLEY INTO FOUR PARCELS WITH THE INTENT TO INCREASE THE TOTAL ACREAGE OF C AND R/O BENEVOLENT DESIGNATIONS. THIS MAP IS INTENDED TO BE INTERPRETED AS NO DEVELOPMENT OR GRADING IS PROPOSED.

**EASEMENT NOTES**  
 AN EASEMENT FOR ROADS AND PUBLIC UTILITIES A PURPOSES PER BOOK 600, PAGE 303 O.R., REC. 10/16/1978.  
 AN EASEMENT FOR ROADS AND UTILITIES LINES AND 1 PER INST. #1973-33540, REC. 03/16/1973.  
 44' DEDICATION FOR PUBLIC ROAD AND PUE PER II REC. 10/16/1978.  
 20' EASEMENT SEWER EASEMENT PER INST. #1918-18007 REC. 03/16/1978.  
 IRREVOCABLY DEDICATION IN PERPETUITY FOR DR INST. #1946-114056, REC. 7/30/1966.  
 AN EASEMENT FOR ROADS AND PUBLIC UTILITIES A PURPOSES PER INST. #0007-21071 O.R., REC. 03/16/1978.  
 A PERPETUAL EASEMENT AND RIGHT OF WAY FOR I PURPOSES AND PUE PER INST. #2041-220641 O.R. I REC. 03/16/1978.

**BASIS OF BEARINGS**  
 THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CAL COORDINATE SYSTEM, CGCS, ZONE 6, BASED LOCALLY STATIONS "MLP", AND "PBP", NAD 83 (NRSR2011).

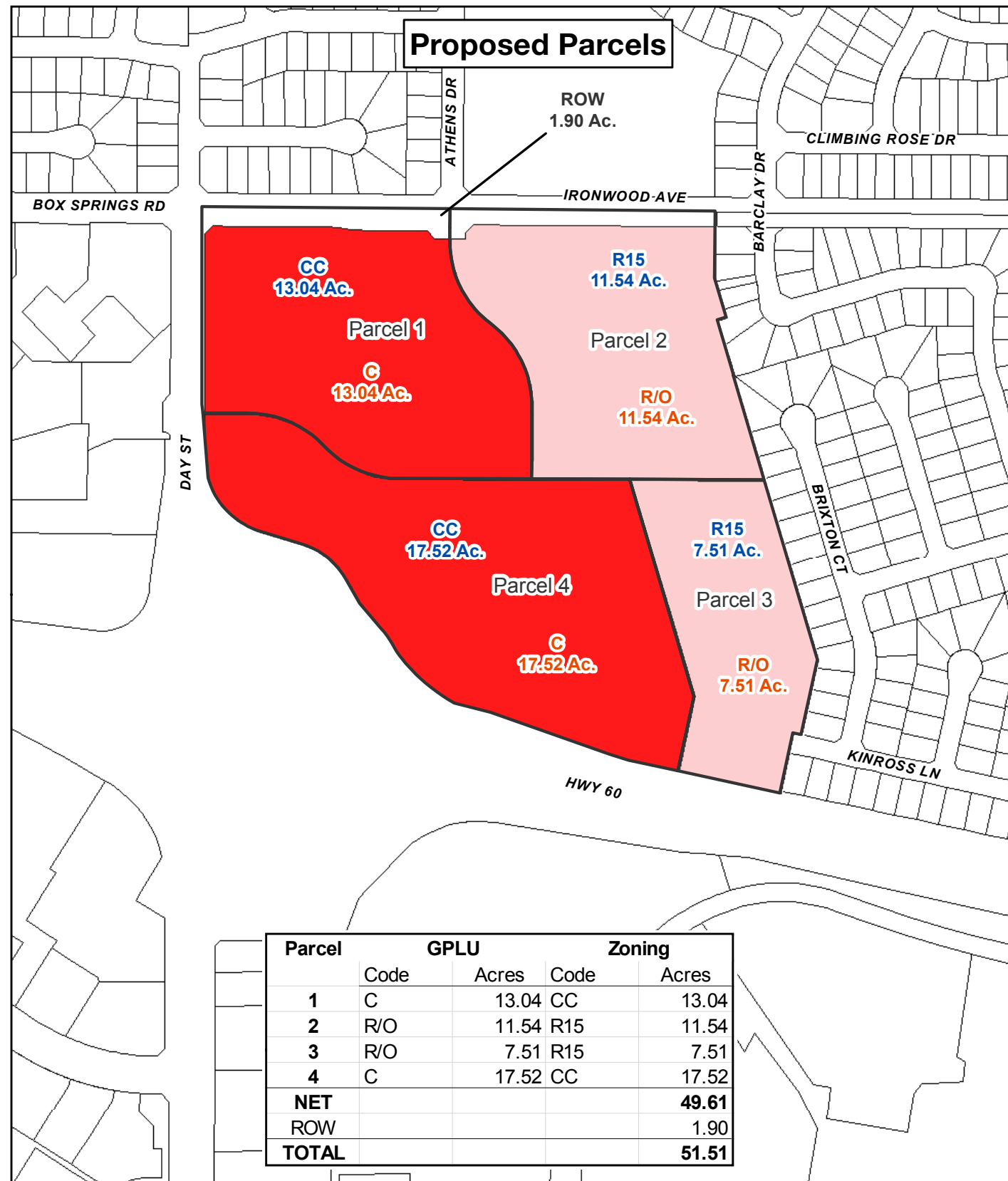
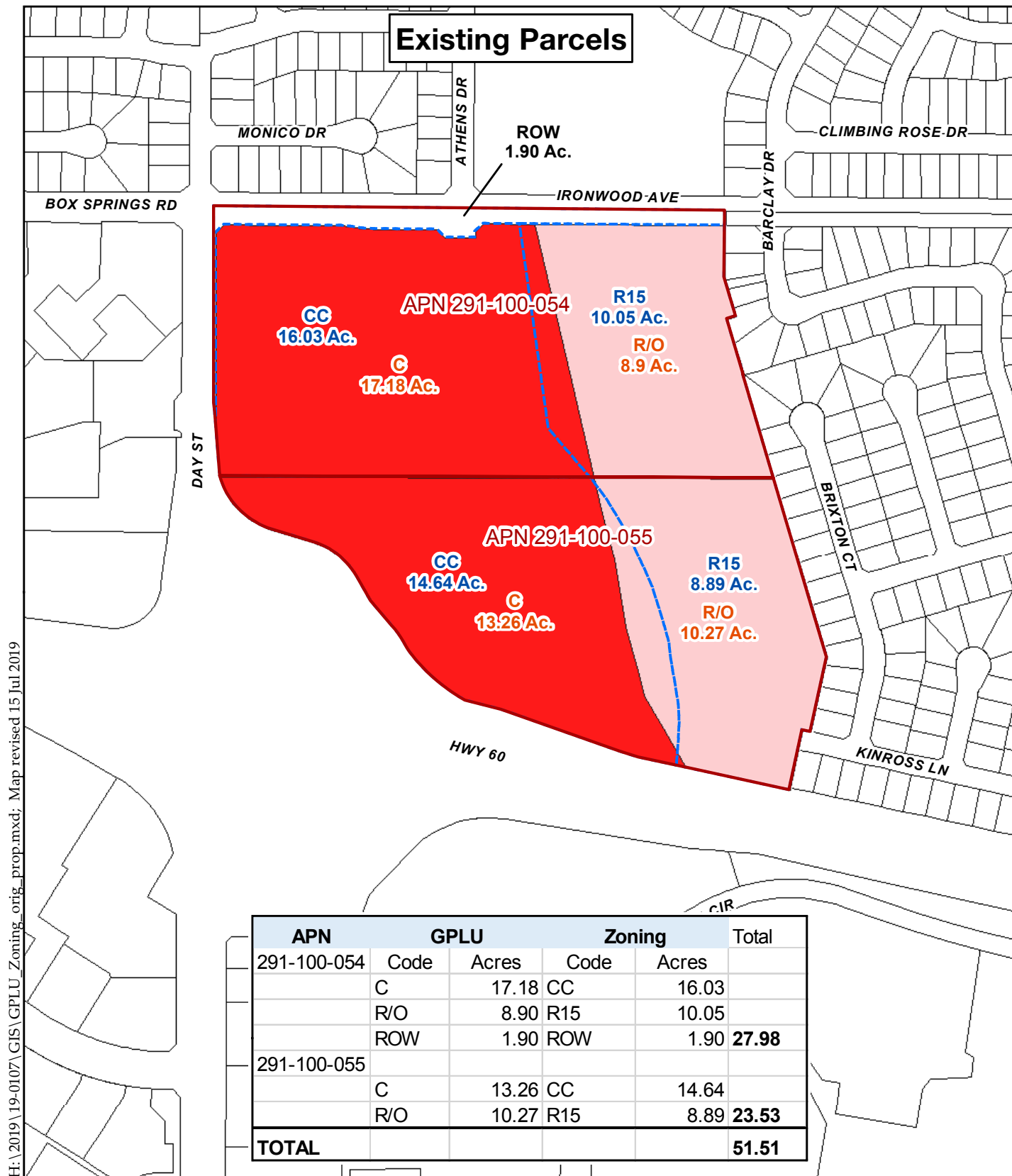
**BENCHMARK**  
 1965 # HP 106 (PID #86564)  
 ELEV. = 1849.42' (NAVD 83)  
 DESCRIBED BY METRO WATER DIST. SO. CALIFORNIA RIVERSIDE, FROM THE INTERSECTION OF INTERSTATE 2 OFF RAMP, PROCEED 0.8 MILE (1.3 KM) WEST ALONG A FINY TO ALEXANDER ST, 44 FEET (13.4 M) SOUTH OF AL 15.2 M) EAST OF ALEXANDER TO A 4 FOOT (1.2 M) BY CATCH BASIN ON SOUTH SIDE OF BLVD. SET A MDSZ STAMPED HP 106 1944 FLUSH ON TOP OF THE NORTHEAST AND 15 FEET (0.5 M) BACK OF CURB FACE AND 6 INCH REFERENCE MHD FB 4205 06 022.

**GENERAL INFORMATION**  
 1. THOMAS BROS. MAP BOOK PAGE T11 GRID. A2.  
 2. THIS MAP INCLUDES THE ENTIRE CONTIGUOUS OWNER'S PROJECT IS NOT WITHIN A SPECIFIC PLAN.  
 4. EASEMENTS OF RECORD ARE PLOTTED HEREON.  
 5. PROJECT IS WITHIN MORENO VALLEY ZONE A (P&R) AND ZONE C (ARTERIAL STREET LIGHTS) COMMUN LAND IS NOT WITHIN A SPECIAL STUDIES ZONE.  
 6. LAND IS SUBJECT TO LOW LIQUEFACTION.  
 7. LAND IS SUSCEPTIBLE TO SUBSIDENCE.  
 8. NO EXISTING STRUCTURES OR DWELLINGS ON SITE.  
 9. THE PROJECT IS IN THE SANTA ANA RIVER WATERS II. FLOOD ZONE X, AREA OF MINIMAL FLOODING PER I.

**SHEET INDEX**  
 NUMBER DESCRIPTION  
 1 TENTATIVE PARCEL MAP  
 2 LEGAL DESCRIPTION & STREET SECTION

Figure 4, Tentative Parcel Map 37750

Attachment: Exhibit A - Initial Study (4070 : General Plan Amendment PEN19-0151, Change of Zone



F:\2019\19-0107\GIS\GPLU\_Zoning\_orig\_prop.mxd; Map revised 15 Jul 2019

Sources: City of Moreno Valley, 2017; Riverside Co. GIS, 2019

Note: Acreages based on Webb Survey

<span style="border: 1px solid black; padding: 2px;">APN</span>	Existing Parcels	<span style="background-color: #f0f0f0; padding: 2px;">R/O</span>	Residential/Office
<span style="border: 1px solid black; padding: 2px;">1</span>	Proposed Parcels	<span style="background-color: #ff0000; color: white; padding: 2px;">C</span>	Commercial
<span style="border: 1px dashed blue; padding: 2px;">CC</span>	Zoning		

**Figure 5, General Plan Amendment and Zone Change**

TPM 37750



Attachment: Exhibit A - Initial Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map

**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.

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Aesthetics                  | <input type="checkbox"/> Agriculture & Forestry Resources | <input type="checkbox"/> Air Quality                        |
| <input type="checkbox"/> Biological Resources        | <input type="checkbox"/> Cultural Resources               | <input type="checkbox"/> Energy                             |
| <input type="checkbox"/> Geology & Soils             | <input type="checkbox"/> Greenhouse Gas Emissions         | <input type="checkbox"/> Hazards & Hazardous Materials      |
| <input type="checkbox"/> Hydrology & Water Quality   | <input type="checkbox"/> Land Use & Planning              | <input type="checkbox"/> Mineral Resources                  |
| <input type="checkbox"/> Noise                       | <input type="checkbox"/> Population & Housing             | <input type="checkbox"/> Public Services                    |
| <input type="checkbox"/> Recreation                  | <input type="checkbox"/> Transportation                   | <input type="checkbox"/> Tribal Cultural Resources          |
| <input type="checkbox"/> Utilities & Service Systems | <input type="checkbox"/> Wildfire                         | <input type="checkbox"/> 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" 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.

Gabriel Diaz  
 Signature  
 Gabriel Diaz  
 Printed Name

5/28/20  
 Date  
 City of Moreno Valley  
 For

Attachment: Exhibit A - Initial Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map

## 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 is significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "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.
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or another 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 Analyses 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 significance.



ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>I. AESTHETICS</b> – Except as provided in <a href="#">Public Resources Code §21099</a> – Modernization of Transportation Analysis for Transit-Oriented Infill Projects – <b>Would the project:</b>				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The City of Moreno Valley’s (City) General Plan (GP) and the GP Environmental Impact Report (EIR) identify Box Springs Mountains, Mount Russell Foothills, Moreno Peak, and the Area as the City’s major scenic resources (GP EIR, p. 5.11-1; GP, pp.7-12 – 7-13). Views of the Box Springs Mountains are visible from the Project site and surrounding areas. However, as noted in the Project Description above, the Project does not propose any development. Therefore, implementation of the Project would not impact the City’s scenic vistas. In addition, for any future development at the Project site, the City’s Municipal Code (MC) 9.16.000 outlines design standards that limit the height of building structures, scale, and color. Specifically, MC 9.16-110 through MC 9.16-160 provide development standards for all projects throughout the City. Through the City’s building permit application process, the City reviews each project to ensure MC standards are met. Therefore, no impacts would occur.</p>				
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The City’s GP Policies 7.74 and 7.75 designate State Route 60 (SR 60), which is located south of the Project site, as a local scenic road and require development along scenic roadways to be visually attractive and to allow for scenic views of the surrounding mountains and Mystic Lake (GP, pp. 9-37 – 9-38). However, there are no sites within the City listed as a state land, nor are there any sites on the National Register of Historic Places (GP 7-4). Further, the Project does not propose any development. Thus, implementation of the Project would not damage scenic resources, including, but not limited to, trees, rock outcroppings, historic buildings within a state scenic highway, or scenic resources within a state scenic highway. Therefore, no impacts would occur.</p>				
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As noted in the Project Description above, although the Project includes a change of zone and a General Plan Amendment (GPA), the total number and type of zoning and GP land use designations will remain the same. As such, the Project site land use designations would remain compatible with the surrounding uses. The Project would be required to adhere to MC 9.16.000 design guidelines. However, the Project does not propose development. Thus, implementation of the Project, would not impact the existing visual character or quality of public views of the site and its surroundings and would not conflict with applicable zoning and other regulations governing scenic quality and scenic resources within a state scenic highway. Therefore, no impacts would occur.</p>				
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The City’s MC 9.10.110 prohibits operation, activity, sign or lighting fixture exceeding 0.5 foot-candles peering onto adjacent properties and requires all lighting to project downward in order to avoid glare on adjacent properties. As noted in the Project Description above, the Project does not propose development. Thus, implementation of the Project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Therefore, no impacts would occur.</p>				
<p><b>Sources:</b></p> <ol style="list-style-type: none"> <li>1. Project Description</li> <li>2. City of Moreno Valley, <i>General Plan</i>, adopted July 11, 2006. (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf</a>, accessed November 2019.) (GP) <ul style="list-style-type: none"> <li>• Chapter 7 – Conservation Element – Section 7.8 – Scenic Resources</li> </ul> </li> </ol>				

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>3. City of Moreno Valley, <i>Final Environmental Impact Report City of Moreno Valley General Plan</i>, certified July 11, 2006. (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/eir-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/eir-tot.pdf</a>, accessed November 2019.) (GP EIR)</p> <ul style="list-style-type: none"> <li>Section 5.11 – Aesthetics                             <ul style="list-style-type: none"> <li>Figure 5.11-1 – Major Scenic Resources</li> </ul> </li> </ul> <p>4. City of Moreno Valley Zoning Map, revised on August 22, 2019, printed October 10, 2019. (Available at <a href="http://www.moval.org/cdd/pdfs/ZoningMap.pdf">http://www.moval.org/cdd/pdfs/ZoningMap.pdf</a>, accessed November 2019.) (Zoning Map)</p> <ul style="list-style-type: none"> <li>Section 9.10.110 – Light and Glare of the Moreno Valley Municipal Code.</li> <li>Chapter 9.16 – Design Guidelines</li> </ul>				
<p><b>II. AGRICULTURE AND FOREST RESOURCES</b> – 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 Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state’s inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest protocols adopted by the California Air Resources Board.</p> <p><b>Would the project:</b></p>				
<p>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?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The Project site is not classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the Farmland Mapping and Monitoring Program (GP EIR, p. 5.8-3; DOC). thus, implementation of the Project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. Therefore, no impacts would occur.</p>				
<p>b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The Project site is zoned Community Commercial (CC) and Multifamily Residential (R15) and is not under a Williamson Act contract (GP EIR, pp. 5.8-6 – 5.8-9; GP, p. 4-4; Zoning Map). Thus, implementation of the Project would not conflict with existing zoning for agricultural use, or an existing Williamson Act contract. Therefore, no impacts would occur.</p>				
<p>c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in <a href="#">Public Resources Code section 12220(g)</a>), timberland (as defined by <a href="#">Public Resources Code section 4526</a>), or timberland zoned Timberland Production (as defined by <a href="#">Government Code section 51104(g)</a>)?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The Project site is zoned CC and R15 (Zoning Map), which do not include uses for timberland production. Thus, implementation of the Project would not conflict with existing zoning for, or cause rezoning of, forest land, timber land, or timberland zoned for Timberland Production. Therefore, no impacts would occur.</p>				
<p>d) Result in the loss of forest land or conversion of forest land to non-forest use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> There is no forest land in proximity to the Project site. Further, the Project is zoned for CC and R15 (Zoning Map), Community Commercial and Residential uses, respectively. Thus, implementation of the Project would not result in the loss of forest land or conversion of forest land to non-forest use. Therefore, no impacts would occur.</p>				
<p>e) Involve other changes in the existing environment which, due to their location or nature, could result in the conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Attachment: Exhibit A - Initial Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p><b>Response:</b> As noted in the Project Description above, the Project does not propose development. Further, the surrounding area, zoned for similar commercial and residential uses, is built out. Therefore, implementation of the Project would not involve changes in the existing environment that could result in the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. Therefore, no impacts would occur.</p>				
<p><b>Sources:</b></p> <ol style="list-style-type: none"> <li>Project Description</li> <li>City of Moreno Valley, <i>General Plan</i>, adopted July 11, 2006. (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf</a>, accessed November 2019.) (GP) <ul style="list-style-type: none"> <li>Chapter 4 – Parks, recreation, and Open Space – Section 4.2 – Open Space</li> </ul> </li> <li>City of Moreno Valley, <i>Final Environmental Impact Report City of Moreno Valley General Plan</i>, certified July 11, 2006. (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/eir/eir-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/eir/eir-tot.pdf</a>, accessed November 2019.) (GP EIR) <ul style="list-style-type: none"> <li>Section 5.8 – Agricultural Resources <ul style="list-style-type: none"> <li>Figure 5.8-1 – Important Farmlands</li> </ul> </li> </ul> </li> <li>State of California, Department of Conservation, <i>Riverside County Important Farmland 2016, Sheet 1 of 3, 2016</i>. (Available at <a href="https://www.conservation.ca.gov/dlrp/fmmp/Pages/Riverside.aspx">https://www.conservation.ca.gov/dlrp/fmmp/Pages/Riverside.aspx</a>, accessed November 2019.) (DOC)</li> <li>City of Moreno Valley Zoning Map, revised on August 22, 2019, printed October 10, 2019. (Available at <a href="http://www.moval.org/cdd/pdfs/ZoningMap.pdf">http://www.moval.org/cdd/pdfs/ZoningMap.pdf</a>, accessed November 2019.) (Zoning Map)</li> </ol>				
<p><b>III. AIR QUALITY</b> – Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. <b>Would the project:</b></p>				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p><b>Response:</b> The City is located within the South Coast Air Basin (Basin). The South Coast Air Quality Management District (SCAQMD) prepares the Air Quality Management Plan (AQMP) for the Basin (GP EIR, p 5.3-1). The AQMP sets forth a comprehensive program that will lead the Basin into compliance with all federal and state air quality standards. The AQMP's control measures and related emission reduction estimates are based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments (GP, pp. 5-2 – 5-3, 6-19 – 6-20). Accordingly, if a project demonstrates compliance with local land use plans and/or population projections, then the AQMP would have considered such uses when it was developed. Further, the Project would be required to comply with the City's MC 9.10.050 which prohibits operation or activity that would cause the emission of smoke, fly ash, dust fumes, vapors, or gases or other forms of air pollution which exceed the requirement of the SCAQMD or the requirements of any air quality plan or General Plan element adopted by the City. Since the proposed Project consists of subdividing two parcels to four and the difference between the total existing and proposed GP land use and zoning land use acreages would be marginal, then the Project in and of itself would not result in any changes to the existing land use patterns in the Project site. As noted in the Project Description above, the Project will subdivide land and does not propose development. Future implementing projects would require a separate analysis to determine potential impacts of the development proposed as part of those projects. Thus, implementation Project would not conflict with or obstruct implementation of the AQMP. Therefore, impacts would be less than significant.</p>				
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As noted in the Project Description above, the Project will subdivide land and does not propose development. Thus, implementation of the Project would not result in the generation of pollutants. Therefore, no impacts would occur.</p>				

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As noted in the Project Description above, the Project will subdivide land and does not propose development. Thus, implementation of the Project would not expose sensitive receptors to pollutant concentrations. Therefore, no impacts would occur.</p>				
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The City's municipal code, MC 9.10.150, prohibits operations or activity that would emit odorous gases or other odorous matter in such quantities as to be dangerous, injurious, noxious, or otherwise objectionable to a level that is detectable with or without the aid of instruments at or beyond the lot line of the property containing said operation or activity. As noted in the Project Description above, the Project would subdivide land and does not propose development. Thus, implementation of the Project would not result in emissions adversely affecting a substantial number of people. Therefore, no impacts would occur.</p>				
<p><b>Sources:</b></p> <ol style="list-style-type: none"> <li>1. Project Description</li> <li>2. City of Moreno Valley, <i>General Plan</i>, adopted July 11, 2006. (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf</a>, accessed November 2019.) (GP) <ul style="list-style-type: none"> <li>• Chapter 5 – Circulation Element</li> <li>• Chapter 6 – Safety Element – Section 6.6 – Air Quality</li> </ul> </li> <li>3. City of Moreno Valley, <i>Final Environmental Impact Report City of Moreno Valley General Plan</i>, certified July 11, 2006. (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/eir-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/eir-tot.pdf</a>, accessed November 2019.) (GP EIR) <ul style="list-style-type: none"> <li>• Section 5.3 – Air Quality <ul style="list-style-type: none"> <li>- Figure 5.3-1 – South Coast Air Basin</li> </ul> </li> </ul> </li> <li>4. City of Moreno Valley, <i>Moreno Valley Municipal Code</i>, December 2018. (Available at <a href="http://qcode.us/codes/morenovalley/">http://qcode.us/codes/morenovalley/</a>, accessed November 2019.) (MC) <ul style="list-style-type: none"> <li>• Section 9.10.050 – Air Quality of the Moreno Valley Municipal Code</li> <li>• Section 9.10.150 – Odors of the Moreno Valley Municipal Code</li> </ul> </li> </ol>				
<p><b>IV. BIOLOGICAL RESOURCES</b> – Would the project:</p>				
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>Response:</b> A Biological Resources Assessment, Burrowing Owl Habitat Suitability Assessment, and Jurisdictional Delineation was prepared by Jericho Systems Inc. dated November 1, 2019 (JERICHO-A) included as Appendix A of this IS, to document existing biological and regulatory constraints associated with implementation of the Project. To ensure compliance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), as required by the City's GP (GP, p. 5.9-90) Jericho also prepared a MSHCP Consistency Analysis dated November 1, 2019 (JERICHO-B) included as Appendix B of this IS. Lastly, a Focused Burrowing Owl Survey was prepared by Cadre Environmental dated September 3, 2019 (CADRE) included as Appendix C of this IS.</p>				
<p><u>Setting</u>  The Project site is located within the Western Riverside County MSHCP Reche Canyon/Badlands Area and is not located within an MSHCP Criteria Cell, Group, or area identified for conservation. Further, the Project site is not located in an amphibian, criteria area species, mammal, or narrow endemic pant survey area (JERICHO-A, p. 1).</p> <p>Elevations range between 1,770 ft above mean sea level (AMSL) to 1,640 ft AMSL. The Project site is within a heavily urbanized area, bordered to the north by dense single-family housing and an elementary school, to the east by more dense single-family housing, and to the west and south by commercial</p>				

<b>ISSUES &amp; SUPPORTING INFORMATION SOURCES:</b>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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shopping centers. The Project site is bounded on the west by Day Street, on the north by Ironwood Avenue, and on the south by SR60. (JERICHO-B, p.5). An aerial view of the Project site shows drainage/topographical features that traverse the Project site from north to south/southwest (JERICHO-A, pp. 4-5).

Historical images back to September of 1996 show consistent and ongoing clearing/grubbing activities on the Project site. The entire Project site is highly disturbed from recent and historic disking and blading which has prevented any type of notable habitat succession from occurring on the Project site. The disturbed areas on the Project site no longer comprises a native plant community. The Project site supports dense non-native grasslands with remnant native vegetation. (JERICHO-A, p. 5).

Methodology

Prior to the field investigation, reference materials and databases relevant to the Project site were reviewed for the Riverside East and Sunnymead 7.5-minute USGS quadrangles (Quads). The database search included the Sunnymead USGS Quad due to the Project site’s proximity to the Riverside East USGS Quad. The sources reviewed include:

- California Natural Diversity Database (CNDDDB) Rarefind 5;
- CNDDDB Biogeographic Information and Observation System (BIOS);
- USDA Natural Resources Conservation Service (NRCS) Web Soil Survey;
- USFWS National Wetland Inventory;
- Environmental Protection Agency (EPA) Water Program “My Waters” data layers;
- Google Earth Pro historic aerial imagery (1994-2018);
- County/City habitat conservation plans and other sensitive resource policies; and
- RCA MSHCP Information Map.

On October 30 and 31, 2019, field surveys were conducted to identify areas of potentially suitable burrowing owl habitat, individuals, surrogate burrows, and signs of historic or current use of the site by burrowing owl. The burrowing owl habitat suitability assessment was conducted in accordance with the Western Riverside County MSHCP. The surveyors systematically searched the entire Project site by walking transects spaced at approximately 10 meters (approximately 30 ft) apart to allow for 100 percent visual coverage of the ground surface. Due to development directly adjacent to the site, a survey buffer was limited outside of the Project boundary on the adjoining vacant parcel that is not a part of this Project in the north west corner. The surveys were conducted on calm weather days, during peak burrowing owl activity between the morning hours of 7:00 a.m. to 11:00 a.m. and 2:00 p.m. to 5:00 p.m. (JERICHO-A, pp. 2 - 3).

Natural and non-natural substrates were examined for potential burrow sites. All potential burrowing owl burrows encountered were examined for shape, size, molted feathers, whitewash, cast pellets and/or prey remains. Disturbance characteristics and all other animal signs encountered within the survey area were recorded. No limitations significantly affected the results and conclusions given herein. No private property was surveyed without owner permission and buffer area transects were not surveyed within the areas occupied by existing development. Surveys were conducted during the appropriate season to observe the target species, in good weather conditions, by qualified biologists who followed all pertinent protocols. (JERICHO-A, p. 3).

Despite a systematic search of the entire site, no burrowing owls or recent or historic signs (molted feathers, whitewash, cast pellets or prey remains, or whitewash) were observed during the habitat assessment. Further, the extensive urbanization in the surrounding areas lends itself to predators such as dogs and cats. Per the literature review, the nearest documented burrowing owl occurrence is approximately 3 miles west of the survey area. The current Project site conditions are not suitable to support burrowing owl and no evidence of burrowing owl was found in the survey area, which included the entirety of the Project site. (JERICHO-A, p. 6).

Burrowing Owls

Four (4) focused burrowing owl surveys were conducted on August 26th, 28th, 30th, and 31<sup>st</sup> of 2019, beginning one hour before sunrise and ending two hours after sunrise. Pedestrian survey transects were spaced to allow 100 percent visual coverage. To the extent possible and practicable, the distances between transect centerlines were no more than 20 meters (approximately 66 ft) apart. During visual

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<b>ISSUES &amp; SUPPORTING INFORMATION SOURCES:</b>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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surveys, all potentially suitable burrow or structure entrances were investigated for signs of owl occupation, such as feathers, tracks, or pellets, and carefully observed to determine if burrowing owls utilize these features when present. All burrows were monitored at a short distance from the entrance, and at a location that would not interfere with potential owl behavior, when present. (CADRE, p. 6).

Burrowing owl foraging habitat and roost sites were documented within the Project site. However, no burrowing owl or characteristic sign including white-wash, feathers, tracks, or pellets were detected within the Project site (CADRE, p. 8).

Riverine/Riparian Areas and Jurisdictional Waters

The Project site was also evaluated for the presence jurisdictional waters, subject to the federal Clean Water Act (CWA), Porter-Cologne (Porter-Cologne) and California Fish and Game Code (FGC) regulations. Jurisdictional resources subject to the CWA regulations include non-wetland waters and wetland waters of the U.S. (WoUS) whereas jurisdictional resources subject to Porter-Cologne include non-wetland waters and waters of the State (WoS). The California FGC encompasses the resources that constitute a stream or river, including associated riparian vegetation and floodplain. (JERICHO-A, p. 1)

Evaluation of Riparian/Riverine resources followed guidance provided in the MSHCP Section 6.1.2. Evaluation of potential federal jurisdiction followed the regulations set forth in 33 Code of Federal Regulations part 328 and the United States Army Corps of Engineers (USACE) guidance documents. Evaluation of potential state jurisdiction followed guidance in the California FGC and A Review of Stream Processes and Forms in Dryland Watersheds, as well as the Mapping Episodic Stream Activity (MESA) Field Guide. (JERICHO-A, p. 1).

The focus of both the state and federal evaluation was the easternmost and westernmost erosional features that traverse the Project site from north to south/southwest which have historically received storms from the north and conveyed water south through the Project site. Upon first glance at an aerial view, what are perceived as drainage features are in fact erosional topographical features. The Project site's soil consists of Monserate sandy loam (5-8 percent slopes and 8-15 percent slopes, eroded) and Hanford course sandy loam (5-8 percent slopes, eroded). The highly erosive nature of the soil results in deep grooves over time on the landscape as soil is eroded away by hydrological processes. This is a typical condition in the Badlands Area. (JERICHO-A, pp. 4 - 5).

The easternmost feature is devoid of any sign of surface flow and is choked with non-native grasses and ruderal vegetation, therefore it does not meet jurisdictional criteria. The westernmost feature receives annual storm flows and urban runoff directed from a concrete culvert under Ironwood Road and supports a few Mulefat and Sandbar Willow plants. This feature is a closed (i.e., non-flow through) man-made system that begins as a development storm drain collection system and ends at a freeway catchment basin. If the flows were redirected or cut off, as is the case with the easternmost erosional feature, then the four Sandbar Willow and 10 Mulefat plants would cease to exist and this feature would resemble the feature to the east, which is choked with non-native grasses. Further, the mulefat and willow individuals are short and thin in stature and are very sparsely distributed along the westernmost feature. (JERICHO-A, p. 6).

Mulefat (*Baccharis salicifolia*) is a native shrub in the Sunflower Family (Asteraceae). Mulefat grows in both seasonally or intermittently flooded habitats and stands are inherently variable depending on the amount of inundation and scouring. Onsite mulefat occurs in sandy soils with low organic matter and soils tend to be rocky alluvium. This species has a wetland indicator status of facultative, meaning that it usually occurs in riparian systems 33 to 67 percent of the time, but is occasionally found in uplands. (JERICHO-A, p. 6).

Sandbar Willow (*Salix exigua*), also called narrowleaf willow, is a clonal shrub in the Willow Family (Salicaceae). Sandbar Willow Thickets occur onsite in association with mulefat. Sandbar willow is a winter-deciduous clonal shrub, typically reaching 15 feet (5 m) or more in height. Onsite, the four willow shrubs observed, reach approximately four to five feet in height. This species occurs in well-drained rocky substrates and has a wetland indicator status of facultative wetland, meaning that it usually occurs in riverine/wetlands 67 to 99 percent of the time, but is occasionally found in non-riverine/wetlands. (JERICHO-A, p. 6).

Attachment: Exhibit A - Initial Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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Hence, the presence of these two plant species within the westernmost feature does not by itself create a circumstance meeting the criteria of a riverine/riparian area, particularly when the man-made, non-flow through nature of the feature is considered. Thus, the westernmost feature is not considered a riverine/riparian area. (JERICHO-A, pp. 6-7).

Additionally, these features do not meet the criteria of WoUS, WoS, FGC streambed waters or riverine/riparian areas. This also holds true for the westernmost feature where Mulefat and Sandbar Willow plants exist. The only reason that this type of vegetation occurs here is because the development to the north created a storm drain system that directs, and outlets, concentrated flows here. The flow regime is man-made, beginning as a collection system and ending at a freeway catchment basin. If the flows were redirected or recycled, then these plants would cease to exist. (JERICHO-A, p. 7). Thus, there are is no riverine/riparian areas or jurisdictional features onsite.

Plants/Vegetation

Plant species identified include brittlebush (*Encelia farinosa*), coastal heron's bill (*Erodium cicutarium*), common dandelion (*Taraxacum officinale*), red brome (*Bromus madritensis ssp. rubens*), London rocket (*Sysimbrium irio*), Jerusalem thorn (*Parkinsonia aculeata*), prickly lettuce (*Lactuca serriola*), rattail sixweeks grass (*Festuca myuros*), rattlesnake sandmat (*Euphorbia albomarginata*), slender wild oats (*Avena fontinalis*), summer mustard (*Hirschfeldia incana*), tocalote (*Centaurea melitensis*), turkey mullein (*Croton setigerus*), western forget-me-not (*Cryptantha circumscissa*), and western ragweed (*Ambrosia psilostachya*). (JERICHO-A, p. 5).

Vegetation observed in the bottom of the westernmost erosional feature includes sparse patches of arroyo willow (*Salix lasiolepis*), California sagebrush (*Artemesia californica*), curcly dock (*Rumex crispus*), deerweed (*Acmispon glaber*), fountain grass (*Pennisetum setaceum*), mulefat (*Baccharis salicifolia*), red castor bean (*Ricinus cummunis*), tamarisk (*Tamarisk ramossima*) and telegraph weed (*Heterotheca grandiflora*). This particular erosional feature receives concentrated flows from a concrete culvert that collects and conveys storm drain flows coming from the development to the north through the site under the 60 freeway to a freeway catch basin. (JERICHO-A, p. 5).

Wildlife

Riparian birds covered under the MSHCP such as the Least Bell's vireo (*Vireo bellii pusillus*), Southwestern willow flycatcher (*Empidonax trallii extimus*) and Yellow-billed cuckoo (*Coccyzus americanus*) are found only in well-developed riparian habitat. No habitat features suitable for any riparian birds exist on site. The entire Project site is surrounded by highly urbanized uses including freeways, roadways and dense single family residential. The shrub canopy is extremely sparse, fragmented, and too close to urbanized uses to be used by riparian birds. Therefore, evaluations for the presence of riparian birds were not warranted or required. (JJERICHO-B, p. 12).

Nesting Birds

The vegetation communities and trees documented on the Project site have the potential to support birds protected under the Migratory Bird Treaty Act (MBTA) (JERICHO-B, p. 7). Potential direct/indirect impacts to regulated nesting birds will require compliance with the California FGC, Sections 3503, 3503.5, and 3513.

Vernal Pools

Vernal pools are seasonally inundated, ponded areas that only form in regions where specialized soil and climatic conditions exist. During fall and winter rains typical of Mediterranean climates, water collects in shallow depressions where downward percolation of water is prevented by the presence of a hard pan or clay pan layer (duripan) below the soil surface. Later in the spring when rains decrease and the weather warms, the water evaporates, and the pools generally disappear by May. The shallow depressions remain relatively dry until late fall and early winter with the advent of greater precipitation and cooler temperatures. Vernal pools provide unusual "flood and drought" habitat conditions to which certain plant and wildlife species have specifically adapted as well as invertebrate species such as fairy shrimp. (JERICHO-B, p. 10).

<b>ISSUES &amp; SUPPORTING INFORMATION SOURCES:</b>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>One of the factors for determining the suitability of the habitat for fairy shrimp would be demonstrable evidence of seasonal ponding in an area of topographic depression that is not subject to flowing waters. These astatic pools are typically characterized as vernal pools. More specifically, vernal pools are seasonal wetlands that occur in depression areas without a continual source of water. They have wetland indicators of all 3 parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season. The determination that an area exhibits vernal pool characteristics and the definition of the watershed supporting vernal pool hydrology is made on a case-by-case basis. (JERICHO-B, p. 11).</p> <p>Such determinations should consider the length of time the area exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. The seasonal hydrology of vernal pools provides for a unique environment, which supports plants and invertebrates specifically adapted to a regime of winter inundation, followed by an extended period when the pool soils are dry. (JERICHO-B, p. 11).</p> <p>The MSHCP lists two general classes of soils known to be associated with special-status plant species; clay soils and Traver-Domino Willow association soils. The specific clay soils known to be associated with special-status species within the MSHCP plan area include Bosanko, Auld, Altamont, and Porterville series soils, whereas Traver-Domino Willows association includes saline-alkali soils largely located along floodplain areas of the San Jacinto River and Salt Creek. Without the appropriate soils to create the impermeable restrictive layer, none of the special-status species associated with vernal pools can occur on the project site. (JERICHO-B, p. 11).</p> <p>A review of recent and historic aerial photographs of the Project site and its immediate vicinity did not provide visual evidence of any astatic or vernal pool conditions on or in the vicinity of the Project site. Soils in this area consist of Monserate sandy loam (5-8 percent slopes, eroded), Hanford course sandy loam (5-8 percent slopes, eroded), Monserate sandy loam (8-15 percent slopes, eroded), Monserate sandy loam (shallow, 5-15 percent slopes, eroded). No ponding was observed on-site, further supporting the fact that the drainage patterns currently occurring on the Project site do not follow hydrologic regimes needed for vernal pools, or astatic ponds. Thus, no vernal pools or suitable fairy shrimp habitat is present at the Project site. And as discussed above, no special-status plant or wildlife species associated with vernal poos were observed and the soil type on site does not support the potential for vernal pools. Additionally, the routine disturbances onsite as well as compacted soils preclude vernal pools from existing onsite. (JERICHO-B, pp.10 - 11).</p> <p>As noted in the above discussion, the Project site does not contain sensitive or special status species identified in local or regional plans. The vegetation communities and trees on the Project site represent potential nesting habitat for common and MSHCP covered sensitive birds. There was no presence of burrowing owls observed. As noted in the Project Description above, the Project will subdivide land but does not propose any development or ground disturbance. However, all future ground disturbing implementing projects would require a 30-day preconstruction survey to determine the presence or absence of burrowing owls and nesting birds. Therefore, with implementation of mitigation measures <b>MM BIO-1</b> and <b>MM BIO-2</b>, direct and indirect impacts to sensitive or special status species will be less than significant.</p> <p><b>MM BIO-1:</b> Prior to grading, a 30-day Preconstruction survey shall be required. A qualified Biologist shall conduct avoidance surveys prior to any vegetation removal or soil disturbance at the Project site. The first survey shall take place 30 days prior to initiating ground disturbance and a second survey shall take place within 24 hours prior to ground disturbance. If burrowing owls are present, the Project Biologist shall consult with the California Department of Fish and Wildlife to determine if a Habitat Loss Mitigation and Relocation Program is warranted. Based on the location of the owls and if avoidance of the area is not feasible, mitigation options may range from passive relocation to habitat replacement.</p>				



ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p><b>MM BIO-2:</b> Prior to grading, a qualified Biologist shall be retained to conduct preconstruction nesting bird survey(s) during the nesting period (February 16<sup>th</sup> through August 31). Nesting bird survey(s) shall be conducted no sooner than 14 days prior to initiation of ground disturbing activities, to document the presence or of absence of nesting birds within or directly adjacent to (i.e., within 100 ft of) the construction zone. If no active nests are found during the survey, construction activities may proceed. A qualified Biologist shall serve as a biological monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts on these nests occur.</p> <p>If active nests are documented during the preconstruction survey(s), species-specific measures shall be prepared by the Project Biologist and implemented to prevent abandonment of the active nest. At a minimum, grading in the vicinity of an active nest shall be monitored by a qualified Biologist. Grading in the vicinity of the nest shall be postponed until the young birds have fledged. A minimum exclusion buffer of 100 ft shall be maintained during construction, depending on the avian species and location of nest. The perimeter of the nest setback zone shall be fenced or adequately demarcated with stakes and flagging at 20-ft intervals, and construction personnel and activities shall be restricted from the area.</p> <p>If construction is proposed to be initiated during breeding season or active relocation is proposed, a burrowing owl mitigation plan shall be developed based on the City of Moreno Valley, CDFW, and USFWS requirements for the relocation of individuals to a predetermined preserve. A survey report by a qualified Biologist verifying that no active nests are present, or that the young have fledged, shall be submitted to City of Moreno Valley prior to initiation of construction activities in the nest-setback zone. A final report of the findings, prepared by a qualified Biologist, shall be submitted to City of Moreno Valley prior to construction-related activities that have the potential to disturb any active nests during the nesting season.</p> <p>Any nest permanently vacated for the season shall not require protection. If construction takes place outside of the nesting season, i.e., between September 1st and February 15th, no preconstruction nesting bird surveys shall be required.</p>				
<p>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?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As noted in Response 4a above, there is no riparian habitat or other sensitive natural communities identified. Further, the Project will only subdivide land but does not propose any development. Thus, implementation of the Project would not affect any riparian habitat or other sensitive natural community. Therefore, no impacts would occur.</p>				
<p>c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As noted in Response 4a above, there are no vernal pools or wetlands present on the Project site. Further, the onsite soil type does not support the potential for vernal pools. Last, the Project will only subdivide land and does not propose any development. Thus, implementation of the Project would not affect protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Therefore, no impacts would occur.</p>				
<p>d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with an established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<b>ISSUES &amp; SUPPORTING INFORMATION SOURCES:</b>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p><b>Response:</b> As noted in Response 4a above, the Project site is within a heavily urbanized area, bordered by dense single-family housing on the west, north, and east and bounded on the west by Day Street, on the north by Ironwood Avenue, and on the south by SR60. The entire site is highly disturbed from recent and historic disking and blading which has prevented any type of notable habitat succession from occurring on site. The disturbed areas on the Project site no longer comprise a native plant community. The Project site supports dense non-native grasslands with remnant native vegetation. As such, the Project site would not support a wildlife corridor or a native wildlife nursery. Further the Project will subdivide land and does not propose development. Thus, implementation of the Project would not interfere with the movement of any native resident or migratory fish or wildlife species, or with an established native resident or migratory wildlife corridors, nor would it impede the use of native wildlife nursery sites. Therefore, no impacts would occur.</p>				
<p>e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The City's MC 9.17.040 (Street Trees) lists approved species of trees for streets and species where street trees shall be planted. However, as noted in the Project Description above, the Project will subdivide land and does not propose development or ground disturbance. Thus, implementation of the Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Therefore, no impacts would occur.</p>				
<p>f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or another approved local, regional, or state habitat conservation plan?</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>Response:</b> The Project site is located within the Western Riverside County MSHCP Reche Canyon/Badlands Plan Area and is not located within an MHSCP Criteria Cell, Group, or area identified for conservation (JERICHO-A, p. 1). The Project will not impact riparian/riverine/vernal pools habitat (MSHCP Section 6.1.2), narrow endemic plant species survey area (MSHCP Section 6.1.3), criteria area species survey area (MSHCP Section 6.3.2), or Guidelines Pertaining to Urban/Wildlands Interface (MSHCP Section 6.1.4) (JERICHO-B, pp. 9 – 15; CADRE, p. 8). The Project site is within a burrowing owl survey area and surveys were conducted to determine presence/absence of owls. Burrowing owl foraging habitat and roost sites were documented within the Project site. However, no burrowing owl or characteristic sign including white-wash, feathers, tracks, or pellets were detected within the Project site (CADRE, p. 8). To avoid direct and indirect impacts, the Project will be required to implement mitigation <b>MM BIO-1</b> and <b>MM BIO-2</b>, which requires a preconstruction survey for burrowing owl and nesting birds prior to ground disturbance initiated by future development projects. Therefore, with implementation of mitigation measures impacts are considered to be less than significant.</p>				
<p><b>Sources:</b></p> <ol style="list-style-type: none"> <li>1. City of Moreno Valley, <i>Final Environmental Impact Report City of Moreno Valley General Plan</i>, certified July 11, 2006. (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/eir-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/eir-tot.pdf</a>, accessed December 2019.) (GP EIR)             <ul style="list-style-type: none"> <li>• Section 5.9 – Biological Resources                 <ul style="list-style-type: none"> <li>- Figure 5.9-3 – Project Site Location within the MSHCP Area</li> <li>- Figure 5.9-4 – Reche Canyon/Badlands Area Plan</li> </ul> </li> </ul> </li> <li>2. City of Moreno Valley, <i>Moreno Valley Municipal Code</i>, December 2018. (Available at <a href="http://qcode.us/codes/morenovalley/">http://qcode.us/codes/morenovalley/</a>, accessed December 2019.) (MC)             <ul style="list-style-type: none"> <li>• Section 9.17.030 G – Heritage Trees</li> <li>• Moreno Valley Municipal Code Chapter 8.60 – Threatened and Endangered Species</li> </ul> </li> <li>3. Riverside Conservation Authority Western Riverside County, <i>RCA MSHCP Information Map</i>. (Available at <a href="http://www.wrc-rca.org/about-rca/multiple-species-habitat-conservation-plan/">http://www.wrc-rca.org/about-rca/multiple-species-habitat-conservation-plan/</a>, accessed December 2019.)</li> <li>4. Jericho Systems <i>Biological Resources Assessment, Burrowing Owl Habitat Suitability Assessment, and Jurisdictional Delineation</i>, November 2019. (Jericho-A). Appendix A</li> <li>5. Jericho Systems, <i>Western Riverside County Multiple Species Habitat MSHCP Consistency Analysis</i>, November 2019. (Jericho-B). Appendix B</li> <li>6. Cadre Environmental, <i>MSHCP Focused Burrowing Owl Surveys for the 51.51-Acre Ironwood Avenue TPM 37750 Project, City of Moreno Valley</i>, September 2019. (CADRE). Appendix C</li> </ol>				

Attachment: Exhibit A - Initial Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>V. CULTURAL RESOURCES</b> – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to <a href="#">§15064.5?</a>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>Response:</b> The GP indicates that there are no sites within the City listed as a state landmark, nor are there any sites on the National Register of Historic Places (GP, p. 7-4). The GP EIR further indicates that the Project site is not a City historic resource or prehistoric site and is within a low potential paleontological resource sensitive area (GP EIR pp. 5.10-3, 5.10-8, 5.10-11). Nevertheless, a Cultural Resources Assessment was prepared for the Project by BCR Consulting LLC dated November 22, 2019 (BCR) to determine impacts to cultural resources at the Project site and is included in Appendix D of this IS.</p> <p>The preparation of the Cultural Resource Assessment entailed a records search and a field survey. The records search was conducted at the Eastern Information Center (EIC), the local clearinghouse for cultural resource records search. BCR reviewed the status of all recorded historic and prehistoric cultural resources on or near the Project site, as well as survey and excavation reports completed within one mile of the Project site. Additional resources reviewed included the National Register of Historic Places, the California Register of Historical Resources, and documents and inventories published by the California Office of Historical Preservation. These include the lists of California Historical Landmarks, California Points of Historical Interest, Listing of National Register Properties, and Inventory of Historic Structures. The field survey was conducted on July 16, 2019 by walking parallel 15-meter transects across as much of the Project site as possible. Some small portions of the Project site could not be traversed due to vegetation, so they were not surveyed. Soil exposures were carefully inspected for evidence of cultural resources. (BCR, p. 5)</p> <p>Research completed through the EIC revealed that 22 cultural resource studies have taken place at or near the Project site, resulting in the recordation of 32 cultural resources within one mile of the Project site. Of the 22 previous studies, two have assessed the Project site resulting in no cultural resources recorded within its boundaries. (BCR, p. 5).</p> <p>Artificial disturbances were severe and consisted of mechanical weed abatement over most of the Project site, grading for dirt trails, and some modern dumping. Surface visibility was approximately 70 percent. Sediments included sandy silt with some gravels, and the sparse vegetation was dominated by seasonal grasses. The field survey did not identify the presence of any cultural resources. However, since numerous cultural resources have been recorded in the vicinity (some with buried components), the Project site is considered sensitive for buried cultural resources. Based on these results, the cultural resources assessment recommends that a professional archaeological monitor be present to monitor any ground-disturbing activities associated with the Project, if any. (BCR, p. 6.). This recommendation has been incorporated as mitigation measures <b>MM CULT-1</b> through <b>MM CULT-3</b> to ensure impacts remain less than significant.</p> <p>If human remains are encountered during any Project activities, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner determines origin and disposition thereof pursuant to California Public Resources Code Section 5097.98. If human remains are encountered, the Riverside County Coroner would be required to be contacted to determine the disposition thereof. To ensure this is accomplished, the Project will further be required to implement mitigation measure <b>MM CULT-4</b>. However, as noted in the Project Description above, the Project would only subdivide land and does not propose any development or any ground disturbing activities. Thus, implementation of the Project would not cause a substantial adverse change in the significance of a historical resource, so while no professional archeological monitor is necessary in conjunction with the Project, implementation of mitigation measures <b>MM CULT-1</b> through <b>MM CULT-4</b> would ensure impacts remain less than significant. Therefore, with implementation of mitigation, impacts would be less than significant.</p> <p><b>MM CULT-1</b> During any ground disturbing activities, future implementing projects shall be required to obtain a professional archaeologist to conduct monitoring of all mass grading and trenching activities. The Project Archaeologist shall have the authority to temporarily redirect earthmoving activities in the event that suspected archaeological resources are</p>				

<b>ISSUES &amp; SUPPORTING INFORMATION SOURCES:</b>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<b>MM CULT-2</b>				
<b>MM CULT-3</b>				
<b>MM CULT-4</b>				

unearthed during Project construction. The Project Archaeologist, in consultation with the Consulting Tribes (Soboba Band of Luiseño Indians, Pechanga Band of Luiseño Indians, Rincon Band of Luiseño Indians, and Morongo Band of Mission Indians), the contractor, and the City, shall develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB52 to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. A consulting tribe is defined as a tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB52. Details in the Plan shall include:

- a) Project grading and development scheduling;
- b) The Project archeologist and the Consulting Tribes(s) as defined in CULT-1 shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Consulting Tribes shall make themselves available to provide the training on an as-needed basis;
- c) The protocols and stipulations that the contractor, City, Consulting Tribes and Project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resource evaluation.

The City shall verify that the following note is included on the Grading Plan: "If any suspected archaeological resources are discovered during ground -disturbing activities and the Project Archaeologist or Native American Tribal Representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Tribal Representatives to the site to assess the significance of the find."

If potential historic or cultural resources are uncovered during excavation or construction activities at the project site, work in the affected area must cease immediately and a qualified person meeting the Secretary of the Interior's standards (36 CFR 61), Tribal Representatives, and all site monitors per the Mitigation Measures, shall be consulted by the City to evaluate the find, and as appropriate recommend alternative measures to avoid, minimize or mitigate negative effects on the historic, or prehistoric resource. Determinations and recommendations by the consultant shall be immediately submitted to the Planning Division for consideration and implemented as deemed appropriate by the Community Development Director, in consultation with the State Historic Preservation Officer (SHPO) and any and all Consulting Native American Tribes as defined in CULT-1 before any further work commences in the affected area.

If human remains are discovered, no further disturbance shall occur in the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 24 hours of the published finding to be given a reasonable opportunity to identify the "most likely descendant". The "most likely descendant" shall then make recommendations and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).

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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to <a href="#">§15064.5</a> ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As discussed in Response 5a above, a total of 32 cultural resources were recorded within one-mile of the Project site; however, none were recorded inside the approximately 51.51-acre Project site. BCR requested a records search of the Sacred Lands File (SLF) of the Native American Heritage Commission (NAHC), which did not indicate the presence of any sacred sites or locations or religious or ceremonial importance. In accordance with the recommendations of the NAHC, BCR contacted all Native American consultants listed in the NAHC response letter to determine if they were aware of any records showing that cultural resources exist within or near the Project site. To date, no responses have been received from the Native American consultants. The Assembly Bill 52 (AB 52) and Senate Bill 18 (SB 18) consultation efforts by the City and discussion about the AB 52 and SB 18 consultations is addressed under Section XVIII – Tribal Cultural Resources of this IS.</p> <p>Because no cultural resources were recorded within the Project site and the proposed Project does not entail a development project and does not propose ground disturbance, archaeological resources would not be impacted. Thus, implementation of the Project would not cause a substantial adverse change in the significance of an archeological resource. Therefore, no impacts would occur.</p>				
c) Disturb any human remains, including those interred outside of formally dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As noted in the Project Description above, the Project will subdivide land and does not propose development. There is no potential for ground disturbance. Thus, implementation of the Project would not disturb any human remains. Therefore, no impacts would occur.</p>				
<p><b>Sources:</b></p> <ol style="list-style-type: none"> <li>1. Project Description</li> <li>2. City of Moreno Valley, <i>General Plan</i>, adopted July 11, 2006. (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf</a>, accessed November 2019.) (GP) <ul style="list-style-type: none"> <li>• Chapter 7 – Conservation Element – Section 7.2 – Cultural and Historical Resources</li> </ul> </li> <li>3. City of Moreno Valley, <i>Final Environmental Impact Report City of Moreno Valley General Plan</i>, certified July 11, 2006. (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/ieir-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/ieir-tot.pdf</a>, accessed December 2019.) (GP EIR) <ul style="list-style-type: none"> <li>• Section 5.10 – Cultural Resources <ul style="list-style-type: none"> <li>- Figure 5.10-1 – Locations of Listed Historic Resource Inventory Structures</li> <li>- Figure 5.10-2 – Location of Prehistoric Sites</li> <li>- Figure 5.10-3 – Paleontological Resource Sensitive Areas</li> </ul> </li> </ul> </li> <li>4. BCR Consulting, Inc., <i>Cultural Resources Assessment Towngate Highlands Project, Moreno Valley</i>, November 2019. (BCR). Appendix D</li> </ol>				
<b>VI. ENERGY – Would the project:</b>				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The City is dependent on outside sources of energy, including electricity and fossil fuels. State and federal institutions, as well as the private sector, are responsible for the supply and price of electricity. Electricity used within the City is generated both in the region and at distant locations in the western United States. Electricity is derived from nonrenewable fossil fuels, such as natural gas, renewable wind energy, waterpower, and other sources. The City and Southern California Edison distribute electricity within the City. (GP, p. 7-10).</p> <p>As noted in the Project Description above, the Project consists of subdividing two parcels into four, and the difference between the total existing and proposed GP land use and zoning land use acreage is marginal. Generally, the Project would result in slightly more commercial than residential land use acreage, which may decrease energy use. However, no development is proposed as part of the Project. Since no development is proposed, energy resources such as electricity, natural gas, and other types of fuel would not be used. Thus, since no development or construction is proposed, implementation of the</p>				

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Project would not use energy that may led to wasteful, inefficient, or unnecessary consumptions of energy resources during Project construction or operation. Therefore, no impacts would occur.				
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The City recognizes the need to reduce energy use and greenhouse gas emissions and become a more sustainable community. In October 2012, the City approved the Energy Efficiency and Climate Action Strategy, a policy document, which identifies ways in which the City can reduce energy and water consumption, and greenhouse gas emissions as an organization. In addition, the <i>Energy Efficiency and Climate Action Strategy</i> outlines actions the City can encourage and community members can employ to reduce their own energy and water consumption and greenhouse gas emissions (GP, p. 7-12).</p>				
<p>As noted in the Project Description above, the Project consists of subdividing two parcels into four and the difference between the total existing and proposed GP land use and zoning land use acreage would be marginal. Generally, the Project would result in slightly more commercial than residential land use acreage, which may decrease energy use. However, no development is proposed by the Project. Thus, implementation of the Project would not conflict with or obstruct any state or local plan for renewal energy or energy efficiency. Therefore, no impacts would occur.</p>				
<p><b>Sources:</b></p> <ol style="list-style-type: none"> <li>1. Project Description</li> <li>2. Moreno Valley General Plan, adopted July 11, 2006 (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf</a>, accessed November 2019.) (GP) <ul style="list-style-type: none"> <li>• Chapter 7 – Conservation Element – Section 7.6 – Energy Resources</li> </ul> </li> <li>3. City of Moreno Valley, Energy Efficiency and Climate Action Strategy, dated October 2012 (Available at <a href="http://www.moval.org/pdf/efficiency-climate112012nr.pdf">http://www.moval.org/pdf/efficiency-climate112012nr.pdf</a>, accessed March 10, 2020.).</li> </ol>				
<p><b>VII. GEOLOGY AND SOILS – Would the project:</b></p>				
<p>a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:</p>				
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 <a href="https://www.conservation.ca.gov/cgs/Documents/SP_042.pdf">https://www.conservation.ca.gov/cgs/Documents/SP_042.pdf</a>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> There are three major faults/fault zones that directly affect Moreno Valley. They are the southern section of the San Andreas Fault, the San Jacinto Fault Zone, and the Elsinore Fault Zone. The San Jacinto Fault Zone is considered to be the most active fault in Southern California and is the closest fault to Moreno Valley (Local Hazard Mitigation Plan (LHMP), p.38). The San Jacinto Fault is the closest delineated Alquist-Priolo Earthquake fault to the City (GP, p. 6-17; GPEIR, p. 5.6-4). The San Jacinto Fault is located approximately 6.60 miles east of the Project site. Given the distance from this fault, implementation of the Project would not directly or indirectly cause the risk of loss, injury or death involving a rupture of a known earthquake fault. Further, the Project does not propose any development. Therefore, no impacts would occur.</p>				
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> Earthquake-generated ground shaking is the most critical and potentially damaging earthquake effect in the City. The San Jacinto fault is the closest potential source of strong seismic ground shaking. Most loss of life and injuries that occur during an earthquake are related to the collapse of buildings and secondary damage (GP EIR, p 5.6-7).</p>				
<p>This Project would be required to comply with standards and regulations from the California Occupational Safety and Health Administration (Cal-OSHA) and all the requirements of the current edition of the California Building Code (CBC). These standards and regulations are designed to reduce construction worker, maintenance worker, and the public's exposure to hazardous impacts, including earthquake hazards. As noted in the Project Description above, the Project does not propose development. Thus,</p>				

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implementation of the Project would not directly or indirectly cause the risk of loss, injury or death involving strong seismic ground shaking. Therefore, no impacts would occur.				
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> Liquefaction occurs when shallow, fine to medium-grained sediments saturated with water are subjected to strong seismic ground shaking. It generally occurs when the underlying water table is 50 ft or less below the surface. The City has historically seen no evidence of liquefaction events occurring in the community, nor has any geotechnical report submitted to the City identified liquefaction hazards (LHMP, p. 42). As indicated in the GP EIR, the Projects site is located in the northern part of the City, which has a very low susceptibility to liquefaction (GP EIR, p 5.6-8). Thus, implementation of the Project would not directly or indirectly cause the risk of loss, injury or death involving ground failure, including liquefaction. Therefore, no impacts would occur.</p>				
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> "Slow moving" landslides tend to occur in the eastern portion of the City, near Gilman Springs Road (GP EIR, p. 5.6-3). The Project site is located approximately 9.9 miles west of Gilman Springs Road. Further, as noted in the Project Description above, the Project does not propose development. Thus, implementation of the Project would not directly or indirectly cause the risk of loss, injury or death involving landslides. Therefore, no impacts would occur.</p>				
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The Project site is located within the Cieneba-Rock Land-Fallbrook soil association. The Cieneba-Rock Land-Fallbrook soil association is found on uplands located in the Box Springs Mountains area, and extends east to Reche Canyon, and into the Mount Russell area. The Cieneba-Rock Land-Fallbrook soil consists of somewhat excessively drained soils on undulating steep slopes. Soil stability near the Project site is generally considered fair with marginal potential for erosion (GP EIR, p. 5.6-3).</p> <p>As noted in the Project Description above, the Project does not propose development and no ground disturbance would occur. Further, per MC 8.21.160, a grading permit and an erosion control plan would be required for all projects that would require grading (MC 8.21.160). Pursuant to existing regulatory requirements, any project over an acre that would result in ground disturbance would be required to obtain a National Pollutant Elimination System (NPDES) general construction permit from the State Water Resources Control Board and prepare a Storm Water Pollution Prevention Plan (SWPPP) prior to the start of construction activities. The SWPPP would incorporate applicable Best Management Practices (BMPs) to reduce loss of topsoil or substantial erosion. Thus, implementation of the Project would not result in soil erosion or the loss of topsoil. Therefore, no impacts would occur.</p>				
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 off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The Project site lies on bedrock geology known as the Perris Block, which is considered to be relatively stable (GP EIR, p 5.6-9). This structural unit is located within the Peninsular Range Geomorphic Province, one of the major geologic provinces in Southern California (GP EIR, p 4-1). The Project site is located in Cieneba-Rock Land-Fallbrook soil which has a marginal potential for collapse (GP EIR, p.5.6-3). However, as noted in the Project Description above, the Project does not propose development and no ground disturbance would occur. Thus, implementation of the Project would not lead to on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. Therefore, no impacts would occur.</p>				
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The Project site is located in soil that is considered to have poor to fair stability (GP EIR, p. 5.6-3). Expansive soil is any soil with an expansion index is twenty (20) or greater. (Table 18-1-B of the Uniform Building Code (1994).) Some soils with poor to fair stability are considered to be potentially expansive. The City requires grading permit applications to include soils engineering reports and, when necessary, geology reports to determine whether soil is expansive (GP EIR, p. 5.6-4). However, as noted</p>				

Attachment: Exhibit A - Initial Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
in the Project Description above, the Project does not propose development and no ground disturbance would occur. Thus, implementation of the Project would not result in the creation of direct or indirect risks to life or property. Therefore, no impacts would occur.				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Response:</b> As noted in the Project Description above, the Project does not propose development. Thus, implementation of the Project would not necessitate the use of septic tank or alternative wastewater disposal system. Therefore, no impacts would occur.				
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Response:</b> As noted in the Project Description above, the Project does not propose development and no ground disturbance would occur. Thus, implementation of the Project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Therefore, no impacts would occur.				
<p><b>Sources:</b></p> <ol style="list-style-type: none"> <li>1. Project Description</li> <li>2. City of Moreno Valley, <i>General Plan</i>, adopted July 11, 2006. (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf</a>, accessed November 2019.) (GP) <ul style="list-style-type: none"> <li>• Chapter 6 – Safety Element – Section 6.5 – Geologic Hazards <ul style="list-style-type: none"> <li>- Figure 6-3 – Geologic Faults &amp; Liquefaction</li> </ul> </li> </ul> </li> <li>3. City of Moreno Valley, <i>Final Environmental Impact Report City of Moreno Valley General Plan</i>, certified July 11, 2006 (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/eir-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/eir-tot.pdf</a>, accessed December 2019.) (GP EIR) <ul style="list-style-type: none"> <li>• Section 5.6 – Geology and Soils <ul style="list-style-type: none"> <li>- Figure 5.6-1 – Geology</li> <li>- Figure 5.6-2 – Seismic Hazards</li> </ul> </li> </ul> </li> <li>4. Local Hazard Mitigation Plan, City of Moreno Valley Fire Department, adopted October 4, 2011, amended 2017. (Available at <a href="http://www.moval.org/city_hall/departments/fire/pdfs/haz-mit-plan.pdf">http://www.moval.org/city_hall/departments/fire/pdfs/haz-mit-plan.pdf</a>, accessed December 2019.) (LHMP) <ul style="list-style-type: none"> <li>• Chapter 4 – Earthquake</li> <li>• Chapter 8 – Landslide</li> </ul> </li> <li>5. City of Moreno Valley, <i>Moreno Valley Municipal Code</i>, December 2018. (Available at <a href="http://qcode.us/codes/morenovalley/">http://qcode.us/codes/morenovalley/</a>, accessed December 2019.) (MC) <ul style="list-style-type: none"> <li>• Section 8.21.160 – Erosion Control</li> </ul> </li> </ol>				
<b>VIII. GREENHOUSE GAS EMISSIONS – Would the project:</b>				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Response:</b> As noted in the Project Description above, the Project consists of subdividing two parcels into four and the difference between the total existing and proposed GP land use and zoning land use acreages would be marginal. Generally, the Project would result in slightly more commercial than residential land use acreage, which may increase greenhouse emissions. However, no development is proposed as part of the Project. Thus, implementation of the Project would not generate greenhouse gas emissions, either directly or indirectly. Therefore, impacts would be less than significant.				
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Response:</b> As noted in the Project Description above, the Project does not propose development and no ground disturbance would occur. Further, since the proposed Project consists of subdividing two parcels into four and the difference between the total existing and proposed GP land use and zoning land use acreages would be marginal, the Project in and of itself would not result in any substantial changes to the existing land use patterns within the Project site. As such, the Project would not conflict with Assembly Bill 32's (AB 32) goals for the statewide reduction of GHG emissions, nor would it conflict				



ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>with the City's <i>Energy Efficiency and Climate Action Strategy</i> policy document that identifies potential programs and policies to reduce overall City energy consumption and increase the use of renewable energy. Thus, implementation of the Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emission of greenhouse gases. Therefore, no impacts would occur.</p>				
<p><b>Sources:</b>                      Project Description                      1. City of Moreno Valley, Energy Efficiency and Climate Action Strategy, 2012. (Available at <a href="http://www.moreno-valley.ca.us/pdf/efficiency-climate112012nr.pdf">http://www.moreno-valley.ca.us/pdf/efficiency-climate112012nr.pdf</a>, accessed December 2019.)                      2. California State Legislature. Assembly Bill No. 32, 2006. (Available at <a href="https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=200520060AB32">https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=200520060AB32</a>, accessed December 2019.) (AB32)</p>				
<p><b>IX. HAZARDS AND HAZARDOUS MATERIALS – Would the project:</b></p>				
<p>a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As noted in the Project Description above, the Project does not propose development, and therefore would not involve any operation by which potential hazardous materials would be transported, used, or disposed of. Thus, implementation of the Project would not create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, no impacts would occur.</p>				
<p>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?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As noted in the Project Description above, the Project does not propose development. Accordingly, there is no proposed construction of building structures or operation of building structures. Thus, implementation of the Project would not create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Therefore, no impacts would occur.</p>				
<p>c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The Project Site is appropriately 85 ft from Box Spring Elementary School, located at 11900 Athens Drive, Moreno Valley, California. However, as noted in the Project Description above, the Project does not propose development. Thus, implementation of the Project would not have the potential to emit hazardous emissions, nor would it involve the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing school. Therefore, no impacts would occur.</p>				
<p>d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to <a href="#">Government Code section 65962.5</a> and, as a result, would it create a significant hazard to the public or the environment?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The Project site is not on the Cortese List accessed from the California Environmental Protection Agency (EPA). Thus, implementation of the Project would not create a significant hazard to the public or the environment as a result of its location. Therefore, no impacts would occur.</p>				
<p>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 or excessive noise for people residing or working in the project area?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The proposed Project site is located approximately 2.30 miles south of the March Air Reserve Base (MARB) and is subject to the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan (MARB/IPA LUCP). The MARB/IPA LUCP divides the area close to the airport into zones based on proximity to the airport and perceived risks. The proposed Project site is within the Airport</p>				

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>Compatibility Zone E which represents the area furthest from the MARB/IPA LUCP and the area with the lowest noise impact and lowest flight hazards, requiring review by ALUC for a consistency determination. Further the Project site is not within Accident Potential Zone (APZ) I or APZ II, which are located immediately under the takeoff and landing zone at either end of the MARB runways (GP, p. 6-28; GP EIR, p.5.5-8.). As noted in the Project Description above, the Project does not propose development. Regardless, the Project was reviewed by ALUC and determined to be consistent with the MARB/IPA LUCP July 25, 2019. Thus, implementation of the Project would not result in a safety hazard or excessive noise for people residing or working in the Project site. Therefore, no impacts would occur.</p>				
<p>f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The City's <i>Emergency Operations Plan (EOP)</i> provides guidance for extraordinary emergency situations associated with natural, man-made, and technological disasters. As noted in the Project Description above, the Project does not propose development. As such, vehicular traffic would not be restricted. The Project will subdivide two existing parcels into four parcels and create private shared access to all of the four parcels for ingress and egress. The Project will provide ROW designation for a 66-ft road to extend Athens Drive south of Ironwood Avenue and will provide ROW designation for a 40-ft road for Project access from Day Street between SR 60 and Ironwood Avenue. Thus, implementation of the Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, no impacts would occur.</p>				
<p>g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> Moreno Valley has several areas of concern for wildfires. They are Box Springs Mountain, located in the western end of Moreno Valley and north of SR 60; San Timoteo Canyon, which is located north of SR 60 off Redlands Boulevard; and Reche Canyon, located north of SR 60 and the hills north and south of SR 60 between the Gilman Springs and Jack Rabbit Trail exits (Emergency Operation Plan (EOP), p. 62) However, the Project site is not an area identified as a very high fire severity zone and is not classified as a fire risk (CAL FIRE; GP EIR, Figure 5.5-2; LHMP, Figure 5-2). Further, as noted in the Project Description above, the Project does not propose development. Thus, implementation of the Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. Therefore, no impacts would occur.</p>				
<p><b>Sources:</b></p> <ol style="list-style-type: none"> <li>1. Project Description</li> <li>2. City of Moreno Valley, <i>General Plan</i>, adopted July 11, 2006. (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf</a>, accessed November 2019.) (GP)             <ul style="list-style-type: none"> <li>- Figure 6-5 – Air Crash Hazards</li> </ul> </li> <li>3. City of Moreno Valley, <i>Final Environmental Impact Report City of Moreno Valley General Plan</i>, certified July 11, 2006. (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/ieir-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/ieir-tot.pdf</a>, accessed December 2019.) (GP EIR)             <ul style="list-style-type: none"> <li>• Section 5.5 – Hazards and Hazardous Materials                 <ul style="list-style-type: none"> <li>- Figure 5.5-2 – Floodplains and High Fire Hazard Areas</li> <li>- Figure 5.5-3 – City Areas Affected by Aircraft Hazard Zones</li> </ul> </li> </ul> </li> <li>4. City of Moreno Valley, <i>Emergency Operation Plan</i>, March 2009. (Available at <a href="http://www.moreno-valley.ca.us/city_hall/departments/fire/pdfs/mv-eop-0309.pdf">http://www.moreno-valley.ca.us/city_hall/departments/fire/pdfs/mv-eop-0309.pdf</a>, accessed December 2019.) (EOP)</li> <li>5. City of Moreno Valley, <i>Local Hazard Mitigation Plan</i>, adopted October 4, 2011, amended 2017. Available at <a href="http://www.moval.org/city_hall/departments/fire/pdfs/haz-mit-plan.pdf">http://www.moval.org/city_hall/departments/fire/pdfs/haz-mit-plan.pdf</a>, accessed December 2019.) (LHMP)             <ul style="list-style-type: none"> <li>• Chapter 5 – Wildland and Urban Fires                 <ul style="list-style-type: none"> <li>- Figure 5-2 – Moreno Valley High Fire Area Map 2016</li> </ul> </li> </ul> </li> <li>6. City of Moreno Valley, <i>Emergency Operations Plan</i>, March 2009. (Available at <a href="http://www.moval.org/city_hall/departments/fire/pdfs/mv-eop-0309.pdf">http://www.moval.org/city_hall/departments/fire/pdfs/mv-eop-0309.pdf</a>, accessed December 2019.) (EOP)</li> <li>7. State of California, Department of Environmental Protection Agency. <i>Hazardous Waste and Substance Site List (Cortese)</i>, 2019. (Available <a href="https://www.envirostor.dtsc.ca.gov/public/search?cmd=search&amp;reporttype=CORTESE&amp;site_typ">https://www.envirostor.dtsc.ca.gov/public/search?cmd=search&amp;reporttype=CORTESE&amp;site_typ</a></li> </ol>				

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p><a href="#">e=CSITES,FUDS&amp;status=ACT,BKLG,COM&amp;reporttitle=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST+%28CORTESE%29</a>, accessed November 2019.) (EPA)</p> <p>8. Riverside County Airport Land Use Commission, <i>March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan</i>, November 13, 2014. (Available at <a href="http://www.rcaluc.org/">http://www.rcaluc.org/</a>, accessed November 2019.) (MARB)</p> <p>9. State of California, Department of Fire. <i>Fire Hazards Severity Zone- Moreno Valley</i>, December 21, 2009. (Available at <a href="https://osfm.fire.ca.gov/divisions/wildfire-prevention-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/">https://osfm.fire.ca.gov/divisions/wildfire-prevention-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/</a>, accessed November 2019.) (Cal FIRE)</p>				
<b>X. HYDROLOGY AND WATER QUALITY – Would the project:</b>				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The Santa Ana Regional Water Quality Control Board (SARWQCB) sets water quality standards for all ground and surface waters within the region including the City of Moreno Valley. Water quality is typically impacted by construction activities and the addition of impervious surfaces.</p> <p>Construction activities such as grading may have the potential to release pollutants (e.g., oil from construction equipment, cleaning solvents, and/or paint) and silt off-site which could impact water quality. However, a Storm Water Pollution Prevention Plan (SWPPP) would be required to be prepared pursuant to the statewide Construction General Permit (NPDES General Permit No. CAS000002, Waste Discharge Requirements, Order No. 2009-0009-DWQ, adopted September 2, 2009 and effective as of July 2, 2010) issued by the State Water Resources Control Board (SWRCB) for construction projects to reduce any potential construction-related water quality impacts to a less than significant level.</p> <p>The construction of buildings streets and paved areas increases the percentage of impervious surfaces, so less water would percolate into the ground and more surface runoff would be generated. In such a case, paved areas and streets would collect dust, soil and other impurities that would then be assimilated into surface runoff during rainfall events which may impact water quality. However, the City has a system for controlling activities that could pollute stormwater runoff, such as new residential, commercial and industrial development. Developers must file project-specific water quality management plans (WQMP's) with the City for review. Project-specific water quality management plans must be approved prior to issuance of grading permits or building permits.</p> <p>A Preliminary Drainage Study was prepared by Albert A. Webb Associates dated August 2019 (WEBB-A) and is available in Appendix E of this IS. Since there is no proposed development project, this study documented the existing hydrologic and hydraulic conditions surrounding the Project site as well as the existing drainage improvements that convey the runoff through the vacant site. Existing elevations across the Project site vary from 1779 to 1650 (NAVD88 datum). The Project site slopes down at approximately 8 percent grade to the south. The existing drainage pattern is characterized by natural channels. (WEBB-A, p. 1-1).</p> <p>Existing improvements at Day Street and Ironwood Avenue convey street runoff around the site towards existing catch basins. Two points of off-site discharge occur at the north and northeast, which contribute runoff from adjacent residential tracts. These flows combine with the on-site runoff, flowing in natural channels towards the south. Along the southern boundary of the Project site, existing Caltrans channels direct flows towards Caltrans facilities, conveying flows under SR 60 to the south. The Project is located within the Master Drainage Plan for the City of Moreno Valley, West End watershed area. (WEBB-A, p. 1-1).</p> <p>Two onsite drainage management areas (DMA) were designated: DMA-A and DMA-B. DMA-A encompasses both the off-site and on-site areas that impact the eastern portion of the Project site. Similarly, DMA-B encompasses both the off-site and on-site areas that impact the western portion of the Project site. Both DMAs drain south to separate 36-inch reinforced concrete pipes maintained by Caltrans. (WEBB-A, pp. 2-1, 2-2).</p>				

Attachment: Exhibit A - Initial Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>One offsite DMA was designated: DMA-C. DMA-C encompasses approximately two acres of 90 percent impervious surfaces, associated with the existing Project frontage roads. The southern half of Ironwood Avenue that fronts the Project boundary between Day Street and Athens Drive slopes down to the west. Flows then travel along the eastern half of Day Street that fronts the Project boundary. These street flows are conveyed by existing curb and gutter towards an existing catch basin, located north of the west-bound off-ramp for SR 60 at Day Street. DMA-C discharges to an existing 18-inch corrugated metal pipe storm drain maintained by Caltrans. (WEBB-A, p. 2-2).</p>				
<p>The existing drainage improvements adequately convey flows off-site for the 100-year storm in light of the Project site's existing vacant condition, larger storm events create ponding at the inlet locations for DMA-A and DMA-B. (WEBB-A, p. 4-1). However, as noted in the Project Description above, the Project does not propose development So there is no potential for ground disturbing activities that would degrade surface or ground water, and since the Project site would remain vacant and undisturbed, there would be no loss of pervious areas. The Project site would remain vacant and undisturbed. Thus, implementation of the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. Therefore, no impacts would occur.</p>				
<p>b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As noted in the Project Description above, the Project does not propose development, so it would have no potential to decrease or interfere with groundwater supplies or recharge. Thus, implementation of the Project would not impede sustainable groundwater management of the basin. Therefore, no impacts would occur.</p>				
<p>c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:</p>				
<p>i) Result in substantial erosion or siltation on- or off-site?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As noted in the Project Description above, the Project does not propose development, so no ground disturbance would occur. Thus, implementation of the Project would not result in substantial erosion or siltation on- or off-site due to the Project's alteration of existing drainage pattern. Therefore, no impacts would occur.</p>				
<p>ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As noted in the Project Description above, the Project does not propose development, so no ground disturbance would occur. Thus, implementation of the Project would not result in an increase in the rate or amount of surface runoff in a manner which would result in flooding on- or offsite due to Project's alteration of existing drainage patterns. Therefore, no impacts would occur.</p>				
<p>iii) 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?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As noted in the Project Description above, the Project does not propose development, so no ground disturbance would occur as a result of the Project. Thus, implementation of the Project would not 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 due to Project's alteration of existing drainage pattern. Therefore, no impacts would occur.</p>				
<p>iv) Impede or redirect flood flows?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As noted in the Project Description above, the Project does not propose development, so no ground disturbance would occur. Thus, implementation of the Project would not impede or redirect flood flows due to the Project's alteration of existing drainage pattern. Therefore, no impacts would occur.</p>				
<p>d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p><b>Response:</b> The closest large body of water to the Project site is Perris Lake, located approximately 7.2 miles southeast of the Project site. At this distance, the Project site’s potential exposure to flooding from dam inundation, or seiche-related hazards from Perris Lake is minimal. The Project site is not located within a 100-year flood hazard zone and the Project site is located outside the identified Lake Perris Dam Potential Inundation Area (GP EIR, pp. 5.5-4 – 5.5-5). Coastal waters are located approximately 40 miles west. As such, the Project site is not subject to tsunami hazards. Thus, implementation of the Project would not release pollutants due to inundation from flood hazards such as a tsunami or seiches. Therefore, no impacts would occur.</p>				
<p>e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> Substantial regulation currently exists that addresses stormwater runoff and keeping non-stormwater pollutants out of receiving waters, including the statewide construction general permit (i.e. SWPPP) and the MS4 Permit (i.e. WQMP) (GP, pp. 6-22 – 6-23). Projects in the City are conditioned to comply with these regulations. However, as noted in the Project Description above, the Project does not propose development and no ground disturbing activities will occur. Thus, implementation of the Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, no impacts would occur.</p>				
<p><b>Sources:</b></p> <ol style="list-style-type: none"> <li>1. Project Description</li> <li>2. City of Moreno Valley, <i>General Plan</i>, adopted July 11, 2006. (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf</a>, accessed November 2019.) (GP)</li> <li>3. City of Moreno Valley, <i>Final Environmental Impact Report City of Moreno Valley General Plan</i>, certified July 11, 2006. (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/eir-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/eir-tot.pdf</a>, accessed December 2019.) (GP EIR)</li> <li>4. Albert A. Webb Associates, <i>Preliminary Drainage Study</i>, dated August 2019. (WEBB-A). Appendix E</li> </ol>				
<p><b>XI. LAND USE AND PLANNING – Would the project:</b></p>				
<p>a) Physically divide an established community?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p><b>Response:</b> The area surrounding the Project site is comprised of residential, school, and commercial uses. The existing surrounding General Plan (GP) land use designations include R5 (Residential) and P (Public Facilities) north of the Project site; C (Commercial) west and south (across State Route 60) of the Project site, and R5 (Residential) east of the Project site. The surrounding zoning designations include R5 (Residential) and P (Public Facilities) north of the Project site; CC (Community Commercial) west of the Project site, Specific Plan Highway Commercial (SP) south of the project site across State Route 60 and R5 (Residential) east of the Project site. The Project site has current GP land use designations of R/O (Residential/Office) and C (Commercial) and zoning designations of CC (Community Commercial) and R15 (Residential) (GP Map; Zoning Map). As noted in the Project Description above, the Project proposes to subdivide two parcels into four parcels to clearly define each new parcel with just one GP land use designation and one zoning designation per parcel since currently, the parcels include split land use designations and split zoning designations. The proposed Project will serve to provide consistency between the GP land use designation and zoning designation acreages among these parcels. Further, the area surrounding the Project site is completely built out; the Project site is the only land in the vicinity that remains vacant. Regardless, the Project site’s land uses and zoning are compatible with the existing surrounding general plan land uses, zoning designations and constructed land uses. As reflected in <b>Tables D</b> and <b>E</b> above, the Project will result in an increase of 0.12 acreage to Commercial GP land uses, a reduction of 0.12 acres to Residential/Office GP land uses, and a reduction of 0.11 acres to Community Commercial zoning designation and an increase of 0.11 acres to Residential zoning designation. These changes are very small change and do not change the planned intent of the site or area. Instead, the proposed Project will bring both the GP land use designation and zoning designation acreages consistent with one another since they are currently inconsistent as demonstrated by <b>Tables D</b> and <b>E</b>, above through the General Plan Amendment (GPA) which will result in an increase of 0.12 acres to Commercial GP land uses and a reduction of 0.12 acres to Residential/Office GP land uses; and the Zone Change (ZC) which will result in a reduction of 0.11 acres to Community Commercial zoning designation and an increase of 0.11 acres to Residential zoning</p>				

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>designation. Both the GPA and ZC will bring the acreage discrepancy between the current GP land use and zoning consistent with one another and remove the split GP land use and split zoning designations. Thus, implementation of the Project would not divide an established community. Therefore, impacts would be less than significant.</p>				
<p>b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> To conform with the existing GP land use and zoning designations, the Project will process a GPA and a CZ (in addition to a TPM) to create four lots with just one GP land use designation and one zoning designation. As noted in the Project Description above, the change between the total existing and proposed GP land use and zoning land use designation acreages would be marginal as noted in Response XI.a, above. The Project site would generally remain designated R/O and C under the GP land use designations and would retain CC and R15 zoning designations. The proposed Project will bring both the GP land use designation and zoning designation acreages consistent with one another since they are currently inconsistent as demonstrated by <b>Tables D and E</b>, above. Thus, implementation of the Project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, no impacts would occur.</p>				
<p><b>Sources:</b></p> <ol style="list-style-type: none"> <li>1. Project Description</li> <li>2. City of Moreno Valley, <i>Land Use Map</i> (Figure 2-2), printed October 10, 2019. (Available at <a href="http://www.moval.org/city_hall/general-plan/landuse-map.pdf">http://www.moval.org/city_hall/general-plan/landuse-map.pdf</a>, accessed December 2019.) (GP Map)</li> <li>3. City of Moreno Valley, <i>Zoning Map</i>, revised on August 22, 2019, printed October 10, 2019. (Available at <a href="http://www.moval.org/cdd/pdfs/ZoningMap.pdf">http://www.moval.org/cdd/pdfs/ZoningMap.pdf</a>, accessed December 2019.) (Zoning Map)</li> </ol>				
<p><b>XII. MINERAL RESOURCES – Would the project:</b></p>				
<p>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?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The City does not have a mineral resource of regional or statewide significance (GP EIR, p. 5.14-2). The mineral resources known to be located within the City are common materials including sand, gravel and rock (GP, p. 7-15). Further, as noted in the Project Description above, the Project does not propose development and no ground disturbance would occur. Thus, implementation of the Project would not 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. Therefore, no impacts would occur.</p>				
<p>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?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The Project site is not identified as a locally-important mineral resource recovery site in the City's GP (GP EIR, p. 5.14-2). Thus, implementation of the Project would not 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. Therefore, no impacts would occur.</p>				
<p><b>Sources:</b></p> <ol style="list-style-type: none"> <li>1. Project Description</li> <li>2. City of Moreno Valley Moreno Valley, <i>General Plan</i>, adopted July 11, 2006. (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/gp/gp-tot.pdf</a>, accessed November 2019.) (GP)</li> <li>3. City of Moreno Valley, <i>Final Environmental Impact Report City of Moreno Valley General Plan</i>, certified July 11, 2006. (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/eir-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/eir-tot.pdf</a>, accessed November 2019.) (GP EIR)</li> </ol>				
<p><b>XIII. NOISE – Would the project result in:</b></p>				
<p>a) Generation of a substantial temporary or permanent increase in ambient noise levels in</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				
<p><b>Response:</b> As noted in the Project Description above, the Project will subdivide land and does not propose development. To remain consistent with the GP land use and zoning designations, the Project will process a GPA and a CZ to align the four lots with just one GP land use and one zoning designation per lot. The Project's change to the total existing GP land use and zoning land use acreages would be marginal. Further, there will be no noise producing activities, such as construction, as a result of the Project. Thus, implementation of the Project would not result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. Therefore, impacts would be less than significant.</p>				
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The generation of groundborne noise and vibration occurs during construction and operation activities and is regulated by the City through the normal design review process and the GP (GP EIR, p. 5.4-17). As noted in the Project Description above, the Project will subdivide land and does not propose development. Thus, implementation of the Project would not result in the generation of excessive groundborne vibration or groundborne noise levels. Therefore, no impacts would occur.</p>				
c) For a project located within the vicinity of a private airstrip or 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As noted in Response IX.e. the Project site is located within the Airport Compatibility Zone E of the MARB/IPA LUCP (MARB). The noise impact is considered low, as is it is exposed to occasional overflights intrusive to some outdoor activity (MARB, pp. 3, 9, 17). However, as noted in the Project Description above, the Project does not propose development. Thus, implementation of the Project would not expose people residing or working in the Project site to excessive noise levels. Therefore, no impacts would occur.</p>				
<p><b>Sources:</b></p> <ol style="list-style-type: none"> <li>1. Project Description</li> <li>2. City of Moreno Valley, <i>Final Environmental Impact Report City of Moreno Valley General Plan</i>, certified July 11, 2006. (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/eir-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/ieir/eir-tot.pdf</a>, accessed December 2019.) (GP EIR)</li> <li>3. MARB/IPA LUCP – Riverside County Airport Land Use Commission, <i>March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan</i>, November 13, 2014. (Available at <a href="http://www.rcaluc.org/Portals/0/PDFGeneral/plan/2014/17%20-%20Vol.%201%20March%20Air%20Reserve%20Base%20Final.pdf">http://www.rcaluc.org/Portals/0/PDFGeneral/plan/2014/17%20-%20Vol.%201%20March%20Air%20Reserve%20Base%20Final.pdf</a>, accessed November 2019.) (MARB)</li> </ol>				
<p><b>XIV. POPULATION AND HOUSING – Would the project:</b></p>				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of road or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p><b>Response:</b> The Project proposes a marginal change to the existing planned land use and development at the Project site. The current GP land use designation acreage for C (Commercial) is 30.44 acres while the current CC (Community Commercial) zoning designation acreage for the site is 30.67; leaving a 0.23 acre discrepancy. The current GP land use designation for R/O Residential/Office is 19.17 acres While the current R15 (Residential) zoning designation is 18.94 acres; leaving a 0.23 acre discrepancy. As noted in the Project Description above, the proposed Project consists of subdividing two parcels with split GP land use and split zoning designations to four parcels with one GP and one zoning designation each. Instead, the proposed Project will bring both the GP land use designation and zoning designation acreages consistent with one another since they are currently inconsistent as demonstrated by <b>Tables</b></p>				

Attachment: Exhibit A - Initial Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p><b>D</b> and <b>E</b>, and as described in Response XI.a, above. As such, the Project will not substantially induce unplanned population growth, but would instead remain consistent with the GP (GP Map). Further, the two proposed roads to access the Project site would not induce population growth, as their purpose is only to provide access to the Project site. Thus, implementation of the Project would not induce substantial unplanned population growth in an area, either directly or indirectly. Therefore, impacts would be less than significant.</p>				
<p>b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The Project site is currently vacant. As noted in the Project Description above, the Project would subdivide two lots into four lots, and the proposed changes to the total existing GP and zoning designation acreages changes would be marginal as described in Response XIV.a, above. Development is not proposed as part of the Project. Thus, implementation of the Project will not displace existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, no impacts would occur.</p>				
<p><b>Sources:</b></p> <ol style="list-style-type: none"> <li>1. Project Description</li> <li>2. City of Moreno Valley, <i>Land Use Map</i> (Figure 2-2), printed October 10, 2019. (Available at <a href="http://www.moval.org/city_hall/general-plan/landuse-map.pdf">http://www.moval.org/city_hall/general-plan/landuse-map.pdf</a>, accessed December 2019.) (GP Map)</li> </ol>				
<p><b>XV. PUBLIC SERVICES – Would the project:</b></p>				
<p>a) 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:</p>				
<p>i) Fire protection?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As noted in the Project Description and as discussed in Response XI,a above, the Project will subdivide two existing parcels to create a total of four parcels. The General Plan Amendment (GPA) and Zone Change (ZC) will bring General Plan land use and zoning designations consistent with one another, since there is currently a 0.23 acre discrepancy between the two. Further, the site currently has split GP land use designations and zoning designations within the two existing parcels. As discussed in Item XI.a above, the GPA will result in an increase of 0.12 acres to Commercial GP land uses and a reduction of 0.12 acres to Residential/Office GP land uses. The ZC will result in a reduction of 0.11 acres to Community Commercial zoning designation and an increase of 0.11 acres to Residential zoning designation. Both the GPA and ZC are necessary to bring the 0.23 acre discrepancy between the current GP land use and zoning consistent with one another and to remove the split GP land use and split zoning designations resulting in changes that would not result in an increased demand to fire protection. Further, the proposed Project does not propose development at this time so will not necessitate additional government facilities or public services like police, fire, school, parks and other public services. Thus, implementation of the Project would not 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. Therefore, no impacts would occur.</p>				
<p>ii) Police protection?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> See Response XV.i. above. No Impacts would occur.</p>				
<p>iii) Schools?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> See Response XV.i. above. No Impacts would occur.</p>				
<p>iv) Parks?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> See Response XV.i. above. No Impacts would occur.</p>				
<p>v) Other public facilities?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> See Response XV.i. above. No Impacts would occur.</p>				
<p><b>Sources:</b></p>				



ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Project Description				
<b>XVI. RECREATION – Would the project:</b>				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As noted in the Project Description and as discussed in Response XI,a above, the Project will subdivide two existing parcels to create a total of four parcels. The General Plan Amendment (GPA) and Zone Change (ZC) will bring General Plan land use and zoning designations consistent with one another, since there is currently a 0.23 acre discrepancy between the two. Further, the site currently has split GP land use designations and zoning designations within the two existing parcels. As discussed in Item XI.a above, the GPA will result in an increase of 0.12 acres to Commercial GP land uses and a reduction of 0.12 acres to Residential/Office GP land uses. The ZC will result in a reduction of 0.11 acres to Community Commercial zoning designation and an increase of 0.11 acres to Residential zoning designation. Both the GPA and ZC are necessary to bring the 0.23 acre discrepancy between the current GP land use and zoning consistent with one another and to remove the split GP land use and split zoning designations resulting in changes that would not result in an increased demand to fire protection. Further, the proposed Project does not propose development at this time. Hence, the Project will not result in an increase in the use of parks or other recreational facilities. Thus, implementation of the Project would not 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. Therefore, no impacts would occur.</p>				
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> See Response XVI.a. above. No Impacts would occur.</p>				
<p><b>Sources:</b></p>				
1. Project Description				
<b>XVII. TRANSPORTATION – Would the project:</b>				
a) Conflict with program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p><b>Response:</b> As noted in the Project Description and as discussed in Response XI,a above, the proposed Project consists of subdividing two existing parcels to create a total of four parcels. The General Plan Amendment (GPA) and Zone Change (ZC) will bring General Plan land use and zoning designations consistent with one another, since there is currently a 0.23 acre discrepancy between the two. Further, the site currently has split GP land use designations and zoning designations within the two existing parcels. As discussed in Item XI.a above, the GPA will result in an increase of 0.12 acres to Commercial GP land uses and a reduction of 0.12 acres to Residential/Office GP land uses. The ZC will result in a reduction of 0.11 acres to Community Commercial zoning designation and an increase of 0.11 acres to Residential zoning designation. Both the GPA and ZC are necessary to bring the 0.23 acre discrepancy between the current GP land use and zoning consistent with one another and to remove the split GP land use and split zoning designations resulting in changes that would not result in an increased demand to fire protection. Further, the proposed Project does not propose any development at this time.</p>				
<p>Regardless, a Trip Generation Memo for Tentative Parcel Map No. 37750 was prepared by Albert A. Webb Associates dated March 16, 2020 (WEBB-B) and is available in Appendix F of this IS. This memo was prepared to identify any differences in potential future trip generation resulting from the proposed Project.</p>				
<p>Vehicle trip generation was estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10<sup>th</sup> Edition. The 0.12 acre increase in Commercial GP land use area (ITE Code 820) results in an estimated increase of 1 AM peak hour trip and 5 PM peak hour trips based on an increase of approximately 1,300 building square feet. This is assuming a 0.25 floor area ratio (FAR). The</p>				

**ISSUES & SUPPORTING INFORMATION SOURCES:**

Potentially Significant Impact

Less Than Significant with Mitigation Incorporated

Less Than Significant Impact

No Impact

0.12 acre loss in Residential/Office land use (ITE Code 220) area results in an estimated loss of 1 AM peak hour trip and 1 PM peak hour trip based on a decrease of approximately 2 residential units. This is assuming a 15 DU per acre maximum per the R15 zoning designation. The net difference in peak hour trip generation between the existing and proposed land use areas is an increase of 0 AM peak hour trips and 4 PM peak hour trips. Trip generation rates and Project trip generation are shown in **Table F, Trip Generation Rates** and **Table G, Trip Generation**. (WEBB-B).

**Table F – Trip Generation Rates**

Land Use	Size	Unit	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Shopping Center (820)	1.3 <sup>1</sup>	TSF	0.94	0.58	0.36	3.81	1.83	1.98
Multifamily Housing (low-Rise) (220)	2 <sup>2</sup>	DU	0.46	0.11	0.35	0.56	0.35	0.21

Source: WEBB-B, Table 1

- 0.12 acre increase = 5,227 SF increase. FAR of 0.25 results in 1,307 sf of building area.
- 0.12 acre decrease = 1.8 DU decrease per R15 zoning. R15 zoning maximum density is 15 DU per acre City zoning descriptions.

**Table G – Trip Generation**

Land Use	Size	Unit	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Shopping Center (820)	1.3 <sup>1</sup>	TSF	1	1	0	5	2	3
Multifamily Housing (low-Rise) (220)	2 <sup>2</sup>	DU	(1)	0	(1)	(1)	(1)	0
Net Difference			0	1	(1)	4	1	3

Source: WEBB-B, Table 2

- 0.12 acre increase = 5,227 SF increase. FAR of 0.25 results in 1,307 sf of building area.
- 0.12 acre decrease = 1.8 DU decrease per R15 zoning. R15 zoning maximum density is 15 DU per acre City zoning descriptions.

The combined size of the two land uses is not proposed to be changed from the existing condition. The minimal change in land use for the Project site resulted in a negligible change in projected vehicle trip generation which is well under the City’s Traffic Impact Analysis Preparation Guide threshold of 100 peak hour project trips. Thus, a trip generation comparison or traffic impact analysis is not needed for this subdivision Project. However, a traffic impact analysis may be required by the City when a development project at this location begins the entitlement process. (WEBB-B).

Thus, implementation of the Project would not conflict with a program plan, ordinance or policy addressing the circulation system. Therefore, impacts would be less than significant.

b) Conflict or be inconsistent with [CEQA Guidelines section 15064.3, subdivision \(b\)](#)?

**Response:** Section 15064.3 of the CEQA Guidelines indicates that vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts. However, there is no implementing project proposed, as this Project consists only of the subdivision of two parcels into four parcels, and zoning and GPA amendments to realign land use designations to be consistent with proposed parcel boundaries. Thus, implementation of the Project would not conflict or be inconsistent with CEQA Guidelines section 1506.43 (b). Therefore, impacts would be less than significant.

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The Project proposes private access easement for ingress and egress and public utility purposes ensuring legal access to all four parcels by creating future shared access off Day Street that lines up with the existing commercial development to the west, and future shared access off of Ironwood Avenue that lines up with the existing Athens Drive to the north. The proposed access roads would not result in increased hazards. The Project does not include any component that will result in an incompatible use to the existing roadways. Thus, implementation of the proposed Project will not result in a substantial increase in hazards due to a geometric design feature or incompatible uses. Therefore, no impacts will occur.</p>				
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> The Project proposes private access for ingress and egress to all four parcels. Further, the Project would not obstruct existing emergency access. Thus, implementation of the proposed Project will not result in inadequate emergency access. Therefore, no impacts will occur.</p>				
<p><b>Sources:</b></p> <ol style="list-style-type: none"> <li>1. Project Description</li> <li>2. Albert A. Webb Associates, <i>Trip Generation for Tentative Parcel Map No 3770</i>, March 16, 2020. (WEBB-B). Appendix F</li> </ol>				
<p><b>XVIII. TRIBAL CULTURAL RESOURCES – Would the project:</b></p>				
<p>a) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in <a href="#">Public Resources Code Section 21074</a> as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</p>				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in <a href="#">Public Resources Code Section 5020.1(k)</a> , or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>Response:</b> The City notified Native American Tribes pursuant to AB 52 and SB 18 via written letter dated October 7, 2019. Letters were sent from the City to the following five tribes: Pechanga Band of Luiseño Indians, Morongo Band of Mission Indians (MBMI), and Soboba Band of Luiseño Indians, Rincon Band of Luiseño Indians, and Agua Caliente Band of Cahuilla Indians. All tribes with the exception of Agua Caliente Band of Cahuilla Indians, requested additional documentation and/or consultation. As a result, on January 23, 2020 the City provided the tribes with copies of the Cultural Resources Assessment and Tentative Tract Map 37750 for their review. Tribal recommendations have been incorporated into mitigation measures. With implementation of mitigation measures <b>MM TCR-1</b> and <b>MM TCR-2</b>, impacts remain less than significant,</p>				
<p>As discussed in Response V.a above, no cultural resources have been identified on the Project site (BCR, p. 6). However, 32 cultural resources have been recorded within one mile of the Project site the Project site is considered sensitive for buried cultural resources so implementation of mitigation measures <b>MM CULT-1</b> through <b>MM CULT-4</b> would ensure impacts remain less than significant. Based on these results, a professional archaeological monitor is recommended to monitor any ground-disturbing activities associated with the proposed Project (BCR, p. 6.). If human remains are encountered during any proposed Project activities, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner determines origin and disposition pursuant to Public Resources Code Section 5097.98.</p>				
<p>However, as noted in the Project Description above, the Project would subdivide land and does not propose development or any ground disturbing activities. Thus, implementation of the Project would not cause a substantial adverse change in the significance of a tribal cultural resource. Therefore, with implementation of mitigation, impacts are less than significant.</p>				
<p><b>MM TCR-1</b> Prior to the issuance of a grading permit, the Developer of future implementing projects shall secure agreements with the Soboba Band of Luiseño Indians, Pechanga Band of Luiseño Indians, Rincon Band of Luiseño Indians, and Morongo Band of Mission</p>				

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
<p>Indians for tribal monitoring. The City is also required to provide a minimum of 30 days advance notice to the tribes of all mass grading and trenching activities. The Native American Tribal Representatives shall have the authority to temporarily halt and redirect earth moving activities in the affected area in the event that suspected archaeological resources are unearthed. If the Native American Tribal Representatives suspect that an archaeological resource may have been unearthed, the Project Archaeologist or the Tribal Representatives shall immediately redirect grading operations in a 100-foot radius around the find to allow identification and evaluation of the suspected resource. In consultation with the Native American Tribal Representatives, the Project Archaeologist shall evaluate the suspected resource and make a determination of significance pursuant to California Public Resources Code Section 21083.2. (only applicable if tribes require monitoring).</p> <p><b>MM TRC-2</b> In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:</p> <p>a) One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Moreno Valley Planning Department:</p> <p>i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place they were found with no development affecting the integrity of the resources.</p> <p>ii. Onsite reburial of the discovered items as detailed in the treatment plan required pursuant to Mitigation Measure CR-1. This shall include measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items is permitted without the written consent of all Consulting Native American Tribal Governments as defined in CR-1. The location for the future reburial area shall be identified on a confidential exhibit on file with the City and concurred to by the Consulting Native American Tribal Governments prior to certification of the environmental document.</p>				
<p>ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of <a href="#">Public Resources Code section 5024.1</a>. In applying the criteria set forth in subdivision (c) of <a href="#">Public Resources Code section 5024.1</a>, the lead agency shall consider the significance of the resource to a California Native American tribe.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> See Response XVIII.a.i. above. No impacts would occur.</p>				
<p><b>Sources:</b></p>				
<p>1. BCR Consulting, Inc., <i>Cultural Resources Assessment Towngate Highlands Project</i>, Moreno Valley, November 2019. (BCR). Appendix D</p>				
<p><b>XIX. UTILITIES AND SERVICE SYSTEMS – Would the project:</b></p>				
<p>a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As noted in the Project Description above, the Project will subdivide land and does not propose development. As such, the Project would not necessitate the use of utilities, water, wastewater, and would not generate solid waste. Therefore, no impacts would occur.</p>				
<p>b) Have sufficient water supplies available to serve the project and reasonably foreseeable future</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ISSUES & SUPPORTING INFORMATION SOURCES:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
development during normal, dry and multiple dry years?				
<b>Response:</b> See Response XIX.a. above. No impacts would occur.				
c) Result in a 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Response:</b> See Response XIX.a. above. No impacts would occur.				
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Response:</b> See Response XIX.a. above. No impacts would occur.				
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Response:</b> See Response XIX.a. above. No impacts would occur.				
<b>Sources:</b>				
1. Project Description				
<b>XX. WILDFIRE</b> – If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, <b>would the project:</b>				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Response:</b> As indicated in the Cal Fire very high fire hazard severity zones (VHFSZ) maps, the Project site is not classified as a VHFSZ and the Project site is not adjacent VHFSZ areas (CAL FIRE). The Project site is not classified as a fire risk (GP EIR, Figure 5.5-2; LHMP, Figure 5-2). Further, the Project does not propose development as it will subdivide two existing parcels into four parcels and create private shared access to each of the four parcels for ingress and egress. The Project will provide ROW designation for a 66-ft road to extend Athens Drive south of Ironwood Avenue and will provide ROW designation for a 40-ft road for Project access from Day Street between State Route 60 (SR 60) and Ironwood Avenue. Thus, since the Project is not classified as a VHFSZ, creates ingress and egress access to new subdivided parcels, and provides ROW designation to extend nearby roads, implementation of the Project would not impair the adopted emergency response plan or emergency evacuation plan. Therefore, no impacts would occur.				
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Response:</b> As indicated in the Cal Fire VHFSZ maps, the Project site is not classified as a VHFSZ and the Project site is not adjacent to VHFSZ areas (CAL FIRE). The Project site is not classified as a fire risk (GP EIR, Figure 5.5-2; LHMP, Figure 5-2). Further, the Project does not propose development. Thus, implementation of the Project would not exacerbate wildfire risks, and thereby expose Project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Therefore, no impacts would occur.				
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Response:</b> As indicated in the Cal Fire VHFSZ maps, the Project site is not classified as a VHFSZ and the Project site is not adjacent to VHFSZ areas (CAL FIRE). The Project site is not classified as a fire risk (GP EIR, Figure 5.5-2; LHMP, Figure 5-2). Further, the Project does not propose development. Thus, implementation of the Project would not require the installation or maintenance of associated infrastructure that may exacerbate wildfire risks, or that may result in temporary or ongoing impacts to the environment. Therefore, no impacts would occur.				

<b>ISSUES &amp; SUPPORTING INFORMATION SOURCES:</b>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Response:</b> As indicated in the Cal Fire VHFSZ maps, the Project site is not classified as a VHFSZ and the Project site is not adjacent to VHFSZ areas (CAL FIRE). The Project site is not classified as a fire risk (GP EIR, Figure 5.5-2; LHMP, Figure 5-2). Further, the Project does not propose development or ground disturbance. Thus, implementation of the Project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. Therefore, no impacts would occur.</p>				
<p><b>Sources:</b></p> <ol style="list-style-type: none"> <li>1. City of Moreno Valley, <i>Final Environmental Impact Report City of Moreno Valley General Plan</i>, certified July 11, 2006 (Available at <a href="http://www.moval.org/city_hall/general-plan/06gpfinal/eir/eir-tot.pdf">http://www.moval.org/city_hall/general-plan/06gpfinal/eir/eir-tot.pdf</a>, accessed December 2019.) (GP EIR) <ul style="list-style-type: none"> <li>• Section 5.5 – Hazards and Hazardous Materials <ul style="list-style-type: none"> <li>- Figure 5.5-2 – Floodplains and High Fire Hazard Areas</li> </ul> </li> </ul> </li> <li>2. City of Moreno Valley, <i>Local Hazard Mitigation Plan</i>, adopted October 4, 2011, amended 2017. (Available at <a href="http://www.moval.org/city_hall/departments/fire/pdfs/haz-mit-plan.pdf">http://www.moval.org/city_hall/departments/fire/pdfs/haz-mit-plan.pdf</a>, accessed December 2019.) (LHMP) <ul style="list-style-type: none"> <li>• Chapter 5 – Wildland and Urban Fires <ul style="list-style-type: none"> <li>- Figure 5-2 – Moreno Valley High Fire Area Map 2016</li> </ul> </li> </ul> </li> <li>3. State of California, Department of Fire. <i>Fire Hazards Severity Zone- Moreno Valley</i>, December 21, 2009. (Available at <a href="https://osfm.fire.ca.gov/divisions/wildfire-prevention-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/">https://osfm.fire.ca.gov/divisions/wildfire-prevention-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/</a>, accessed November 2019.) (Cal FIRE)</li> </ol>				
<b>XXI. MANDATORY FINDINGS OF SIGNIFICANCE</b>				
a) Does the project have the potential to substantially 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, substantially 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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>Response:</b> As discussed in Response IV.a. through IV.f, although the proposed Project site is within special status survey areas for the MSHCP, there is no suitable habitat on the Project site to support sensitive biological resources that could potentially be affected by the proposed Project. The Project would not impact biological resources. However, all future implementing projects would be required to implement mitigation measures <b>MM BIO-1</b> and <b>MM BIO-2</b>, set forth in Section IV Biological Resources of this IS in order to reduce impacts to less than significant levels.</p>				
<p>As discussed in Response V.a., there are no known historic resources on or near the Project site. None of the 32 previously recorded cultural resources are within a one-mile radius of the Project site were recorded or found on the proposed Project site. Further, the Project does not propose any ground disturbance. As such, impacts to cultural resources would not occur.</p>				
<p>Thus, the proposed Project will not 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 an endangered plant or animal or eliminate important examples of the major periods of California history or prehistory. Therefore, with implementation of mitigation measures impacts are less than significant.</p>				
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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Attachment: Exhibit A - Initial Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map

<b>ISSUES &amp; SUPPORTING INFORMATION SOURCES:</b>	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
with the effects of past projects, the effects of other current project, and the effects of probable future projects.)?				
<p><b>Response:</b> As demonstrated by the analysis in this IS, the Project will only subdivide land and does not propose any development or ground disturbance. Thus, the Project will have no physical impact to the Project site. The proposed Project will not result in any impacts that are individually limited, but cumulatively considerable. The Project is consistent with local and regional plans, and the Project has no air quality emissions (since there is no construction or operation associated with the Project). The Project adheres to all other land use plans and policies that have jurisdiction over the Project site, and the increase traffic volumes are marginal. The Project is not considered growth-inducing as defined by State CEQA Guidelines Section 15126.2(d) and will not induce, either directly or indirectly, population and/or housing growth. Therefore, impacts are less than significant.</p>				
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p><b>Response:</b> Effects on human beings were evaluated as part of this analysis of this IS under the aesthetics, air quality, cultural resources as it relates to human remains, geology and soils, GHG, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, population and housing, public services, recreation, transportation, tribal cultural resources, and utilities and services systems thresholds. Based on the analysis and conclusions in this IS, impacts for these topics were considered to have no impact or less than significant impact. Therefore, potential direct and indirect impacts on human beings that result from the proposed Project are considered less than significant.</p>				
<p><b>Sources:</b> 1. Above Checklist</p>				

Attachment: Exhibit A - Initial Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map



47 1st Street, Suite 1  
Redlands, CA 92373-4601  
(909) 307-5633

November 01, 2019

Mark A. Ostoich  
Gresham-Savage  
550 East Hospitality Lane, Suite 300  
San Bernardino, CA 92408

RE: BIOLOGICAL RESOURCES ASSESSMENT - BURROWING OWL HABITAT  
SUITABILITY ASSESSMENT - JURISDICTIONAL WATERS DELINEATION  
TOWNGATE HIGHLANDS DEVELOPMENT  
MORENO VALLEY, RIVERSIDE COUNTY, CA

Dear Mr. Ostoich

Jericho Systems, Inc. (Jericho) is pleased to provide this Biological Resources Assessment (BRA), burrowing owl (*Athene cunicularia*) [BUOW] habitat suitability assessment and Jurisdictional Delineation (JD) prepared for the Towngate Highlands Development (Project) located in the City of Moreno Valley at the southwest corner of Ironwood Avenue and Day Street in Riverside County, California. The 50- acre site comprises two assessor parcels (APNs) 291-100-054 and 291-100-055 and can be found on the *Riverside East* U.S. Geological Survey (USGS) 7.5-minute topographical map in Section 3, Township 3 South, Range 4 West (Figures 1 and 2).

The City of Moreno Valley is a signatory to the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The MSHCP requires that a project comply with the MSHCP policies identified in Section 6 of the MSHCP. The Project site is located in the Reche Canyon/Badlands Area Plan of the MSHCP area that requires focused BUOW surveys be conducted if suitable habitat is present. The site is not located in within any MSHCP designated criteria cell, cell group, or area identified for conservation. Further, the Project site is not located in an amphibian, criteria area species, mammal, or narrow endemic plant survey area.

For this Project site, a habitat suitability assessment for burrowing owl (MSHCP section 6.3.2) and MSHCP Riparian/Riverine resources (MSHCP section 6.1.2) was required and conducted. The site was also evaluated for the presence jurisdictional waters, subject to the federal Clean Water Act (CWA), Porter-Cologne (Porter-Cologne) and California Fish and Game Code (FGC) regulations. Jurisdictional resources subject to the CWA regulations include non-wetland waters and wetland waters of the U.S. (WoUS) whereas jurisdictional resources subject to Porter-Cologne include non-wetland waters and waters of the State (WoS). The California FGC encompasses the resources that constitute a stream or river, including associated riparian vegetation and floodplain.

Evaluation of Riparian/Riverine resources followed guidance provided in the MSHCP Section 6.1.2. Potential federal jurisdiction followed the regulations set forth in 33CFR part 328 and the USACE guidance documents and evaluation of potential State jurisdiction followed guidance in the Fish and Game Code and A Review of Stream Processes and Forms in Dryland Watersheds and MESA Field Guide (CDFW, 2010 and 2012 respectively).



The results of Jericho's field surveys are intended to provide sufficient baseline information to the County and, if required, to federal and State regulatory agencies, including U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), respectively, to determine if impacts will occur, quantify those impacts and to identify mitigation measures to offset any impacts.

## PROJECT DESCRIPTION

The proposed TownGate Highlands Project (Project) consists of developing approximately 293 residential units on approximately 19.53 acres of land, approximately 14,000 square feet of sit-down restaurants, approximately 11,500 square feet of fast-food restaurants, an approximately 3,000 square foot gas station/convenience store and hotels totaling approximately 260 rooms.

This report evaluated the entire 50-acre site, not just the footprint acreage of the proposed Project.

## METHODS

Prior to the field investigation reference materials and databases relevant to the Project site were reviewed for the *Riverside East* and *Sunnymead 7.5-minute* USGS quadrangles. The database search included the *Sunnymead* USGS Quad due to the Project site's proximity to the *Riverside East* USGS Quad. The sources reviewed included:

- California Natural Diversity Database (CNDDDB) *Rarefind 5*;
- CNDDDB Biogeographic Information and Observation System (BIOS);
- USDA Natural Resources Conservation Service (NRCS) Web Soil Survey;
- USFWS National Wetland Inventory;
- Environmental Protection Agency (EPA) Water Program "My Waters" data layers
- Google Earth Pro historic aerial imagery (1994-2018)
- County/City habitat conservation plans and other sensitive resource policies;
- RCA MSHCP Information Map

### *Burrowing owl*

On October 30 and 31, 2019, Jericho biologists Shay Lawrey, Todd White, Christian Nordal, and Craig Lawrey (Jericho field staff) conducted field surveys. Each surveyor has advanced degrees in Biology and multiple years of experience surveying for biological resources throughout Southern California.

The field surveys were designed to identify areas of potentially suitable BUOW habitat, individuals, surrogate burrows, and sign of historic or current use of the site by BUOW. The field surveys were also designed to determine if any of the erosional features on site met the criteria for being federally or state jurisdictional and/or being a riverine/riparian and vernal pool area as defined by the MSHCP.

The BUOW habitat suitability assessment was conducted in accordance with the Western Riverside County MSHCP, which follows the 1993 "*Burrowing Owl Survey Protocol and Mitigation Guidelines*" prepared by the California Burrowing Owl Consortium. If suitable habitat is present, this protocol requires four (4) surveys between April 15 and July 15 with the first site survey counting as one survey period.

The surveyors systematically searched the entire Project site by walking transects spaced at approximately 10 meters (30 feet) apart to allow for 100 percent visual coverage of the ground surface. Due to development directly adjacent to the site a survey buffer was limited outside of the Project boundary on the adjoining vacant parcel that is not a part of this project in the north west corner (Figure 3).

The surveys were conducted on calm weather days, during peak BUOW activity between the morning hours of 7:00 a.m. to 11:00 a.m. and 2:00 p.m. to 5:00 p.m.

**Table 1**  
**Weather Data for BUOW Survey**

Date	Time of Survey	% Cloud Cover	Wind (BFT)	Temperature (° F)	Precipitation
10/30/19	Morning	5	0	52-68	0
10/30/19	Afternoon	0	3	72-64	0
10/31/19	Morning	85	1	40-67	0
10/31/19	Afternoon	10	2	77-66	0

Natural and non-natural substrates were examined for potential burrow sites. All potential BUOW burrows encountered were examined for shape, size, molted feathers, whitewash, cast pellets and/or prey remains. Disturbance characteristics and all other animal sign encountered within the survey area were recorded. Date time and weather conditions were logged. A hand-held, global positioning system (GPS) unit was used to survey straight transects, to identify survey area boundaries, and for other pertinent information. Representative photographs of the survey area were taken, and Google Earth Pro was accessed to provide recent aerial photographs of the project site and surrounding area.

Riverside County also requires that any survey limitations be identified. No limitations significantly affected the results and conclusions given herein. No private property was surveyed without owner permission and buffer area transects were not surveyed within the areas occupied by existing development. Surveys were conducted during the appropriate season to observe the target species, in good weather conditions, by qualified biologists who followed all pertinent protocols.

#### ***Riverine/Riparian Areas and Jurisdictional Waters***

Jericho also assessed the Project site for State and /or federal jurisdictional waters that are subject to Sections 404 and 401 of the federal Clean Water Act (CWA) regulated by the U.S. Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) respectively; and/or Section 1602 of the California Fish and Game Code (FCG) administered by the CDFW and Riverine/Riparian and Vernal Pool habitat subject to Section 6.1.2 of the MSHCP

The methods used in this study to delineate the non-wetland WoUS at the Ordinary High Water Mark (OHWM) in variable, ephemeral, intermittent, or perennial non-wetland waters followed guidance described in *A Field Guide to the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States* (Lichvar and McColley 2008) and the *Updated Datasheet for the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States* (“Updated Datasheet”, Curtis and Lichvar 2010).

The RWQCB maintains jurisdiction over all waters of the State, including wetlands. For the purposes of Porter-Cologne, the methods used to determine federal jurisdiction over non-wetland waters were also used to determine the extent of RWQCB jurisdiction over non-wetland waters within the property.

Evaluation of FGC Section 1600 Streambed Waters followed guidance in the Mapping Episodic Stream Activity (MESA) protocols [*MESA Field Guide*], pursuant to which CDFW claims jurisdiction beyond traditional stream banks and the outer edge of riparian. Under MESA, the term stream is defined broadly to include “a body of water that flows perennially or episodically and that is defined by the area in which water currently flows, or has flowed, over a given course during the historic regime [i.e., ‘circa 1800 to the present’], and where the width of its course can reasonably be identified by physical or biological indicators.”

The methods used to determine any riparian/riverine or vernal pool areas were based on the above techniques as well as soils evaluations and vegetation classifications. This is because an area may be characterized as riparian based on its vegetative composition, but not meet the criteria of being federal or state jurisdictional water.

## RESULTS

### *Regional Setting*

According to the EPA Regional map, the Project site is located in the Inland Valleys (85k) ecoregion. An ecoregion is a regional area that has similar ecosystems in terms of type, quality, and quantity of environmental resources. The Inland Valleys ecoregion is influenced less by marine processes, and more by alluvial processes. The ecoregion consists of alluvial fans and basin floors at the base of the San Bernardino and San Gabriel mountains and the San Jacinto and Perris Valleys in the south. The region was historically composed of Riversidean coastal sage scrub, valley grasslands, and riparian woodlands. The ecoregion is now heavily urbanized with some remaining agriculture.

Hydrologically, the Project site is located within the Perris hydrologic area, in the 106,456-acre Perris Valley hydrologic sub-area (HSA 802.11) within the Lower San Jacinto River watershed (HUC 180702020304).

The City of Moreno Valley is located in northwestern Riverside County on the east side of the mountains of the Badlands. Moreno Valley is bounded by Old Highway 215 on the west, the mountains of Lake Perris State Recreation Area on the south, and the Box Springs mountain range to the north. The general climate of Moreno Valley is described as warm, dry summers and mild winters and is characterized as warm-summer Mediterranean with temperatures ranging from 97 to 38 degrees Fahrenheit and an average annual rainfall of 12 inches.

### *Existing Site Conditions*

Soils on site consist of Monserate sandy loam (5-8 percent slopes, eroded), Hanford course sandy loam (5-8 percent slopes, eroded), Monserate sandy loam (8-15 percent slopes, eroded), Monserate sandy loam (shallow, 5-15 percent slopes, eroded). Please refer to Figure 6 for a depiction of the soils on site. The highly erosive nature of the soils on site, results in deep grooves over time on the landscape as soil is eroded away by hydrologic processes. This is a typical condition in the “Badlands” area and can easily be seen in aerial imagery of the site. At first glance of an aerial photo these erosive features on site could

appear to be drainage channels. However, once on the ground viewing them, they are in fact erosional topographical features and not drainages.

The topography of the Project site gently to moderately sloped from the north/northeast to the south/southwest. The subject property has an altitude of 1,770 feet above MSL along the northeastern corner dropping to 1,640 feet at the southwestern portion.

The Project site is within a heavily urbanized area, bordered by dense single-family housing on the west, north and east and bounded on the west by Day Street, on the north by Ironwood Avenue, and on the south by State Route 60 (SR-60). Historical images back to September of 1996 show consistent and ongoing clearing/grubbing activities on these parcels. The entire site is highly disturbed from recent and historic disking and blading which has prevented any type of notable habitat succession from occurring on site. The disturbed areas on the project site no longer comprises a native plant community. The Project site supports dense non-native grasslands with remnant native vegetation (Figures 4a and 4b).

Plant species identified include brittlebush (*Encelia farinosa*), coastal heron's bill (*Erodium cicutarium*), common dandelion (*Taraxacum officinale*), red brome (*Bromus madritensis ssp. rubens*), London rocket (*Sysimbrium irio*), Jerusalem thorn (*Parkinsonia aculeata*), prickly lettuce (*Lactuca serriola*), rattail sixweeks grass (*Festuca myuros*), rattlesnake sandmat (*Euphorbia albomarginata*), slender wild oats (*Avena fontinalis*), summer mustard (*Hirschfeldia incana*), tocalote (*Centaurea melitensis*), turkey mullein (*Croton setigerus*), western forget-me-not (*Cryptantha circumscissa*), and western ragweed (*Ambrosia psilostachya*).

Vegetation observed in the bottom of the westernmost erosional feature includes sparse patches of arroyo willow (*Salix lasiolepis*), California sagebrush (*Artemesia californica*), curly dock (*Rumex crispus*), deerweed (*Acmispon glaber*), fountain grass (*Pennisetum setaceum*), mulefat (*Baccharis salicifolia*), red castor bean (*Ricinus cummunis*), tamarisk (*Tamarisk ramossima*) and telegraph weed (*Heterotheca grandiflora*). This particular erosional feature receives concentrated flows from a concrete culvert that collects and conveys storm drain flows coming from the development to the north through the site under the 60 freeway to a freeway catch basin.

### ***Burrowing owl***

The BUOW is a small, ground-dwelling owl that is protected by the international treaty under the Migratory Bird Treaty Act of 1918 and by State law under the California Fish and Game Code (CDFG Code #3513 & #3503.5) as a Species of Special Concern. In southern California, BUOW can be found in grassland, shrub steppe, and desert habitat types consisting of short, sparse vegetation with few shrubs, level to gentle topography, and friable soils. They can also be found in agricultural areas, ruderal fields, vacant lots and pastures, and flood control facilities. Most importantly, BUOWs require underground burrows or other cavities for nesting, roosting and shelter. Burrows used by the owls are usually dug by other species, termed host burrowers. In California, California ground squirrel (*Spermophilus beecheyi*) and round-tailed ground squirrel (*Citellus tereticaudus*) burrows are frequently used by BUOW but they may use dens or holes dug by other fossorial species.

Per the definition provided in the 2012 CDFG Staff Report on Burrowing Owl Mitigation, "Burrowing owl habitat generally includes, but is not limited to, short or sparse vegetation (at least at some time of year), presence of burrows, burrow surrogates or presence of fossorial mammal dens, well-drained soils, and abundant and available prey."

The vegetation on site is dense and above knee high and is not characterized as short or sparse. This dense grass loading is not preferred by BUOW. No evidence of California ground squirrel (*Spermophilus beecheyi*) along with very few fossorial mammal burrows were observed. No fossorial mammal dens were observed either. No burrows of appropriate size, aspect, and shape were located within the property site. Burrows observed were <2 inches in diameter.

Despite a systematic search of the entire site, no burrowing owls or recent or historic sign (molted feathers, whitewash, cast pellets or prey remains, or white wash) was observed during the habitat assessment. Further, the extensive urbanization in the surrounding areas lends itself to predators such as dogs and cats. Per the literature review, the nearest documented BUOW occurrence is approximately 3 miles west of the survey area (CNDDDB, 2019). The site current site conditions for BUOW are not suitable to support BUOW and no evidence of BUOW was found in the survey area.

### ***Riverine/Riparian Areas and Jurisdictional Waters***

Several erosional features traverse the site from north to south/southwest. These types of features are typical of the Badlands area due to the erosive nature of the soils. According to the National Hydrography Dataset (NHD) two of these features historically received storm flows from the north to convey water south through the site (Figure 5).

However, development to the north created a storm drain system that cut off upland flows completely here by redirecting them to the west. This easternmost feature previously mapped as a blue-line stream is void of any signs of surface flow and is choked with non-native grasses and ruderal vegetation. As a result, this feature does not meet the criteria of being a jurisdictional water or riverine/riparian area.

Concentrated storm flows and urban runoff enter the site through a concrete culvert under Ironwood Road from the storm drain collection system serving the development to the north. Flows from here are directed into one concrete culvert that enters the vacant property on the northwest, at the westernmost feature. Storm flows and urban runoff pass through the site here and are collected at a concrete v-ditch north of the 60 freeway where they pass under the freeway and terminate at a freeway catchment basin (Figure 5a).

Although the annual storm flows through the westernmost erosional feature support a few individual Mulefat (*Baccharis salicifolia*) and Sandbar Willow (*Salix exigua*) plants, the criteria for non-wetland WoUS/WoS, FGC streambed or riverine/riparian areas are not met. This feature is a closed (non-flow through) man-made system that begins as a development storm drain collection system and ends at a freeway catchment basin. If the flows were redirected or cut off, as is the case of the easternmost erosional feature, then the four willows and 10 mulefat would cease to exist and this feature would resemble the feature to the east, which is choked with non-native grasses. Further, the mulefat and willow individuals are short and thin in stature and are very sparsely distributed along the westernmost feature.

Mulefat (*Baccharis salicifolia*) is a native shrub in the Sunflower Family (Asteraceae) grow in both seasonally or intermittently flooded habitats, and stands are inherently variable depending on the amount of inundation and scouring. Mulefat onsite occurs in sandy soils with low organic matter. Soils tend to be rocky alluvium; this species has a wetland indicator status of facultative (FAC), meaning that it usually occurs in riparian systems (33-67% of the time), but is occasionally found in uplands (Lichvar et al. 2016).

Sandbar Willow (*Salix exigua*), also called narrowleaf willow, a clonal shrub in the Willow Family (Salicaceae). Sandbar Willow Thickets occur on site in association with mulefat. Sandbar willow is a

Mark A. Ostoich  
 Towngate Highlands-Bio  
 November 01, 2019  
 Page 7

winter-deciduous clonal shrub, typically reaching 15 feet (5 m) or more in height. On site the four willow shrubs reach approximately four to five feet in height. This species occurs in well-drained rocky substrates. It has a wetland indicator status of FACW, meaning that it usually occurs in riverine/wetlands (67-99% of the time), but is occasionally found in non-riverine/wetlands (Lichvar et al. 2016).

The occurrence of these two plant species within the westernmost feature does not by itself create a circumstance of meeting the criteria of a riverine/riparian area when the man-made, non-flow through, nature of the feature is taken into account. Therefore, it is determined that the westernmost feature is not a riverine riparian area.

## CONCLUSIONS AND RECOMMENDATIONS

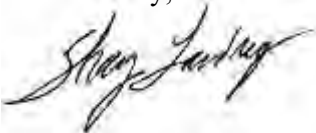
Vegetation onsite has the potential to support nesting birds and migratory birds protected under the MBTA. Therefore, a pre-construction survey is recommended should Project implementation occur during the bird nesting season.

Bird nesting season generally extends from February 1 through September 15 in southern California and specifically, April 15 through August 31 for migratory passerine birds. To avoid impacts to nesting birds (common and special status including BUOW) during the nesting season, a qualified Avian Biologist should conduct pre-construction Nesting Bird Surveys (NBS) prior to Project-related disturbance to nestable vegetation to identify any active nests. If no active nests are found, no further action will be required. If an active nest is found, the biologist should set appropriate no work buffers around the nest which will be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity and duration of disturbance. The nests and buffer zones shall be field checked as needed by the biologist to update the expected fledge date. The approved no-work buffer zone shall be clearly marked in the field, within which no disturbance activity shall commence until the biologist has determined the young birds have successfully fledged and the nest is inactive.

The erosional features on site are just that, erosional features very typical of the Badlands area. These features do not meet the criteria of WoUS, WoS, FGC streambed waters or riverine/areas. This also holds true for the westernmost feature where mulefat and willow individuals exist. The only reason this type of vegetation occurs here, is because the development to the north created a storm drain system that directs and outlets concentrated flows here. The flow regime is man-made beginning as a collection system and ending at a freeway catchment basin. If the flows were redirected or recycled, the these plants would cease to exist.

Thank you for this opportunity to provide information on this important Project. Please contact me if you have questions or need further information:

Sincerely,



Shay Lawrey  
 President

Attachments:

Mark A. Ostoich  
Towngate Highlands-Bio  
November 01, 2019  
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Figure 5 – NHD Blueline Streams and Waterbodies  
Figure 5b – Current Drainage Pattens  
Figure 6 – Soils

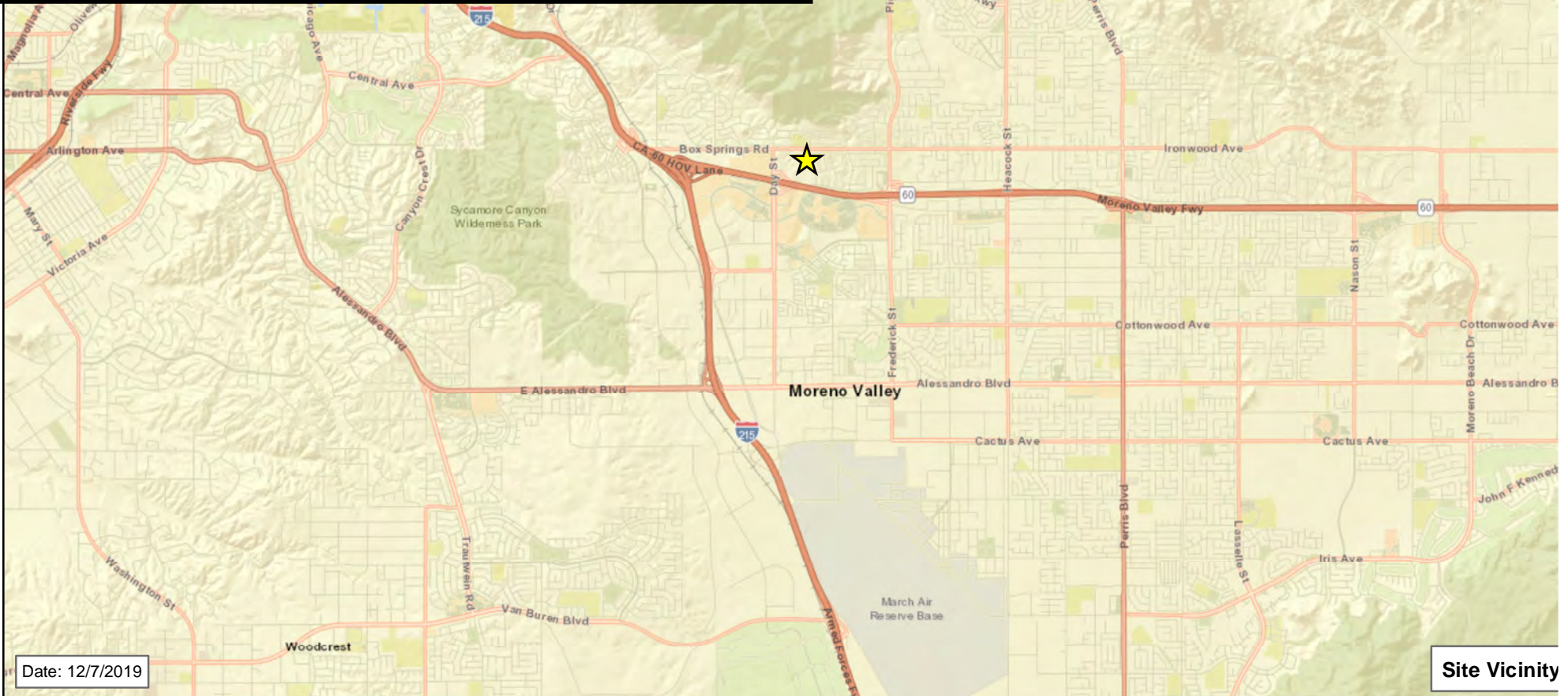
Photo Log

Photos-1-7

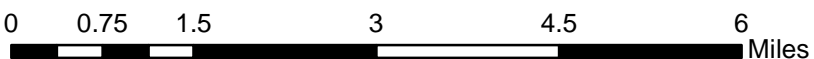


**Legend**

★ Site Location



Date: 12/7/2019



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



**Figure 1 - Regional Overview  
Site Vicinity**

Gresham Savage: Towngate Highlands Project  
Southeast Corner of Ironwood Ave and Day St.  
Moreno Valley, CA

Attachment: Appendix A - Habitat Assessment, Burrowing Owl Habitat Suitability, and Jurisdictional



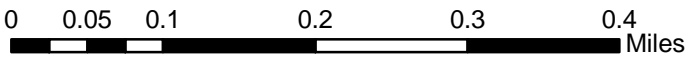


**Legend**

Project Boundary

Date: 12/7/2019

Site Location



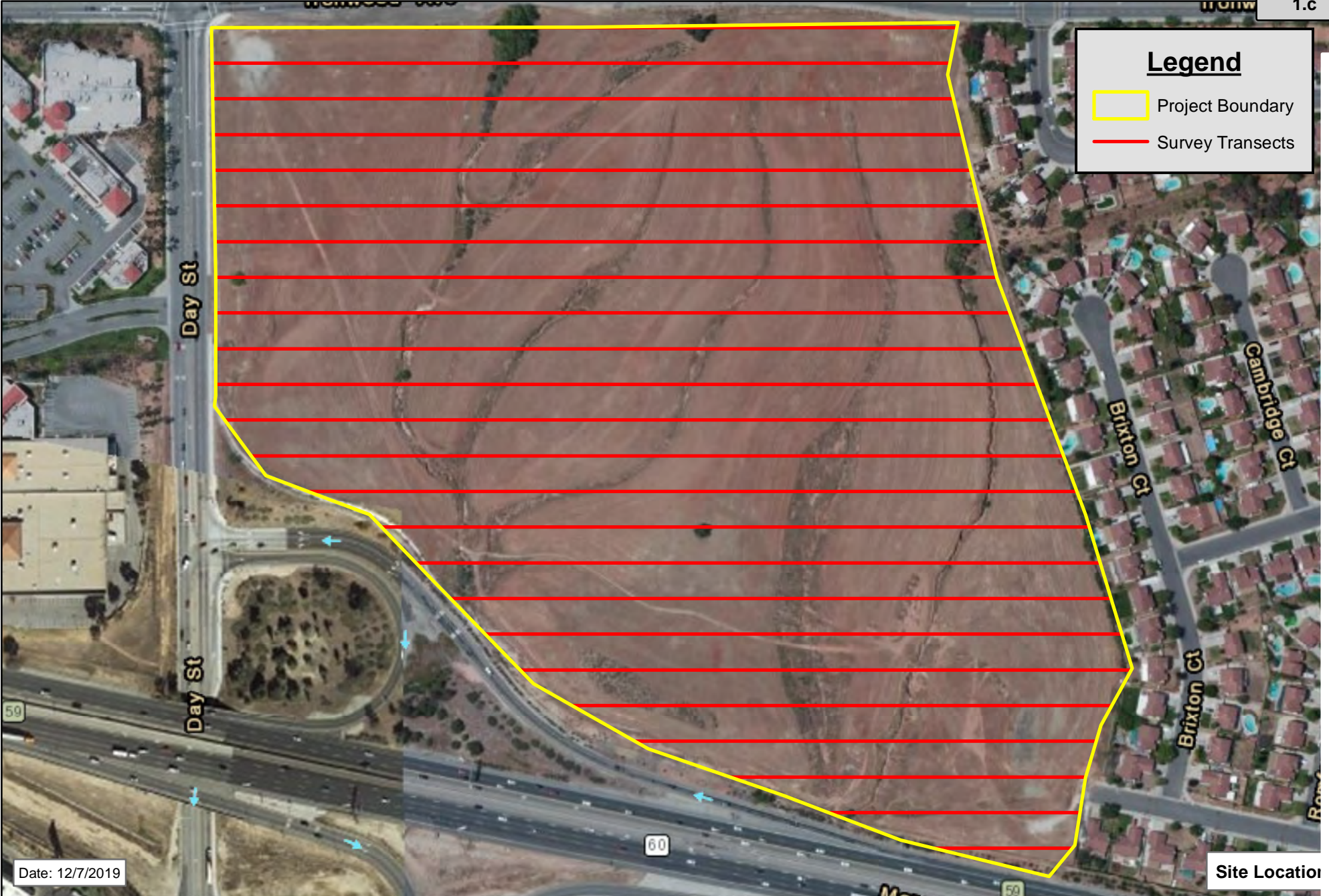
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 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Figure 2**  
Project Location

Gresham Savage: Towngate Highlands Project  
 Southeast Corner of Ironwood Ave and Day St.  
 Moreno Valley, **Packet Pg. 73**

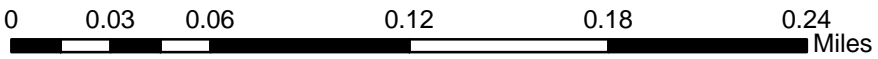
Attachment: Appendix A - Habitat Assessment, Burrowing Owl Habitat Suitability, and Jurisdictional



**Legend**

- Project Boundary
- Survey Transects

Date: 12/7/2019



Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors  
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Figure 3**  
**Survey Transects**

Gresham Savage: Towngate Highlands Project  
 Southeast Corner of Ironwood Ave and Day St.  
 Moreno Valley, **Packet Pg. 74**

Attachment: Appendix A - Habitat Assessment, Burrowing Owl Habitat Suitability, and Jurisdictional



**Legend**

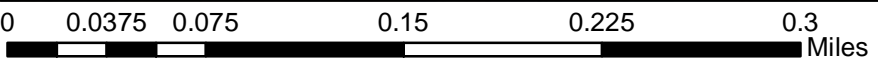
Project Boundary

**RCA MSHCP 2012 Vegetation Classifications**

- Coastal Sage Scrub
- Developed/Disturbed Land
- Riparian Scrub, Woodland, Forest

Date: 12/7/2019

Site Location



Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors  
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Figure 4a**  
**RCA Vegetation Layer (2012)**

Gresham Savage: Towngate Highlands Project  
 Southeast Corner of Ironwood Ave and Day St.  
 Moreno Valley, CA

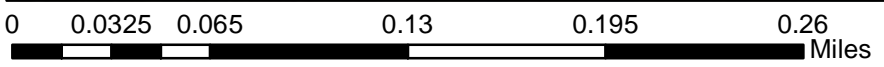
Attachment: Appendix A - Habitat Assessment, Burrowing Owl Habitat Suitability, and Jurisdictional



**Legend**

- Project Boundary
- Coastal Sage/Riparian Scrub
- Disturbed Non-Native Grassland
- Disturbed Riparian Scrub

Date: 12/7/2019



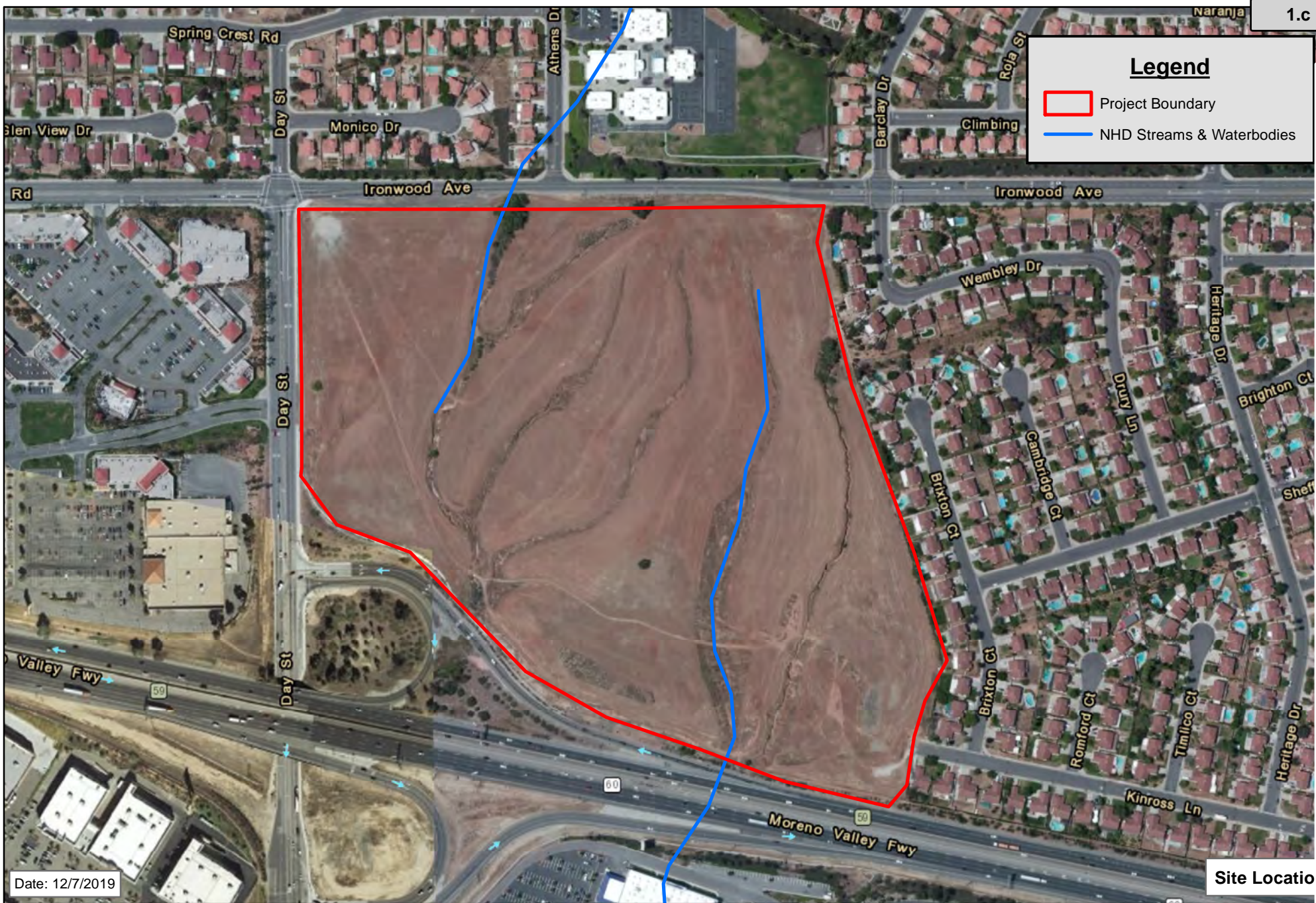
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 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Figure 4b**  
**Observed Vegetation (2019)**

Gresham Savage: Towngate Highlands Project  
 Southeast Corner of Ironwood Ave and Day St.  
 Moreno Valley, **Packet Pg. 76**

Attachment: Appendix A - Habitat Assessment, Burrowing Owl Habitat Suitability, and Jurisdictional

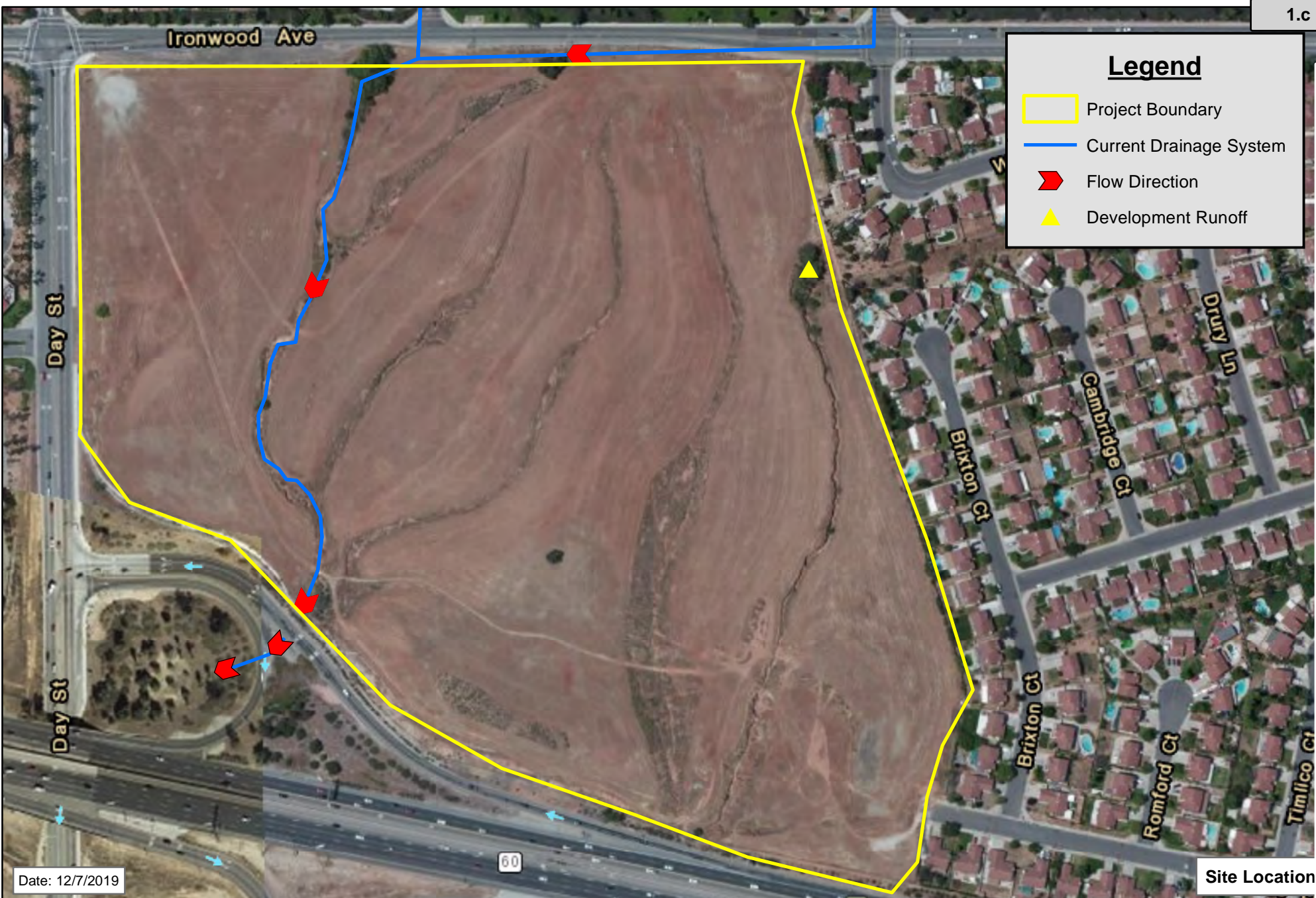


Attachment: Appendix A - Habitat Assessment, Burrowing Owl Habitat Suitability, and Jurisdictional



Figure 5  
National Hydrography Dataset (NHD)  
Blueline Streams & Waterbodies

Gresham Savage: Towngate Highlands Project  
Southeast Corner of Ironwood Ave and Day St.  
Moreno Valley, CA

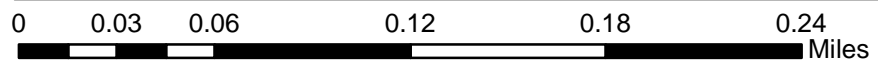


**Legend**

- Project Boundary
- Current Drainage System
- Flow Direction
- ▲ Development Runoff

Date: 12/7/2019

Site Location



Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors  
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Figure 5b**  
**Present Drainage Flow**

Gresham Savage: Towngate Highlands Project  
 Southeast Corner of Ironwood Ave and Day St.  
 Moreno Valley, CA

Attachment: Appendix A - Habitat Assessment, Burrowing Owl Habitat Suitability, and Jurisdictional

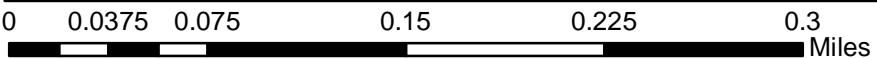


**Legend**

- Project Boundary
- Soils**
- Monserate sandy loam, 5 to 8 percent slopes, eroded
- Monserate sandy loam, 8 to 15 percent slopes, eroded
- Monserate sandy loam, shallow, 5 to 15 percent slopes, eroded

Date: 12/7/2019

Site Location



Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors  
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Figure 6**  
**Soils (USDA Soil Survey)**

Gresham Savage: Towngate Highlands Project  
 Southeast Corner of Ironwood Ave and Day St.  
 Moreno Valley, CA

Attachment: Appendix A - Habitat Assessment, Burrowing Owl Habitat Suitability, and Jurisdictional

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Towngate Highlands-Bio  
November 01, 2019



Photo 1. View of Easternmost Erosional Feature.



Photo 3. Showing Westernmost drainage pattern leaving site at south from northwest



Photo 2. Showing Westernmost Feature drainage pattern mid-site



Photo 4. Location where flows leave site into V-ditch - carried off site under 60 freeway and terminate in catchbasin

Attachment: Appendix A - Habitat Assessment, Burrowing Owl Habitat Suitability, and Jurisdictional



Mark A. Ostoich  
Towngate Highlands-Bio  
November 01, 2019



Photo 5. Showing Westernmost Feature drainage pattern top of site



Photo 7. Showing disturbances on site.



Photo 6. Further d/s of Photo 5 showing Westernmost Feature top of site

**Western Riverside County  
Multiple Species Habitat Conservation Plan  
Consistency Analysis**

**Assessor's Parcel Numbers 291-100-054 and 291-100-055  
TownGate Highlands – 50 Acres**

**Permittee Name: Permittee Name**  
*Fritz Duda Company*

**Applicant Name: Applicant Name**  
*Paul Bernard*

**Jericho Systems, Inc.**  
*Shay Lawrey*  
*(909) 915-5900*

**November 1, 2019**

## MSHCP Consistency Analysis

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## MSHCP Consistency Analysis

### 1 EXECUTIVE SUMMARY

This report contains the findings of Jericho Systems, Inc. (Jericho's) Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis for the TownGate Highlands Development (Project) located in the City of Moreno Valley at the southwest corner of Ironwood Avenue and Day Street in Riverside County, California. The City of Moreno Valley is a signatory to the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The MSHCP requires that a project comply with the MSHCP policies identified in Section 6 of the MSHCP. The Project site is located in the Reche Canyon/Badlands Area Plan of the MSHCP. The site is not located in within any MSHCP designated criteria cell, cell group, or area identified for conservation. Further, the Project site is not located in an amphibian, criteria area species, mammal, or narrow endemic plant survey area.

Review of the Western Riverside County Regional Conservation Authority (RCA) MSHCP Information Map determined that the Project site is located within the designated survey area for burrowing owl (*Athene cunicularia*) [BUOW]. Therefore, a habitat suitability assessment for BUOW (MSHCP section 6.3.2) and MSHCP Riparian/Riverine resources (MSHCP section 6.1.2) was required and conducted. The site was also evaluated for the presence jurisdictional waters, subject to the federal Clean Water Act (CWA), Porter-Cologne (Porter-Cologne) and California Fish and Game Code (FGC) regulations. Jurisdictional resources subject to the CWA regulations include non-wetland waters and wetland waters of the U.S. (WoUS) whereas jurisdictional resources subject to Porter-Cologne include non-wetland waters and waters of the State (WoS). The California FGC encompasses the resources that constitute a stream or river, including associated riparian vegetation and floodplain.

The Project site is within a heavily urbanized area, bordered by dense single-family housing on the west, north and east and bounded on the west by Day Street, on the north by Ironwood Avenue, and on the south by State Route 60 (SR-60). Historical images back to September of 1996 show consistent and ongoing clearing/grubbing activities on these parcels. The entire site is highly disturbed from recent and historic disking and blading which has prevented any type of notable habitat succession from occurring on site. The Project site supports large blocks of dense non-native grasslands, disked ground and remnant native plants sparsely interspersed among the non-native grasses.

The survey results found that the Project site primarily consists of dense non-native grasses and ruderal habitat which is not suitable for burrowing owl. Several erosional features traverse the site from north to south/southwest. These types of features are typical of the Badlands area due to the erosive nature of the soils. According to the National Hydrography Dataset (NHD) two of these features historically received storm flows from the north to convey water south through the site. None of the erosional features meet the definitions for non-wetland Waters of the U.S., Waters of the State, Fish and Game Code streambed and/or riverine/riparian because either they do not flow or they are closed (non-flow through) man-made systems that begins as a development storm drain collection system and ends at a freeway catchment basin. Further, no riverine riparian or vernal pool areas were identified onsite, and no special status species were observed or expected to occur.

A General Biological Resources Assessment/Jurisdictional Delineation is provided in Appendix A.

### 2 INTRODUCTION

The purpose of this Consistency Analysis (Analysis) report is to summarize the biological data for the proposed TownGate Highlands Project (Project) and to document Project's consistency with the goals and objectives of the Western Riverside County MSHCP. The format of this report follows the Regional

## MSHCP Consistency Analysis

Conservation Agency’s guidance document for the Western Riverside MSHCP Consistency Analysis Report Template.

### 2.1 General Survey Methods

Prior to the field investigation reference materials and databases relevant to the Project site were reviewed for the *Riverside East* and *Sunnymead 7.5-minute* USGS quadrangles. The database search included the *Sunnymead* USGS Quad due to the Project site’s proximity to the *Riverside East* USGS Quad. The sources reviewed included:

- California Natural Diversity Database (CNDDDB) *Rarefind 5*;
- CNDDDB Biogeographic Information and Observation System (BIOS);
- USDA Natural Resources Conservation Service (NRCS) Web Soil Survey;
- USFWS National Wetland Inventory;
- Environmental Protection Agency (EPA) Water Program “My Waters” data layers
- Google Earth Pro historic aerial imagery (1994-2018)
- County/City habitat conservation plans and other sensitive resource policies;
- RCA MSHCP Information Map

On October 30 and 31, 2019, Jericho biologists Shay Lawrey, Todd White, Christian Nordal, and Craig Lawrey (Jericho field staff) conducted field surveys. Each surveyor has advanced degrees in Biology and multiple years of experience surveying for biological resources throughout Southern California. The surveyors systematically searched the Project site by walking transects spaced at approximately 10 meters (30 feet) apart to allow for 100 percent visual coverage of the ground surface. Due to development directly adjacent to the site a survey buffer was limited outside of the Project boundary on the adjoining vacant parcel that is not a part of this project in the north west corner. The surveys were conducted on calm weather days, during peak BUOW activity between the morning hours of 7:00 a.m. to 11:00 a.m. and 2:00 p.m. to 5:00 p.m.

### 2.2 Project Area

The proposed Project site consists of 50-acres encompassing Assessor’s Parcel Number’s (APNs) 291-100-054 and 291-100-055, which are bound on the west by Day Street, on the north by Ironwood Avenue, on the east by dense single-family residences and on the south by State Route 60 (SR-60). The proposed Project is within the *Riverside East* USGS 7.5’ quadrangle, Township 3 South, Range 4 West, Section 2 (Figure 1 and Figure 2).

The Project area is defined as follows:

Assessor Parcel Numbers: 291-100-054 and 291-100-055

Project Acreage Onsite: 50 acres

Project Acreage Offsite: 0. New signal at Day Street at Project entrance.

### 2.3 Project Description

The Project proposes to construct 293 residential units on approximately 19.53 acres, sit-down restaurants on 14,000 square feet, 11,500 square feet of fast-food restaurants, 3,000 square feet of a gas station/convenience store and 260 rooms of hotel space.

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The intent is to develop the entire 50-acre site. The description provided above provides details of the initial development phase.

### 2.4 Covered Roads

The Project does not occur on a Covered Road or require access from a Covered Road as identified by MSHCP Table 7-4. Therefore, this section is not applicable.

### 2.5 General Setting

According to the EPA Regional map, the Project site is located in the Inland Valleys (85k) ecoregion. An ecoregion is a regional area that has similar ecosystems in terms of type, quality, and quantity of environmental resources. The Inland Valleys ecoregion is influenced less by marine processes, and more by alluvial processes. The ecoregion consists of alluvial fans and basin floors at the base of the San Bernardino and San Gabriel mountains and the San Jacinto and Perris Valleys in the south. The region was historically composed of Riversidean coastal sage scrub, valley grasslands, and riparian woodlands. The ecoregion is now heavily urbanized with some remaining agriculture.

Hydrologically, the Project site is located within the Perris hydrologic area, in the 106,456-acre Perris Valley hydrologic sub-area (HSA 802.11) within the Lower San Jacinto River watershed (HUC 180702020304).

The City of Moreno Valley is located in northwestern Riverside County on the east side of the mountains of the Badlands. Moreno Valley is bounded by Old Highway 215 on the west, the mountains of Lake Perris State Recreation Area on the south, and the Box Springs mountain range to the north. The general climate of Moreno Valley is described as warm, dry summers and mild winters and is characterized as warm-summer Mediterranean with temperatures ranging from 97 to 38 degrees Fahrenheit and an average annual rainfall of 12 inches.

Soils on site consist of Monserate sandy loam (5-8 percent slopes, eroded), Hanford course sandy loam (5-8 percent slopes, eroded), Monserate sandy loam (8-15 percent slopes, eroded), Monserate sandy loam (shallow, 5-15 percent slopes, eroded). Please refer to Figure 3 for a depiction of the soils on site. The highly erosive nature of the soils on site, results in deep grooves over time on the landscape as soil is eroded away by hydrologic processes. This is a typical condition in the “Badlands” area and can easily be seen in aerial imagery of the site. At first glance of an aerial photo these erosive features on site could appear to be drainage channels. However, once on the ground viewing them, they are in fact erosional topographical features and not drainages.

The topography of the Project site gently to moderately sloped from the north/northeast to the south/southwest. The subject property has an altitude of 1,770 feet above MSL along the northeastern corner dropping to 1,640 feet at the southwestern portion.

The Project site is within a heavily urbanized area, bordered by dense single-family housing on the west, north and east and bounded on the west by Day Street, on the north by Ironwood Avenue, and on the south by State Route 60 (SR-60). Historical images back to September of 1996 show consistent and ongoing clearing/grubbing activities on these parcels. The entire site is highly disturbed from recent and historic disking and blading which has prevented any type of notable habitat succession from occurring on site. The disturbed areas on the project site no longer comprises a native plant community. The Project site supports dense non-native grasslands with remnant native vegetation

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### 3 RESERVE ASSEMBLY ANALYSIS

The site is not located or mapped within or adjacent to any criteria cells or cell groups. Therefore, this analysis is not applicable.

#### 3.1 Public Quasi-Public Lands

The majority of the cities in western Riverside County as well as the County have contributed open space/land to the County to help establish the MSHCP Conservation Area. These lands are described in the MSHCP as Public/Quasi-Public (PQP) Lands. P/QP Lands are a subset of MSHCP Conservation Area lands totaling approximately 347,000 acres of lands known to be in public/private ownership and expected to be managed for open space value and/or in a manner that contributes to the Conservation of Covered Species (including lands contained in existing reserves). The acreage of PQP Lands has been accounted for in the MSHCP tracking process for assembling the Conservation Area. If impacts to PQP Lands will result from development or implementation of a project, the project applicant must prepare an equivalency analysis that shows the impacts will either not affect the total acreage of PQP Lands or that the applicant can provide other compensatory mitigation that is biologically equivalent or superior to offset the loss of the PQP Lands.

##### 3.1.1 Public Quasi-Public Lands in Reserve Assembly Analysis

The Project will not directly or indirectly impact any PQP lands because the project site is not located with PQP Lands nor is the Project site near PQP lands.

##### 3.1.2 Project Impacts to Public Quasi-Public Lands

The Project will not directly or indirectly impact any PQP lands because the project site is not located with PQP Lands nor is the Project site near PQP lands.

### 4 VEGETATION MAPPING

The RCA MSHCP Information Map (Vegetation 2012 layer) identifies the vegetation type as “Developed/Disturbed.” Small patches of “Riparian Scrub, Woodland, Forest” are identified in the drainage feature within the northern boundary of the site and along the eastern boundary of the site (Figure 4a).

Historical images back to September of 1996 show consistent and ongoing clearing/grubbing activities on these parcels. The entire site is highly disturbed from recent and historic disking and blading which has prevented any type of notable habitat succession from occurring on site. The disturbed areas on the project site no longer comprises a native plant community (Figure 4b).

Plant species identified include brittlebush (*Encelia farinosa*), coastal heron’s bill (*Erodium cicutarium*), common dandelion (*Taraxacum officinale*), red brome (*Bromus madritensis ssp. rubens*), London rocket (*Sysimbrium irio*), Jerusalem thorn (*Parkinsonia aculeata*), prickly lettuce (*Lactuca serriola*), rattail sixweeks grass (*Festuca myuros*), rattlesnake sandmat (*Euphorbia albomarginata*), slender wild oats (*Avena fontinalis*), summer mustard (*Hirschfeldia incana*), tocalote (*Centaurea melitensis*), turkey mullein (*Croton setigerus*), western forget-me-not (*Cryptantha circumscissa*), and western ragweed (*Ambrosia psilostachya*).

Vegetation observed in the bottom of the westernmost erosional feature includes non-native grasses and scattered, sparse patches of arroyo willow (*Salix lasiolepis*), California sagebrush (*Artemesia californica*),



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curely dock (*Rumex crispus*), deerweed (*Acemison glaber*), fountain grass (*Pennisetum setaceum*), mulefat (*Baccharis salicifolia*), red castor bean (*Ricinus cummunis*), tamarisk (*Tamarisk ramossima*) and telegraph weed (*Heterotheca grandiflora*). This particular erosional feature receives concentrated flows from a concrete culvert that collects and conveys storm drain flows coming from the development to the north through the site under the 60 freeway to a freeway catch basin.

### 5 PROTECTION OF SPECIES ASSOCIATED WITH RIPARIAN/RIVERINE AREAS AND VERNAL POOLS (SECTION 6.1.2)

According to Section 6.1.2 of the MSHCP:

*“Riparian/Riverine Areas are lands which contain Habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.*

*“Vernal pools are seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season. The determination that an area exhibits vernal pool characteristics, and the definition of the watershed supporting vernal pool hydrology, must be made on a case-by-case basis. Such determinations should consider the length of the time the area exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. Evidence concerning the persistence of an area's wetness can be obtained from its history, vegetation, soils, and drainage characteristics, uses to which it has been subjected, and weather and hydrologic records.*

*“Fairy Shrimp. For Riverside, vernal pool and Santa Rosa fairy shrimp, mapping of stock ponds, ephemeral pools and other features shall also be undertaken as determined appropriate by a qualified biologist.*

*“With the exception of wetlands created for the purpose of providing wetlands Habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions.”*

#### 5.1 Riparian/Riverine

As defined under Section 6.1.2 of the MSHCP, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*, riparian/riverine areas are areas dominated by trees, shrubs, persistent emergent plants, or emergent mosses and lichens which occur close to or are dependent upon nearby freshwater, or areas with freshwater flowing during all or a portion of the year. Conservation of these areas is intended to protect habitat that is essential to a number of listed or special-status water-dependent fish, amphibian, avian, and plant species. Any alteration or loss of riparian/riverine habitat from development of a Project will require the preparation of a Determination of Biologically Equivalent or Superior Preservation (DBESP) analysis to ensure the replacement of any lost functions and values of habitats in regard to the listed species. This assessment is independent from considerations given to waters of the United States and waters of the State under the CWA, the California Porter-Cologne Water Quality Control Act, and CDFW jurisdictional streambed under the California Fish and Game Code.

##### 5.1.1 Methods

On July 1 and 8, and October 30 and 31, 2019, Jericho assessed the entire Project site for State and /or federal jurisdictional waters that are subject to Sections 404 and 401 of the federal Clean Water Act (CWA) regulated by the U.S. Army Corps of Engineers (USACE) and Regional Water Quality Control Board

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(RWQCB) respectively; and/or Section 1602 of the California Fish and Game Code (FCG) administered by the CDFW and Riverine/Riparian and Vernal Pool habitat subject to Section 6.1.2 of the MSHCP

The methods used to delineate the non-wetland Waters of the US at the Ordinary High Water Mark (OHWM) in variable, ephemeral, intermittent, or perennial non-wetland waters followed guidance described in *A Field Guide to the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States* (Lichvar and McColley 2008) and the *Updated Datasheet for the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States* (“Updated Datasheet”, Curtis and Lichvar 2010).

The RWQCB maintains jurisdiction over all waters of the State, including wetlands. For the purposes of Porter-Cologne, the methods used to determine federal jurisdiction over non-wetland waters were also used to determine the extent of RWQCB jurisdiction over non-wetland waters within the property.

Evaluation of FGC Section 1600 Streambed Waters followed guidance in the Mapping Episodic Stream Activity (MESA) protocols [*MESA Field Guide*], pursuant to which CDFW claims jurisdiction beyond traditional stream banks and the outer edge of riparian. Under MESA, the term stream is defined broadly to include “a body of water that flows perennially or episodically and that is defined by the area in which water currently flows, or has flowed, over a given course during the historic regime [i.e., ‘circa 1800 to the present’], and where the width of its course can reasonably be identified by physical or biological indicators.”

The methods used to determine any riparian/riverine or vernal pool areas were based on the above techniques as well as soils evaluations and vegetation classifications. This is because an area may be characterized as riparian based on its vegetative composition, but not meet the criteria of being federal or state jurisdictional water.

### 5.1.2 Existing Conditions and Results

Several erosional features traverse the site from north to south/southwest. The function and value of the erosional features on site is bird nesting and foraging habitat. The vegetation growing within these features is either non-native grasses or a mix non-native ruderal plants and native plants such as buckwheat, brittle brush, mule fat, and/or willow. These types of features are typical of the Badlands area due to the erosive nature of the soils. According to the National Hydrography Dataset (NHD) two of these features historically received storm flows from the north to convey water south through the site (Figure 5).

However, development to the north created a storm drain system that cut off upland flows completely here by redirecting them to the west. This easternmost feature previously mapped as a blue-line stream is void of any signs of surface flow and is choked with non-native grasses and ruderal vegetation. As a result, this feature does not meet the criteria of being a jurisdictional water or riverine/riparian area.

Concentrated storm flows and urban runoff enter the site through a concrete culvert under Ironwood Road from the storm drain collection system serving the development to the north. Flows from here are directed into one concrete culvert that enters the vacant property on the northwest, at the westernmost feature. Storm flows and urban runoff pass through the site here and are collected at a concrete v-ditch north of the 60 freeway where they pass under the freeway and terminate at a freeway catchment basin (Figure 5b).

Although the annual storm flows through the westernmost erosional feature support a few individual Mulefat (*Baccharis salicifolia*) and arroyo willow (*Salix lasiolepis*) plants, the criteria for non-wetland WoUS/WoS, FGC streambed or riverine/riparian areas are not met. This feature is a closed (non-flow through) man-made system that begins as a development storm drain collection system and ends at a

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freeway catchment basin. If the flows were redirected or cut off, as is the case of the easternmost erosional feature, then the four willows and 10 mulefat would cease to exist and this feature would resemble the feature to the east, which is choked with non-native grasses. Further, the mulefat and willow individuals are short and thin in stature and are very sparsely distributed along the westernmost feature.

Mulefat is a native shrub in the Sunflower Family (Asteraceae) grow in both seasonally or intermittently flooded habitats, and stands are inherently variable depending on the amount of inundation and scouring. Mulefat onsite occurs in sandy soils with low organic matter. Soils tend to be rocky alluvium; this species has a wetland indicator status of facultative (FAC), meaning that it usually occurs in riparian systems (33-67% of the time), but is occasionally found in uplands associated with coastal sage scrub habitat (Lichvar et al. 2016).

Arroyo willow is a shrub in the Willow Family (Salicaceae) that occur on site in association with mulefat. It is a winter-deciduous shrub, typically reaching 15 feet (5 m) or more in height. On site, the three willow shrubs reach approximately five feet in height. This species occurs in well-drained rocky substrates. It has a wetland indicator status of FACW, meaning that it usually occurs in riverine/wetlands (67-99% of the time), but is occasionally found in non-riverine/wetlands (Lichvar et al. 2016).

The occurrence of these two plant species within the westernmost feature does not by itself create a circumstance of meeting the criteria of a riverine/riparian area when the man-made, non-flow through, nature of the feature is taken into account. Therefore, it is determined that the westernmost feature is not a riverine riparian area.

### 5.1.3 Impacts

There is no impact to riparian resources because no evidence of any soils, plants or other features that meet the definition of 6.1.2 of the MSHCP occurs on site. The features on site are either erosional or man-made and non-flow through in nature. The criteria for riverine/riparian areas are not met on site. No further discussion is made

### 5.1.4 Mitigation

No mitigation is proposed as no impact will occur to potential jurisdictional waters and/or riverine/riparian areas. Therefore, a Determination of Biologically Equivalent or Superior Preservation (DBESP) report is not required for compliance with the MSHCP and no regulatory permits from the CDFW, USACE, or RWQCB necessary are required.

## 5.2 Vernal Pools

Vernal pools are seasonally inundated, ponded areas that only form in regions where specialized soil and climatic conditions exist. During fall and winter rains typical of Mediterranean climates, water collects in shallow depressions where downward percolation of water is prevented by the presence of a hard pan or clay pan layer (duripan) below the soil surface. Later in the spring when rains decrease and the weather warms, the water evaporates, and the pools generally disappear by May. The shallow depressions remain relatively dry until late fall and early winter with the advent of greater precipitation and cooler temperatures.

Vernal pools provide unusual "flood and drought" habitat conditions to which certain plant and wildlife species have specifically adapted as well as invertebrate species such as fairy shrimp.

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One of the factors for determining the suitability of the habitat for fairy shrimp would be demonstrable evidence of seasonal ponding in an area of topographic depression that is not subject to flowing waters. These astatic pools are typically characterized as vernal pools. More specifically, vernal pools are seasonal wetlands that occur in depression areas without a continual source of water. They have wetland indicators of all 3 parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season. The determination that an area exhibits vernal pool characteristics and the definition of the watershed supporting vernal pool hydrology is made on a case-by-case basis. Such determinations should consider the length of time the area exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. The seasonal hydrology of vernal pools provides for a unique environment, which supports plants and invertebrates specifically adapted to a regime of winter inundation, followed by an extended period when the pool soils are dry.

The MSHCP lists two general classes of soils known to be associated with special-status plant species; clay soils and Traver-Domino Willow association soils. The specific clay soils known to be associated with special-status species within the MSHCP plan area include Bosanko, Auld, Altamont, and Porterville series soils, whereas Traver-Domino Willows association includes saline-alkali soils largely located along floodplain areas of the San Jacinto River and Salt Creek. Without the appropriate soils to create the impermeable restrictive layer, none of the special-status species associated with vernal pools can occur on the project site.

### 5.2.1 *Methods*

Methods included a review of recent and historic aerial photographs (1994-2018) of the project site and its immediate vicinity, a review of soils data, and a site visit on July 1 and 8, and October 30 and 31, 2019 by Jericho field staff. The field visit included walking transects spaced at no more than 15 meters (approximately 50 feet) intervals to provide 100 percent visual coverage of the ground surface, looking for signs of clayey soils, ponding, cracking, mottling, etc.

### 5.2.2 *Existing Conditions and Results*

A review of recent and historic aerial photographs of the project site and its immediate vicinity did not provide visual evidence of an astatic or vernal pool conditions on or in the vicinity of the project site.

Soils in this area consist of Monserate sandy loam (5-8 percent slopes, eroded), Hanford course sandy loam (5-8 percent slopes, eroded), Monserate sandy loam (8-15 percent slopes, eroded), Monserate sandy loam (shallow, 5-15 percent slopes, eroded).

No ponding was observed on-site, further supporting the fact that the drainage patterns currently occurring on the project site do not follow hydrologic regimes needed for vernal pools, or astatic ponds.

From this review of historic aerial photographs and observations during the field investigations, it was concluded vernal pools or suitable fairy shrimp habitat occurs on the Project site, as no evidence of ponding was observed. Further, no special-status plant and wildlife species associated with vernal pools were observed during the field visits. Additionally, the routine disturbances on-site, and compacted soils also preclude vernal pools from existing on-site.

### 5.2.3 *Impacts*

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There are no impacts to vernal pools because none exist on site, and the soil type on site does not support the potential for vernal pools.

### 5.2.4 Mitigation

No mitigation is required because no vernal pools exist on site.

### 5.3 Fairy Shrimp

Fairy shrimp can be found in non-vernal pool features such as stock ponds, ephemeral pools, road ruts, human-made depressions, or other depressions that may pond water. If vernal pools or other suitable fairy shrimp habitats are located within the project site then fairy shrimp surveys must be conducted pursuant to USFWS Survey Guidelines for the Listed Large Branchiopods (May 31, 2015), which includes six listed fairy shrimp species, including those species covered under the MSHCP Section 6.1.2 which include but are not limited to:

- Riverside fairy shrimp (*Streptocephalus woottoni*)
- Santa Rosa Plateau fairy Shrimp (*Linderiella santarosae*)
- Vernal Pool fairy shrimp (*Branchinecta lynchi*)

No habitat features suitable for fairy shrimp exist on site. Therefore, evaluations for the presence of fairy shrimp were not warranted or required. No further discussion on fairy shrimp is made in this report.

### 5.4 Riparian Birds

Riparian Birds covered under the MSHCP such as the Least Bell's vireo (*Vireo bellii pusillus*) [LBVI], Southwestern willow flycatcher (*Empidonax trallii extimus*) [SWWF] and Yellow-billed cuckoo (*Coccyzus americanus*) [YBCU] are found only in well-developed riparian habitat. No habitat features suitable for any riparian birds exist on site. The entire site is surrounded by highly urbanized uses including freeways, roadways and dense single family residential. The shrub canopy is extremely sparse, fragmented, and too close to urbanized uses to be used by riparian birds. Therefore, evaluations for the presence of riparian birds were not warranted or required. No further discussion on riparian birds is made in this report.

## 6 PROTECTION OF NARROW ENDEMIC PLANT SPECIES (SECTION 6.1.3)

The MSHCP identifies the potential presence for a number of endemic plant species.

The MSHCP states that in general, habitat suitability assessments may be undertaken year-round, with the exception of vernal pool species for which habitat suitability assessments must be conducted during the rainy season. Species found in vernal pools and associated Habitats include the following Narrow Endemic Plant Species: San Diego ambrosia (*Ambrosia pumila*), spreading navarretia (*Navarretia fossalis*), California Orcutt grass (*Orcuttia californica*), and Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*). Species found in vernal pools and associated Habitats include the following Criteria Area Survey plant species: San Jacinto Valley crownscale (*Atriplex coronator* var. *notator*), Parish's brittle scale (*Atriplex parishii*), Davidson's salt scale (*Atriplex serenana* var. *davidsonii*), thread-leaved brodiaea (*Brodiaea filifolia*), Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), little mousetail (*Myosurus minimus*), and prostrate navarretia (*Navarretia prostrata*) (MSHCP, Section 6.1.3)

The Project site does not fall within a Narrow Endemic Plant Species Survey Area (NEPSSA) and no further discussion is made in this document.

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### 7 ADDITIONAL SURVEY NEEDS AND PROCEDURES (SECTION 6.3.2)

The Project site is not mapped in a Criteria survey area for plants, mammals or amphibians. It is however, mapped in a Criteria survey area for burrowing owl - *Athene cunicularia hypugaea*. Surveys must be conducted within suitable habitat for species according to accepted protocols.

#### 7.1 Burrowing Owl

The Project site is within a mapped survey area for burrowing owl, in accordance with MSHCP Figure 6-4 and a recent review of the RCA MSHCP Information GIS map.

Burrowing owl is currently designated as a California Species of Special Concern. The burrowing owl is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with level to gently sloping areas characterized by open vegetation and bare ground. The western burrowing owl (*A.c. hypugaea*), which occurs throughout the western United States including California, rarely digs its own burrows and is instead dependent upon the presence of burrowing mammals (i.e., California ground squirrels [*Otospermophilus beecheyi*], coyotes, and badgers [*Taxidea taxus*]) whose burrows are often used for roosting and nesting. The presence or absence of colonial mammal burrows is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drainpipes, stand-pipes, and dry culverts. They also require low growth or open vegetation allowing line-of-sight observation of the surrounding habitat to forage and watch for predators. In California, the burrowing owl breeding season extends from the beginning of February through the end of August.

Under the MSHCP burrowing owl is considered and adequately conserved covered species that may still require focused surveys in certain areas as designated in Figure 6-4 of the MSHCP. The survey for burrowing owl requires a systematic survey of all areas that provide suitable habitat plus a 150-meter (approximately 500 feet) zone of influence on all sides of suitable habitat, where applicable.

##### 7.1.1 Methods

Jericho field staff conducted a BUOW habitat assessment on July 1 and 8 and July 1 and 8, and October 30 and 31, 2019 by walking transects spaced at approximately 15 meters (approximately 50 feet) intervals to provide 100 percent visual coverage of the ground surface determined to contain suitable habitat for BUOW. Adjacent areas that were not accessible on foot were surveyed with binoculars. Since the project site is bordered by transportation land uses to the south, west and north, and residential uses immediately to the east, a buffer area was not surveyed. Survey transects were orientated north to south and were conducted at a maximum of 30-meter (approximately 100 feet) intervals to ensure 100% visual coverage of all areas in suitable habitat, as applicable based on topography of the site. Areas providing potential habitat for burrowing owls were surveyed for suitable burrows, consisting of natural and non-natural substrates in areas with low, open vegetation.

The survey was during calm weather, Survey hours of spanned from 7:00 a.m. to 8:30 a.m. with temperatures ranging from 55 degrees Fahrenheit (° F) to 65° F and no wind.

All burrows encountered were examined for shape, scat, pellets, white-wash, feathers, tracks, and prey remains. The location of all suitable burrowing owl habitat, potential owl burrows, burrowing owl sign, and any owls observed were recorded and mapped, with a hand-held GPS unit, if observed. Methods to detect presence of burrowing owls included direct observation, aural detection, and signs of presence;

## MSHCP Consistency Analysis

including pellets, whitewash, feathers, or prey remains. Suitable burrows/sites, including rock piles and non-natural substrates, were thoroughly examined for signs of presence.

### 7.1.2 Conditions and Results

The vegetation on site is dense and above knee high and is not characterized as short or sparse. This dense grass loading is not preferred by BUOW. No evidence of California ground squirrel (*Spermophilus beecheyi*) along with very few fossorial mammal burrows were observed. No fossorial mammal dens were observed either. No burrows of appropriate size, aspect, and shape were located within the property site. Burrows observed were <2 inches in diameter.

Despite a systematic search of the entire site, no burrowing owls or recent or historic sign (molted feathers, whitewash, cast pellets or prey remains, or whitewash) was observed during the habitat assessment. Further, the extensive urbanization in the surrounding areas lends itself to predators such as dogs and cats. Per the literature review, the nearest documented BUOW occurrence is approximately 3 miles west of the survey area (CNDDDB, 2019). The site current site conditions for BUOW are not suitable to support BUOW and no evidence of BUOW was found in the survey area.

### 7.1.3 Impacts

No impacts can be identified in that no BUOW or BUOW sign was observed on the Project site.

### 7.1.4 Mitigation

To ensure there will be no impact to BUOW, a pre-construction survey is required. The suggested mitigation is as follows:

*“Prior to issuance of a grading permit, the applicant shall perform a preconstruction survey that shall be conducted within 30 days prior to ground disturbance to avoid direct take of burrowing owls. If the results of the survey indicate that no burrowing owls are present on-site, then the project may move forward with grading, upon Planning Department approval. If burrowing owls are found to be present or nesting on-site during the preconstruction survey, then the following recommendations must be adhered to: Exclusion and relocation activities may not occur during the breeding season, which is defined as March 1 through August 31, with the following exception: From March 1 through March 15 and from August 1 through August 31 exclusion and relocation activities may take place if it is proven to the Lead Agency and/or appropriate agencies (if any) that egg laying or chick rearing is not taking place. This determination must be made by a qualified biologist.”*

## 8 INFORMATION ON OTHER SPECIES

### 8.1 Delhi Sands Flower Loving Fly

The Project site does not fall within the Delhi soils mapped within the MSHCP baseline data.

### 8.2 Species Not Adequately Conserved

MSHCP Table 9-3 identifies 28 species where requirements must be met for those to be considered not adequately conserved. None of the species listed in the MSHCP Table 9-3 occur on or near the Project site. Therefore, there is no further action required.

## MSHCP Consistency Analysis

### 9 GUIDELINES PERTAINING TO THE URBAN/WILDLANDS INTERFACE (SECTION 6.1.4)

The MSHCP Section 6.1.4 Guidelines are intended to address indirect effects associated with locating Development in proximity to the MSHCP Conservation Area, where applicable. The Project site is not in proximity to any MSHCP Conservation Areas and no further discussion is made in this document.

The Project Site is not located within a Criteria Cell. Therefore, the MSHCP guidelines pertaining to Urban/Wildlands Interface for the management of edge factors such as lighting, urban runoff, toxics, and domestic predators do not apply.

### 10 BEST MANAGEMENT PRACTICES (VOLUME I, APPENDIX C)

This section of the report is designed to describe and comment as to the necessity of implementation of the BMPs identified in Volume 1, Appendix C. The BMPs and their applicability to the Project is identified in Table 1.

**Table 1**  
**MSHCP Best Management Practices Applicability (Volume 1, Appendix C)**

BMP No.	BMP	Applicable Yes or No	Comment
1	A condition shall be placed on grading permits requiring a qualified biologist to conduct a training session for project personnel prior to grading. The training shall include a description of the species of concern and its habitats, the general provisions of the Endangered Species Act (Act) and the MSHCP, the need to adhere to the provisions of the Act and the MSHCP, the penalties associated with violating the provisions of the Act, the general measures that are being implemented to conserve the species of concern as they relate to the project, and the access routes to and project site boundaries within which the project activities must be accomplished.	No	There are no sensitive species within or near the Project site.
2	Water pollution and erosion control plans shall be developed and implemented in accordance with RWQCB requirements.	Yes	The site will include grading and development.
3	The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible.	No	Intent is to develop entire site. Access will be provided via Ironwood and Day Street.
4	The upstream and downstream limits of projects disturbance plus lateral limits of disturbance on either side of the stream shall be clearly defined and marked in the field and reviewed by the biologist prior to initiation of work.	No	There are no streambed resources on or near the site, only erosional features.



## MSHCP Consistency Analysis

BMP No.	BMP	Applicable Yes or No	Comment
5	Projects should be designed to avoid the placement of equipment and personnel within the stream channel or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern.	No	There are no streambed resources on or near the site, only erosional features.
6	Projects that cannot be conducted without placing equipment or personnel in sensitive habitats should be timed to avoid the breeding season of riparian identified in MSHCP Global Species Objective No. 7.	No	There are no streambed resources on or near the site, only erosional features.
7	When stream flows must be diverted, the diversions shall be conducted using sandbags or other methods requiring minimal instream impacts. Silt fencing of other sediment trapping materials shall be installed at the downstream end of construction activity to minimize the transport of sediments offsite. Settling ponds where sediment is collected shall be cleaned out in a manner that prevents the sediment from reentering the stream. Care shall be exercised when removing silt fences, as feasible, to prevent debris or sediment from returning to the stream.	No	There are no streambed resources on or near the site, only erosional features.
8	Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas shall be in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. Project related spills of hazardous materials shall be reported to appropriate entities including but not limited to applicable jurisdictional city, FWS, and CDFG, RWQCB and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.	No	There are no streambed resources on or near the site, only erosional features.
9	Erodible fill material shall not be deposited into water courses. Brush, loose soils, or other similar debris material shall not be stockpiled within the stream channel or on its banks.	No	There are no streambed resources on or near the site, only erosional features.
10	The qualified project biologist shall monitor construction activities for the duration of the project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside the project footprint.	No	The site is surrounded by existing development.
11	The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. Temporary impacts shall be returned to pre-existing	No	Vegetation on-site is mostly non-native grasses and ruderal with very sparse native

## MSHCP Consistency Analysis

BMP No.	BMP	Applicable Yes or No	Comment
	contours and revegetated with appropriate native species.		elements such as buckwheat, brittle brush, mulefat and willow
12	Exotic species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible.	No	Entire site will be developed.
13	To avoid attracting predators of the species of concern, the project site shall be kept as clean of debris as possible. All food related trash items shall be enclosed in sealed containers and regularly removed from the site(s).	Yes	Standard measure.
14	Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the proposed project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the project and shall be specified in the construction plans. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas.	Yes	Standard measure.
15	The Permittee shall have the right to access and inspect any sites of approved projects including any restoration/enhancement area for compliance with project approval conditions including these BMPs.	Yes	Standard measure.

## MSHCP Consistency Analysis

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### 11 REFERENCES

- USFWS (United States Fish and Wildlife Service). 2000. *Southwestern Willow Flycatcher Protocol Revision 2000*. Sacramento, California: USFWS. <https://www.fws.gov/pacific/ecoservices/endangered/recovery/documents/SWWFlycatcher.2000.protocol.pdf>
- USFWS. 2001. *Least Bell's Vireo Survey Guidelines*. January 19, 2001. Sacramento, California: USFWS. [https://www.fws.gov/cno/es/Recovery\\_Permitting/birds/least\\_bells\\_vireo/LeastBellsVireo\\_SurveyGuidelines\\_20010119.pdf](https://www.fws.gov/cno/es/Recovery_Permitting/birds/least_bells_vireo/LeastBellsVireo_SurveyGuidelines_20010119.pdf)
- USFWS. 2015. *A Natural History Summary and Survey Protocol for the Western Distinct Population Segment of the Yellow-Billed Cuckoo*. Prepared by M. Halterman, M.J. Johnson, J.A. Holmes, and S.A. Laymon. Sacramento, California: USFWS. April 2015. [https://www.fws.gov/southwest/es/Documents/R2ES/YBCU\\_SurveyProtocol\\_FINAL\\_DRAFT\\_22Apr2015.pdf](https://www.fws.gov/southwest/es/Documents/R2ES/YBCU_SurveyProtocol_FINAL_DRAFT_22Apr2015.pdf)
- USFWS. May 31, 2015. *Survey Guidelines for Listed Large Branchiopods*.

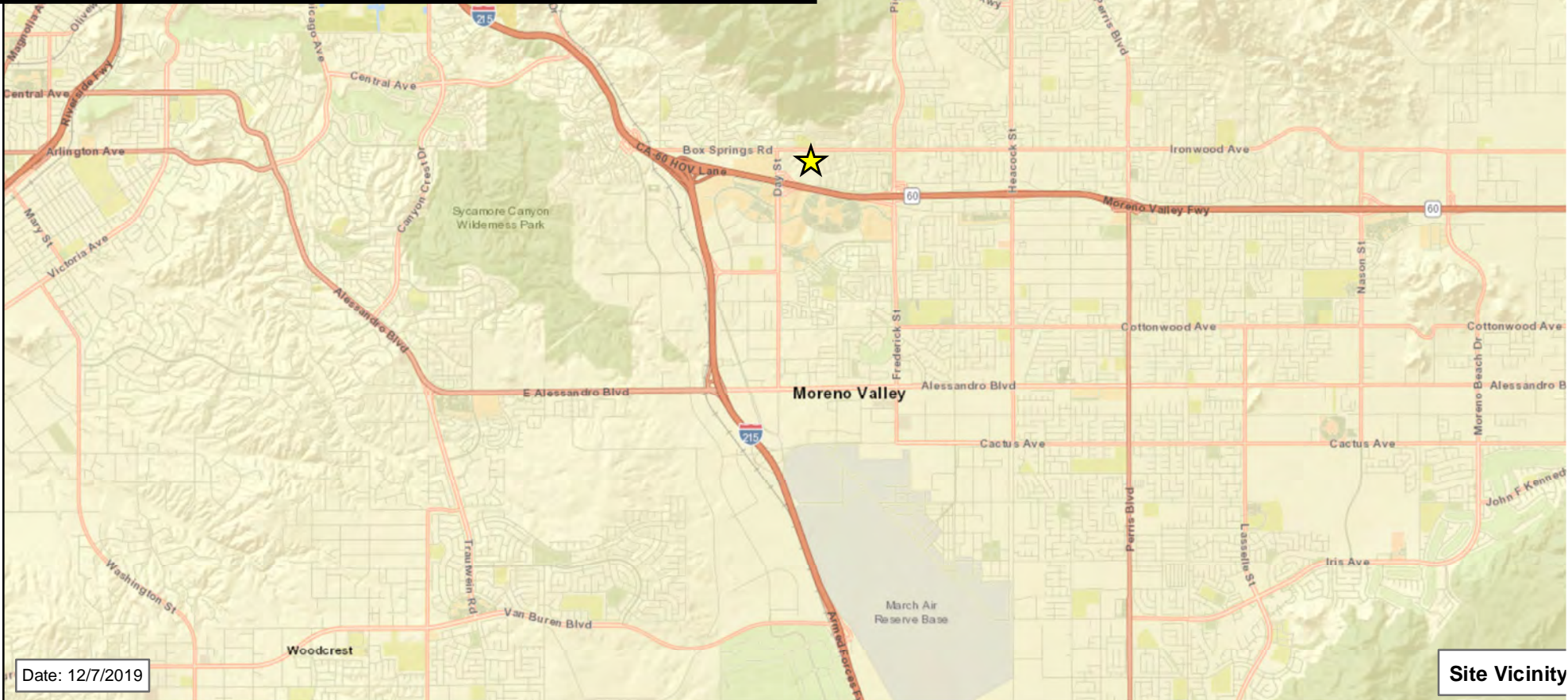
### 12 SUPPORTING APPENDICES

Appendix A –Biological Resources and Habitat Suitability Assessment

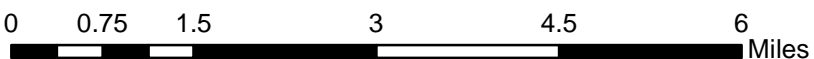


**Legend**

★ Site Location



Date: 12/7/2019



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community



**Figure 1 - Regional Overview Site Vicinity**

Gresham Savage: Towngate Highlands Project  
 Southeast Corner of Ironwood Ave and Day St.  
 Moreno Valley, CA



**Legend**

Project Boundary

Date: 12/7/2019

Site Location

0 0.05 0.1 0.2 0.3 0.4 Miles

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors  
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



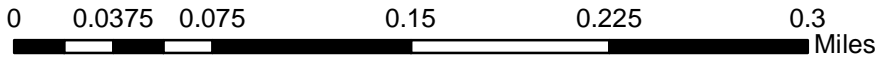
**Figure 2**  
Project Location

Gresham Savage: Towngate Highlands Project  
Southeast Corner of Ironwood Ave and Day St.  
Moreno Valley, **Packet Pg. 101**



Date: 12/7/2019

Site Location



Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors  
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Figure 3**  
Soils (USDA Soil Survey)

Gresham Savage: Towngate Highlands Project  
 Southeast Corner of Ironwood Ave and Day St.  
 Moreno Valley, CA



**Legend**

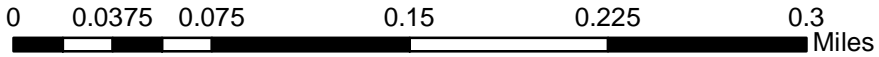
Project Boundary

**RCA MSHCP 2012 Vegetation Classifications**

- Coastal Sage Scrub
- Developed/Disturbed Land
- Riparian Scrub, Woodland, Forest

Date: 12/7/2019

Site Location



Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors  
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Figure 4a**  
**RCA Vegetation Layer (2012)**

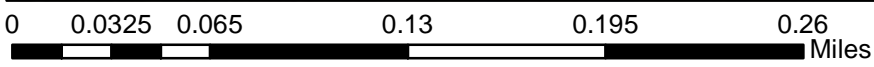
Gresham Savage: Towngate Highlands Project  
 Southeast Corner of Ironwood Ave and Day St.  
 Moreno Valley, CA



**Legend**

- Project Boundary
- Coastal Sage/Riparian Scrub
- Disturbed Non-Native Grassland
- Disturbed Riparian Scrub

Date: 12/7/2019



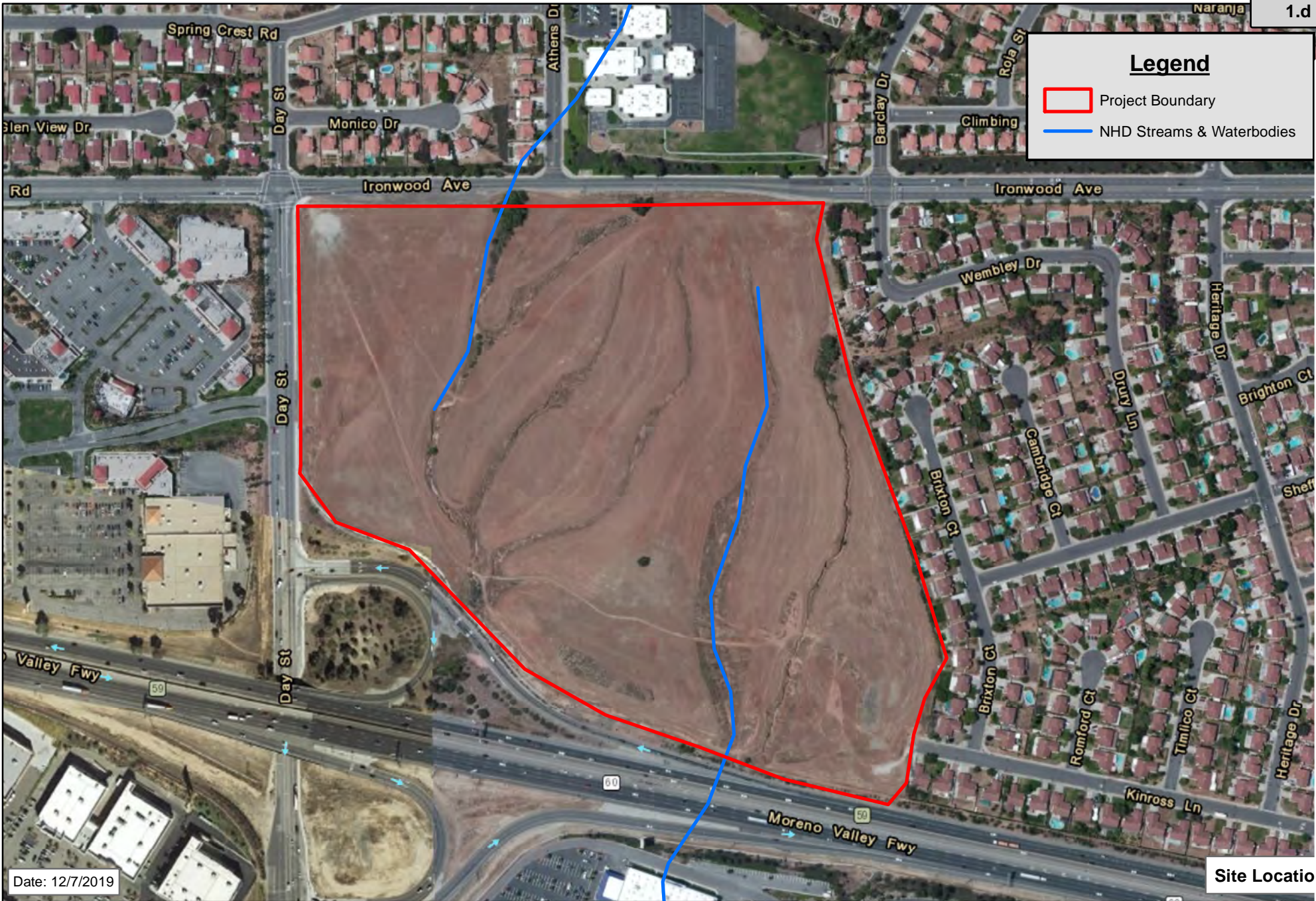
Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors  
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Figure 4b**  
**Observed Vegetation (2019)**

Gresham Savage: Towngate Highlands Project  
 Southeast Corner of Ironwood Ave and Day St.  
 Moreno Valley, Packet Pg. 104



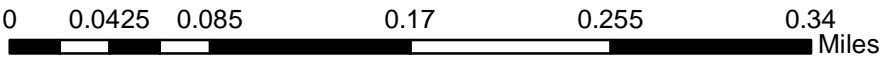


**Legend**

- Project Boundary
- NHD Streams & Waterbodies

Date: 12/7/2019

Site Location

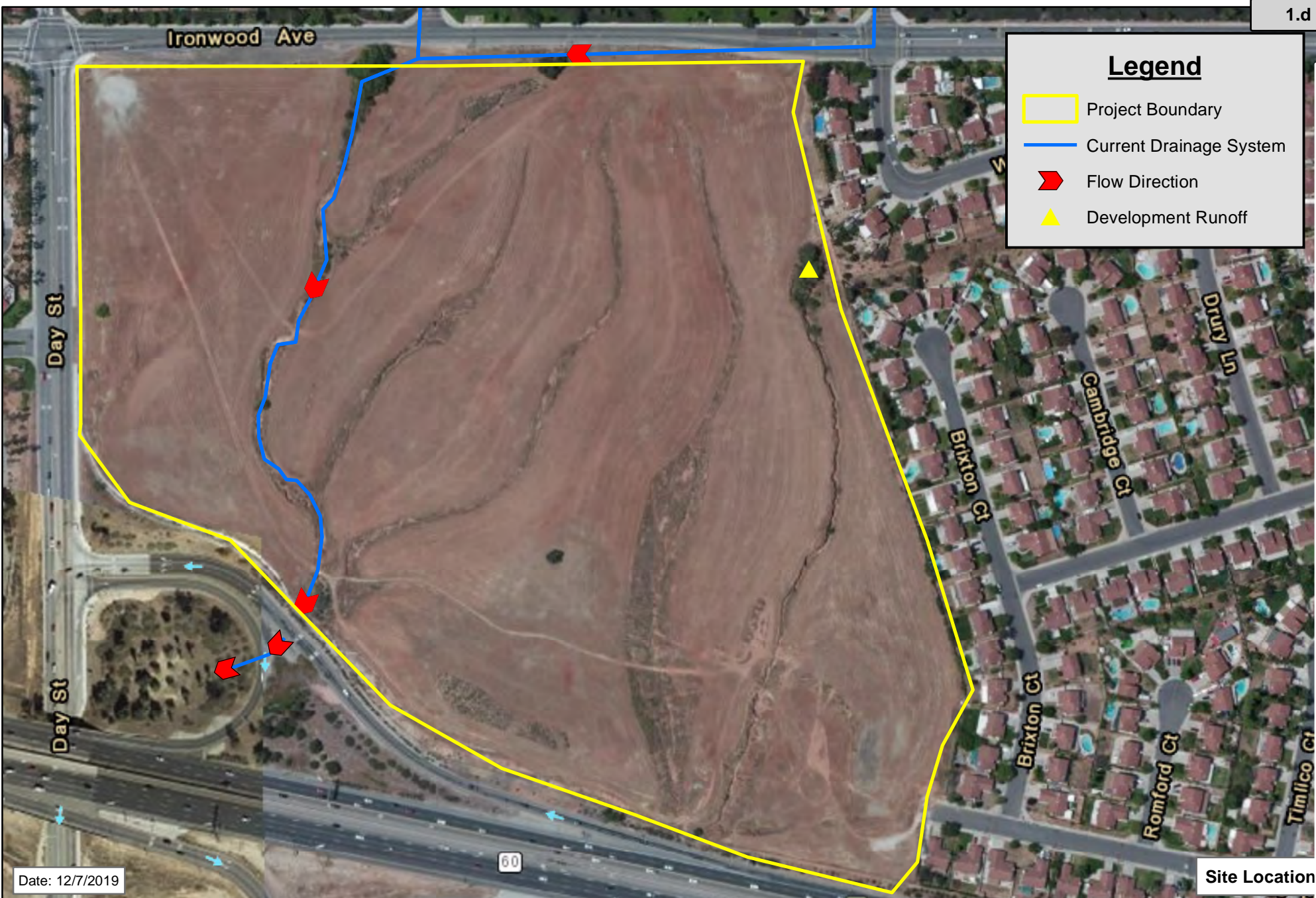


Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors  
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Figure 5  
 National Hydrography Dataset (NHD)  
 Blueline Streams & Waterbodies

Gresham Savage: Towngate Highlands Project  
 Southeast Corner of Ironwood Ave and Day St.  
 Moreno Valley, CA

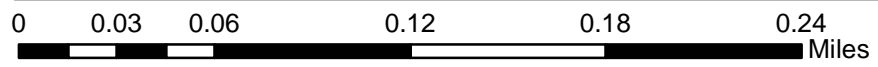


**Legend**

- Project Boundary
- Current Drainage System
- ➔ Flow Direction
- ▲ Development Runoff

Date: 12/7/2019

Site Location



Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors  
 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



**Figure 5b**  
**Present Drainage Flow**

Gresham Savage: Towngate Highlands Project  
 Southeast Corner of Ironwood Ave and Day St.  
 Moreno Valley, CA



## INFORMATION SUMMARY

- A. Report Date: September 3<sup>rd</sup>, 2019
- B. Report Title: MSHCP Focused Burrowing Owl Surveys for the 51.51-Acre Ironwood Avenue TPM 37750 Project, City of Moreno Valley, California.
- C. Case #: N/A
- D. APN#s: 291-100-054 and 291-100-055.
- E. Project Location: USGS 7.5' series Riverside East Quadrangle, Riverside County, Township 3 South, Range 4 West, Section 2, South of Ironwood Avenue, East of Day Street and North of State Route 60 as shown in Attachment A, *Regional Location Map* and Attachment B, *Biological Resources Map*.
- F. Applicant: M&F Development Company  
3425 Via Lido, Suite 250  
Newport Beach, CA 92663  
Contact: Paul C. Bernard (949) 723-7100
- G. MOU Principal: Cadre Environmental  
701 Palomar Airport Road, Suite 300  
Carlsbad, CA. 92011  
Contact: Ruben S. Ramirez, Jr. (949) 300-0212  
USFWS permit #TE780566-14, CDFW 02243
- H. Date of Surveys: August 26<sup>th</sup>, 28<sup>th</sup>, 30<sup>th</sup>, and 31<sup>st</sup> 2019.
- I. Summary: The 51.51-acre project site is dominated by disturbed/ruderal developed, Riversidean sage scrub, southern willow scrub, mule fat scrub and ornamental (exotic) vegetation communities as shown in Attachment B, *Biological Resources Map*, and Attachments C and D, *Current Project Site Photographs*.
- The project site is located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Reche Canyon/Badlands Area Plan. The project site is not located within a MSHCP criteria area, group, or linkage area.

The MSHCP has determined that all of the sensitive species potentially occurring onsite have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). However, additional surveys may be required for specific wildlife species if suitable habitat is documented onsite and/or if the property is located within a predetermined “Survey Area” (MSHCP 2004).

The majority of the project site occurs within a predetermined Survey Area for the burrowing owl. Suitable burrowing owl refugia and foraging habitat was documented within the project site during the initial focused survey conducted on August 26<sup>th</sup>, 2019. Focused MSHCP burrowing owl surveys were conducted to determine the presence, absence and status of the species within the project site. Surveys were conducted by Cadre Environmental during the summer of 2019.

No burrowing owl or characteristic sign such as white-wash, feathers, tracks, or pellets were detected within the project site during the 2019 survey effort.

At a minimum, a 30-day preconstruction survey will be required immediately prior to any ground disturbance activities to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP. If no construction related project is approved or initiated onsite within two (2) years, updated MSHCP burrowing owl focused surveys should be initiated.

## **SUBJECT**

### **MSHCP Focused Burrowing Owl Surveys for the 51.51-Acre Ironwood Avenue TPM 37750 Project Site, City of Moreno Valley, California.**

This report presents the findings of focused burrowing owl surveys conducted for the 51.51-acre Ironwood Avenue TPM 37750 project site (“Project Site”) located within the City of Moreno Valley, California.

The Project Site is located in Western Riverside County and is located on the U.S. Geological Survey (USGS) 7.5’ series Riverside East Quadrangle, Township 3 South, Range 4 West, Section 2 (APN’s 291-100-054 and 29-100-055), south of Ironwood Avenue, east of Day Street, and north of State Route 60. The Project Site is located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Reche Canyon/Badlands Plan Area and is not located within an MSHCP Criteria Cell, Group, or Linkage Area.

This report incorporates the findings of a literature review, compilation of existing documentation, and a field reconnaissance and focused surveys conducted on August 26<sup>th</sup>, 28<sup>th</sup>, 30<sup>th</sup>, and 31<sup>st</sup> 2019.

This documentation is consistent with accepted scientific and technical standards and the requirements of the MSHCP. When appropriate, general biological resources are described in summary form in an effort to provide the reader with adequate background information.

## **METHODS OF STUDY**

### **APPROACH**

Prior to visiting the Project Site, a review of all available and relevant data on the biological characteristics, sensitive habitats, and species potentially present on or adjacent to the Project Site was conducted. Additionally, aerial photography, and USGS topographic map data were examined. After reviewing the available information, Cadre Environmental conducted a physical site assessment/burrow and focused survey.

As required by the MSHCP, and during the initial property assessment process, all Project Site APN’s were searched using the Regional Conservation Authority MSHCP GIS database to determine if additional surveys for wildlife not adequately covered by the MSHCP may be required. The majority of the Project Site is located within a predetermined Survey Area for the burrowing owl.

## **Plant Community/Habitat Classification and Mapping**

Plant communities were preliminarily mapped during the initial focused survey conducted on August 26<sup>th</sup> 2019 with the aid of an aerial photograph using the MSHCP uncollapsed vegetation communities classification system. When a vegetation community could not be accurately characterized using this classification system, an updated community classification code was developed to more accurately represent onsite habitat types.

### **General Wildlife Inventory**

All animals identified during the reconnaissance and focused burrowing owl surveys by sight, call, tracks, scat, or other characteristic sign were recorded. In addition to species actually detected, expected use of the site by other wildlife was derived from the analysis of habitats on the site, combined with known habitat preferences of regionally occurring wildlife species.

Vertebrate taxonomy followed in this report is according to the Center for North American Herpetology (2019 for amphibians and reptiles), the American Ornithologists' Union (1988 and supplemental) for birds, and Baker et al. (2003) for mammals. Both common and scientific names are used during the first mention of a species; common names only are used in the remainder of the text.

### **Burrowing Owl Surveys**

In accordance with the MSHCP Burrowing Owl Survey Instructions (2006), survey protocol consists of two steps, Step I – Habitat Assessment and Step II – Locating Burrows and Burrowing Owls. Step II is comprised of two parts, Part A: Focused Burrow Surveys and Part B: Focused Burrowing Owl Surveys.

Each step is briefly outlined below, followed by the methodology and results of each survey conducted within the Project Site. All initial habitat assessment, burrow and focused surveys were conducted by Ruben Ramirez.

Surveys were conducted during weather that is conducive to observing owls outside their burrows and detecting burrowing owl sign. Surveys were not conducted during rain, high winds (> 20 mph), dense fog, or temperatures over 90 °F. None of the surveys were conducted within five (5) days of measurable precipitation.

In addition to the MSHCP guidelines, field notes were taken daily. These notes recorded the date, location, animal species observed, and general habitat characteristics of each area and habitat examined that day.

## Step I – Habitat Assessment

Step 1 of the MSHCP habitat assessment for burrowing owl consists of a walking survey to determine if suitable habitat is present onsite. Cadre Environmental conducted the habitat assessment on August 26<sup>th</sup> 2019. Upon arrival at the Project Site, and prior to initiating the assessment survey, Cadre Environmental used binoculars to scan all suitable habitats on the property, including perch locations, to ascertain owl presence.

All suitable areas of the Project Site were surveyed on foot by walking slowly and methodically while recording/mapping areas that may represent suitable owl habitat onsite. Primary indicators of suitable burrowing owl habitat in western Riverside County include, but are not limited to, native and non-native grassland, interstitial grassland within shrub lands, shrub lands with low density shrub cover, golf courses, drainage ditches, earthen berms, unpaved airfields, pastureland, dairies, fallow fields, and agricultural use areas. Burrowing owls typically use burrows made by fossorial mammals, such as ground squirrels (*Otospermophilus beecheyi*) or badgers (*Taxidea taxus*), but they often utilize man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, wood debris piles, openings beneath cement or asphalt pavement. Burrowing owls are often found within, under, or in close proximity to man-made structures.

According to the MSHCP guidelines, if suitable habitat is present, the biologist should also walk the perimeter of the property, which consists of a 150-meter (approximately 500 feet) buffer zone around the Project Site boundary. If permission to access the buffer area cannot be obtained, the biologist shall not trespass, but visually inspect adjacent habitats with binoculars.

Results from the habitat assessment indicate that suitable resources for burrowing owl are present throughout the Project Site. Accordingly, if suitable habitat is documented onsite or within adjacent habitats, both Step II, focused surveys and the 30-day pre-construction surveys are required in order to comply with the MSHCP guidelines.

## Step II – Locating Burrows and Burrowing Owls

Concurrent with the initial habitat assessment, a detailed focused burrow survey was conducted and included documentation of appropriately sized natural burrows or suitable man-made structures that may be utilized by burrowing owl - as part of the MSHCP protocol, which is described below under Part A. Focused Burrow Survey. The MSHCP protocol indicated that no more than 100 acres should be surveyed per day/per biologist.

**Part A: Focused Burrow Survey**

A systematic survey for burrows, including burrowing owl sign (white-wash, feathers, tracks, or pellets), was conducted by walking across and adjacent to all suitable habitats mapped within the Project Site on August 26<sup>th</sup>, 2019. All observations of suitable burrows or dens, natural or man-made, or sightings of burrowing owl, were recorded and mapped during the survey.

**Part B: Focused Burrowing Owl Surveys**

Four (4) focused burrowing owl surveys were conducted on August 26<sup>th</sup>, 28<sup>th</sup>, 30<sup>th</sup>, and 31<sup>st</sup> 2019 from one hour before sunrise to two hours after sunrise as outlined in Table 1, *Burrowing Owl Survey Schedule*. Pedestrian survey transects were spaced to allow 100% visual coverage. To the extent possible and practicable, the distances between transect centerlines were no more than 20 meters (approximately 66 ft.) apart. During visual surveys, all potentially suitable burrow or structure entrances were investigated for signs of owl occupation, such as feathers, tracks, or pellets, and carefully observed to determine if burrowing owls utilize these features, when present. All burrows are monitored at a short distance from the entrance, and at a location that would not interfere with potential owl behavior, when present.

**Table 1 – Burrowing Owl Survey Schedule**

Survey	Dates (Conditions) 2019	Results
1	August 26 <sup>th</sup> - 70°F to 86°F, winds 2-8 mph, no rain	No owls detected
2	August 28 <sup>th</sup> - 69°F to 88°F, winds 4-8 mph, no rain	No owls detected
3	August 30 <sup>th</sup> - 72°F to 90°F, winds 0-6 mph, no rain	No owls detected
4	August 31 <sup>st</sup> - 70°F to 87°F, winds 2-10 mph, no rain	No owls detected

**EXISTING CONDITIONS**

The majority of the Project Site is characterized as disturbed/ruderal with several incised drainages bisecting the property in a north south direction. Elevations onsite range between 1,776 feet above mean sea level (AMSL) in the extreme northeast region of the Project Site to 1,660 feet AMSL along the southern boundary.

**Plant Community/Habitat Classification****Disturbed/Ruderal (D/R)**

The County of Riverside<sup>1</sup> has mapped the property as non-native grassland. At the

<sup>1</sup> Vegetation-Riverside County GIS-ARC GIS. Agriculture. Description: these polygons represent Western Riverside County's Vegetation types. It was originally obtained from WRCOG and produced by KTUA consultants. Source date



time of investigation in 2019, portions of the property have been recently disked and/or mowed, but otherwise the site is dominated by non-native ruderal plants. This vegetation community is comprised of London rocket (*Sisymbrium irio*), stink-net (*Oncosiphon piluliferum*), southern thistle (*Salsola australis*), black mustard (*Brassica nigra*), puncture vine (*Tribulus terrestris*), tumbling pigweed (*Amaranthus albus*), horseweed (*Erigeron canadensis*), red stemmed filaree (*Erodium cicutarium*), and tocalote (*Centaurea melitensis*). Non-native grasses documented onsite include red brome (*Bromus madritensis* subsp. *rubens*), rippgut grass (*Bromus diandrus*), and wild oats (*Avena fatua*). Native forbs common in disturbed habitats and detected onsite include telegraph weed (*Heterotheca grandiflora*), rattlesnake weed (*Euphorbia albomarginata*), western ragweed (*Ambrosia psilostachya*), common fiddleneck (*Amsinckia menziesii*) vinegar weed (*Trichostema lanceolatum*), and doveweed (*Croton setigerus*).

### **Riversidean Sage Scrub (RSS)**

Several patches of Riversidean sage scrub are scattered throughout the Project Site including the adjacent terrace regions of the drainage features. Common species documented within this vegetation community includes common sand aster (*Corethrogyne filaginifolia*), brittlebush (*Encelia farinosa*), California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), and pinebush (*Ericameria pinifolia*).

### **Southern Willow Scrub (SWS)**

Several patches of southern willow scrub are located within the ephemeral drainages documented onsite. Common species documented within this vegetation community include Gooding's willow (*Salix gooddingii*), mule fat (*Baccharis salicifolia*), curly dock (*Rumex crispus*), annual beard grass (*Polypogon monspeliensis*) and castor bean (*Ricinus communis*).

### **Mule Fat Scrub (MFS)**

A single patch of mule fat scrub dominated by mule fat was documented in the central region of the project within the western incised drainage.

### **Ornamental (ORN)**

Several ornamental trees were documented onsite including Persian turpentine tree

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approximately 1994. RBF consultants made minor updates through field verification. Available: [http://data-countyofriverside.opendata.arcgis.com/datasets/a479299547054233a483325069b394c6\\_4](http://data-countyofriverside.opendata.arcgis.com/datasets/a479299547054233a483325069b394c6_4). Accessed August 2019.

(*Pistacia atlantica*), Peruvian pepper (*Schinus molle*), Brazilian pepper (*Schinus terebinthifolius*), Mexican fan palm (*Washingtonia robusta*), and tamarisk (*Tamarisk* sp.).

### **Developed (DEV)**

A small reach of Ironwood Avenue extends into the Project Site in the north central region of the property.

Representative distribution and photographs of these habitat types are illustrated in Attachment B, *Biological Resources Map* and Attachment C and D, *Current Project Site Photographs*.

### **WILDLIFE POPULATIONS**

General wildlife species documented onsite or within the vicinity during the site visits and/or during focused surveys include but are not limited to western fence lizard (*Sceloporus occidentalis*), side-blotched lizard (*Uta stansburiana*), turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), rock dove (*Columba livia*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), American crow (*Corvus brachyrhynchos*), European starling (*Sturnus vulgaris*), western meadowlark (*Sturnella neglecta*), house finch (*Haemorhous mexicanus*), lesser goldfinch (*Spinus psaltria*).

### **RESULTS**

Suitable burrowing owl foraging habitat and roost sites were documented within the Project Site. However, no burrowing owl or characteristic sign including white-wash, feathers, tracks, or pellets were detected within the Project Site during the 2019 survey effort.

At a minimum, a 30-day preconstruction survey will be required immediately prior to any ground disturbance activities to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP. If no construction related project is approved or initiated onsite within two (2) years, updated MSHCP burrowing owl focused surveys should be initiated.

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**ATTACHMENTS**

Attachment A - Regional Location Map

Attachment B - Biological Resources Map

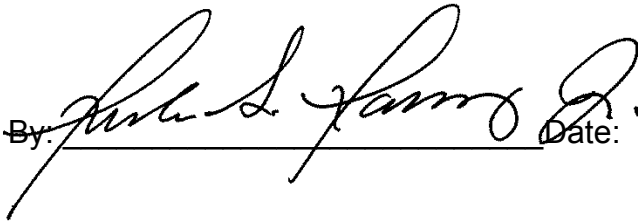
Attachment C - Current Project Site Photographs

Attachment D - Current Project Site Photographs

**Certification**

*"I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief."*

Author:  Date: September 3<sup>rd</sup>, 2019

Fieldwork Performed By:  Date: September 3<sup>rd</sup>, 2019



APNs 291-100-054 and 291-100-055

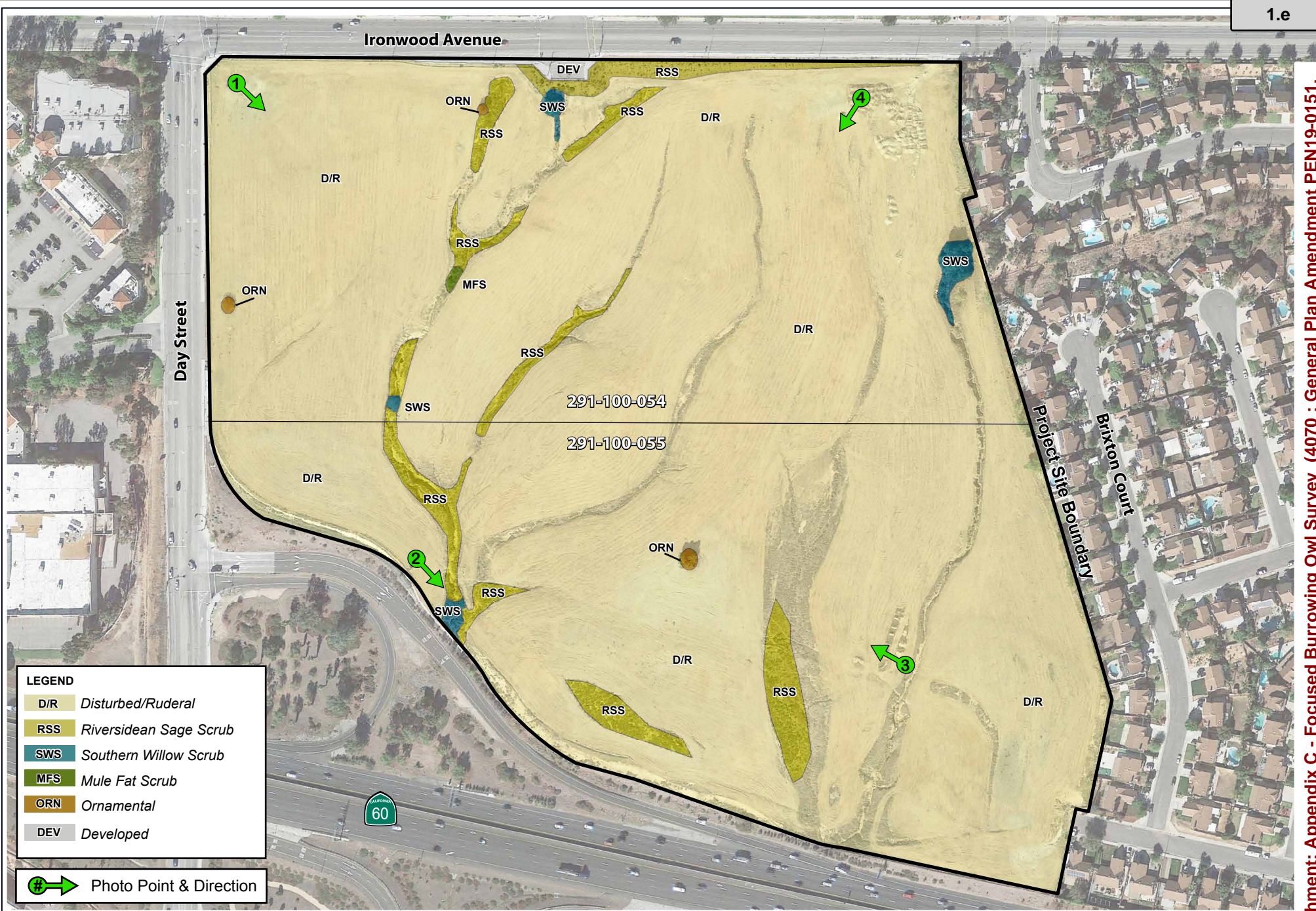
**Attachment A - Regional Location Map**

*MSHCP Burrowing Owl Focused Surveys*

*Ironwood Project Site - TPM 37750, City of Moreno Valley*



not to scale

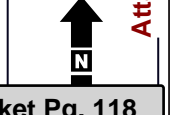


**LEGEND**

D/R	Disturbed/Ruderal
RSS	Riversidean Sage Scrub
SWS	Southern Willow Scrub
MFS	Mule Fat Scrub
ORN	Ornamental
DEV	Developed

**#** → Photo Point & Direction

**Attachment B - Biological Resources Map**  
 MSHCP Burrowing Owl Focused Surveys  
 Ironwood Project Site - TPM 37750, City of Moreno Valley





PHOTOGRAPH 1 - Southeast view of Project Site from northwest corner near Ironwood Avenue and Day Street intersection.



PHOTOGRAPH 2 - Eastward view of southern region of Project Site adjacent to State Route 60.

*Refer to Att B for Photographic Key*

**Attachment C - Current Project Site Photographs**

*MSHCP Burrowing Owl Focused Surveys*

*Ironwood Project Site - TPM 37750, City of Moreno Valley*





PHOTOGRAPH 3 - Northwest view of Project Site from southeast region.



PHOTOGRAPH 4 - Southwest view of Project Site from northeast corner adjacent to Ironwood Avenue.

Refer to Att B for Photographic Key

**Attachment D - Current Project Site Photographs**

*MSHCP Burrowing Owl Focused Surveys*

*Ironwood Project Site - TPM 37750, City of Moreno Valley*





# CULTURAL RESOURCES ASSESSMENT

## Towngate Highlands Project

### Moreno Valley, Riverside County, California

Prepared for:

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Prepared by:

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505 West 8<sup>th</sup> Street  
Claremont, California 91711

Project No. JER1901

**Data Base (NADB) Information:**

*Type of Study:* Reconnaissance Survey

*Resources Recorded:* None

*USGS Quadrangle:* 7.5-minute Riverside East, California (1980)



**BCRCONSULTING LLC**

November 22, 2019

## MANAGEMENT SUMMARY

BCR Consulting LLC (BCR Consulting) is under contract to Jericho Systems, Inc. to complete a Cultural Resources Assessment of the Towngate Highlands Project (the project) located in the City of Moreno Valley, Riverside County, California. A cultural resources records search, reconnaissance level pedestrian field survey, Sacred Lands File search with the Native American Heritage Commission, and paleontological resources overview were conducted for the project in partial fulfillment of the California Environmental Quality Act (CEQA). The records search revealed that 22 cultural resource studies have taken place resulting in the recording of 32 cultural resources within one mile of the project site. Of the 22 previous studies, two have assessed the project site resulting in no cultural resources recorded within its boundaries. During the field survey, BCR Consulting did not discover any cultural resources, including prehistoric or historic-period archaeological sites or historic-period buildings, within the project boundaries. However, since numerous prehistoric cultural resources have been recorded in the vicinity (some with buried components) the project site is considered sensitive for buried cultural resources.

Based on these results, BCR Consulting recommends that a professional archaeological monitor be present to monitor any ground-disturbing activities associated with the proposed project. The monitor should work under the direct supervision of a Cultural Resource Professional that meets the Secretary of the Interior's Professional Qualification Standards for Archaeology (qualified archaeologist). The monitor should be authorized to temporarily stop and divert construction equipment to investigate any areas suspected to contain cultural resources. Excavation would cease in the area surrounding any cultural resource discoveries until the qualified archaeologist can evaluate the discovery for California Register of Historical Resources eligibility. Evaluations should take place in consultation with the City and any participating Native American entities. Non-eligible resources would not merit further consideration. Eligible discoveries would be mitigated by avoidance or data recovery.

If human remains are encountered during any proposed project activities, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery.

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A: PROJECT PHOTOGRAPHS

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C: PALEONTOLOGICAL OVERVIEW

Attachment: Appendix D - Cultural Resources Assessment (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

## INTRODUCTION

BCR Consulting LLC (BCR Consulting) is under contract to Jericho Systems, Inc. to complete a Cultural Resources Assessment of the Towngate Highlands Project (the project) located in the City of Moreno Valley, Riverside County, California. A cultural resources records search, reconnaissance level pedestrian field survey, paleontological overview, and Sacred Lands File search with the Native American Heritage Commission (NAHC) were conducted for the project site in partial fulfillment of the California Environmental Quality Act (CEQA). The project site is located within Section 2 of Township 3 South, Range 4 West, San Bernardino Baseline and Meridian. It is depicted on the United States Geological Survey (USGS) *Riverside East, California* (1980) 7.5-minute topographic quadrangles (Figure 1).

## NATURAL SETTING

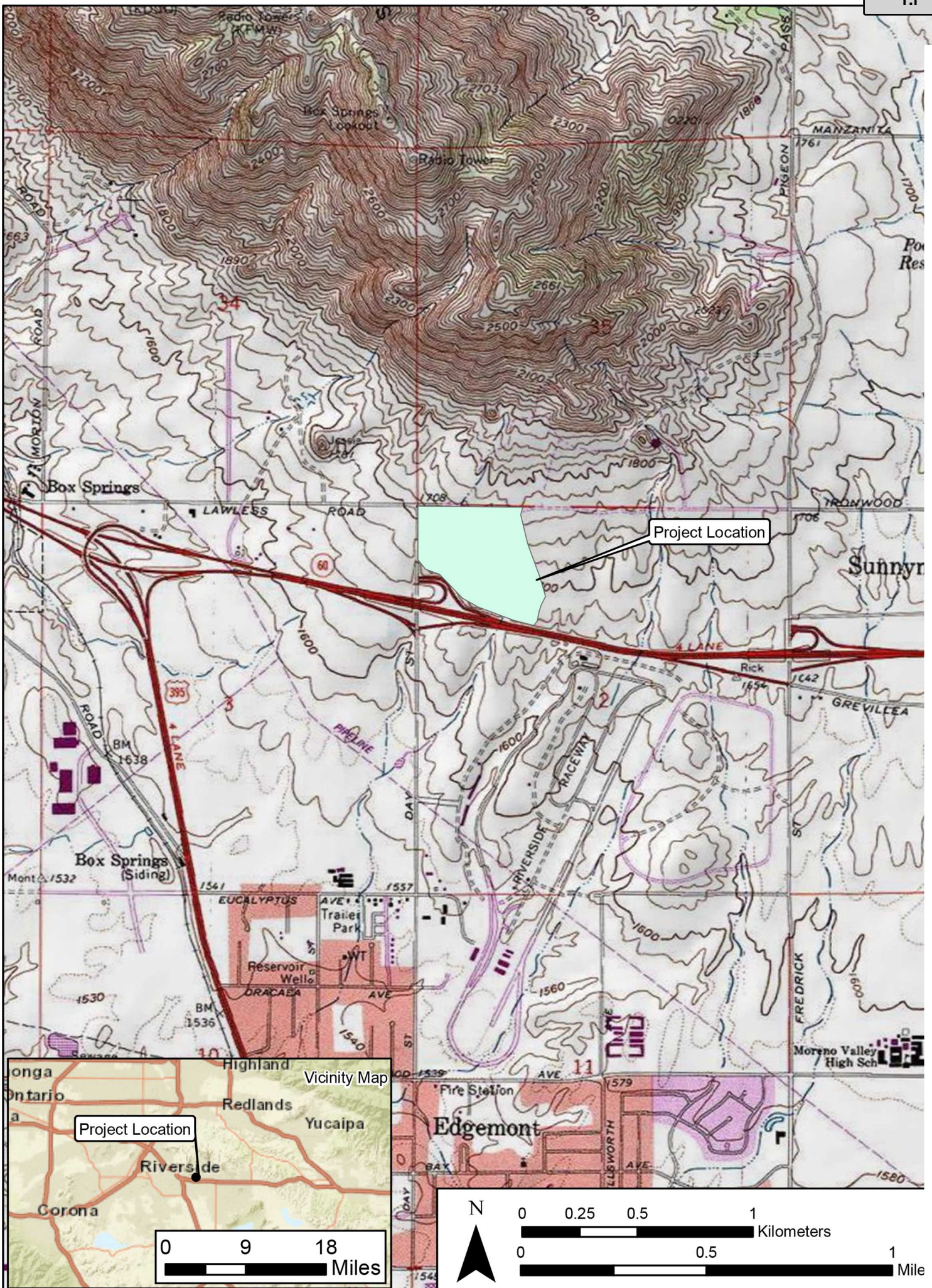
The elevation of the project site ranges from approximately 1656 to 1771 feet above mean sea level (AMSL). It exhibits a southwesterly aspect and occupies a portion of the San Jacinto River watershed. The project site has been subject to severe disturbances from mechanical vegetation abatement, and some modern dumping. Coastal sage scrub, oak woodland, and riparian habitat vegetation communities are typical of the area. For details on local prehistoric (particularly Luiseño) use of plant and animal species, see Bean and Shipek (1978:552) and Oxendine (1983:19-29). Sparkman (1908) and Bean and Saubel (1972) can be referenced to review prehistoric harvesting and processing methods, and seasons and conditions in which edible plants grow locally.

The project site is located in the Peninsular Range geologic province of California that encompasses western Riverside County. It occupies the eastern margin of the Perris Block (Kenney 1999), which is bounded on the east by the San Jacinto Fault (Reynolds 1988, Morton 1972, 1977). Crystalline rocks present in the region include late Jurassic and cretaceous granitics of the southern California batholith. These resistant rocks weather to form gray or tan colored, boulder-covered conical buttes and hills. Locally, a thin veneer of Holocene soils typically obscures late Pleistocene sediments that often erode away to reveal the base of local boulder outcrops (Rogers 1965). During prehistory in Western Riverside County the boulders that form such outcrops were widely utilized as milling slicks for seed processing, although no boulders of this type were observed in the project site area. Decomposing granite in the form of brown silty sand dominates sediments within the project.

## CULTURAL SETTING

### Prehistoric Context

The local prehistoric cultural setting has been organized into many chronological frameworks (see Warren and Crabtree 1986; Bettinger and Taylor 1974; Lanning 1963; Hunt 1960; Wallace 1958, 1962, 1977; Wallace and Taylor 1978; Campbell and Campbell 1935), although there is no definitive sequence for the region. The difficulties in establishing cultural chronologies for Riverside County are a function of its enormous size and the small amount of archaeological excavations conducted there. Moreover, throughout prehistory many groups have occupied the area and their territories often overlap spatially and chronologically resulting in mixed artifact deposits. Due to dry climate and capricious



Attachment: Appendix D - Cultural Resources Assessment (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel

Project Location Site  
Towngate Highlands Project

Figure 1

Jericho Systems, Inc.

Reference: ESRI; USGS Quad: Riverside East, California (1980)

geological processes, these artifacts rarely become integrated in-situ. Lacking a milieu hospitable to the preservation of cultural midden, local chronologies have relied upon temporally diagnostic artifacts, such as projectile points, or upon the presence/absence of other temporal indicators, such as groundstone. Such methods are instructive, but can be limited by prehistoric occupants' concurrent use of different artifact styles, or by artifact reuse or re-sharpening, as well as researchers' mistaken diagnosis, and other factors (see Flenniken 1985; Flenniken and Raymond 1986; Flenniken and Wilke 1989). Recognizing the shortcomings of comparative temporal indicators, this study recommends review of Warren and Crabtree (1986), who have drawn upon this method to produce a commonly cited and relatively comprehensive chronology.

### **Ethnography**

The project site is located in a shared use area that was probably inhabited by the Cahuilla, Luiseño, and Serrano people.

**Cahuilla.** The Cahuilla are a member of the Cupan group of the Takic subfamily of languages (Bean 1978:550). Like other Native American groups in southern California, the Cahuilla practiced semi-nomadic hunter-gatherer subsistence strategies and commonly exploited seasonably available plant and animal resources. Spanish missionaries were the first outsiders to encounter them during the late 18<sup>th</sup> century. The Cahuilla are generally divided into three groups: Desert Cahuilla, Mountain Cahuilla, and Western (or Pass) Cahuilla (Kroeber 1925). The term Western Cahuilla is preferred over Pass Cahuilla because this group is not confined to the San Geronio Pass area. The distinctions are believed to be primarily geographic, although linguistic and cultural differences may have existed to varying degrees (Strong 1929). Cahuilla territory lies within the geographic center of Southern California and the Cocopa-Maricopa Trail, a major prehistoric trade route, ran through it. The first written accounts of the Cahuilla are attributed to mission fathers; later documentation was by Strong (1929), Bright (1998), and others.

**Luiseño.** Typically, the native culture groups in southern California are named after nearby Spanish missions, and such is the case for this Takic-speaking population. For instance, the term "Luiseño" is applied to the natives inhabiting the region within the "ecclesiastical jurisdiction of Mission San Luis Rey...[and who shared] an ancestral relationship which is evident in their cosmogony, and oral tradition, common language, and reciprocal relationship in ceremonies" (Oxendine 1983:8). The first written accounts of the Luiseño are attributed to the mission fathers. Sparkman (1908), Oxendine (1983) and others produced later documentation. Prior to Spanish occupation of California, the territory of the Luiseño extended along the coast from Agua Hedionda Creek to the south, Aliso Creek to the northwest, and the Elsinore Valley and Palomar Mountain to the east. These territorial boundaries were somewhat fluid and changed through time. They encompassed an extremely diverse environment that included coastal beaches, lagoons and marshes, inland river valleys and foothills, and mountain groves of oaks and evergreens (Bean and Shipek 1978:551).

**Serrano.** The Uto-Aztecan "Serrano" people occupied the western Mojave Desert periphery. Kroeber (1925) applied the generic term "Serrano" to four groups, each with distinct territories: the Kitanemuk, Tataviam, Vanyume, and Serrano. Only one group, in the San

Bernardino Mountains and West-Central Mojave Desert, ethnically claims the term Serrano. Bean and Smith (1978) indicate that the Vanyume, an obscure Takic population, was found along the Mojave River at the time of Spanish contact. The Kitanemuk lived to the north and west, while the Tataviam lived to the west. The Serrano lived mainly to the south (Bean and Smith 1978). All may have used the western Mojave area seasonally. Historical records are unclear concerning precise territory and village locations.

## History

Historic-era California is generally divided into three periods: the Spanish Period (1769 to 1821), the Mexican Period (1821 to 1848), and the American Period (1848 to present).

**Spanish Period.** The first European to pass through the vicinity was probably Father Francisco Garces. Having become familiar with the area, Garces acted as a guide to Juan Bautista de Anza, who was commissioned to lead a group across the desert from a Spanish outpost in Arizona to set up quarters at the Mission San Gabriel in 1771 near what today is Pasadena (Beck and Haase 1974). Garces was followed by Alta California Governor Pedro Fages, who briefly explored the region in 1772. Searching for San Diego Presidio deserters, Fages had traveled through Riverside to San Bernardino, crossed over the mountains into the Mojave Desert, and then to the San Joaquin Valley (Beck and Haase 1974).

**Mexican Period.** In 1821, Mexico overthrew Spanish rule and the missions began to decline. By 1833, the Mexican government passed the Secularization Act, and the missions, reorganized as parish churches, lost their vast land holdings, and released their neophytes (Beattie and Beattie 1974).

**American Period.** The American Period, 1848–Present, began with the Treaty of Guadalupe Hidalgo. In 1850, California was accepted into the Union of the United States primarily due to the population increase created by the Gold Rush of 1849. The cattle industry reached its greatest prosperity during the first years of the American Period. Mexican Period land grants had created large pastoral estates in California, and demand for beef during the Gold Rush led to a cattle boom that lasted from 1849–1855. However, beginning about 1855, the demand for beef began to decline due to imports of sheep from New Mexico and cattle from the Mississippi and Missouri Valleys. When the beef market collapsed, many California ranchers lost their ranchos through foreclosure. A series of disastrous floods in 1861–1862, followed by a significant drought diminished the economic impact of local ranching. This decline combined with ubiquitous agricultural and real estate developments of the late 19<sup>th</sup> century, set the stage for diversified economic pursuits that have continued to proliferate to this day (Beattie and Beattie 1974; Cleland 1941).

## PERSONNEL

David Brunzell, M.A., RPA acted as the Project Manager and Principal Investigator for the current study, and compiled the technical report. BCR Consulting Staff Archaeologist Nicholas Shepetuk, B.A., initiated the Sacred Lands File search, completed the cultural resources records search, and contributed to the technical report. Mr. Shepetuk and BCR Staff Historian Dylan Williams, B.A. performed the field survey.

## METHODS

### Research

Prior to fieldwork, a records search was conducted at the Eastern Information Center (EIC), the local clearinghouse for cultural resource records. This archival research reviewed the status of all recorded historic and prehistoric cultural resources, and survey and excavation reports completed within one mile of the project site. Additional resources reviewed included the National Register of Historic Places, the California Register of Historical Resources, and documents and inventories published by the California Office of Historic Preservation. These include the lists of California Historical Landmarks, California Points of Historical Interest, Listing of National Register Properties, and Inventory of Historic Structures.

### Field Survey

An archaeological field survey of the project site was conducted on July 16, 2019. The survey was conducted by walking parallel 15-meter transects across as much of the project area as possible. There were some small portions of the project area that could not be traversed due to vegetation so they were not surveyed. Soil exposures were carefully inspected for evidence of cultural resources.

## RESULTS

### Research

Research completed through the EIC revealed that 22 cultural resource studies have taken place resulting in the recording of 32 cultural resources within one mile of the project site. Of the 22 previous studies, two have assessed the project site resulting in no cultural resources recorded within its boundaries. A records search summary is included below.

**Table A. Cultural Resource Records Search Results**

USGS Quad	Resources Within One Mile of Project Site (Location)	Studies Within 1 Mile
<i>Riverside East, California</i> (1980)	CA-RIV-487: Unspecified prehistoric site (3/4 mile NW) CA-RIV-2199: Prehistoric artifacts/features (3/4 mile NW) CA-RIV-2868: Prehistoric bedrock milling feature (3/4 mile NW) CA-RIV-2869: Prehistoric bedrock milling feature (3/4 mile NW) CA-RIV-3222: Unspecified historic site (1/2 mile W) CA-RIV-3240: Prehistoric bedrock milling feature (7/8 mile NE) CA-RIV-3243: Prehistoric bedrock milling feature (3/4 mile NW) CA-RIV-3244: Prehistoric bedrock milling feature (3/4 mile NW) CA-RIV-3245: Hist. foundations/prehist. bedrock milling (3/4 mi. N) CA-RIV-3246: Prehistoric bedrock milling feature (3/4 mile NW) CA-RIV-3250: Prehistoric bedrock milling feature (1 mile NE) CA-RIV-3261: Prehist. bedrock milling, hist. ranch (1 mi NE) CA-RIV-3263: Prehistoric bedrock milling feature (7/8 mile NE) CA-RIV-3264: Prehistoric bedrock milling feature (1/4 mile NW) CA-RIV-3265: Prehistoric bedrock milling feature (1/2 mile NW) CA-RIV-3266: Prehistoric bedrock milling feature (1/2 mile NW) CA-RIV-3267: Prehist. bedrock milling/rock shelter (1/2 mile NW) CA-RIV-3268: Prehistoric bedrock milling feature (3/4 mile NW)	RI-116, 178, 204, 329, 387*, 497, 980, 1410, 1648, 1894*, 2171, 2920, 3189, 3693, 3989, 4420, 7957, 8063, 8366, 8771, 9294, 10037



USGS Quad	Resources Within One Mile of Project Site (Location)	Studies Within 1 Mile
	CA-RIV-3269: Prehistoric bedrock milling feature (3/4 mile NW) CA-RIV-4181: Prehistoric bedrock milling feature (3/4 mile NW) CA-RIV-4182: Historic foundation/structure pad (1 mile NW) CA-RIV-4183: Prehistoric bedrock milling feature (7/8 mile NW) CA-RIV-4184: Prehistoric bedrock milling feature (1 mile NW) CA-RIV-4185: Prehistoric bedrock milling feature (3/4 mile NW) CA-RIV-4186: Prehistoric bedrock milling feature (3/4 mile NW) CA-RIV-5896: Prehistoric bedrock milling feature (3/4 mile NW) CA-RIV-6015: Prehistoric bedrock milling feature (3/4 mile NW) CA-RIV-6493/H: Historic features, and prehist. BMF (3/4 mile NW) CA-RIV-7061: Prehistoric bedrock milling feature (1/16 mile S) CA-RIV-7501: Prehistoric bedrock milling feature (1/16 mile W) CA-RIV-7527: Prehistoric artifact scatter (3/4 mile S) CA-RIV-12316: Historic foundations, walls/fences (1/2 mile W)	

### Field Survey

During the field survey, BCR Consulting identified no cultural resources. Artificial disturbances were severe and consisted of mechanical weed abatement over most of the project site, grading for dirt trails, and some modern dumping. Surface visibility was about 70 percent. Sediments included sandy silt with some gravels, and the sparse vegetation was dominated by seasonal grasses.

### RECOMMENDATIONS

The records search and field survey failed to identify any cultural resources within the project site boundaries. However, since numerous cultural resources have been recorded in the vicinity (some with buried components) the project site is considered sensitive for buried cultural resources. Based on these results, BCR Consulting recommends that a professional archaeological monitor be present to monitor any ground-disturbing activities associated with the proposed project. The monitor should work under the direct supervision of a Cultural Resource Professional that meets the Secretary of the Interior's Professional Qualification Standards for Archaeology (qualified archaeologist). The monitor should be authorized to temporarily stop and divert construction equipment to investigate any areas suspected to contain cultural resources. Excavation would cease in the area surrounding any cultural resource discoveries until the qualified archaeologist could evaluate the discovery for California Register of Historical Resources eligibility. Evaluations should take place in consultation with the City and any participating Native American entities. Non-eligible resources would not merit further consideration. Eligible discoveries would be mitigated by avoidance or data recovery.

If human remains are encountered during any proposed project activities, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner determines origin and disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or representative, the MLD may inspect the discovery site. The MLD shall complete inspection within 48 hours of notification by the NAHC.

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1978 *Ancient Peoples and Cultures of Death Valley National Monument*. Acoma Books, Ramona, California.
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1986 The Prehistory of the Southwestern Great Basin. In *Handbook of the North American Indians, Vol. 11, Great Basin*, edited by W.L. d'Azevedo, pp.183-193. W.C. Sturtevant, General Editor. Smithsonian Institution, Washington D.C.

**APPENDIX A**  
**PHOTOGRAPHS**



Photo 1: Project Site Overview (View North)



Photo 2: Modern Dump Site (View Northeast)



Photo 3: Project Site Overview (View Northeast)



Photo 4: Project Site Overview (View South)



Photo 5: Site Overview (View Southeast)



Photo 6: Site Overview (View Southwest)



**APPENDIX B**  
**NAHC SACRED LANDS FILE SEARCH**

Attachment: Appendix D - Cultural Resources Assessment (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152; and

NATIVE AMERICAN HERITAGE COMMISSION  
Cultural and Environmental Department  
1550 Harbor Blvd., Suite 100  
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Website: <http://www.nahc.ca.gov>  
Twitter: @CA\_NAHC



July 22, 2019

Nicholas Shepetuk  
BCR Consulting

VIA Email to: [nickshepetuk@gmail.com](mailto:nickshepetuk@gmail.com)

RE: Towngate Highlands Project, Riverside County

Dear Mr. Shepetuk:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: [steven.quinn@nahc.ca.gov](mailto:steven.quinn@nahc.ca.gov).

Sincerely,

A handwritten signature in blue ink that reads "Steven Quinn".

Steven Quinn  
Associate Governmental Program Analyst

Attachment

Native American Heritage Commission  
Native American Contact List  
Riverside County  
7/22/2019

1.f

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Mission Indians**

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Luiseno

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Towngate Highlands Project, Riverside County.

**Native American Heritage Commission  
Native American Contact List  
Riverside County  
7/22/2019**

***Pechanga Band of Luiseno  
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Indians***

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Attachment: Appendix D - Cultural Resources Assessment (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

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Native American Heritage Commission  
Native American Contact List  
Riverside County  
7/22/2019

**Soboba Band of Luiseno  
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Cahuilla  
Luiseno

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Attachment: Appendix D - Cultural Resources Assessment (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

**APPENDIX C**  
**PALEONTOLOGICAL OVERVIEW**

Attachment: Appendix D - Cultural Resources Assessment (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152; and



# WESTERN SCIENCE CENTER

July 9, 2019

BRC Consulting LLC  
 Nicholas Shepetuk  
 505 West 8<sup>th</sup> Street  
 Claremont, CA 91711

Dear Mr. Shepetuk,

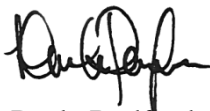
This letter presents the results of a record search conducted for the Towngate Highlands Project in the city of Moreno Valley, Riverside County, California. The project site is located north of Interstate 60, west of Day Street, and south of Ironwood Avenue in Section 2, Township 3 South, Range 4 West on the Riverside East USGS 7.5 minute quadrangle.

The geologic units underlying this project are mapped almost entirely as very old alluvial fan deposits dating from the Early Pleistocene period, with a small sections of tonalite units dating to the Cretaceous period in the southern half of the project area (Morton & Cox, 1996-1997). Pleistocene alluvial fan units are considered to be of high paleontological sensitivity. The Western Science Center does not have localities within the project area or within a 1 mile radius, but does have numerous fossil localities in similarly mapped units throughout Riverside County that have resulted in Pleistocene fossils specimens. Cretaceous tonalite deposits are not considered to be paleontologically sensitive and are unlikely to result in fossil material.

Any fossil specimen recovered from the Towngate Highlands Project would be scientifically significant. Excavation activity associated with the development of the project area would impact the paleontologically sensitive Pleistocene alluvial units and it is the recommendation of the Western Science Center that a paleontological resource mitigation program be put in place to monitor, salvage, and curate any recovered fossils associated with the study area.

If you have any questions, or would like further information, please feel free to contact me at [dradford@westerncentermuseum.org](mailto:dradford@westerncentermuseum.org)

Sincerely,



Darla Radford  
 Collections Manager

Tentative Parcel No. 37750 (PEN19-0150)  
SWC of Day Street and Ironwood Avenue  
City of Moreno Valley, County of Riverside,  
California

# Preliminary Drainage Study

*Prepared for:*  
M&F Development Company  
3425 Via Lido, Suite 250  
Newport Beach, CA 92663  
(949) 723-7100

*Prepared By:*  
A L B E R T A.  
**WEBB**  
A S S O C I A T E S  
3788 McCray Street  
Riverside, CA 92506

Original Date Prepared: August 2019  
Revision Date(s):



Sarah K. Kowalski, PE  
Senior Engineer

Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and



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## SECTION 1 - SUMMARY

### PURPOSE

The purpose of this report is to document the existing hydrologic and hydraulic conditions surrounding the Tentative Parcel Map No 37750 project located in City of Moreno Valley, County of Riverside, California. The project site is located at the southeast corner of Day Street and Ironwood Avenue. The project is bounded by Ironwood Avenue to the north, Day Street to the west, California State Route 60 (Moreno Valley Freeway) to the south, and existing residential developments (Tracts 19533 and 19533-1) to the east. The project proposes to subdivide approximately 50 acres into four parcels. This project does not propose any improvements at this time. This report will summarize the hydrologic and hydraulic analyses that were conducted in order to document the existing drainage improvements safely conveying the runoff through the site.

The scope of this report will include the following:

- Determine the peak 100-year and 10-year flow rates for the existing condition using the Riverside County Flood Control and Water Conservation District (RCFC&WCD) Rational Method.
- Preparation of a preliminary report summarizing the existing hydrology and hydraulic conditions.

### DESCRIPTION OF WATERSHED

The project proposes to subdivide approximately 50 acres of vacant land into four parcels. Existing elevations across the site vary from 1779 to 1650 (NAVD88 datum). The site currently slopes down at approximately 8% grade to the south. The existing drainage pattern for the site and the general area is characterized by natural channels.

Existing improvements in Day Street and Ironwood Avenue convey street runoff around the site towards existing catch basins. Two points of off-site discharge occur at the north and northeast, which contribute runoff from adjacent residential tracts. These flows combine with the on-site runoff, flowing in natural channels towards the south. Along the southern boundary of the site, existing Caltrans channels direct flows towards Caltrans facilities, conveying flows under California State Route 60 to the south.

The project is located within the Master Drainage Plan for the City of Moreno Valley, West End watershed area.

### PROPOSED CONDITIONS

The project does not propose any improvements at this time.

### METHODOLOGY

#### HYDROLOGY

Hydrologic calculations were performed in accordance with the RCFC&WCD Hydrology Manual, dated April 1978. The Rational Method was utilized in determining peak flow rates.

The hydrological parameters, including rainfall values and soil types were derived from the RCFC&WCD Hydrology Manual. The isohyetal maps and soil map have been included in Section 2.

Rational Method calculations were performed using a computer program developed by CivilDesign Corporation and Joseph E. Bonadiman and Associates Inc. The computer program is commonly referred to as CivilD which incorporates the hydrological parameters outlined in the RCFC&WCD Hydrology Manual.

The Rational Method was used to determine the peak flow rates to confirm the size of existing drainage facilities conveying flows off-site. The flow rates were computed by generating a hydrologic “link-node”

model in which the overall area is divided into separate drainage sub-areas, each tributary to a concentration point (node) determined by the proposed layout and grading.

Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

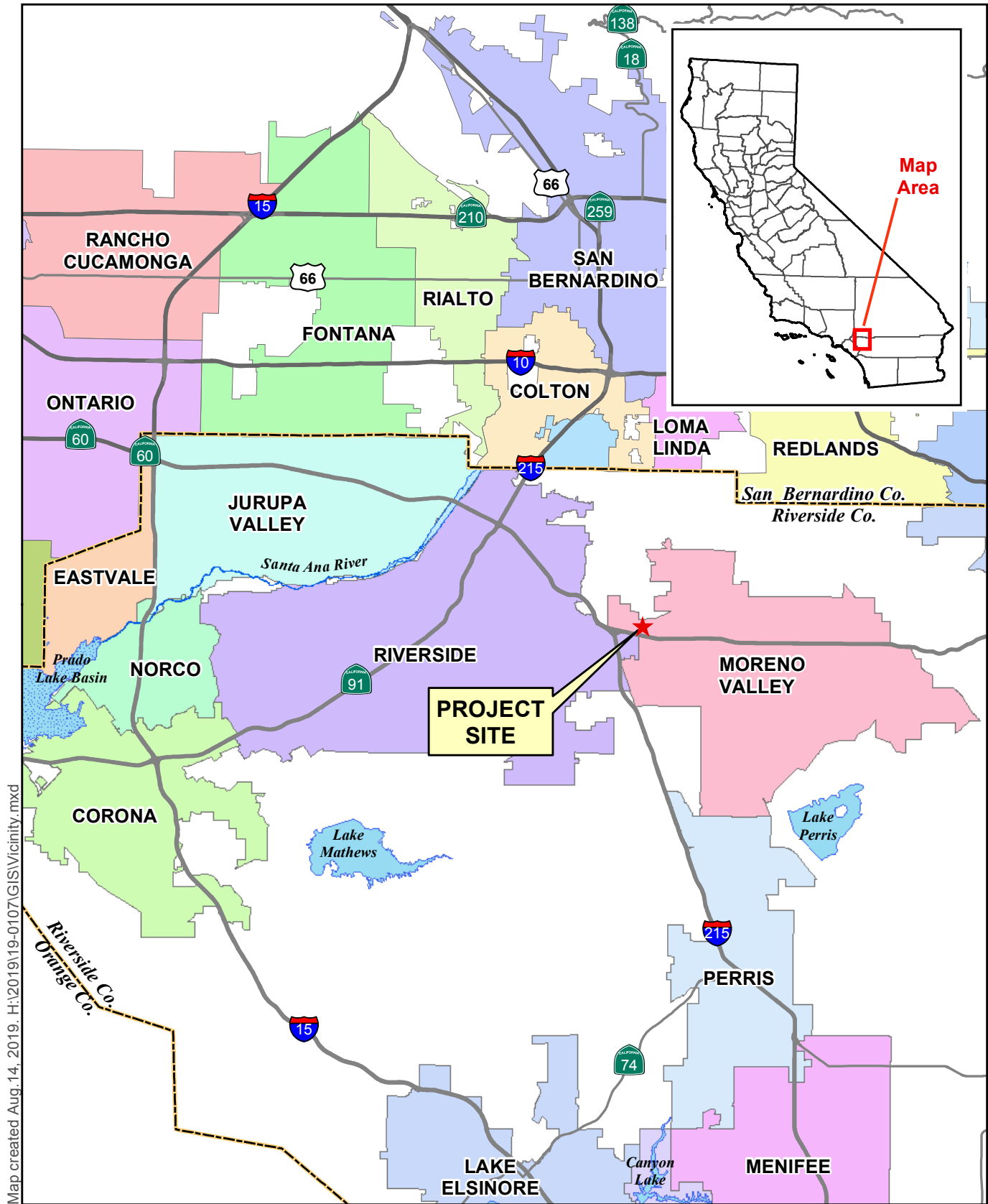
**FIG. 1 VICINITY MAP**

**FIG. 2 AERIAL PHOTOGRAPH**

**FIG. 3 USGS TOPOGRAPHY MAP**

**FIG. 4 RECEIVING WATERBODIES**

Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and



Map created Aug. 14, 2019. H:\2019\19-0107\GIS\Vicinity.mxd

Figure 1 – Vicinity Map

TPM 37750

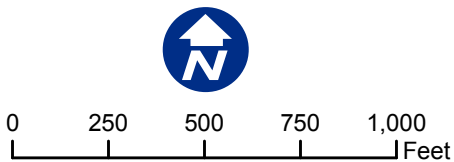


Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

H:\2019\19-0107\GIS\Aerial.mxd; Map created 14 Aug 2019



Sources: Riverside Co. GIS, 2019 (streets) and 2016 (imagery).

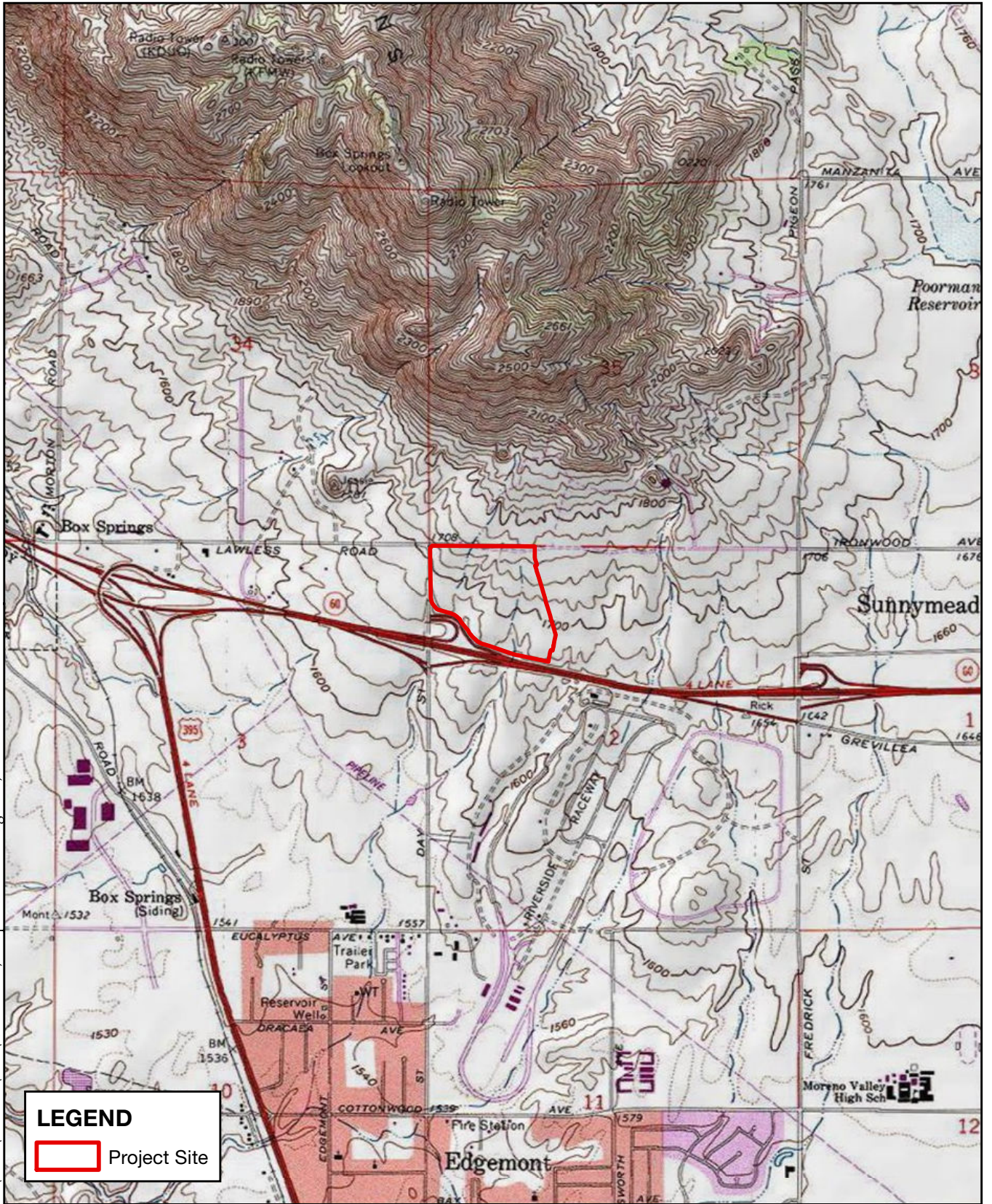


**Figure 2 - Aerial Map**

TPM 37750

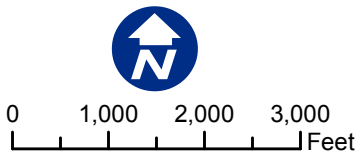


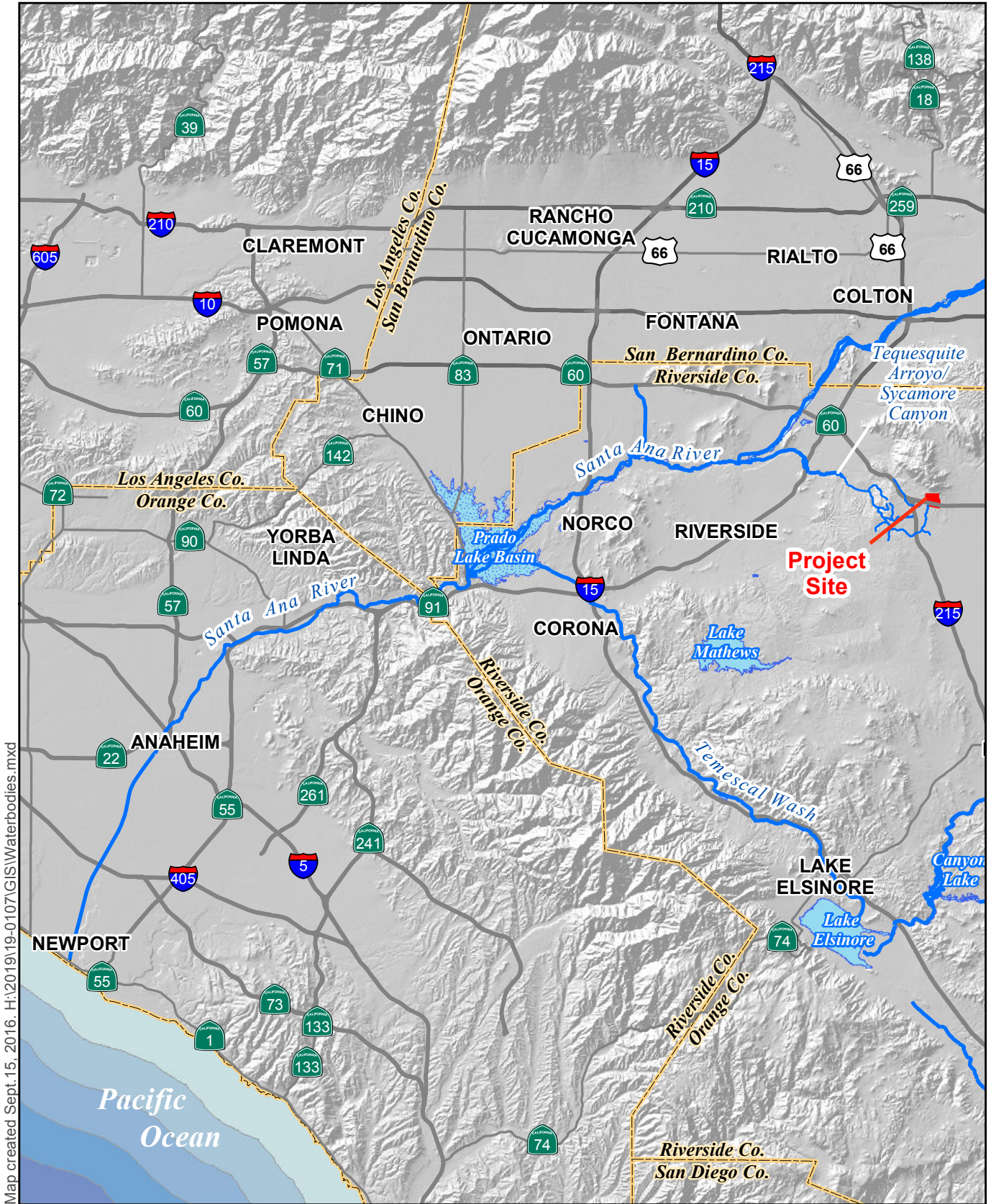
H:\2019\19-0107\GIS\USGS.mxd; Map created 14 Aug 2019; nanette



Sources: ESRI / USGS 7.5min Quad  
DRG: Riverside East

**Figure 3 - USGS Map**  
TPM 37750



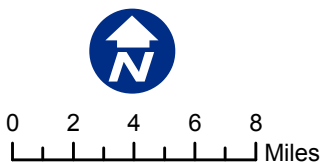


Map created Sept. 15, 2016. H:\2019\19-0107\GIS\Waterbodies.mxd

Sources: USGS DLG; USGS 30m DEM

Figure 4 – Receiving Waterbodies

Project Name





## SECTION 2 - HYDROLOGY ANALYSIS

### HYDROLOGY PARAMETERS

The RCFC&WCD Hydrology Manual was used to determine several of the hydrological parameters. The following rainfall intensities were utilized in the hydrology analyses, which were obtained from the standard intensity-duration curves provided in the RCFC&WCD Hydrology Manual:

**Table 1 – Intensity Values**

Storm Event	Duration	
	10-minute (inches/hour)	60-minute (inches/hour)
10-Year	2.14	0.80
100-Year	3.21	1.20

The value for slope of intensity was determined to be 0.55. The standard intensity-duration curves data (D-4.1) has been included in Appendix A.

Based on the Plate C-1.16 (Riverside-East) in the RCFC&WCD Hydrology Manual, the project site is predominantly classified as soil type C. Based on the National Resources Conservation Service (NRCS) Web Soil Survey, the project site is predominantly classified as soil types C and D. The soils maps are included in Appendix A. The more conservative soil type D was used for roughly 15% of the project site, as shown on the NRCS soil map.

The cover type was determined based on the existing land cover of the site. Hydrological computations for the existing condition were done using undeveloped (poor cover). The table below summarizes the runoff index values and the recommended values for percentage of impervious cover:

**Table 2 – Cover Type**

Cover Type	Soil Group A	Soil Group B	Soil Group C	Soil Group D	Percentage of Impervious Cover
Undeveloped (poor cover)	67	78	86	89	0%

### ON-SITE RATIONAL METHOD HYDROLOGY

The Rational Method was used to determine the peak flow rates to evaluate the size of existing drainage facilities conveying flows off-site. The runoff associated with the on-site areas was split into two drainage management areas (DMAs), each of which drains to separate Caltrans facilities.

DMA-A encompasses both off-site and on-site areas that impact the eastern portion of the project site. Off-site flows are discharged onto the site through a 33" RCP storm drain pipe within the adjacent residential tract. The flows are a combination of developed, residential runoff from Tracts 19533-1, 21332, and 21333, in addition to some natural foothill areas to the north of those tracts. These off-site flows are

discharged onto the project site, with a rip-rap apron, from whence they flow in natural channels. These natural channels converge with additional channels formed by runoff associated with approximately 20 acres of on-site, undeveloped area on the eastern portion of the project site. DMA-A discharges to an existing 36" RCP storm drain pipe maintained by Caltrans. This Caltrans line then connects to Moreno Valley West End MDP Line CC.

DMA-B encompasses both off-site and on-site areas that impact the western portion of the project site. Off-site flows are discharged onto the site through a 30" RCP storm drain pipe within Ironwood Avenue. The flows are a combination of flows from residential Tract 21332, Box Springs Elementary School, and street flows within Ironwood Avenue. These off-site flows are discharged onto the project site, with a rip-rap apron, from whence they flow in natural channels. These natural channels converge with additional channels formed by runoff associated with approximately 30 acres of on-site, undeveloped area on the western portion of the project site. Existing improved channels along the southern project boundary convey these cumulative flows towards an existing 36" RCP storm drain pipe maintained by Caltrans. The exact dimensions of these improved concrete channels are unknown at this time and are approximated from sections as shown on the Rational Method Hydrology Map in Appendix A.

The following table summarizes the on-site rational method results at key points:

**Table 3 – On-Site Rational Method Results**

Point of Interest	10-Year Peak Flow Rate (cfs)	100-Year Peak Flow Rate (cfs)
User-Defined Input Node 103 – Flow discharge point from adjacent tracts (values from Tract 19533-1 Street Plan)	55	86
Node 105 – Outlet location for DMA-A into an existing Caltrans facility	84	131
User-Defined Input Node 201 – Flow discharge point from adjacent tracts (value from Ironwood Avenue Street Plan)	41*	41
Node 206 – Outlet location for DMA-B into an existing Caltrans facility	83	106

**\* The Ironwood Avenue Street Plan did not include Q10 values for Line "A". The Q100 value was used for Q10 Rational Method calculations as a conservative estimate.**

The rational method output files and hydrology map have been included in Appendix A.

## OFF-SITE RATIONAL METHOD HYDROLOGY

The Rational Method was used to determine the peak flow rates to confirm the size of existing drainage facilities conveying flows off-site. The runoff associated with the off-site areas was accounted for with one drainage management area (DMA).

DMA-C includes approximately two acres of 90% impervious surfaces, associated with the existing project frontage roads. The southern half of Ironwood Avenue that fronts the project boundary between Day Street and Athens Drive slopes down to the west. Flows then travel along the eastern half of Day Street that fronts the project boundary. These street flows are conveyed by existing curb and gutter towards an existing catch basin, located north of the west-bound off-ramp for California State Route 60 at Day Street. DMA-C discharges to an existing 18" CMP storm drain pipe maintained by Caltrans.

The portion of Ironwood Avenue that fronts the project site between Barclay Drive and Athens Drive is accounted for in the off-site flows that are discharged within DMA-B.

The following table summarizes the off-site rational method results at key points:

**Table 3 – Off-Site Rational Method Results**

Point of Interest	10-Year Peak Flow Rate (cfs)	100-Year Peak Flow Rate (cfs)
Node 303 – Outlet location for DMA-C into an existing catch basin on Day Street	4.5	6.8

See Appendix A for the output files of the off-site rational method analysis.

## SECTION 3 - HYDRAULIC ANALYSIS

### EXISTING STORM DRAIN FACILITIES

Caltrans maintains multiple facilities that convey flows from the project site under California State Route 60 to the south. The project site is located within the City of Moreno Valley West End MDP. A portion of the site drains to the Line CC associated with that Master Development Plan. Ultimately, the Caltrans lines and Line CC connect to a City of Riverside maintained storm drain line (DWG D-480) located within Day Street south of the freeway.

#### 36" Caltrans Pipe (DMA-A)

DMA-A drains to an existing 36" RCP storm drain pipe, maintained by Caltrans, which transverses beneath California State Route 60, conveying flows to the south. The City of Moreno Valley West End MDP Line CC connects to this storm drain pipe south of the freeway, conveying flows further south to an existing storm drain line in Day Street, maintained by the City of Riverside.

The West End MDP Line CC plans reference a Q100 of 103 CFS. The Rational Method performed as part of this report resulted in a Q100 of 131 CFS for the same pipe line. The existing storm drain facilities were evaluated with the larger flow rate calculated per this report.

The Caltrans plans do not provide invert elevations or slopes for the existing facilities. The line was evaluated using a minimum pipe slope of 0.0050 and the flows computed by the Rational Method. The existing condition for this pipe is ponding at the inlet during larger storm events. The hydraulic model for this storm drain line is included in Appendix B.

#### Concrete Ditch and 36" Caltrans Pipe (DMA-B)

DMA-B drains to existing concrete channels, which extend along the southern project boundary. These Caltrans ditches convey flows to an existing 36" RCP storm drain pipe, maintained by Caltrans, which transverses beneath California State Route 60.

The Caltrans plans do not provide invert elevations or slopes for the existing facilities. The concrete ditch was evaluated using a pipe slope consistent with the topographic information and the flows computed by the Rational Method. The hydraulic model for this concrete ditch is included in Appendix B.

The Caltrans plans do not provide invert elevations or slopes for the existing facilities. The storm drain line was evaluated using a minimum pipe slope of 0.0050 and the flows computed by the Rational Method. The existing condition for this pipe is ponding at the inlet during larger storm events. The hydraulic model for this storm drain line is included in Appendix B.

#### 21' Catch Basin in Day Street (DMA-C)

DMA-C drains to an existing catch basin located in Day Street north of the California State Route 60 off-ramp. City of Riverside plans in that location show an existing 21' wide catch basin, which conveys flows beneath the off-ramp via an 18" storm drain pipe.

The catch basin was evaluated using the street depth and street flow computed by the Rational Method. The hydraulic model for this catch basin is included in Appendix B.

### PROPOSED STORM DRAIN FACILITIES

No improvements are proposed with this project.

## SECTION 4 - CONCLUSION

Based on the analyses and results of this report, the following conclusions were derived from the hydrology and hydraulic results:

- The existing drainage improvements adequately conveys flows off-site for the 100-year storm event.
- In the existing condition, larger storm events create ponding at the inlet locations for DMA-A & DMA-B.
- No improvements are proposed with this project.

## APPENDIX A – HYDROLOGY ANALYSIS

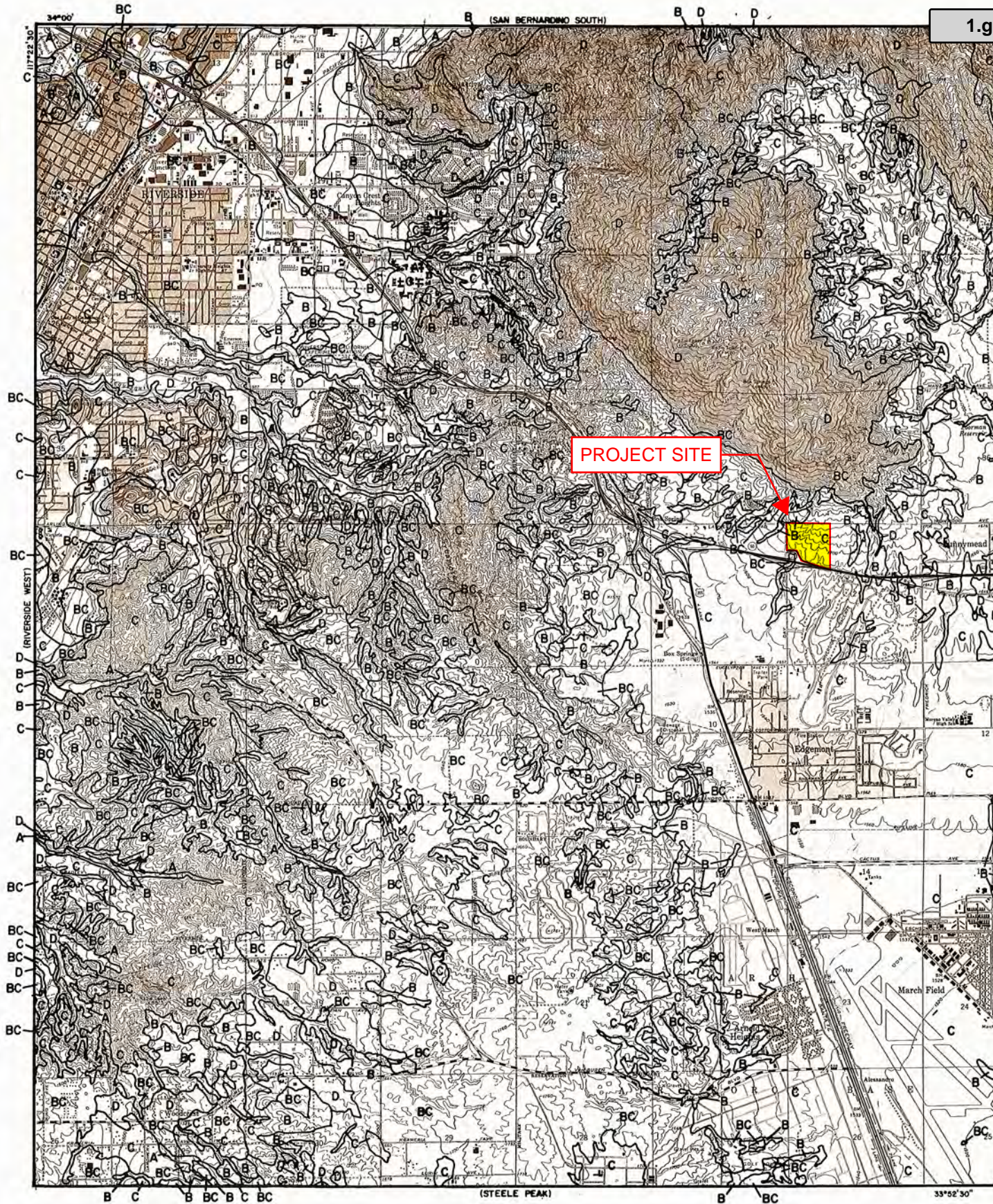
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Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

**HYDROLOGIC SOILS GROUP MAP (PLATE C-1.16)**

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Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and



Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

**LEGEND**

- SOILS GROUP BOUNDARY
- A SOILS GROUP DESIGNATION

**RCFC & WCD**  
HYDROLOGY MANUAL

0 FEET 5000

**HYDROLOGIC SOILS GROUP MAP**  
FOR  
**RIVERSIDE-EAST**





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A | A | A

Area of Interest (AOI) | Soil Map | **Soil Data Explorer** | Download Soils Data | Shopping Cart (Free)

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Soil Chemical Properties

Soil Erosion Factors

Soil Health Properties

Soil Physical Properties

**Soil Qualities and Features**

AASHTO Group Classification (Surface)

AASHTO Group Index

Depth to a Selected Soil Restrictive Layer

Depth to Any Soil Restrictive Layer

Drainage Class

Frost Action

Frost-Free Days

**Hydrologic Soil Group**

[View Description](#) [View Rating](#)

**View Options**

Map

Table

Description of Rating

Rating Options

Detailed Description

**Advanced Options**

Aggregation Method: Dominant Condition

Component Percent Cutoff:

Tie-break Rule:  Lower  Higher

[View Description](#) [View Rating](#)

Map Unit Name

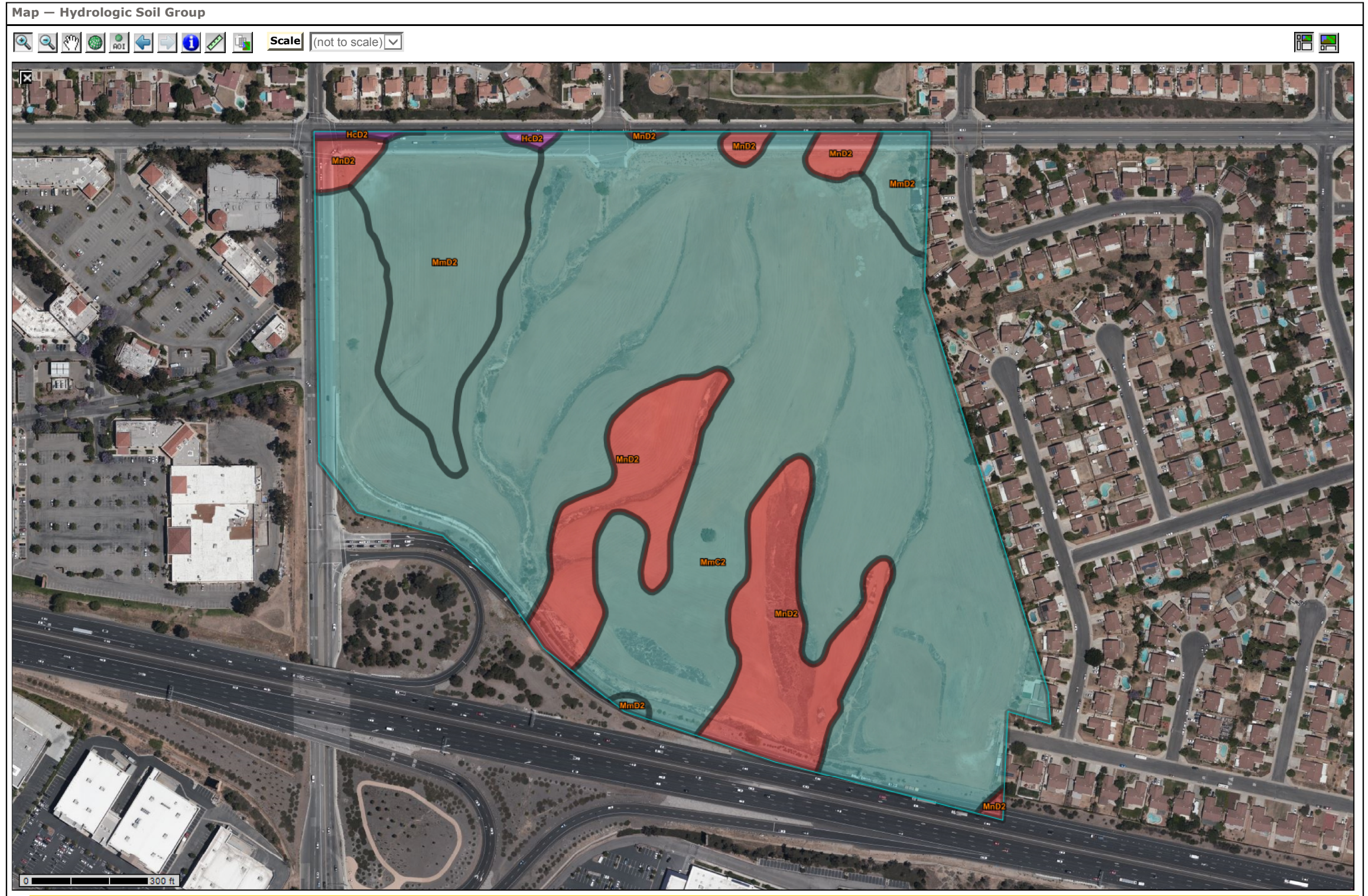
Parent Material Name

Representative Slope

Soil Slippage Potential

Unified Soil Classification (Surface)

Water Features



Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

**Warning: Soil Ratings Map may not be valid at this scale.**

You have zoomed in beyond the scale at which the soil map for this area is intended to be used. Mapping of soils is done at a particular scale. The soil surveys that comprise your AOI were mapped at 1:15,800. The design of map units and the level of detail shown in the resulting soil map are dependent on that map scale. Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

**Tables — Hydrologic Soil Group — Summary By Map Unit**

**Summary by Map Unit — Western Riverside Area, California (CA679)**

Summary by Map Unit — Western Riverside Area, California (CA679)

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
HcD2	Hanford coarse sandy loam, 8 to 15 percent slopes, eroded	A	0.2	0.3%
MmC2	Monserate sandy loam, 5 to 8 percent slopes, eroded	C	40.5	72.2%
MmD2	Monserate sandy loam, 8 to 15 percent slopes, eroded	C	6.7	12.0%
MnD2	Monserate sandy loam, shallow, 5 to 15 percent slopes, eroded	D	8.7	15.4%
<b>Totals for Area of Interest</b>			<b>56.0</b>	<b>100.0%</b>

**Description — Hydrologic Soil Group**

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

**Rating Options — Hydrologic Soil Group**

**Aggregation Method:** Dominant Condition  
**Component Percent Cutoff:** None Specified  
**Tie-break Rule:** Higher

**STANDARD INTENSITY-DURATION CURVES DATA (PLATE D-4.1)**

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Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

# RAINFALL INTENSITY—INCHES PER HOUR

RIVERSIDE			RIVERSIDE (FOOTHILL AREAS)			RUBIDOUX			SAN JACINTO			SUN CITY		
DURATION MINUTES	FREQUENCY 10 YEAR	FREQUENCY 100 YEAR	DURATION MINUTES	FREQUENCY 10 YEAR	FREQUENCY 100 YEAR	DURATION MINUTES	FREQUENCY 10 YEAR	FREQUENCY 100 YEAR	DURATION MINUTES	FREQUENCY 10 YEAR	FREQUENCY 100 YEAR	DURATION MINUTES	FREQUENCY 10 YEAR	FREQUENCY 100 YEAR
5	2.75	3.92	5	3.14	4.71	5	3.18	4.71	5	2.81	4.16	5	3.25	4.85
6	2.48	3.55	6	2.84	4.26	6	2.87	4.26	6	2.56	3.79	6	2.95	4.40
7	2.28	3.26	7	2.61	3.91	7	2.64	3.91	7	2.37	3.51	7	2.72	4.06
8	2.12	3.03	8	2.42	3.63	8	2.45	3.63	8	2.22	3.29	8	2.53	3.78
9	1.99	2.84	9	2.27	3.41	9	2.30	3.41	9	2.09	3.10	9	2.38	3.55
10	1.88	2.68	10	2.14	3.21	10	2.17	3.21	10	1.98	2.94	10	2.25	3.36
11	1.78	2.54	11	2.03	3.05	11	2.06	3.05	11	1.89	2.80	11	2.14	3.19
12	1.70	2.42	12	1.94	2.91	12	1.96	2.91	12	1.81	2.68	12	2.04	3.05
13	1.62	2.32	13	1.86	2.78	13	1.88	2.78	13	1.74	2.58	13	1.96	2.92
14	1.56	2.23	14	1.78	2.67	14	1.80	2.67	14	1.68	2.48	14	1.88	2.81
15	1.50	2.14	15	1.71	2.57	15	1.74	2.57	15	1.62	2.40	15	1.81	2.71
16	1.45	2.07	16	1.66	2.48	16	1.68	2.48	16	1.57	2.32	16	1.75	2.62
17	1.40	2.00	17	1.60	2.40	17	1.62	2.40	17	1.52	2.25	17	1.70	2.54
18	1.36	1.94	18	1.55	2.33	18	1.57	2.33	18	1.48	2.19	18	1.65	2.46
19	1.32	1.88	19	1.51	2.26	19	1.52	2.26	19	1.44	2.13	19	1.60	2.39
20	1.28	1.83	20	1.46	2.20	20	1.48	2.20	20	1.40	2.08	20	1.56	2.33
22	1.22	1.74	22	1.39	2.08	22	1.41	2.08	22	1.34	1.98	22	1.48	2.21
24	1.16	1.66	24	1.32	1.99	24	1.34	1.99	24	1.28	1.90	24	1.41	2.11
26	1.11	1.58	26	1.27	1.90	26	1.28	1.90	26	1.23	1.82	26	1.36	2.03
28	1.06	1.52	28	1.22	1.82	28	1.23	1.82	28	1.19	1.76	28	1.30	1.95
30	1.02	1.46	30	1.17	1.76	30	1.19	1.76	30	1.15	1.70	30	1.26	1.88
32	.99	1.41	32	1.13	1.70	32	1.14	1.70	32	1.11	1.64	32	1.21	1.81
34	.96	1.37	34	1.09	1.64	34	1.11	1.64	34	1.08	1.59	34	1.18	1.76
36	.93	1.32	36	1.06	1.59	36	1.07	1.59	36	1.05	1.55	36	1.14	1.70
38	.90	1.29	38	1.03	1.54	38	1.04	1.54	38	1.02	1.51	38	1.11	1.66
40	.87	1.25	40	1.00	1.50	40	1.01	1.50	40	.99	1.47	40	1.08	1.61
45	.82	1.17	45	.94	1.41	45	.95	1.41	45	.94	1.39	45	1.01	1.51
50	.77	1.11	50	.88	1.33	50	.90	1.33	50	.89	1.31	50	.96	1.43
55	.73	1.05	55	.84	1.26	55	.85	1.26	55	.85	1.25	55	.91	1.36
60	.70	1.00	60	.80	1.20	60	.81	1.20	60	.81	1.20	60	.87	1.30
65	.67	.96	65	.77	1.15	65	.78	1.15	65	.78	1.15	65	.83	1.25
70	.64	.92	70	.73	1.10	70	.74	1.10	70	.75	1.11	70	.80	1.20
75	.62	.88	75	.71	1.06	75	.72	1.06	75	.72	1.07	75	.77	1.15
80	.60	.85	80	.68	1.02	80	.69	1.02	80	.70	1.04	80	.75	1.12
85	.58	.83	85	.66	.99	85	.67	.99	85	.68	1.01	85	.72	1.08
SLOPE = .550			SLOPE = .550			SLOPE = .550			SLOPE = .500			SLOPE = .530		

**RCFC & WCD**  
HYDROLOGY MANUAL

STANDARD  
INTENSITY – DURATION  
CURVES DATA

**10-YEAR ON-SITE HYDROLOGY (RATIONAL METHOD)**

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Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

## EXIST10A

## Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2004 Version 7.0  
 Rational Hydrology Study Date: 08/13/19 File:EXIST10A.out

-----  
 TPM 37750 FRITZ DUDA  
 10-YEAR RATIONAL METHOD HYDROLOGY - EAST  
 WO 2019-0107  
 ABE 2019/08/13  
 -----

\*\*\*\*\* Hydrology Study Control Information \*\*\*\*\*

English (in-lb) Units used in input data file  
 -----

Program License Serial Number 4010  
 -----

Rational Method Hydrology Program based on  
 Riverside County Flood Control & Water Conservation District  
 1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)

For the [ Riverside-Foothill ] area used.

10 year storm 10 minute intensity = 2.140(In/Hr)

10 year storm 60 minute intensity = 0.800(In/Hr)

100 year storm 10 minute intensity = 3.210(In/Hr)

100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 10.0

Calculated rainfall intensity data:

1 hour intensity = 0.800(In/Hr)

Slope of intensity duration curve = 0.5500

+++++  
 Process from Point/Station 101.000 to Point/Station 102.000  
 \*\*\*\* INITIAL AREA EVALUATION \*\*\*\*  
 -----

Initial area flow distance = 375.000(Ft.)

Top (of initial area) elevation = 1776.700(Ft.)

Bottom (of initial area) elevation = 1743.600(Ft.)

Difference in elevation = 33.100(Ft.)

Slope = 0.08827 s(percent)= 8.83

TC = k(0.530)\*[(length^3)/(elevation change)]^0.2

Initial area time of concentration = 9.220 min.

Rainfall intensity = 2.241(In/Hr) for a 10.0 year storm

UNDEVELOPED (poor cover) subarea

Runoff Coefficient = 0.821

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 0.000

Decimal fraction soil group C = 1.000

Decimal fraction soil group D = 0.000

RI index for soil(AMC 2) = 86.00

Pervious area fraction = 1.000; Impervious fraction = 0.000

Page 1

EXIST10A  
 Initial subarea runoff = 0.919(CFS)  
 Total initial stream area = 0.500(Ac.)  
 Pervious area fraction = 1.000

\*\*\*\*\*  
 Process from Point/Station 101.000 to Point/Station 102.000  
 \*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

Along Main Stream number: 1 in normal stream number 1  
 Stream flow area = 0.500(Ac.)  
 Runoff from this stream = 0.919(CFS)  
 Time of concentration = 9.22 min.  
 Rainfall intensity = 2.241(In/Hr)

\*\*\*\*\*  
 Process from Point/Station 103.000 to Point/Station 102.000  
 \*\*\*\* USER DEFINED FLOW INFORMATION AT A POINT \*\*\*\*

Rainfall intensity = 2.244(In/Hr) for a 10.0 year storm  
 SINGLE FAMILY (1/4 Acre Lot)  
 Runoff Coefficient = 0.805  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 69.00  
 Pervious area fraction = 0.500; Impervious fraction = 0.500  
 User specified values are as follows:  
 TC = 9.20 min. Rain intensity = 2.24(In/Hr)  
 Total area = 30.00(Ac.) Total runoff = 55.10(CFS)

OFF-SITE FLOW VALUE PER TRACT 19533-1 STREET PL  
 CONTRIBUTING AREAS APPROXIMATED PER TRACTS  
 19533-1, 21332, AND 21333 STREET PLANS  
 ASSUMED TC EQUIVALENT TO CONFLUENCED FLOWS

\*\*\*\*\*  
 Process from Point/Station 103.000 to Point/Station 102.000  
 \*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

Along Main Stream number: 1 in normal stream number 2  
 Stream flow area = 30.000(Ac.)  
 Runoff from this stream = 55.100(CFS)  
 Time of concentration = 9.20 min.  
 Rainfall intensity = 2.244(In/Hr)  
 Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
------------	-----------------	----------	----------------------------

1	0.919	9.22	2.241
2	55.100	9.20	2.244

Largest stream flow has longer or shorter time of concentration

Qp = 55.100 + sum of  

$$Q_a \cdot \frac{T_b}{T_a}$$

$$0.919 \cdot 0.998 = 0.917$$
 Qp = 56.017

Total of 2 streams to confluence:  
 Flow rates before confluence point:  
 0.919 55.100  
 Area of streams before confluence:  
 0.500 30.000  
 Results of confluence:

EXIST10A

Total flow rate = 56.017(CFS)  
 Time of concentration = 9.200 min.  
 Effective stream area after confluence = 30.500(Ac.)

+++++  
 Process from Point/Station 102.000 to Point/Station 104.000  
 \*\*\*\* NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION \*\*\*\*

---

Top of natural channel elevation = 1743.600(Ft.)  
 End of natural channel elevation = 1678.800(Ft.)  
 Length of natural channel = 923.000(Ft.)  
 Estimated mean flow rate at midpoint of channel = 60.425(CFS)

Natural valley channel type used  
 L.A. County flood control district formula for channel velocity:  
 Velocity(ft/s) = (7 + 8(q(English Units)<sup>0.352</sup>)(slope<sup>0.5</sup>)  
 Velocity using mean channel flow = 10.83(Ft/s)

Correction to map slope used on extremely rugged channels with  
 drops and waterfalls (Plate D-6.2)  
 Normal channel slope = 0.0702  
 Corrected/adjusted channel slope = 0.0702  
 Travel time = 1.42 min. TC = 10.62 min.

Adding area flow to channel  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.815  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Rainfall intensity = 2.074(In/Hr) for a 10.0 year storm  
 Subarea runoff = 8.109(CFS) for 4.800(Ac.)  
 Total runoff = 64.126(CFS) Total area = 35.300(Ac.)

+++++  
 Process from Point/Station 104.000 to Point/Station 105.000  
 \*\*\*\* NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION \*\*\*\*

---

Top of natural channel elevation = 1678.800(Ft.)  
 End of natural channel elevation = 1650.000(Ft.)  
 Length of natural channel = 401.000(Ft.)  
 Estimated mean flow rate at midpoint of channel = 69.576(CFS)

Natural valley channel type used  
 L.A. County flood control district formula for channel velocity:  
 Velocity(ft/s) = (7 + 8(q(English Units)<sup>0.352</sup>)(slope<sup>0.5</sup>)  
 Velocity using mean channel flow = 11.42(Ft/s)

Correction to map slope used on extremely rugged channels with  
 drops and waterfalls (Plate D-6.2)  
 Normal channel slope = 0.0718  
 Corrected/adjusted channel slope = 0.0718  
 Travel time = 0.59 min. TC = 11.21 min.

Adding area flow to channel  
 UNDEVELOPED (poor cover) subarea



EXIST10A

Runoff Coefficient = 0.812  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Rainfall intensity = 2.013(In/Hr) for a 10.0 year storm  
 Subarea runoff = 9.813(CFS) for 6.000(Ac.)  
 Total runoff = 73.940(CFS) Total area = 41.300(Ac.)

\*\*\*\*\*  
 Process from Point/Station 104.000 to Point/Station 105.000  
 \*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

---

Along Main Stream number: 1 in normal stream number 1  
 Stream flow area = 41.300(Ac.)  
 Runoff from this stream = 73.940(CFS)  
 Time of concentration = 11.21 min.  
 Rainfall intensity = 2.013(In/Hr)

\*\*\*\*\*  
 Process from Point/Station 106.000 to Point/Station 107.000  
 \*\*\*\* INITIAL AREA EVALUATION \*\*\*\*

---

Initial area flow distance = 817.000(Ft.)  
 Top (of initial area) elevation = 1778.900(Ft.)  
 Bottom (of initial area) elevation = 1706.100(Ft.)  
 Difference in elevation = 72.800(Ft.)  
 Slope = 0.08911 s(percent)= 8.91  
 $TC = k(0.530)*[(length^3)/(elevation\ change)]^{0.2}$   
 Initial area time of concentration = 12.566 min.  
 Rainfall intensity = 1.890(In/Hr) for a 10.0 year storm  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.807  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Initial subarea runoff = 4.883(CFS)  
 Total initial stream area = 3.200(Ac.)  
 Pervious area fraction =1.000

\*\*\*\*\*  
 Process from Point/Station 107.000 to Point/Station 105.000  
 \*\*\*\* NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION \*\*\*\*

---

Top of natural channel elevation = 1706.100(Ft.)  
 End of natural channel elevation = 1650.000(Ft.)  
 Length of natural channel = 816.000(Ft.)  
 Estimated mean flow rate at midpoint of channel = 9.156(CFS)

Natural valley channel type used  
 L.A. County flood control district formula for channel velocity:  
 $Velocity(ft/s) = (7 + 8(q(English\ Units)^{.352})(slope^{0.5}))$   
 Velocity using mean channel flow = 6.41(Ft/s)

Correction to map slope used on extremely rugged channels with  
 Page 4

EXIST10A

drops and waterfalls (Plate D-6.2)  
 Normal channel slope = 0.0687  
 Corrected/adjusted channel slope = 0.0687  
 Travel time = 2.12 min. TC = 14.69 min.

Adding area flow to channel  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.816  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 0.250  
 Decimal fraction soil group D = 0.750  
 RI index for soil(AMC 2) = 88.25  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Rainfall intensity = 1.735(In/Hr) for a 10.0 year storm  
 Subarea runoff = 7.932(CFS) for 5.600(Ac.)  
 Total runoff = 12.815(CFS) Total area = 8.800(Ac.)

+++++  
 Process from Point/Station 107.000 to Point/Station 105.000  
 \*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

Along Main Stream number: 1 in normal stream number 2  
 Stream flow area = 8.800(Ac.)  
 Runoff from this stream = 12.815(CFS)  
 Time of concentration = 14.69 min.  
 Rainfall intensity = 1.735(In/Hr)  
 Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
------------	-----------------	----------	----------------------------

1	73.940	11.21	2.013
2	12.815	14.69	1.735

Largest stream flow has longer or shorter time of concentration

Qp = 73.940 + sum of  

$$Qa \cdot \frac{Tb}{Ta}$$
 12.815 \* 0.763 = 9.776  
 Qp = 83.716

Total of 2 streams to confluence:  
 Flow rates before confluence point:  
 73.940 12.815  
 Area of streams before confluence:  
 41.300 8.800

Results of confluence:  
 Total flow rate = 83.716(CFS)  
 Time of concentration = 11.205 min.  
 Effective stream area after confluence = 50.100(Ac.)  
 End of computations, total study area = 50.10 (Ac.)

The following figures may be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.701  
 Area averaged RI index number = 76.1

EXIST10B

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2004 Version 7.0  
Rational Hydrology Study Date: 09/10/19 File:EXIST10B.out

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TPM 37750 FRITZ DUDA  
10-YEAR RATIONAL METHOD HYDROLOGY - WEST  
WO 2019-0107  
ABE 2019-09-10  
-----

\*\*\*\*\* Hydrology Study Control Information \*\*\*\*\*

English (in-lb) units used in input data file  
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Program License Serial Number 4010  
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Rational Method Hydrology Program based on  
Riverside County Flood Control & Water Conservation District  
1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)  
For the [ Riverside-Foothill ] area used.  
10 year storm 10 minute intensity = 2.140(In/Hr)  
10 year storm 60 minute intensity = 0.800(In/Hr)  
100 year storm 10 minute intensity = 3.210(In/Hr)  
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 10.0  
Calculated rainfall intensity data:  
1 hour intensity = 0.800(In/Hr)  
Slope of intensity duration curve = 0.5500

++++  
Process from Point/Station 201.000 to Point/Station 202.000  
\*\*\*\* USER DEFINED FLOW INFORMATION AT A POINT \*\*\*\*

-----  
Rainfall intensity = 2.167(In/Hr) for a 10.0 year storm

SINGLE FAMILY (1/4 Acre Lot)  
Runoff Coefficient = 0.803  
Decimal fraction soil group A = 0.000  
Decimal fraction soil group B = 0.000  
Decimal fraction soil group C = 1.000  
Decimal fraction soil group D = 0.000  
RI index for soil(AMC 2) = 69.00

OFF-SITE FLOW VALUE PER IRONWOOD AVE STREET P  
(Q10 NOT PROVIDED. Q100 USED AS CONSERVATIVE  
ESTIMATE.)  
CONTRIBUTING AREAS APPROXIMATED PER TRACT 21  
STREET PLAN  
ASSUMED TC EQUIVALENT TO CONFLUENCED FLOWS

Pervious area fraction = 0.500; Impervious fraction = 0.500  
User specified values are as follows:  
TC = 9.80 min. Rain intensity = 2.17(In/Hr)  
Total area = 16.00(Ac.) Total runoff = 41.40(CFS)

++++  
Process from Point/Station 202.000 to Point/Station 203.000  
Page 1

Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

EXIST10B

\*\*\*\* NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION \*\*\*\*

Top of natural channel elevation = 1749.700(Ft.)
End of natural channel elevation = 1663.800(Ft.)
Length of natural channel = 1000.000(Ft.)
Estimated mean flow rate at midpoint of channel = 47.093(CFS)

Natural valley channel type used
L.A. County flood control district formula for channel velocity:
Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)
Velocity using mean channel flow = 11.15(Ft/s)

Correction to map slope used on extremely rugged channels with
drops and waterfalls (Plate D-6.2)
Normal channel slope = 0.0859
Corrected/adjusted channel slope = 0.0859
Travel time = 1.49 min. TC = 11.29 min.

Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.812
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2) = 86.00
Pervious area fraction = 1.000; Impervious fraction = 0.000
Rainfall intensity = 2.004(In/Hr) for a 10.0 year storm
Subarea runoff = 7.162(CFS) for 4.400(Ac.)
Total runoff = 48.562(CFS) Total area = 20.400(Ac.)

Process from Point/Station 202.000 to Point/Station 203.000
\*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

Along Main Stream number: 1 in normal stream number 1
Stream flow area = 20.400(Ac.)
Runoff from this stream = 48.562(CFS)
Time of concentration = 11.29 min.
Rainfall intensity = 2.004(In/Hr)

Process from Point/Station 204.000 to Point/Station 205.000
\*\*\*\* INITIAL AREA EVALUATION \*\*\*\*

Initial area flow distance = 561.000(Ft.)
Top (of initial area) elevation = 1776.200(Ft.)
Bottom (of initial area) elevation = 1705.500(Ft.)
Difference in elevation = 70.700(Ft.)
Slope = 0.12602 s(percent)= 12.60
TC = k(0.530)\*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 10.087 min.
Rainfall intensity = 2.133(In/Hr) for a 10.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.817
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2) = 86.00

EXIST10B  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Initial subarea runoff = 3.311(CFS)  
 Total initial stream area = 1.900(Ac.)  
 Pervious area fraction = 1.000

++++  
 Process from Point/Station 205.000 to Point/Station 203.000  
 \*\*\*\* NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION \*\*\*\*

---

Top of natural channel elevation = 1705.500(Ft.)  
 End of natural channel elevation = 1663.800(Ft.)  
 Length of natural channel = 519.000(Ft.)  
 Estimated mean flow rate at midpoint of channel = 6.883(CFS)

Natural valley channel type used  
 L.A. County flood control district formula for channel velocity:  
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)  
 velocity using mean channel flow = 6.46(Ft/s)

Correction to map slope used on extremely rugged channels with  
 drops and waterfalls (Plate D-6.2)  
 Normal channel slope = 0.0803  
 Corrected/adjusted channel slope = 0.0803  
 Travel time = 1.34 min. TC = 11.43 min.

Adding area flow to channel  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.812  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Rainfall intensity = 1.992(In/Hr) for a 10.0 year storm  
 Subarea runoff = 6.627(CFS) for 4.100(Ac.)  
 Total runoff = 9.938(CFS) Total area = 6.000(Ac.)

++++  
 Process from Point/Station 205.000 to Point/Station 203.000  
 \*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

---

Along Main Stream number: 1 in normal stream number 2  
 Stream flow area = 6.000(Ac.)  
 Runoff from this stream = 9.938(CFS)  
 Time of concentration = 11.43 min.  
 Rainfall intensity = 1.992(In/Hr)  
 Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
1	48.562	11.29	2.004
2	9.938	11.43	1.992

Largest stream flow has longer or shorter time of concentration  
 Qp = 48.562 + sum of  

$$Q_p = 9.938 * \frac{Q_a}{T_b/T_a} = 9.822$$
  
 Qp = 58.384

EXIST10B

Total of 2 streams to confluence:  
 Flow rates before confluence point:  
     48.562          9.938  
 Area of streams before confluence:  
     20.400          6.000  
 Results of confluence:  
 Total flow rate = 58.384(CFS)  
 Time of concentration = 11.295 min.  
 Effective stream area after confluence = 26.400(Ac.)

++++  
 Process from Point/Station 203.000 to Point/Station 206.000  
 \*\*\*\* NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION \*\*\*\*

---

Top of natural channel elevation = 1663.800(Ft.)  
 End of natural channel elevation = 1650.000(Ft.)  
 Length of natural channel = 316.000(Ft.)  
 Estimated mean flow rate at midpoint of channel = 59.269(CFS)

Natural valley channel type used  
 L.A. County flood control district formula for channel velocity:  
 Velocity(ft/s) = (7 + 8(q(English Units)<sup>0.352</sup>)(slope<sup>0.5</sup>)  
 velocity using mean channel flow = 8.50(Ft/s)

Correction to map slope used on extremely rugged channels with  
 drops and waterfalls (Plate D-6.2)  
     Normal channel slope = 0.0437  
 Corrected/adjusted channel slope = 0.0437  
 Travel time = 0.62 min.      TC = 11.91 min.

Adding area flow to channel  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.810  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Rainfall intensity = 1.946(In/Hr) for a 10.0 year storm  
 Subarea runoff = 1.261(CFS) for 0.800(Ac.)  
 Total runoff = 59.645(CFS) Total area = 27.200(Ac.)

++++  
 Process from Point/Station 203.000 to Point/Station 206.000  
 \*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

---

Along Main Stream number: 1 in normal stream number 1  
 Stream flow area = 27.200(Ac.)  
 Runoff from this stream = 59.645(CFS)  
 Time of concentration = 11.91 min.  
 Rainfall intensity = 1.946(In/Hr)

++++  
 Process from Point/Station 207.000 to Point/Station 208.000  
 \*\*\*\* INITIAL AREA EVALUATION \*\*\*\*

---

Initial area flow distance = 992.000(Ft.)  
 Page 4

Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

EXIST10B

Top (of initial area) elevation = 1776.200(Ft.)  
 Bottom (of initial area) elevation = 1683.200(Ft.)  
 Difference in elevation = 93.000(Ft.)  
 Slope = 0.09375 s(percent)= 9.38  
 $TC = k(0.530)*[(length^3)/(elevation\ change)]^{0.2}$   
 Initial area time of concentration = 13.443 min.  
 Rainfall intensity = 1.821(In/Hr) for a 10.0 year storm  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.804  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Initial subarea runoff = 4.980(CFS)  
 Total initial stream area = 3.400(Ac.)  
 Pervious area fraction = 1.000

+++++  
 Process from Point/Station 208.000 to Point/Station 206.000  
 \*\*\*\* NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION \*\*\*\*

---

Top of natural channel elevation = 1683.200(Ft.)  
 End of natural channel elevation = 1650.000(Ft.)  
 Length of natural channel = 513.000(Ft.)  
 Estimated mean flow rate at midpoint of channel = 7.324(CFS)

Natural valley channel type used  
 L.A. County flood control district formula for channel velocity:  
 $Velocity(ft/s) = (7 + 8(q(English\ units)^{.352})(slope^{0.5}))$   
 Velocity using mean channel flow = 5.88(Ft/s)

Correction to map slope used on extremely rugged channels with  
 drops and waterfalls (Plate D-6.2)  
 Normal channel slope = 0.0647  
 Corrected/adjusted channel slope = 0.0647  
 Travel time = 1.45 min. TC = 14.90 min.

Adding area flow to channel  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.821  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 0.000  
 Decimal fraction soil group D = 1.000  
 RI index for soil(AMC 2) = 89.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Rainfall intensity = 1.721(In/Hr) for a 10.0 year storm  
 Subarea runoff = 4.525(CFS) for 3.200(Ac.)  
 Total runoff = 9.505(CFS) Total area = 6.600(Ac.)

+++++  
 Process from Point/Station 208.000 to Point/Station 206.000  
 \*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

---

Along Main Stream number: 1 in normal stream number 2  
 Stream flow area = 6.600(Ac.)  
 Runoff from this stream = 9.505(CFS)  
 Time of concentration = 14.90 min.

Rainfall intensity = EXIST10B  
1.721(In/Hr)

Process from Point/Station 209.000 to Point/Station 210.000  
\*\*\*\* INITIAL AREA EVALUATION \*\*\*\*

Initial area flow distance = 885.000(Ft.)  
Top (of initial area) elevation = 1741.400(Ft.)  
Bottom (of initial area) elevation = 1674.000(Ft.)  
Difference in elevation = 67.400(Ft.)  
Slope = 0.07616 s(percent)= 7.62  
TC = k(0.530)\*[(length^3)/(elevation change)]^0.2  
Initial area time of concentration = 13.388 min.  
Rainfall intensity = 1.826(In/Hr) for a 10.0 year storm  
UNDEVELOPED (poor cover) subarea  
Runoff Coefficient = 0.804  
Decimal fraction soil group A = 0.000  
Decimal fraction soil group B = 0.000  
Decimal fraction soil group C = 1.000  
Decimal fraction soil group D = 0.000  
RI index for soil(AMC 2) = 86.00  
Pervious area fraction = 1.000; Impervious fraction = 0.000  
Initial subarea runoff = 9.985(CFS)  
Total initial stream area = 6.800(Ac.)  
Pervious area fraction = 1.000

Process from Point/Station 210.000 to Point/Station 206.000  
\*\*\*\* IMPROVED CHANNEL TRAVEL TIME \*\*\*\*

Upstream point elevation = 1674.000(Ft.)  
Downstream point elevation = 1650.000(Ft.)  
Channel length thru subarea = 685.000(Ft.)  
Channel base width = 2.500(Ft.)  
Slope or 'Z' of left channel bank = 1.700  
Slope or 'Z' of right channel bank = 1.700  
Estimated mean flow rate at midpoint of channel = 11.270(CFS)  
Manning's 'N' = 0.015  
Maximum depth of channel = 1.800(Ft.)  
Flow(q) thru subarea = 11.270(CFS)  
Depth of flow = 0.409(Ft.), Average velocity = 8.631(Ft/s)  
Channel flow top width = 3.890(Ft.)  
Flow Velocity = 8.63(Ft/s)  
Travel time = 1.32 min.  
Time of concentration = 14.71 min.

EXACT CHANNEL DIMENSIONS  
UNKNOWN AND APPROXIMATED  
BY SECTION A-A ON HYDROLOGY  
EXHIBIT

Sub-Channel No. 1 Critical depth = 0.719(Ft.)  
' ' ' Critical flow top width = 4.944(Ft.)  
' ' ' Critical flow velocity= 4.213(Ft/s)  
' ' ' Critical flow area = 2.675(Sq.Ft)

Adding area flow to channel  
UNDEVELOPED (poor cover) subarea  
Runoff Coefficient = 0.800  
Decimal fraction soil group A = 0.000  
Decimal fraction soil group B = 0.000  
Decimal fraction soil group C = 1.000  
Decimal fraction soil group D = 0.000  
RI index for soil(AMC 2) = 86.00  
Pervious area fraction = 1.000; Impervious fraction = 0.000  
Rainfall intensity = 1.733(In/Hr) for a 10.0 year storm



EXIST10B  
 Subarea runoff = 2.495(CFS) for 1.800(Ac.)  
 Total runoff = 12.480(CFS) Total area = 8.600(Ac.)  
 Depth of flow = 0.433(Ft.), Average velocity = 8.908(Ft/s)

Sub-Channel No. 1 Critical depth = 0.766(Ft.)  
 Critical flow top width = 5.103(Ft.)  
 Critical flow velocity = 4.288(Ft/s)  
 Critical flow area = 2.911(Sq.Ft)

Process from Point/Station 210.000 to Point/Station 206.000  
 \*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

Along Main Stream number: 1 in normal stream number 3  
 Stream flow area = 8.600(Ac.)  
 Runoff from this stream = 12.480(CFS)  
 Time of concentration = 14.71 min.  
 Rainfall intensity = 1.733(In/Hr)

Process from Point/Station 211.000 to Point/Station 212.000  
 \*\*\*\* INITIAL AREA EVALUATION \*\*\*\*

Initial area flow distance = 561.000(Ft.)  
 Top (of initial area) elevation = 1709.200(Ft.)  
 Bottom (of initial area) elevation = 1672.200(Ft.)  
 Difference in elevation = 37.000(Ft.)  
 Slope = 0.06595 s(percent) = 6.60  
 $TC = k(0.530)*[(length^3)/(elevation\ change)]^{0.2}$   
 Initial area time of concentration = 11.482 min.  
 Rainfall intensity = 1.986(In/Hr) for a 10.0 year storm  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.811  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Initial subarea runoff = 5.802(CFS)  
 Total initial stream area = 3.600(Ac.)  
 Pervious area fraction = 1.000

Process from Point/Station 212.000 to Point/Station 206.000  
 \*\*\*\* IMPROVED CHANNEL TRAVEL TIME \*\*\*\*

Upstream point elevation = 1672.200(Ft.)  
 Downstream point elevation = 1650.000(Ft.)  
 Channel length thru subarea = 420.000(Ft.)  
 Channel base width = 0.000(Ft.)  
 Slope or 'Z' of left channel bank = 3.000  
 Slope or 'Z' of right channel bank = 3.000  
 Manning's 'N' = 0.015  
 Maximum depth of channel = 0.700(Ft.)  
 Flow(q) thru subarea = 5.802(CFS)  
 Depth of flow = 0.478(Ft.), Average velocity = 8.468(Ft/s)  
 Channel flow top width = 2.867(Ft.)  
 Flow velocity = 8.47(Ft/s)

EXACT CHANNEL DIMENSIONS  
 UNKNOWN AND APPROXIMATED  
 BY SECTION B-B ON HYDROLOGY  
 EXHIBIT

EXIST10B

Travel time = 0.83 min.  
Time of concentration = 12.31 min.

Sub-Channel No. 1 Critical depth = 0.742(Ft.)  
Critical flow top width = 4.200(Ft.)  
Critical flow velocity = 3.522(Ft/s)  
Critical flow area = 1.647(Sq.Ft)

++++  
Process from Point/Station 212.000 to Point/Station 206.000  
\*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

Along Main Stream number: 1 in normal stream number 4  
Stream flow area = 3.600(Ac.)  
Runoff from this stream = 5.802(CFS)  
Time of concentration = 12.31 min.  
Rainfall intensity = 1.912(In/Hr)  
Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
1	59.645	11.91	1.946
2	9.505	14.90	1.721
3	12.480	14.71	1.733
4	5.802	12.31	1.912

Largest stream flow has longer or shorter time of concentration  
Qp = 59.645 + sum of  
Qa Tb/Ta  
9.505 \* 0.800 = 7.602  
Qa Tb/Ta  
12.480 \* 0.810 = 10.108  
Qa Tb/Ta  
5.802 \* 0.968 = 5.616  
Qp = 82.972

Total of 4 streams to confluence:  
Flow rates before confluence point:  
59.645 9.505 12.480 5.802  
Area of streams before confluence:  
27.200 6.600 8.600 3.600

Results of confluence:  
Total flow rate = 82.972(CFS)  
Time of concentration = 11.915 min.  
Effective stream area after confluence = 46.000(Ac.)  
End of computations, total study area = 46.00 (Ac.)

The following figures may be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.826  
Area averaged RI index number = 80.3

**100-YEAR ON-SITE HYDROLOGY (RATIONAL METHOD)**

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Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

EXIST100A

## Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2004 Version 7.0  
 Rational Hydrology Study Date: 08/13/19 File:EXIST100A.out

-----  
 TPM 37750 FRITZ DUDA  
 100-YEAR RATIONAL METHOD HYDROLOGY - EAST  
 WO 2019-0107  
 ABE 2019/08/13  
 -----

\*\*\*\*\* Hydrology Study Control Information \*\*\*\*\*

English (in-lb) units used in input data file  
 -----

Program License Serial Number 4010  
 -----

Rational Method Hydrology Program based on  
 Riverside County Flood Control & Water Conservation District  
 1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)

For the [ Riverside-Foothill ] area used.

10 year storm 10 minute intensity = 2.140(In/Hr)

10 year storm 60 minute intensity = 0.800(In/Hr)

100 year storm 10 minute intensity = 3.210(In/Hr)

100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 100.0

Calculated rainfall intensity data:

1 hour intensity = 1.200(In/Hr)

Slope of intensity duration curve = 0.5500

+++++  
 Process from Point/Station 101.000 to Point/Station 102.000  
 \*\*\*\* INITIAL AREA EVALUATION \*\*\*\*  
 -----

Initial area flow distance = 375.000(Ft.)

Top (of initial area) elevation = 1776.700(Ft.)

Bottom (of initial area) elevation = 1743.600(Ft.)

Difference in elevation = 33.100(Ft.)

Slope = 0.08827 s(percent)= 8.83

TC = k(0.530)\*[(length^3)/(elevation change)]^0.2

Initial area time of concentration = 9.220 min.

Rainfall intensity = 3.362(In/Hr) for a 100.0 year storm

UNDEVELOPED (poor cover) subarea

Runoff Coefficient = 0.845

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 0.000

Decimal fraction soil group C = 1.000

Decimal fraction soil group D = 0.000

RI index for soil(AMC 2) = 86.00

Pervious area fraction = 1.000; Impervious fraction = 0.000

Page 1

EXIST100A  
 Initial subarea runoff = 1.421(CFS)  
 Total initial stream area = 0.500(Ac.)  
 Pervious area fraction = 1.000

\*\*\*\*\*  
 Process from Point/Station 101.000 to Point/Station 102.000  
 \*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

Along Main Stream number: 1 in normal stream number 1  
 Stream flow area = 0.500(Ac.)  
 Runoff from this stream = 1.421(CFS)  
 Time of concentration = 9.22 min.  
 Rainfall intensity = 3.362(In/Hr)

\*\*\*\*\*  
 Process from Point/Station 103.000 to Point/Station 102.000  
 \*\*\*\* USER DEFINED FLOW INFORMATION AT A POINT \*\*\*\*

Rainfall intensity = 3.366(In/Hr) for a 100.0 year storm  
 SINGLE FAMILY (1/4 Acre Lot)  
 Runoff Coefficient = 0.832  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 69.00  
 Pervious area fraction = 0.500; Impervious fraction = 0.500  
 User specified values are as follows:  
 TC = 9.20 min. Rain intensity = 3.37(In/Hr)  
 Total area = 30.00(Ac.) Total runoff = 86.20(CFS)

OFF-SITE FLOW VALUE PER TRACT 19533-1 STREET PL  
 CONTRIBUTING AREAS APPROXIMATED PER TRACTS  
 19533-1, 21332, AND 21333 STREET PLANS  
 ASSUMED TC EQUIVALENT TO CONFLUENCED FLOWS

\*\*\*\*\*  
 Process from Point/Station 103.000 to Point/Station 102.000  
 \*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

Along Main Stream number: 1 in normal stream number 2  
 Stream flow area = 30.000(Ac.)  
 Runoff from this stream = 86.200(CFS)  
 Time of concentration = 9.20 min.  
 Rainfall intensity = 3.366(In/Hr)  
 Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
------------	-----------------	----------	----------------------------

1	1.421	9.22	3.362
2	86.200	9.20	3.366

Largest stream flow has longer or shorter time of concentration

Qp = 86.200 + sum of  

$$Q_a \cdot \frac{T_b}{T_a}$$

$$Q_p = 1.421 * 0.998 = 1.418$$

Total of 2 streams to confluence:  
 Flow rates before confluence point:  
 1.421 86.200  
 Area of streams before confluence:  
 0.500 30.000  
 Results of confluence:

EXIST100A

Total flow rate = 87.618(CFS)  
 Time of concentration = 9.200 min.  
 Effective stream area after confluence = 30.500(Ac.)

+++++  
 Process from Point/Station 102.000 to Point/Station 104.000  
 \*\*\*\* NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION \*\*\*\*

---

Top of natural channel elevation = 1743.600(Ft.)  
 End of natural channel elevation = 1678.800(Ft.)  
 Length of natural channel = 923.000(Ft.)  
 Estimated mean flow rate at midpoint of channel = 94.512(CFS)

Natural valley channel type used  
 L.A. County flood control district formula for channel velocity:  
 Velocity(ft/s) = (7 + 8(q(English Units)<sup>0.352</sup>)(slope<sup>0.5</sup>)  
 Velocity using mean channel flow = 12.37(Ft/s)

Correction to map slope used on extremely rugged channels with  
 drops and waterfalls (Plate D-6.2)  
 Normal channel slope = 0.0702  
 Corrected/adjusted channel slope = 0.0702  
 Travel time = 1.24 min. TC = 10.44 min.

Adding area flow to channel  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.842  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Rainfall intensity = 3.139(In/Hr) for a 100.0 year storm  
 Subarea runoff = 12.683(CFS) for 4.800(Ac.)  
 Total runoff = 100.301(CFS) Total area = 35.300(Ac.)

+++++  
 Process from Point/Station 104.000 to Point/Station 105.000  
 \*\*\*\* NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION \*\*\*\*

---

Top of natural channel elevation = 1678.800(Ft.)  
 End of natural channel elevation = 1650.000(Ft.)  
 Length of natural channel = 401.000(Ft.)  
 Estimated mean flow rate at midpoint of channel = 108.825(CFS)

Natural valley channel type used  
 L.A. County flood control district formula for channel velocity:  
 Velocity(ft/s) = (7 + 8(q(English Units)<sup>0.352</sup>)(slope<sup>0.5</sup>)  
 Velocity using mean channel flow = 13.05(Ft/s)

Correction to map slope used on extremely rugged channels with  
 drops and waterfalls (Plate D-6.2)  
 Normal channel slope = 0.0718  
 Corrected/adjusted channel slope = 0.0718  
 Travel time = 0.51 min. TC = 10.96 min.

Adding area flow to channel  
 UNDEVELOPED (poor cover) subarea

## EXIST100A

Runoff Coefficient = 0.840  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Rainfall intensity = 3.057(In/Hr) for a 100.0 year storm  
 Subarea runoff = 15.416(CFS) for 6.000(Ac.)  
 Total runoff = 115.717(CFS) Total area = 41.300(Ac.)

+-----+  
 Process from Point/Station 104.000 to Point/Station 105.000  
 \*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

Along Main Stream number: 1 in normal stream number 1  
 Stream flow area = 41.300(Ac.)  
 Runoff from this stream = 115.717(CFS)  
 Time of concentration = 10.96 min.  
 Rainfall intensity = 3.057(In/Hr)

+-----+  
 Process from Point/Station 106.000 to Point/Station 107.000  
 \*\*\*\* INITIAL AREA EVALUATION \*\*\*\*

Initial area flow distance = 817.000(Ft.)  
 Top (of initial area) elevation = 1778.900(Ft.)  
 Bottom (of initial area) elevation = 1706.100(Ft.)  
 Difference in elevation = 72.800(Ft.)  
 Slope = 0.08911 s(percent) = 8.91  
 $TC = k(0.530)*[(length^3)/(elevation\ change)]^{0.2}$   
 Initial area time of concentration = 12.566 min.  
 Rainfall intensity = 2.835(In/Hr) for a 100.0 year storm  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.836  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Initial subarea runoff = 7.585(CFS)  
 Total initial stream area = 3.200(Ac.)  
 Pervious area fraction = 1.000

+-----+  
 Process from Point/Station 107.000 to Point/Station 105.000  
 \*\*\*\* NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION \*\*\*\*

Top of natural channel elevation = 1706.100(Ft.)  
 End of natural channel elevation = 1650.000(Ft.)  
 Length of natural channel = 816.000(Ft.)  
 Estimated mean flow rate at midpoint of channel = 14.222(CFS)

Natural valley channel type used  
 L.A. County flood control district formula for channel velocity:  
 $Velocity(ft/s) = (7 + 8(q(English\ Units)^{.352})(slope^{0.5}))$   
 Velocity using mean channel flow = 7.18(Ft/s)

Correction to map slope used on extremely rugged channels with  
 Page 4

EXIST100A  
 drops and waterfalls (Plate D-6.2)  
 Normal channel slope = 0.0687  
 Corrected/adjusted channel slope = 0.0687  
 Travel time = 1.90 min. TC = 14.46 min.

Adding area flow to channel  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.843  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 0.250  
 Decimal fraction soil group D = 0.750  
 RI index for soil(AMC 2) = 88.25  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Rainfall intensity = 2.625(In/Hr) for a 100.0 year storm  
 Subarea runoff = 12.390(CFS) for 5.600(Ac.)  
 Total runoff = 19.975(CFS) Total area = 8.800(Ac.)

++++  
 Process from Point/Station 107.000 to Point/Station 105.000  
 \*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

Along Main Stream number: 1 in normal stream number 2  
 Stream flow area = 8.800(Ac.)  
 Runoff from this stream = 19.975(CFS)  
 Time of concentration = 14.46 min.  
 Rainfall intensity = 2.625(In/Hr)  
 Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
------------	-----------------	----------	----------------------------

1	115.717	10.96	3.057
2	19.975	14.46	2.625

Largest stream flow has longer or shorter time of concentration

Qp = 115.717 + sum of  

$$\frac{Q_a}{19.975} * \frac{T_b}{T_a} = 0.758 = 15.134$$
  
 Qp = 130.851

Total of 2 streams to confluence:  
 Flow rates before confluence point:  
 115.717 19.975  
 Area of streams before confluence:  
 41.300 8.800

Results of confluence:  
 Total flow rate = 130.851(CFS)  
 Time of concentration = 10.956 min.  
 Effective stream area after confluence = 50.100(Ac.)  
 End of computations, total study area = 50.10 (Ac.)

The following figures may be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.701  
 Area averaged RI index number = 76.1



EXIST100B

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2004 Version 7.0  
Rational Hydrology Study Date: 09/10/19 File:EXIST100B.out

-----  
TPM 37750 FRITZ DUDA  
100-YEAR RATIONAL METHOD HYDROLOGY - WEST  
WO 2019-0107  
ABE 2019-09-10  
-----

\*\*\*\*\* Hydrology Study Control Information \*\*\*\*\*

English (in-lb) units used in input data file  
-----

Program License Serial Number 4010  
-----

Rational Method Hydrology Program based on  
Riverside County Flood Control & Water Conservation District  
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)  
For the [ Riverside-Foothill ] area used.  
10 year storm 10 minute intensity = 2.140(In/Hr)  
10 year storm 60 minute intensity = 0.800(In/Hr)  
100 year storm 10 minute intensity = 3.210(In/Hr)  
100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 100.0  
Calculated rainfall intensity data:  
1 hour intensity = 1.200(In/Hr)  
Slope of intensity duration curve = 0.5500

+++++  
Process from Point/Station 201.000 to Point/Station 202.000  
\*\*\*\* USER DEFINED FLOW INFORMATION AT A POINT \*\*\*\*

-----  
Rainfall intensity = 3.251(In/Hr) for a 100.0 year storm  
SINGLE FAMILY (1/4 Acre Lot)  
Runoff Coefficient = 0.830  
Decimal fraction soil group A = 0.000  
Decimal fraction soil group B = 0.000  
Decimal fraction soil group C = 1.000  
Decimal fraction soil group D = 0.000  
RI index for soil(AMC 2) = 69.00  
Pervious area fraction = 0.500; Impervious fraction = 0.500  
User specified values are as follows:  
TC = 9.80 min. Rain intensity = 3.25(In/Hr)  
Total area = 16.00(Ac.) Total runoff = 41.40(CFS)

OFF-SITE FLOW VALUE PER IRONWOOD AVE STREET P  
CONTRIBUTING AREAS APPROXIMATED PER TRACT 21  
STREET PLAN  
ASSUMED TC EQUIVALENT TO CONFLUENCED FLOWS

+++++  
Process from Point/Station 202.000 to Point/Station 203.000  
Page 1

Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

EXIST100B  
\*\*\*\* NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION \*\*\*\*

Top of natural channel elevation = 1749.700(Ft.)  
End of natural channel elevation = 1663.800(Ft.)  
Length of natural channel = 1000.000(Ft.)  
Estimated mean flow rate at midpoint of channel = 47.093(CFS)

Natural valley channel type used  
L.A. County flood control district formula for channel velocity:  
Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)  
Velocity using mean channel flow = 11.15(Ft/s)

Correction to map slope used on extremely rugged channels with  
drops and waterfalls (Plate D-6.2)  
Normal channel slope = 0.0859  
Corrected/adjusted channel slope = 0.0859  
Travel time = 1.49 min. TC = 11.29 min.

Adding area flow to channel  
UNDEVELOPED (poor cover) subarea  
Runoff Coefficient = 0.839  
Decimal fraction soil group A = 0.000  
Decimal fraction soil group B = 0.000  
Decimal fraction soil group C = 1.000  
Decimal fraction soil group D = 0.000  
RI index for soil(AMC 2) = 86.00  
Pervious area fraction = 1.000; Impervious fraction = 0.000  
Rainfall intensity = 3.007(In/Hr) for a 100.0 year storm  
Subarea runoff = 11.105(CFS) for 4.400(Ac.)  
Total runoff = 52.505(CFS) Total area = 20.400(Ac.)

++++  
Process from Point/Station 202.000 to Point/Station 203.000  
\*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

Along Main Stream number: 1 in normal stream number 1  
Stream flow area = 20.400(Ac.)  
Runoff from this stream = 52.505(CFS)  
Time of concentration = 11.29 min.  
Rainfall intensity = 3.007(In/Hr)

++++  
Process from Point/Station 204.000 to Point/Station 205.000  
\*\*\*\* INITIAL AREA EVALUATION \*\*\*\*

Initial area flow distance = 561.000(Ft.)  
Top (of initial area) elevation = 1776.200(Ft.)  
Bottom (of initial area) elevation = 1705.500(Ft.)  
Difference in elevation = 70.700(Ft.)  
Slope = 0.12602 s(percent)= 12.60  
TC = k(0.530)\*[(length^3)/(elevation change)]^0.2  
Initial area time of concentration = 10.087 min.  
Rainfall intensity = 3.200(In/Hr) for a 100.0 year storm  
UNDEVELOPED (poor cover) subarea  
Runoff Coefficient = 0.843  
Decimal fraction soil group A = 0.000  
Decimal fraction soil group B = 0.000  
Decimal fraction soil group C = 1.000  
Decimal fraction soil group D = 0.000  
RI index for soil(AMC 2) = 86.00

EXIST100B  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Initial subarea runoff = 5.124(CFS)  
 Total initial stream area = 1.900(Ac.)  
 Pervious area fraction = 1.000

++++  
 Process from Point/Station 205.000 to Point/Station 203.000  
 \*\*\*\* NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION \*\*\*\*

-----  
 Top of natural channel elevation = 1705.500(Ft.)  
 End of natural channel elevation = 1663.800(Ft.)  
 Length of natural channel = 519.000(Ft.)  
 Estimated mean flow rate at midpoint of channel = 10.652(CFS)

Natural valley channel type used  
 L.A. County flood control district formula for channel velocity:  
 Velocity(ft/s) = (7 + 8(q(English Units)^.352)(slope^0.5)  
 velocity using mean channel flow = 7.20(Ft/s)

Correction to map slope used on extremely rugged channels with  
 drops and waterfalls (Plate D-6.2)  
 Normal channel slope = 0.0803  
 Corrected/adjusted channel slope = 0.0803  
 Travel time = 1.20 min. TC = 11.29 min.

Adding area flow to channel  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.839  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Rainfall intensity = 3.008(In/Hr) for a 100.0 year storm  
 Subarea runoff = 10.351(CFS) for 4.100(Ac.)  
 Total runoff = 15.474(CFS) Total area = 6.000(Ac.)

++++  
 Process from Point/Station 205.000 to Point/Station 203.000  
 \*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

-----  
 Along Main Stream number: 1 in normal stream number 2  
 Stream flow area = 6.000(Ac.)  
 Runoff from this stream = 15.474(CFS)  
 Time of concentration = 11.29 min.  
 Rainfall intensity = 3.008(In/Hr)  
 Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
1	52.505	11.29	3.007
2	15.474	11.29	3.008
Largest stream flow has longer time of concentration			
Qp =	52.505 + sum of		
	Qb	Ia/Ib	
	15.474 *	1.000 =	15.470
Qp =	67.975		

EXIST100B

Total of 2 streams to confluence:  
 Flow rates before confluence point:  
     52.505      15.474  
 Area of streams before confluence:  
     20.400      6.000  
 Results of confluence:  
 Total flow rate = 67.975(CFS)  
 Time of concentration = 11.295 min.  
 Effective stream area after confluence = 26.400(Ac.)

++++  
 Process from Point/Station 203.000 to Point/Station 206.000  
 \*\*\*\* NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION \*\*\*\*

---

Top of natural channel elevation = 1663.800(Ft.)  
 End of natural channel elevation = 1650.000(Ft.)  
 Length of natural channel = 316.000(Ft.)  
 Estimated mean flow rate at midpoint of channel = 69.004(CFS)

Natural valley channel type used  
 L.A. County flood control district formula for channel velocity:  
 Velocity(ft/s) = (7 + 8(q(English Units)<sup>0.352</sup>)(slope<sup>0.5</sup>)  
 velocity using mean channel flow = 8.88(Ft/s)

Correction to map slope used on extremely rugged channels with  
 drops and waterfalls (Plate D-6.2)  
 Normal channel slope = 0.0437  
 Corrected/adjusted channel slope = 0.0437  
 Travel time = 0.59 min. TC = 11.89 min.

Adding area flow to channel  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.838  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Rainfall intensity = 2.923(In/Hr) for a 100.0 year storm  
 Subarea runoff = 1.959(CFS) for 0.800(Ac.)  
 Total runoff = 69.934(CFS) Total area = 27.200(Ac.)

++++  
 Process from Point/Station 203.000 to Point/Station 206.000  
 \*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

---

Along Main Stream number: 1 in normal stream number 1  
 Stream flow area = 27.200(Ac.)  
 Runoff from this stream = 69.934(CFS)  
 Time of concentration = 11.89 min.  
 Rainfall intensity = 2.923(In/Hr)

++++  
 Process from Point/Station 207.000 to Point/Station 208.000  
 \*\*\*\* INITIAL AREA EVALUATION \*\*\*\*

---

Initial area flow distance = 992.000(Ft.)  
 Page 4

EXIST100B

Top (of initial area) elevation = 1776.200(Ft.)  
 Bottom (of initial area) elevation = 1683.200(Ft.)  
 Difference in elevation = 93.000(Ft.)  
 Slope = 0.09375 s(percent)= 9.38  
 $TC = k(0.530)*[(length^3)/(elevation\ change)]^{0.2}$   
 Initial area time of concentration = 13.443 min.  
 Rainfall intensity = 2.732(In/Hr) for a 100.0 year storm  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.834  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Initial subarea runoff = 7.745(CFS)  
 Total initial stream area = 3.400(Ac.)  
 Pervious area fraction = 1.000

++++  
 Process from Point/Station 208.000 to Point/Station 206.000  
 \*\*\*\* NATURAL CHANNEL TIME + SUBAREA FLOW ADDITION \*\*\*\*

---

Top of natural channel elevation = 1683.200(Ft.)  
 End of natural channel elevation = 1650.000(Ft.)  
 Length of natural channel = 513.000(Ft.)  
 Estimated mean flow rate at midpoint of channel = 11.390(CFS)

Natural valley channel type used  
 L.A. County flood control district formula for channel velocity:  
 $Velocity(ft/s) = (7 + 8(q(English\ units)^{.352})(slope^{0.5}))$   
 Velocity using mean channel flow = 6.57(Ft/s)

Correction to map slope used on extremely rugged channels with  
 drops and waterfalls (Plate D-6.2)  
 Normal channel slope = 0.0647  
 Corrected/adjusted channel slope = 0.0647  
 Travel time = 1.30 min. TC = 14.74 min.

Adding area flow to channel  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.846  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 0.000  
 Decimal fraction soil group D = 1.000  
 RI index for soil(AMC 2) = 89.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Rainfall intensity = 2.597(In/Hr) for a 100.0 year storm  
 Subarea runoff = 7.032(CFS) for 3.200(Ac.)  
 Total runoff = 14.777(CFS) Total area = 6.600(Ac.)

++++  
 Process from Point/Station 208.000 to Point/Station 206.000  
 \*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

---

Along Main Stream number: 1 in normal stream number 2  
 Stream flow area = 6.600(Ac.)  
 Runoff from this stream = 14.777(CFS)  
 Time of concentration = 14.74 min.

EXIST100B  
Rainfall intensity = 2.597(In/Hr)

Process from Point/Station 209.000 to Point/Station 210.000  
\*\*\*\* INITIAL AREA EVALUATION \*\*\*\*

Initial area flow distance = 885.000(Ft.)  
Top (of initial area) elevation = 1741.400(Ft.)  
Bottom (of initial area) elevation = 1674.000(Ft.)  
Difference in elevation = 67.400(Ft.)  
Slope = 0.07616 s(percent)= 7.62  
TC = k(0.530)\*[(length^3)/(elevation change)]^0.2  
Initial area time of concentration = 13.388 min.  
Rainfall intensity = 2.738(In/Hr) for a 100.0 year storm  
UNDEVELOPED (poor cover) subarea  
Runoff Coefficient = 0.834  
Decimal fraction soil group A = 0.000  
Decimal fraction soil group B = 0.000  
Decimal fraction soil group C = 1.000  
Decimal fraction soil group D = 0.000  
RI index for soil(AMC 2) = 86.00  
Pervious area fraction = 1.000; Impervious fraction = 0.000  
Initial subarea runoff = 15.527(CFS)  
Total initial stream area = 6.800(Ac.)  
Pervious area fraction = 1.000

Process from Point/Station 210.000 to Point/Station 206.000  
\*\*\*\* IMPROVED CHANNEL TRAVEL TIME \*\*\*\*

Upstream point elevation = 1674.000(Ft.)  
Downstream point elevation = 1650.000(Ft.)  
Channel length thru subarea = 685.000(Ft.)  
Channel base width = 2.500(Ft.)  
Slope or 'Z' of left channel bank = 1.700  
Slope or 'Z' of right channel bank = 1.700  
Estimated mean flow rate at midpoint of channel = 17.533(CFS)  
Manning's 'N' = 0.015  
Maximum depth of channel = 1.800(Ft.)  
Flow(q) thru subarea = 17.533(CFS)  
Depth of flow = 0.524(Ft.), Average velocity = 9.878(Ft/s)  
Channel flow top width = 4.280(Ft.)  
Flow Velocity = 9.88(Ft/s)  
Travel time = 1.16 min.  
Time of concentration = 14.54 min.

EXACT CHANNEL DIMENSIONS  
UNKNOWN AND APPROXIMATED  
BY SECTION A-A ON HYDROLOGY  
EXHIBIT

Sub-Channel No. 1 Critical depth = 0.930(Ft.)  
Critical flow top width = 5.661(Ft.)  
Critical flow velocity = 4.622(Ft/s)  
Critical flow area = 3.794(Sq.Ft)

Adding area flow to channel  
UNDEVELOPED (poor cover) subarea  
Runoff Coefficient = 0.831  
Decimal fraction soil group A = 0.000  
Decimal fraction soil group B = 0.000  
Decimal fraction soil group C = 1.000  
Decimal fraction soil group D = 0.000  
RI index for soil(AMC 2) = 86.00  
Pervious area fraction = 1.000; Impervious fraction = 0.000  
Rainfall intensity = 2.616(In/Hr) for a 100.0 year storm

EXIST100B  
 Subarea runoff = 3.914(CFS) for 1.800(Ac.)  
 Total runoff = 19.441(CFS) Total area = 8.600(Ac.)  
 Depth of flow = 0.554(Ft.), Average velocity = 10.187(Ft/s)

Sub-Channel No. 1 Critical depth = 0.984(Ft.)  
 Critical flow top width = 5.847(Ft.)  
 Critical flow velocity = 4.732(Ft/s)  
 Critical flow area = 4.108(Sq.Ft)

\*\*\*\*\*  
 Process from Point/Station 210.000 to Point/Station 206.000  
 \*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

Along Main Stream number: 1 in normal stream number 3  
 Stream flow area = 8.600(Ac.)  
 Runoff from this stream = 19.441(CFS)  
 Time of concentration = 14.54 min.  
 Rainfall intensity = 2.616(In/Hr)

\*\*\*\*\*  
 Process from Point/Station 211.000 to Point/Station 212.000  
 \*\*\*\* INITIAL AREA EVALUATION \*\*\*\*

Initial area flow distance = 561.000(Ft.)  
 Top (of initial area) elevation = 1709.200(Ft.)  
 Bottom (of initial area) elevation = 1672.200(Ft.)  
 Difference in elevation = 37.000(Ft.)  
 Slope = 0.06595 s(percent) = 6.60  
 $TC = k(0.530)*[(length^3)/(elevation\ change)]^{0.2}$   
 Initial area time of concentration = 11.482 min.  
 Rainfall intensity = 2.980(In/Hr) for a 100.0 year storm  
 UNDEVELOPED (poor cover) subarea  
 Runoff Coefficient = 0.839  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 86.00  
 Pervious area fraction = 1.000; Impervious fraction = 0.000  
 Initial subarea runoff = 8.998(CFS)  
 Total initial stream area = 3.600(Ac.)  
 Pervious area fraction = 1.000

\*\*\*\*\*  
 Process from Point/Station 212.000 to Point/Station 206.000  
 \*\*\*\* IMPROVED CHANNEL TRAVEL TIME \*\*\*\*

Upstream point elevation = 1672.200(Ft.)  
 Downstream point elevation = 1650.000(Ft.)  
 Channel length thru subarea = 420.000(Ft.)  
 Channel base width = 0.000(Ft.)  
 Slope or 'Z' of left channel bank = 3.000  
 Slope or 'Z' of right channel bank = 3.000  
 Manning's 'N' = 0.015  
 Maximum depth of channel = 0.700(Ft.)  
 Flow(q) thru subarea = 8.998(CFS)  
 Depth of flow = 0.563(Ft.), Average velocity = 9.450(Ft/s)  
 Channel flow top width = 3.380(Ft.)  
 Flow velocity = 9.45(Ft/s)

EXACT CHANNEL DIMENSIONS  
 UNKNOWN AND APPROXIMATED  
 BY SECTION B-B ON HYDROLOGY  
 EXHIBIT

EXIST100B

Travel time = 0.74 min.  
Time of concentration = 12.22 min.

Sub-Channel No. 1 Critical depth = 0.875(Ft.)  
Critical flow top width = 4.200(Ft.)  
Critical flow velocity = 4.081(Ft/s)  
Critical flow area = 2.205(Sq.Ft)

Process from Point/Station 212.000 to Point/Station 206.000  
\*\*\*\* CONFLUENCE OF MINOR STREAMS \*\*\*\*

Along Main Stream number: 1 in normal stream number 4  
Stream flow area = 3.600(Ac.)  
Runoff from this stream = 8.998(CFS)  
Time of concentration = 12.22 min.  
Rainfall intensity = 2.879(In/Hr)  
Summary of stream data:

Stream No.	Flow rate (CFS)	TC (min)	Rainfall Intensity (In/Hr)
1	69.934	11.89	2.923
2	14.777	14.74	2.597
3	19.441	14.54	2.616
4	8.998	12.22	2.879

Largest stream flow has longer or shorter time of concentration  
Qp = 69.934 + sum of  
Qa Tb/Ta  
14.777 \* 0.806 = 11.915  
Qa Tb/Ta  
19.441 \* 0.817 = 15.891  
Qa Tb/Ta  
8.998 \* 0.973 = 8.752  
Qp = 106.491

Total of 4 streams to confluence:  
Flow rates before confluence point:  
69.934 14.777 19.441 8.998  
Area of streams before confluence:  
27.200 6.600 8.600 3.600

Results of confluence:  
Total flow rate = 106.491(CFS)  
Time of concentration = 11.888 min.  
Effective stream area after confluence = 46.000(Ac.)  
End of computations, total study area = 46.00 (Ac.)

The following figures may be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.826  
Area averaged RI index number = 80.3



**10-YEAR OFF-SITE HYDROLOGY (RATIONAL METHOD)**

---

Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

## EXIST10C

## Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2004 Version 7.0  
 Rational Hydrology Study Date: 08/13/19 File:EXIST10C.out

-----  
 TPM 37750 FRITZ DUDA  
 10-YEAR RATIONAL METHOD HYDROLOGY - DAY ST  
 WO 2019-0107  
 ABE 2019/08/13  
 -----

\*\*\*\*\* Hydrology Study Control Information \*\*\*\*\*

English (in-lb) units used in input data file  
 -----

Program License Serial Number 4010  
 -----

Rational Method Hydrology Program based on  
 Riverside County Flood Control & Water Conservation District  
 1978 hydrology manual

Storm event (year) = 10.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)

For the [ Riverside-Foothill ] area used.

10 year storm 10 minute intensity = 2.140(In/Hr)

10 year storm 60 minute intensity = 0.800(In/Hr)

100 year storm 10 minute intensity = 3.210(In/Hr)

100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 10.0

Calculated rainfall intensity data:

1 hour intensity = 0.800(In/Hr)

Slope of intensity duration curve = 0.5500

+++++  
 Process from Point/Station 301.000 to Point/Station 302.000  
 \*\*\*\* INITIAL AREA EVALUATION \*\*\*\*

Initial area flow distance = 759.000(Ft.)

Top (of initial area) elevation = 1759.900(Ft.)

Bottom (of initial area) elevation = 1711.100(Ft.)

Difference in elevation = 48.800(Ft.)

Slope = 0.06430 s(percent)= 6.43

TC = k(0.300)\*[(length^3)/(elevation change)]^0.2

Initial area time of concentration = 7.372 min.

Rainfall intensity = 2.535(In/Hr) for a 10.0 year storm

COMMERCIAL subarea type

Runoff Coefficient = 0.883

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 0.000

Decimal fraction soil group C = 1.000

Decimal fraction soil group D = 0.000

RI index for soil(AMC 2) = 69.00

Pervious area fraction = 0.100; Impervious fraction = 0.900

Page 1

EXIST10C  
 Initial subarea runoff = 2.461(CFS)  
 Total initial stream area = 1.100(Ac.)  
 Pervious area fraction = 0.100

+++++  
 Process from Point/Station 302.000 to Point/Station 303.000  
 \*\*\*\* STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION \*\*\*\*

---

Top of street segment elevation = 1711.100(Ft.)  
 End of street segment elevation = 1652.100(Ft.)  
 Length of street segment = 898.000(Ft.)  
 Height of curb above gutter flowline = 8.0(In.)  
 Width of half street (curb to crown) = 38.000(Ft.)  
 Distance from crown to crossfall grade break = 36.000(Ft.)  
 Slope from gutter to grade break (v/hz) = 0.020  
 Slope from grade break to crown (v/hz) = 0.020  
 Street flow is on [1] side(s) of the street  
 Distance from curb to property line = 6.500(Ft.)  
 Slope from curb to property line (v/hz) = 0.020  
 Gutter width = 2.000(Ft.)  
 Gutter hike from flowline = 1.200(In.)  
 Manning's N in gutter = 0.0150  
 Manning's N from gutter to grade break = 0.0150  
 Manning's N from grade break to crown = 0.0150  
 Estimated mean flow rate at midpoint of street = 3.504(CFS)  
 Depth of flow = 0.221(Ft.), Average velocity = 4.935(Ft/s)  
 Streetflow hydraulics at midpoint of street travel:  
 Halfstreet flow width = 8.062(Ft.)  
 Flow velocity = 4.93(Ft/s)  
 Travel time = 3.03 min. TC = 10.40 min.  
 Adding area flow to street  
 COMMERCIAL subarea type  
 Runoff Coefficient = 0.880  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 69.00  
 Pervious area fraction = 0.100; Impervious fraction = 0.900  
 Rainfall intensity = 2.097(In/Hr) for a 10.0 year storm  
 Subarea runoff = 2.030(CFS) for 1.100(Ac.)  
**Total runoff = 4.491(CFS) Total area = 2.200(Ac.)**  
 Street flow at end of street = 4.491(CFS)  
 Half street flow at end of street = 4.491(CFS)  
 Depth of flow = 0.239(Ft.), Average velocity = 5.232(Ft/s)  
 Flow width (from curb towards crown)= 8.935(Ft.)  
 End of computations, total study area = 2.20 (Ac.)  
 The following figures may  
 be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.100  
 Area averaged RI index number = 69.0

**100-YEAR OFF-SITE HYDROLOGY (RATIONAL METHOD)**

---

Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

EXIST100C

## Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2004 Version 7.0  
 Rational Hydrology Study Date: 08/13/19 File:EXIST100C.out

-----  
 TPM 37750 FRITZ DUDA  
 100-YEAR RATIONAL METHOD HYDROLOGY - DAY ST  
 WO 2019-0107  
 ABE 2019/08/13  
 -----

\*\*\*\*\* Hydrology Study Control Information \*\*\*\*\*

English (in-lb) units used in input data file  
 -----

Program License Serial Number 4010  
 -----

Rational Method Hydrology Program based on  
 Riverside County Flood Control & Water Conservation District  
 1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

Standard intensity-duration curves data (Plate D-4.1)

For the [ Riverside-Foothill ] area used.

10 year storm 10 minute intensity = 2.140(In/Hr)

10 year storm 60 minute intensity = 0.800(In/Hr)

100 year storm 10 minute intensity = 3.210(In/Hr)

100 year storm 60 minute intensity = 1.200(In/Hr)

Storm event year = 100.0

Calculated rainfall intensity data:

1 hour intensity = 1.200(In/Hr)

Slope of intensity duration curve = 0.5500

+++++  
 Process from Point/Station 301.000 to Point/Station 302.000  
 \*\*\*\* INITIAL AREA EVALUATION \*\*\*\*  
 -----

Initial area flow distance = 759.000(Ft.)

Top (of initial area) elevation = 1759.900(Ft.)

Bottom (of initial area) elevation = 1711.100(Ft.)

Difference in elevation = 48.800(Ft.)

Slope = 0.06430 s(percent)= 6.43

TC = k(0.300)\*[(length^3)/(elevation change)]^0.2

Initial area time of concentration = 7.372 min.

Rainfall intensity = 3.802(In/Hr) for a 100.0 year storm

COMMERCIAL subarea type

Runoff Coefficient = 0.888

Decimal fraction soil group A = 0.000

Decimal fraction soil group B = 0.000

Decimal fraction soil group C = 1.000

Decimal fraction soil group D = 0.000

RI index for soil(AMC 2) = 69.00

Pervious area fraction = 0.100; Impervious fraction = 0.900

Page 1

EXIST100C  
 Initial subarea runoff = 3.713(CFS)  
 Total initial stream area = 1.100(Ac.)  
 Pervious area fraction = 0.100

Process from Point/Station 302.000 to Point/Station 303.000  
 \*\*\*\* STREET FLOW TRAVEL TIME + SUBAREA FLOW ADDITION \*\*\*\*

---

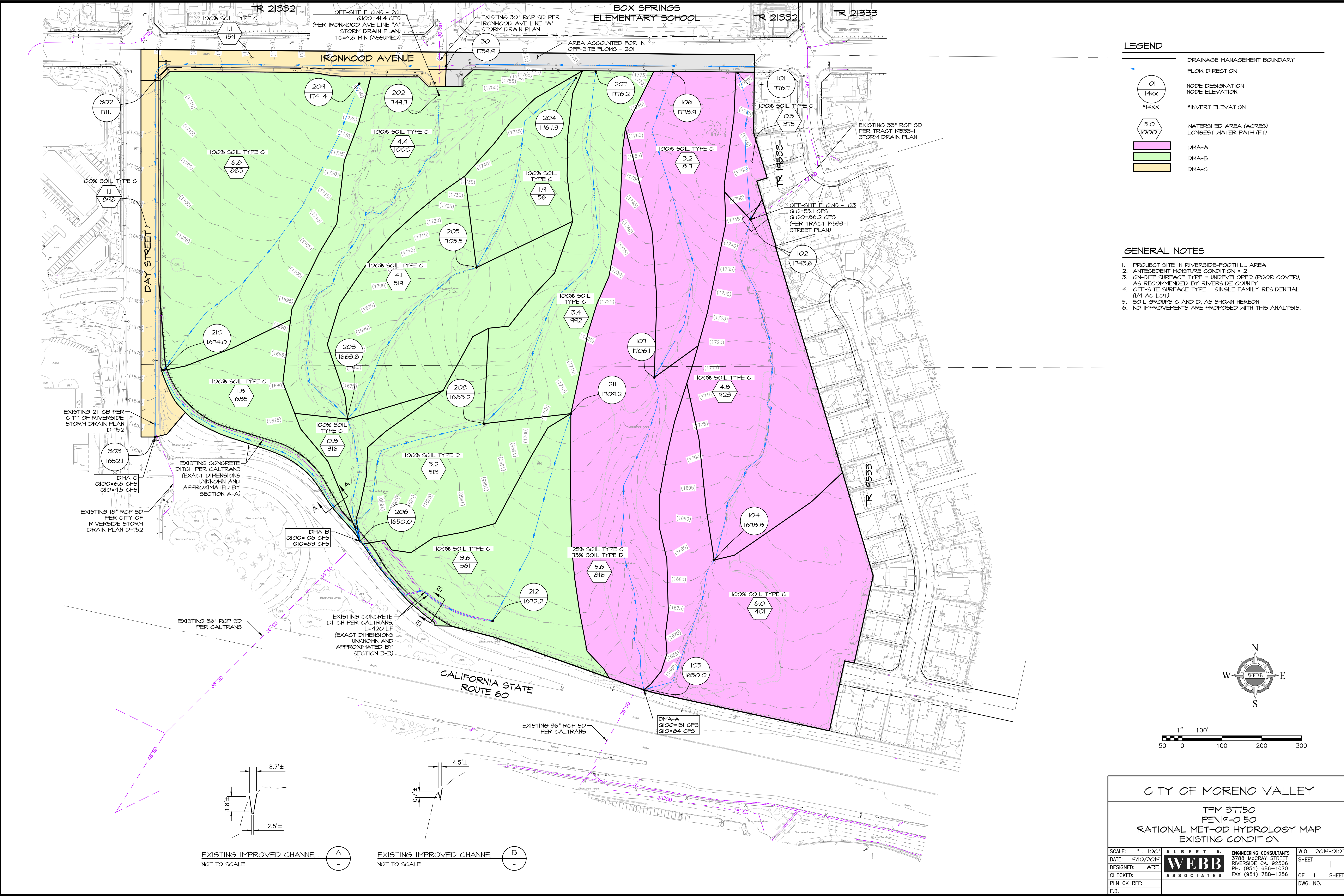
Top of street segment elevation = 1711.100(Ft.)  
 End of street segment elevation = 1652.100(Ft.)  
 Length of street segment = 898.000(Ft.)  
 Height of curb above gutter flowline = 8.0(In.)  
 Width of half street (curb to crown) = 38.000(Ft.)  
 Distance from crown to crossfall grade break = 36.000(Ft.)  
 Slope from gutter to grade break (v/hz) = 0.020  
 Slope from grade break to crown (v/hz) = 0.020  
 Street flow is on [1] side(s) of the street  
 Distance from curb to property line = 6.500(Ft.)  
 Slope from curb to property line (v/hz) = 0.020  
 Gutter width = 2.000(Ft.)  
 Gutter hike from flowline = 1.200(In.)  
 Manning's N in gutter = 0.0150  
 Manning's N from gutter to grade break = 0.0150  
 Manning's N from grade break to crown = 0.0150  
 Estimated mean flow rate at midpoint of street = 5.307(CFS)  
 Depth of flow = 0.251(Ft.), Average velocity = 5.444(Ft/s)  
 Streetflow hydraulics at midpoint of street travel:  
 Halfstreet flow width = 9.565(Ft.)  
 Flow velocity = 5.44(Ft/s)  
 Travel time = 2.75 min. TC = 10.12 min.  
 Adding area flow to street  
 COMMERCIAL subarea type  
 Runoff Coefficient = 0.886  
 Decimal fraction soil group A = 0.000  
 Decimal fraction soil group B = 0.000  
 Decimal fraction soil group C = 1.000  
 Decimal fraction soil group D = 0.000  
 RI index for soil(AMC 2) = 69.00  
 Pervious area fraction = 0.100; Impervious fraction = 0.900  
 Rainfall intensity = 3.194(In/Hr) for a 100.0 year storm  
 Subarea runoff = 3.112(CFS) for 1.100(Ac.)  
**Total runoff = 6.824(CFS) Total area = 2.200(Ac.)**  
 Street flow at end of street = 6.824(CFS)  
 Half street flow at end of street = 6.824(CFS)  
 Depth of flow = 0.272(Ft.), Average velocity = 5.783(Ft/s)  
 Flow width (from curb towards crown)= 10.584(Ft.)  
 End of computations, total study area = 2.20 (Ac.)  
 The following figures may  
 be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.100  
 Area averaged RI index number = 69.0

**RATIONAL METHOD HYDROLOGY MAP**

---

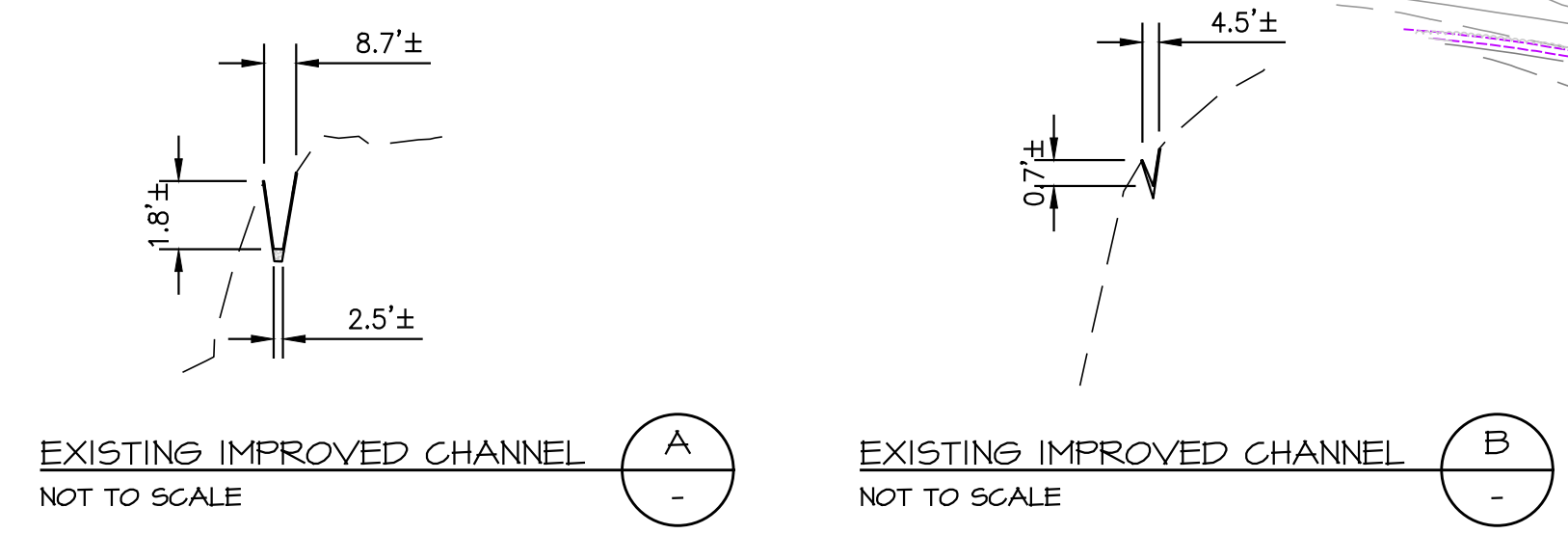
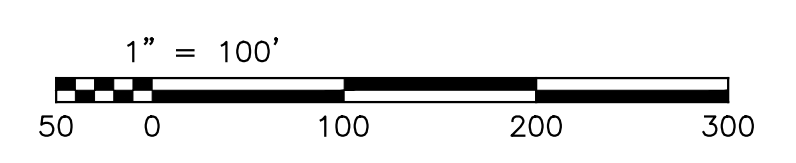
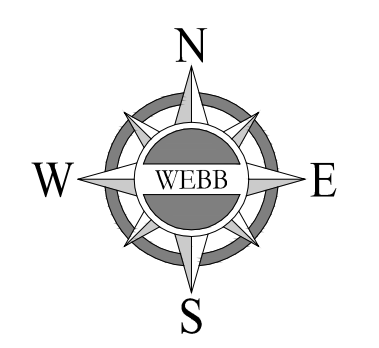
Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and



**LEGEND**

- DRAINAGE MANAGEMENT BOUNDARY
- FLOW DIRECTION
- 101  
14xx  
Node Designation  
Node Elevation
- \*14xx  
\*INVERT ELEVATION
- 5.0  
1000  
Watershed Area (Acres)  
Longest Water Path (ft)
- DMA-A
- DMA-B
- DMA-C

- GENERAL NOTES**
- PROJECT SITE IN RIVERSIDE-FOOTHILL AREA
  - ANTECEDENT MOISTURE CONDITION = 2
  - ON-SITE SURFACE TYPE = UNDEVELOPED (POOR COVER), AS RECOMMENDED BY RIVERSIDE COUNTY
  - OFF-SITE SURFACE TYPE = SINGLE FAMILY RESIDENTIAL (1/4 AC LOT)
  - SOIL GROUPS C AND D, AS SHOWN HEREON
  - NO IMPROVEMENTS ARE PROPOSED WITH THIS ANALYSIS.



**CITY OF MORENO VALLEY**

TPM 37750  
PEN19-0150  
RATIONAL METHOD HYDROLOGY MAP  
EXISTING CONDITION

SCALE: 1" = 100'	<b>WEBB</b> ASSOCIATES	ENGINEERING CONSULTANTS 3788 MCCRAY STREET RIVERSIDE CA 92506 PH. (951) 686-1070 FAX (951) 788-1256	W.O. 2019-0107 SHEET 1 OF 1 SHEETS DWG. NO.
DATE: 9/10/2019	DESIGNED: ABE	CHECKED:	PLN CK REF: F.B.

Attachment: Appendix E - Preliminary Drainage Study (4070) - General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map PEN19-0150



## APPENDIX B – HYDRAULIC ANALYSIS

---

Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

## INLET AND CATCH BASIN CALCULATIONS

---

Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

```

*****
HYDRAULIC ELEMENTS - I PROGRAM PACKAGE
(C) Copyright 1982-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1238

```

Analysis prepared by:

```

-----
TIME/DATE OF STUDY: 08:40 09/10/2019
=====

```

```

Problem Descriptions:
TPM 37750 FRITZ DUDA
EXISTING 36" CALTRANS PIPE (DMA-A & DMA-B)
ABE 2019-09-10
*****

```

```

>>>>PIPEFLOW HYDRAULIC INPUT INFORMATION<<<<
-----

```

```

PIPE DIAMETER (FEET) = 3.000
FLOWDEPTH (FEET) = 3.000
PIPE SLOPE (FEET/FEET) = 0.0040
MANNINGS FRICTION FACTOR = 0.015000
>>>> NORMAL DEPTH FLOW (CFS) = 36.56
=====

```

ANY FLOWS OVER 36.6 CFS WILL RESULT IN PONDING AT THE INLET LOCATIONS OF DMA-A & DMA-B. THIS IS THE EXISTING CONDITION FOR THE CALTRANS PIPES CONVEYING THE FLOWS FROM BOTH DMAS.

```

*****
HYDRAULIC ELEMENTS - I PROGRAM PACKAGE
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Ver. 20.0 Release Date: 06/01/2013 License ID 1238

```

Analysis prepared by:

```

-----
TIME/DATE OF STUDY: 09:10 08/14/2019
-----

```

```

Problem Descriptions:
TPM 37750 FRITZ DUDA
EXISTING 36" CALTRANS PIPE (DMA-A)
ABE 2019-08-14

```

```

*****
>>>>PIPEFLOW HYDRAULIC INPUT INFORMATION<<<<

```

```

-----
PIPE DIAMETER (FEET) = 3.000
PIPE SLOPE (FEET/FEET) = 0.0050
PIPEFLOW (CFS) = 131.00
MANNINGS FRICTION FACTOR = 0.015000

```

PIPE SLOPE IS UNKNOWN. MINIMUM S=0.0050  
USED FOR CONSERVATIVE CALCULATIONS.

```

-----
CRITICAL-DEPTH FLOW INFORMATION:

```

```

-----
CRITICAL DEPTH (FEET) = 2.96
CRITICAL FLOW AREA (SQUARE FEET) = 7.053
CRITICAL FLOW TOP-WIDTH (FEET) = 0.658
CRITICAL FLOW PRESSURE + MOMENTUM (POUNDS) = 5361.68
CRITICAL FLOW VELOCITY (FEET/SEC.) = 18.575
CRITICAL FLOW VELOCITY HEAD (FEET) = 5.36
CRITICAL FLOW HYDRAULIC DEPTH (FEET) = 10.72
CRITICAL FLOW SPECIFIC ENERGY (FEET) = 8.32
==>NORMAL PIPEFLOW IS PRESSURE FLOW
-----

```

```

*****
HYDRAULIC ELEMENTS - I PROGRAM PACKAGE
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Ver. 20.0 Release Date: 06/01/2013 License ID 1238

```

Analysis prepared by:

```

-----
TIME/DATE OF STUDY: 16:02 08/13/2019
-----

```

```

Problem Descriptions:
TPM 37750 FRITZ DUDA
EXISTING 36" CALTRANS PIPE (DMA-B)
ABE 2019-08-13

```

```

*****
>>>>PIPEFLOW HYDRAULIC INPUT INFORMATION<<<<

```

```

-----
PIPE DIAMETER (FEET) = 3.000
PIPE SLOPE (FEET/FEET) = 0.0050
PIPEFLOW (CFS) = 104.00
MANNINGS FRICTION FACTOR = 0.015000

```

PIPE SLOPE IS UNKNOWN. MINIMUM S=0.0050  
USED FOR CONSERVATIVE CALCULATIONS.

```

-----
CRITICAL-DEPTH FLOW INFORMATION:

```

```

-----
CRITICAL DEPTH (FEET) = 2.91
CRITICAL FLOW AREA (SQUARE FEET) = 7.007
CRITICAL FLOW TOP-WIDTH (FEET) = 1.024
CRITICAL FLOW PRESSURE + MOMENTUM (POUNDS) = 3612.75
CRITICAL FLOW VELOCITY (FEET/SEC.) = 14.843
CRITICAL FLOW VELOCITY HEAD (FEET) = 3.42
CRITICAL FLOW HYDRAULIC DEPTH (FEET) = 6.84
CRITICAL FLOW SPECIFIC ENERGY (FEET) = 6.33
==>NORMAL PIPEFLOW IS PRESSURE FLOW
-----

```

```

*****
HYDRAULIC ELEMENTS - I PROGRAM PACKAGE
(C) Copyright 1982-2013 Advanced Engineering Software (aes)
Ver. 20.0 Release Date: 06/01/2013 License ID 1238

```

Analysis prepared by:

```

-----
TIME/DATE OF STUDY: 09:36 09/10/2019
=====

```

```

Problem Descriptions:
TPM 37750 FRITZ DUDA
EXISTING CATCH BASIN IN DAY STREET (DMA-C)
ABE 2019-09-10
*****
>>>>FLOWBY CATCH BASIN INLET CAPACITY INPUT INFORMATION<<<<
-----

```

Curb Inlet Capacities are approximated based on the Bureau of Public Roads nomograph plots for flowby basins and sump basins.

```

STREETFLOW(CFS) = 6.82
GUTTER FLOWDEPTH(FEET) = 0.27
BASIN LOCAL DEPRESSION(FEET) = 0.33

```

```

-----
FLOWBY BASIN ANALYSIS RESULTS:

```

BASIN WIDTH	FLOW INTERCEPTION
2.68	0.94
3.00	1.05
3.50	1.21
4.00	1.38
4.50	1.55
5.00	1.71
5.50	1.88
6.00	2.04
6.50	2.21
7.00	2.37
7.50	2.53
8.00	2.69
8.50	2.86
9.00	3.02
9.50	3.17
10.00	3.31
10.50	3.45
11.00	3.58
11.50	3.71
12.00	3.84
12.50	3.97
13.00	4.10
13.50	4.22
14.00	4.35
14.50	4.47
15.00	4.60
15.50	4.72
16.00	4.84

16.50	4.94
17.00	5.04
17.50	5.14
18.00	5.24
18.50	5.33
19.00	5.43
19.50	5.53
20.00	5.62
20.50	5.71
21.00	5.80
21.50	5.90
22.00	5.99
22.50	6.08
23.00	6.17
23.50	6.26
24.00	6.35
24.50	6.43
25.00	6.52
25.50	6.61
26.00	6.69
26.50	6.78
26.77	6.82

EXISTING 21' WIDE CATCH BASIN PER CITY OF RIVERSIDE DAY STREET WIDENING PLAN, D-752



## APPENDIX C – REFERENCES

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Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and



**CALTRANS RIGHT OF WAY MAP**

---

THIS PLAN SHOWS EXISTING STORM DRAIN UNDER CALIFORNIA STATE ROUTE 60

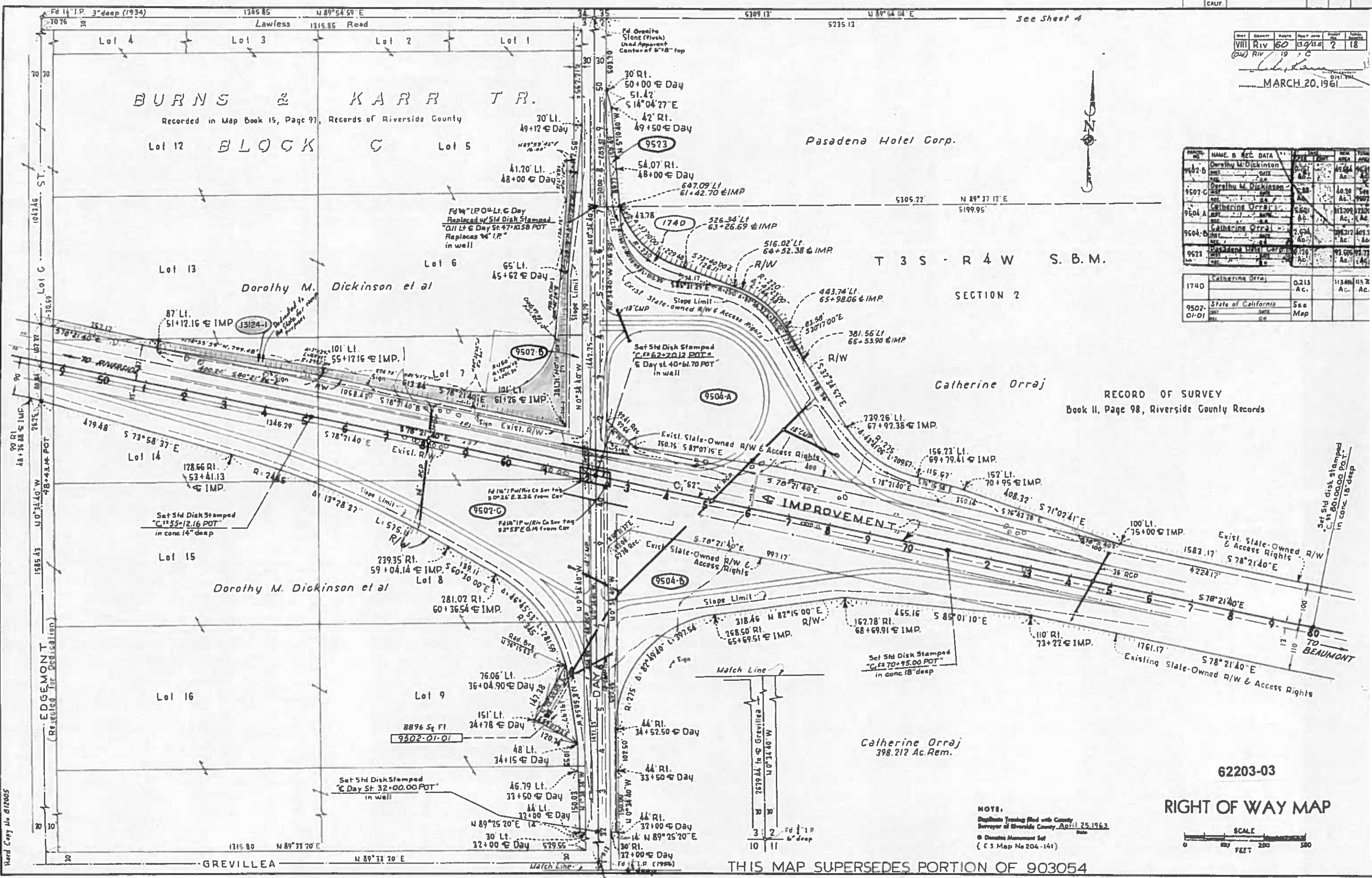
Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

S.P. No.	STATE	FEDERAL PROJECT NO.	F. SCALE	SHEET NO.	TOTAL SHEETS
419572	CALIF.			2	18

419572

DATE	OTHER CHANGES	BY	CHK. BY
4-2-61	Revised to show proposed drainage study	M.S.C.M.	M.S.C.M.
7-21-61	Revised to show proposed drainage study	M.S.C.M.	M.S.C.M.

RIV. 60  
 (24) Riv 19 'C  
 MARCH 20, 1961

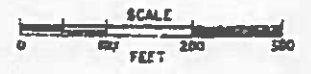


NO.	NAME & SEC. DATA	AC.	AREA	TIME
9502-B	Dorothy M. Dickinson	0.213	113.78	Ac.
9502-C	Dorothy M. Dickinson	0.213	113.78	Ac.
9504-A	Catherine Orraj	0.213	113.78	Ac.
9504-B	Catherine Orraj	0.213	113.78	Ac.
9523	Pasadena Hotel Corp.	0.213	113.78	Ac.
1740	Catherine Orraj	0.213	113.78	Ac.
9502-01-01	State of California	See Map		

RECORD OF SURVEY  
 Book 11, Page 98, Riverside County Records

62203-03

RIGHT OF WAY MAP



NOTE:  
 Dupl. this map with County Surveyor of Riverside County April 25, 1963.  
 © Deane's Monument Set (C.S. Map No 204-141)

THIS MAP SUPERSEDES PORTION OF 903054

419572

419572

Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

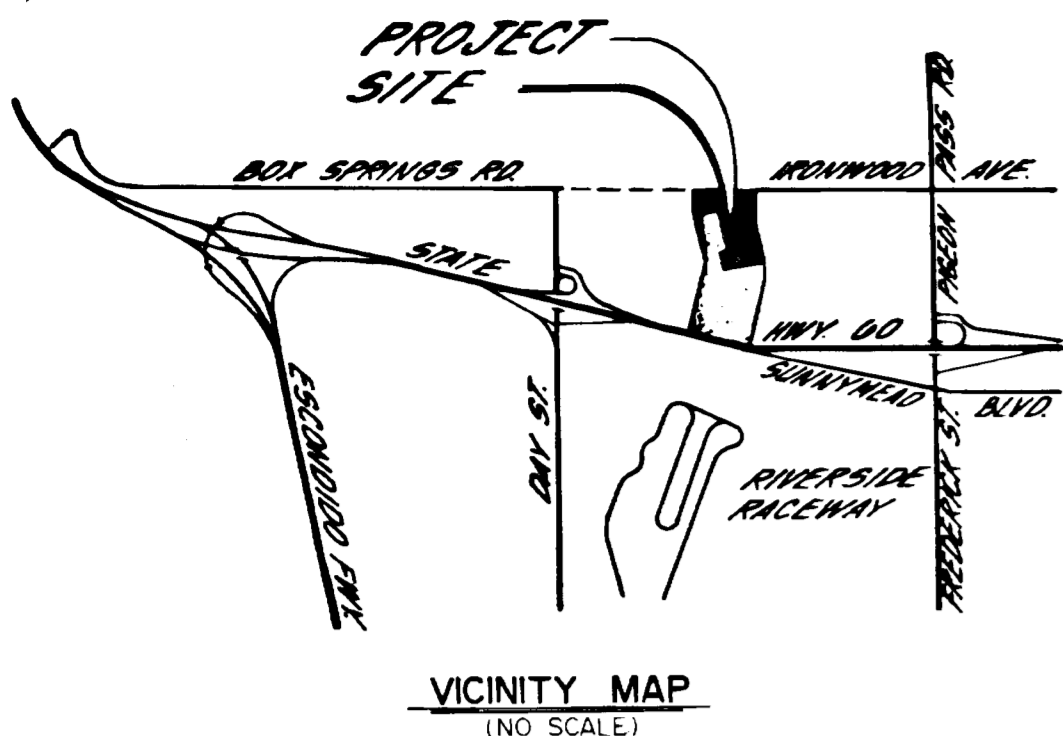
**TRACT 19533-1 STREET PLAN (EXCERPT)**

---

FLOW RATES SHOWN ON THESE PLAN SETS USED AS DISCHARGES ONTO DMA-A

Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

# STREET IMPROVEMENT PLANS FOR TRACT NO. 19533-1



## GENERAL NOTES

- The contractor shall be responsible for the clearing of the proposed work area, relocation costs of all existing utilities. Permittee must inform County of construction schedule at least 48 hours prior to beginning of construction. PHONE 787-6111 for permit cases, PHONE 787-2031 for parcel maps and tracts.
- The developer will install street name signs conforming to County Standard No. 816, as directed.
- All work shall conform to the requirements of the Riverside County Road Department Improvement Standards and Specifications, dated 1982, County Ordinance 461 and subsequent amendments.
- It shall be the responsibility of the contractor to notify the engineer to install street centerline monuments required by Riverside County Ordinance No. 461.
- It shall be the responsibility of the developer or contractor to apply to the Riverside County Road Department, Permit Section, for an encroachment permit, for all work on existing County maintained roads and for utility work within offers of dedication for public use.
- All underground facilities, with laterals, shall be in place prior to paving the street section including, but not limited to, the following: Sewer, water, electric, gas, drainage.
- Curb depressions and driveway approaches will be installed and constructed according to County Standard No. 206 and/or No. 207, as directed in the field.
- "Asphaltic Emulsion (Fog Seal) shall be applied not less than fourteen days following placement of the asphalt surfacing and shall be applied at a rate of 0.05 gallons per square yard. Asphaltic emulsion shall conform to Sections 37, 39 and 94 of the State Standard Specifications.
- All street sections are tentative. Additional soil tests may be taken after rough grading to determine the exact street section requirements. In the event expansive soils are encountered, sidewalks shall be constructed per Riverside County Std. No. 401.
- Install street trees in accordance with Ordinance No. 460.53, Art. 13A.
- IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER OR CONTRACTOR TO APPLY TO CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) FOR AN ENCROACHMENT PERMIT FOR ALL WORK PERFORMED WITHIN THE STATE RIGHT OF WAY.

## CONSTRUCTION NOTES & QUANTITY ESTIMATES

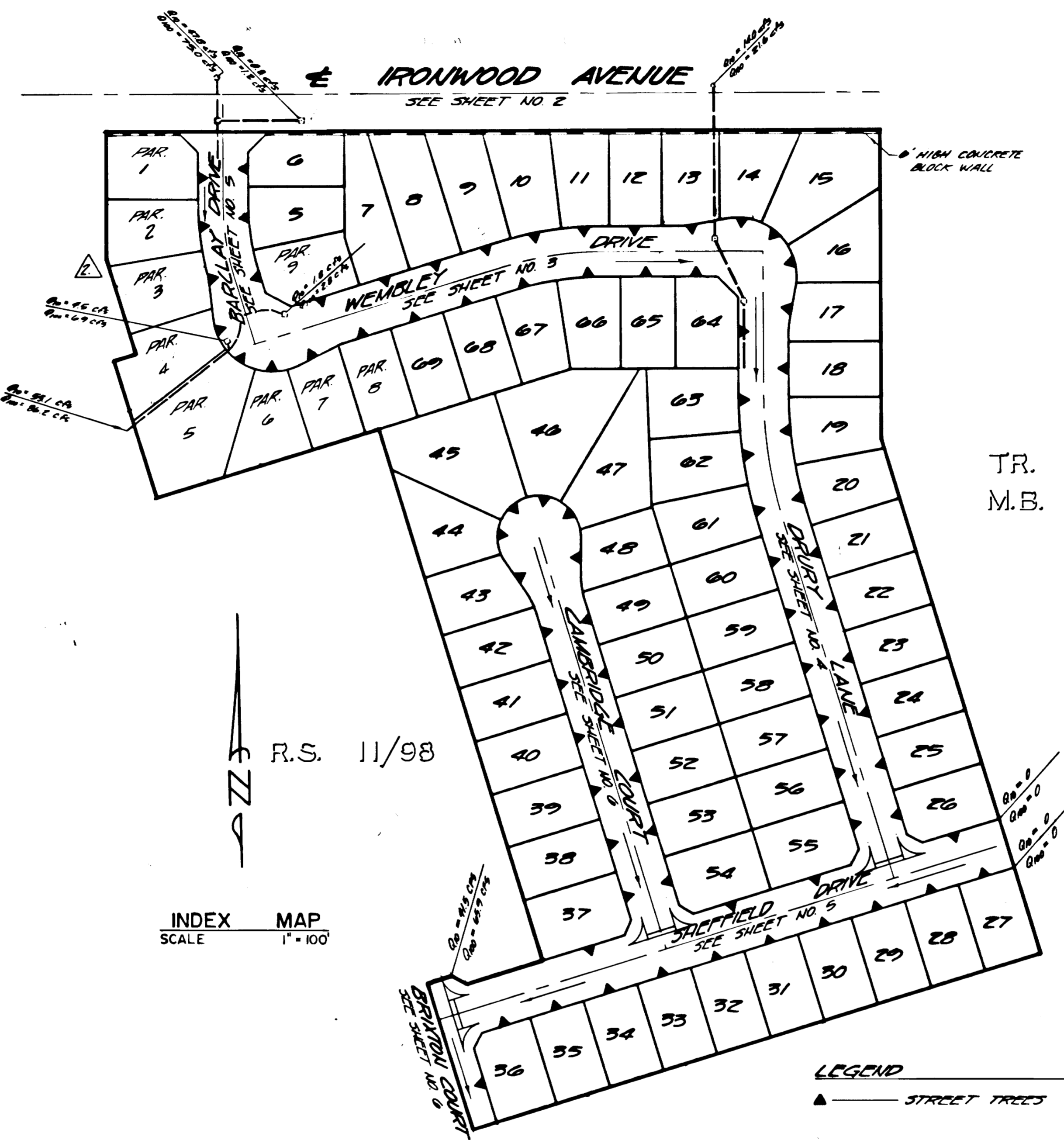
NO.	DESCRIPTION	QUANTITY	
		TOTAL	UNIT
1	CONSTRUCT 0.33' AC OVER 1.04' AB CLASS 3 PER COUNTY OF RIVERSIDE STANDARDS (IRONWOOD AVE.)	27,750	S.F.
2	CONSTRUCT 0.15' AC OVER 0.85' AB CLASS 3 PER COUNTY OF RIVERSIDE STANDARDS	92,872	S.F.
3	CONSTRUCT 0.33' AC OVER 0.15' AB CLASS 3 PER COUNTY OF RIVERSIDE STANDARDS (CAMBRIDGE CT.)	19,330	S.F.
4	CONSTRUCT TYPE 'A' 6" CURB & GUTTER PER COUNTY OF RIVERSIDE STD. DWG. NO. 200	1090	L.F.
5	CONSTRUCT TYPE 'A' 6" CURB ONLY PER COUNTY OF RIVERSIDE STD. DWG. NO. 200	5211	L.F.
6	CONSTRUCT TYPE 'B' 8" CURB & GUTTER PER COUNTY OF RIVERSIDE STD. DWG. NO. 201	158	L.F.
7	CONSTRUCT CURB & GUTTER TRANSITION (TYPE 'A' 6" TO TYPE 'B' 8") PER COUNTY OF RIVERSIDE STANDARDS	90	L.F.
8	CONSTRUCT CURB ONLY TRANSITION (TYPE 'A' 6" TO TYPE 'B' 8") PER COUNTY OF RIVERSIDE STANDARDS	79	L.F.
9	CONSTRUCT CROSS GUTTER PER COUNTY OF RIVERSIDE STD. DWG. NO. 209 & 210	2027	S.F.
10	CONSTRUCT ACCESS FRAME PER COUNTY OF RIVERSIDE STD. DWG. NO. 402 & 403	8	EA.
11	CONSTRUCT SIDEWALK PER COUNTY OF RIVERSIDE STD. DWG. NO. 401. (QUANTITIES INCLUDE DRIVEWAY APPROACHES)	37,149	S.F.
12	STREET TREES	81	EA.
13	STREET SIGNS	6	EA.
14	STREET LIGHTS		
15	UTILITY TRENCHING	4025	L.F.
16	CONSTRUCT BARRICADE PER COUNTY OF RIVERSIDE STD. DWG. NO. 810	2	EA.
17	CONSTRUCT DRIVEWAY APPROACH PER COUNTY OF RIVERSIDE STD. DWG. NO. 827	74	EA.
18	CONSTRUCT CATCH BASIN PER COUNTY OF RIVERSIDE STD. DWG. NO. 300 & 300A W=400 V=4.00	3	EA.
19	CONSTRUCT CATCH BASIN PER COUNTY OF RIVERSIDE STD. DWG. NO. 300 & 300A W=400 V=5.90	1	EA.
20	CONSTRUCT CATCH BASIN PER COUNTY OF RIVERSIDE STD. DWG. NO. 300 & 300A W=700 V=5.74		

## STORM DRAIN QUANTITIES

21	CONSTRUCT MANHOLE NO. 1 PER R.C.F.C. STD. M.H. 291	3	EA.
22	CONSTRUCT 30" R.C.P. (1250-D)	272	L.F.
23	CONSTRUCT 18" R.C.P. (2000-D)	190	L.F.
24	CONSTRUCT 18" R.C.P. (1250-D)	241	L.F.
25	CONSTRUCT NLET TYPE 2 PER R.C.F.C. STD. CB. 105	2	EA.
26	CONSTRUCT 6" ABS BLEEDER LINE	83	L.F.
27	CONSTRUCT 6" ABS CURB OUTLET PER DETAIL ON SHEET 4	1	EA.
28	CONSTRUCT 33" R.C.P. (1250-D)	223	L.F.
29	CONSTRUCT JUNCTION STRUCTURE NO. 2 PER R.C.F.C. DWG. JS. 227	1	EA.
30	CONSTRUCT 14" YOU RIP RAP OUTLET	300	S.F.

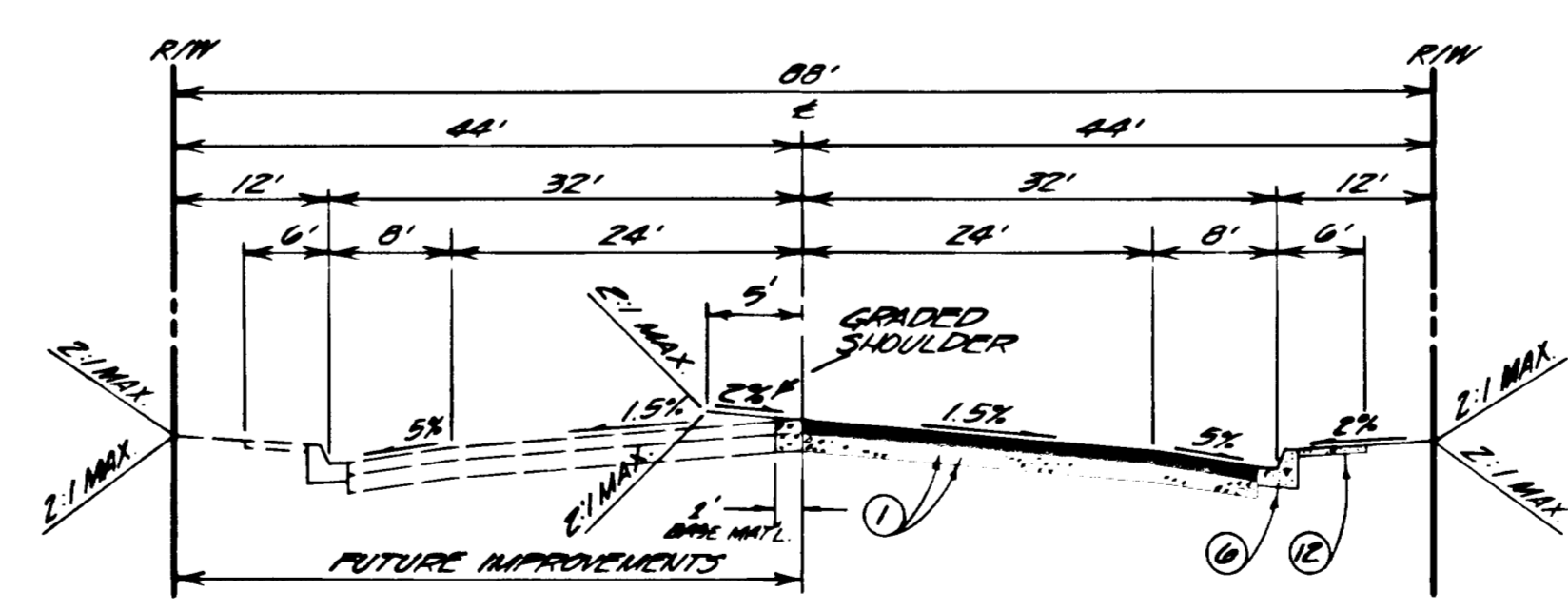
## NOTIFICATIONS

- CONSTRUCTION UNDER RIVERSIDE COUNTY SUBDIVISION AGREEMENT
- Contractor shall notify Riverside County Road Dept. Construction Section at Riverside 787-2031 or 787-2032 at least 48 hours in advance of starting construction.
  - Contractor shall notify Riverside County Flood Control District at Riverside 787-2015 at least 48 hours in advance of starting construction.
  - Contractor shall notify the following at least 48 hours prior to excavation.
    - a. So. Calif. Gas Co. } VIA (USA)
    - b. So. Calif. Edison Co. }
    - c. General Telephone Co. }
    - d. Underground Service Alert (USA) 1-800-422-4133

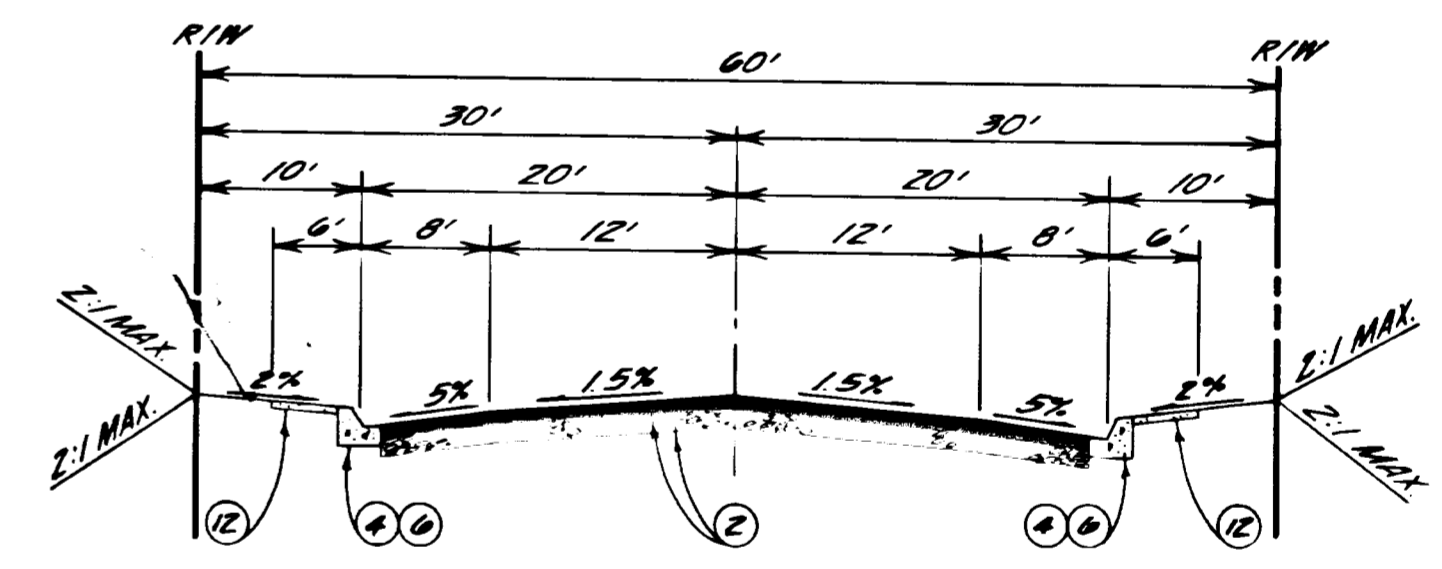


TR. 19233-1  
M.B. 140/14-17

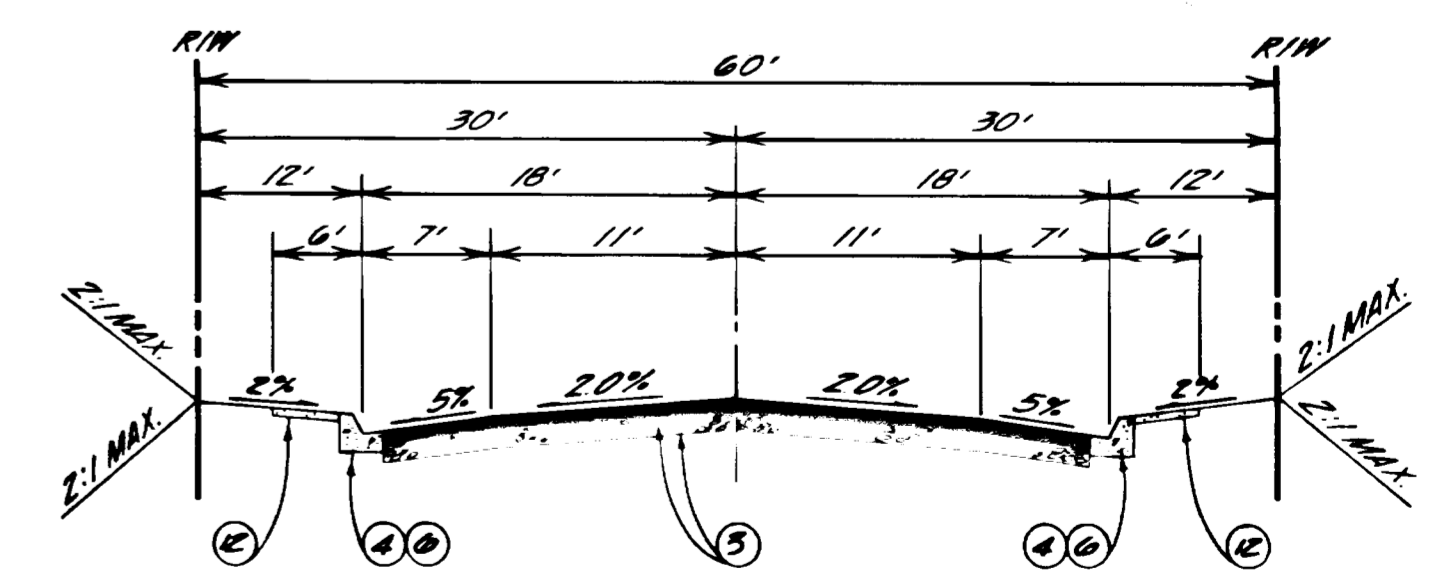
INDEX MAP SCALE 1" = 100'



TYPICAL SECTION - RIV. CO. STD. 102  
IRONWOOD AVENUE  
T.I.



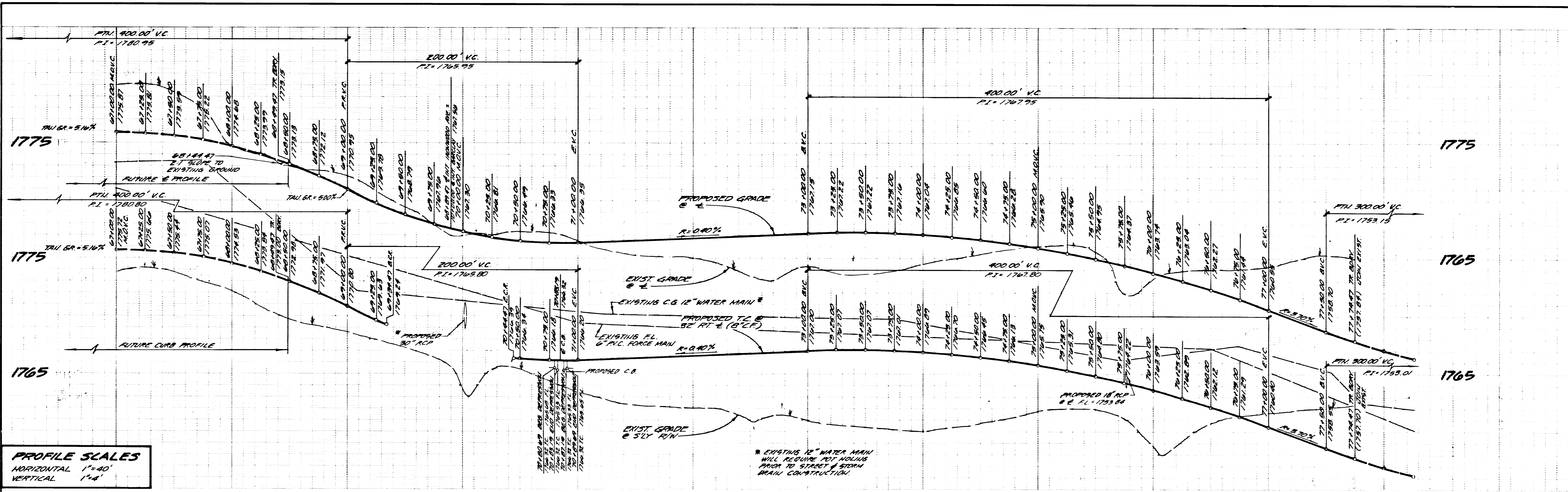
TYPICAL SECTION - RIV. CO. STD. 104A  
BARCLAY DRIVE - WEMBLEY DRIVE  
DRURY LANE - SHEFFIELD DRIVE  
BRIXTON COURT  
T.I.



TYPICAL SECTION - RIV. CO. STD. 105A  
CAMBRIDGE COURT  
BRIXTON COURT  
T.I.

REVISIONS: 1. REVISED PROFILES ON SHEETS 3, 4, 5, 6, 7 2. REVISED WEMBLEY & BARCLAY INT. STORM DRAIN 3. FINAL STRUCTURAL SECTIONS 4/30/85	APPROVED BY:  REGISTERED CIVIL ENGINEER NO. 51716 DATE: 8/10/85	GFB & ASSOCIATES, INC. 6809 INDIANA AVENUE SUITE 201 RIVERSIDE, CA. 92506 (714) 781-0811	TRACT NO. 19533-1 COUNTY OF RIVERSIDE SCHEDULE "A" STREET IMPROVEMENT PLAN TITLE SHEET - INDEX MAP SECTION 2, T.3S., R.4W.
APPROVED BY:  RIVERSIDE COUNTY, CALIF. FOR ROAD COMMISSIONER DATE: 9/4/85	SCALE: AS SHOWN DATE MAY, 1985	BENCH MARK: ELEV=1640603 FD BRASS DISK STAMPED RIV. CO. SURVEY B.M. M-59-69 ON A CONCRETE HEADWALL AT THE SW CORNER OFF-RAMP, FREDERICK ST.	J.N. R513-0101 OF 7 SHEETS FILE NO.

Attachment: Appendix E - Preliminary Drainage Study (4070) - General Plan Amendment (PE19-0151), Change of Zone (PE19-0152), and Tentative Parcel Map (PE19-0150)



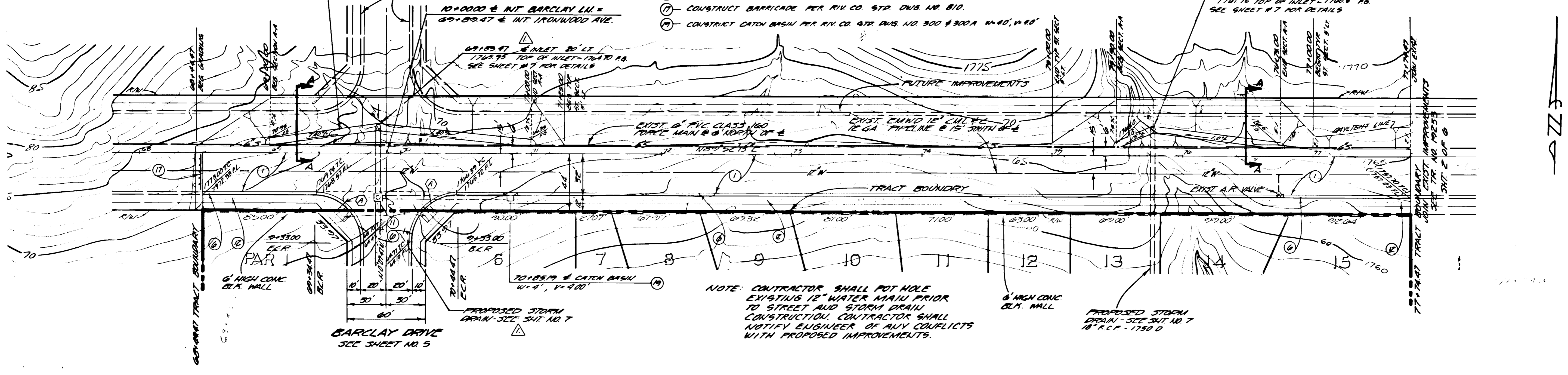
**PROFILE SCALES**  
 HORIZONTAL 1"=40'  
 VERTICAL 1"=4'

68 69 70 71 72 73 74 75 76 77 78

**CONSTRUCTION NOTES**

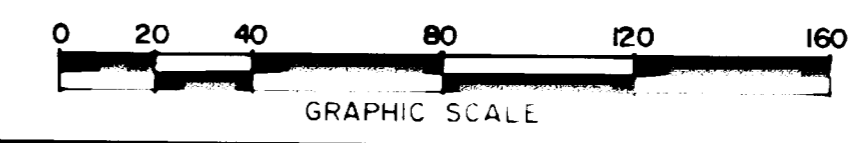
- ① CONSTRUCT 0.15' A.C. OVER 1.05' CLASS B A.B. PER RIV. CO. STD.
- ② CONSTRUCT TYPE 'B' 8" CURB AND GUTTER PER RIV. CO. STD. DUG NO. 201
- ③ CONSTRUCT ACCESS RAMP PER RIV. CO. STD. DUG NO. 402 & 403
- ④ CONSTRUCT SIDEWALK PER RIV. CO. STD. DUG NO. 401.
- ⑤ CONSTRUCT BARRICADE PER RIV. CO. STD. DUG NO. 810.
- ⑥ CONSTRUCT DITCH BASIN PER RIV. CO. STD. DUG NO. 300 & 300A W/40" W/40"

NOTE: CONSTRUCT GRADED SWALE PER SECTION A-A THIS SHEET.

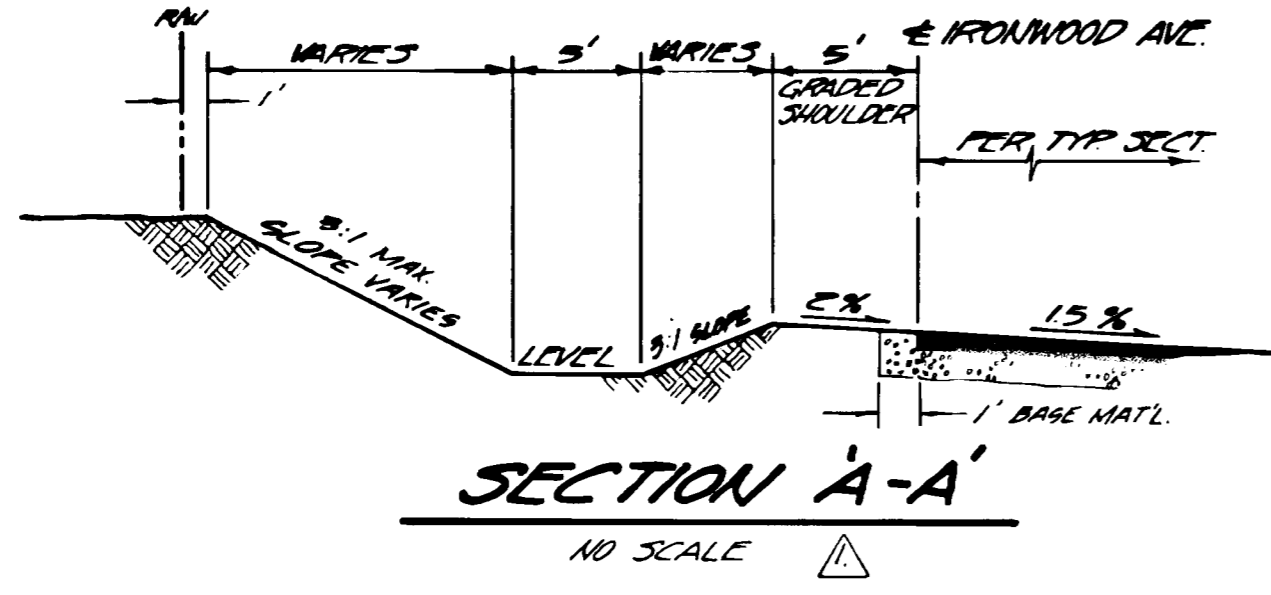


NOTE: CONTRACTOR SHALL POT HOLE EXISTING 12" WATER MAIN PRIOR TO STREET AND STORM DRAIN CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTS WITH PROPOSED IMPROVEMENTS.

**IRONWOOD AVENUE**



CURVE DATA			
Δ	R	L	T
90°00'	55'	54.98'	55.00'

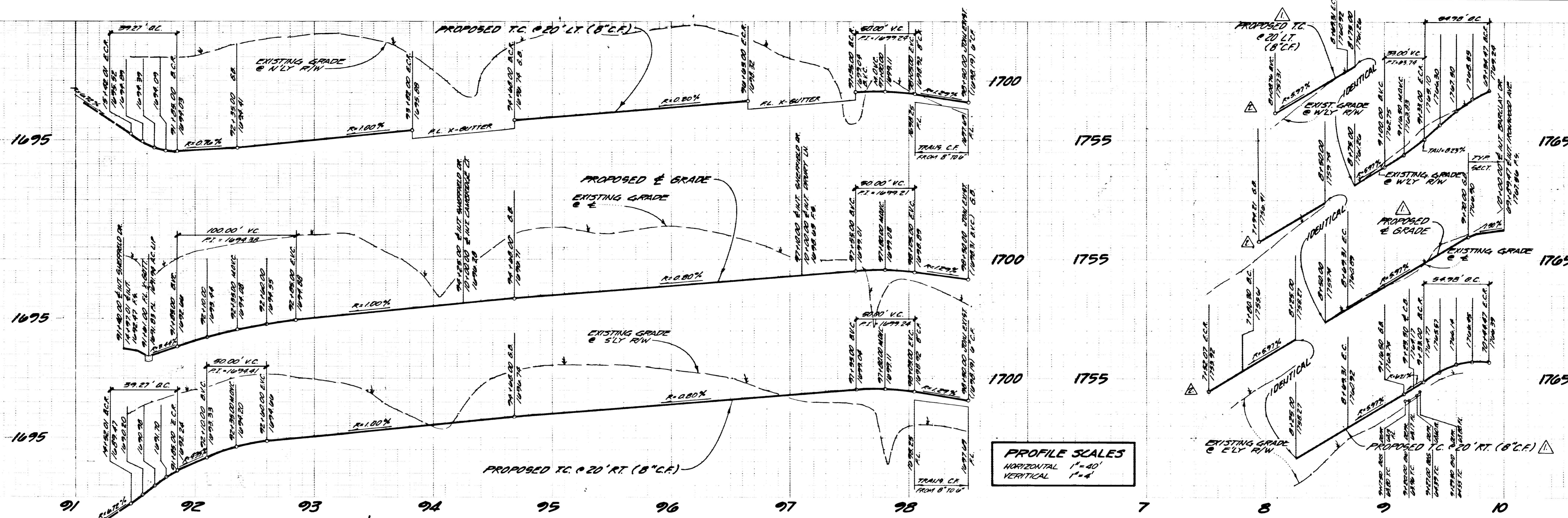


REVISIONS:	
1	REVISED STORM DRAIN LOCATION (LINE A) 5/10/85

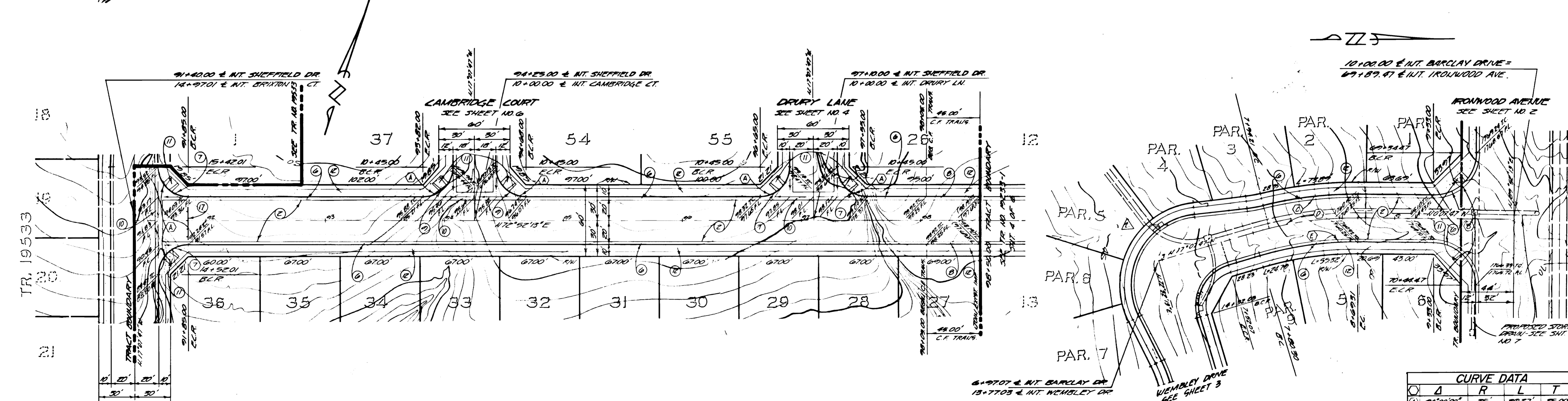
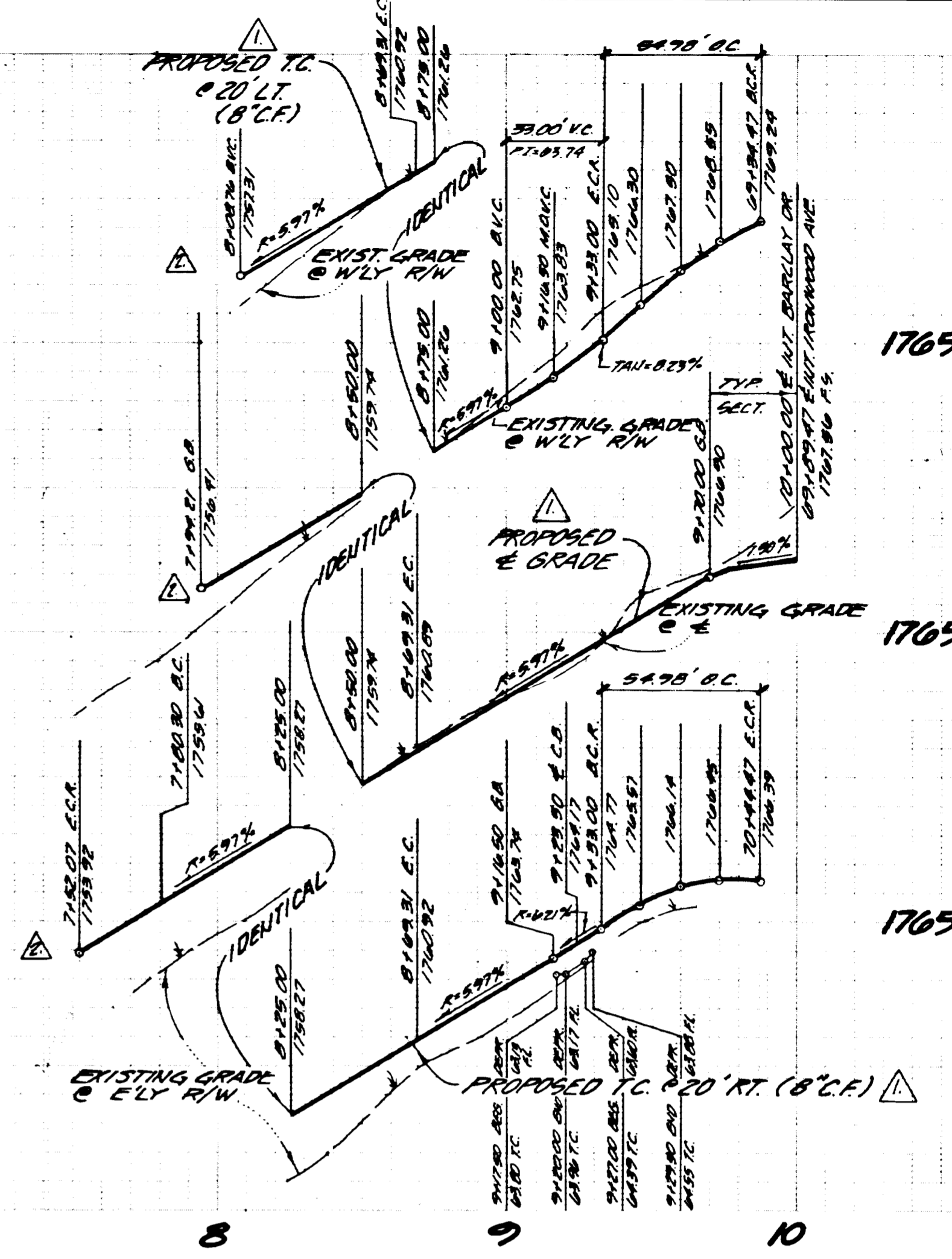
APPROVED BY: *Shay W. Wanda*  
 REGISTERED CIVIL ENGINEER NO. 13116  
 DATE: 5/10/85  
 APPROVED BY: *Elmer P. B...*  
 RIVERSIDE COUNTY CALIF. FOR ROAD COMMISSIONER  
 DATE: 5/11/85

GFB & ASSOCIATES, INC.  
 6809 INDIANA AVENUE SUITE 201  
 RIVERSIDE, CA 92506 (714) 781-0811  
 SCALE: 1"=40'  
 PROFILE SCALES:  
 HORIZ. 1"=40'  
 VERT. 1"=4'  
 DATE MAY, 1985

TRACT NO. 19533-1  
 COUNTY OF RIVERSIDE  
 STREET IMPROVEMENT PLAN  
**IRONWOOD AVENUE**  
 SECTION 25, T.3S., R.4W.  
 J.N. R513-0101  
 2 OF 7 SHEETS  
 FILE NO.



**PROFILE SCALES**  
 HORIZONTAL 1" = 40'  
 VERTICAL 1" = 4'



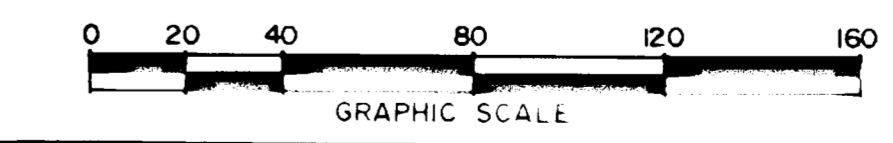
**CONSTRUCTION NOTES**

- 1. CONSTRUCT 0.5' A.C. OVER 0.85' CLASS 3 A.B. PER RIV CO. 9709.
- 2. CONSTRUCT TYPE 'B' 8" CURB AND GUTTER PER RIV CO. 970 DWS NO. 201
- 3. CONSTRUCT TYPE 'B' 8" CURB ONLY PER RIV CO. 970 DWS NO. 201
- 4. CONSTRUCT CURB AND GUTTER TRANSITION (TYPE 'A' 6" TO TYPE 'B' 8") PER RIV CO. 9709.
- 5. CONSTRUCT CURB ONLY TRANSITION (TYPE 'A' 6" TO TYPE 'B' 8") PER RIV CO. 9709.
- 6. CONSTRUCT CROSS GUTTER PER RIV CO. 970 DWS NO. 209 & 210.
- 7. CONSTRUCT ACCESS RAMP PER RIV CO. 970 DWS NO. 402 & 403.
- 8. CONSTRUCT SIDEWALK PER RIV CO. 970 DWS NO. 401.
- 9. CONSTRUCT BARRICADE PER RIV CO. 970 DWS NO. 810.
- 10. CONSTRUCT CATCH BASIN PER RIV CO. 970 DWS NO. 300 & 300A W=7'00", V=6'12"

**SHEFFIELD DRIVE**

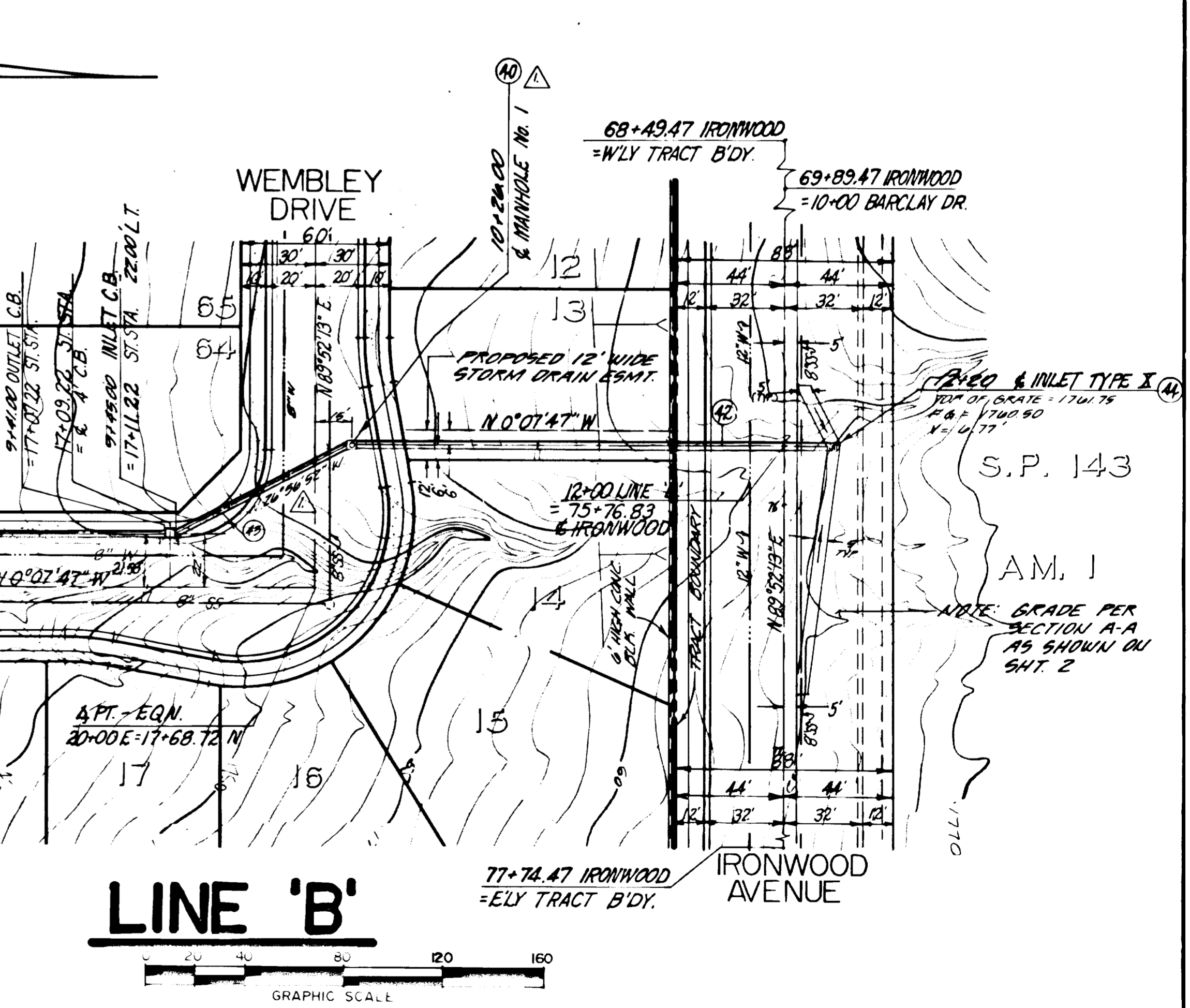
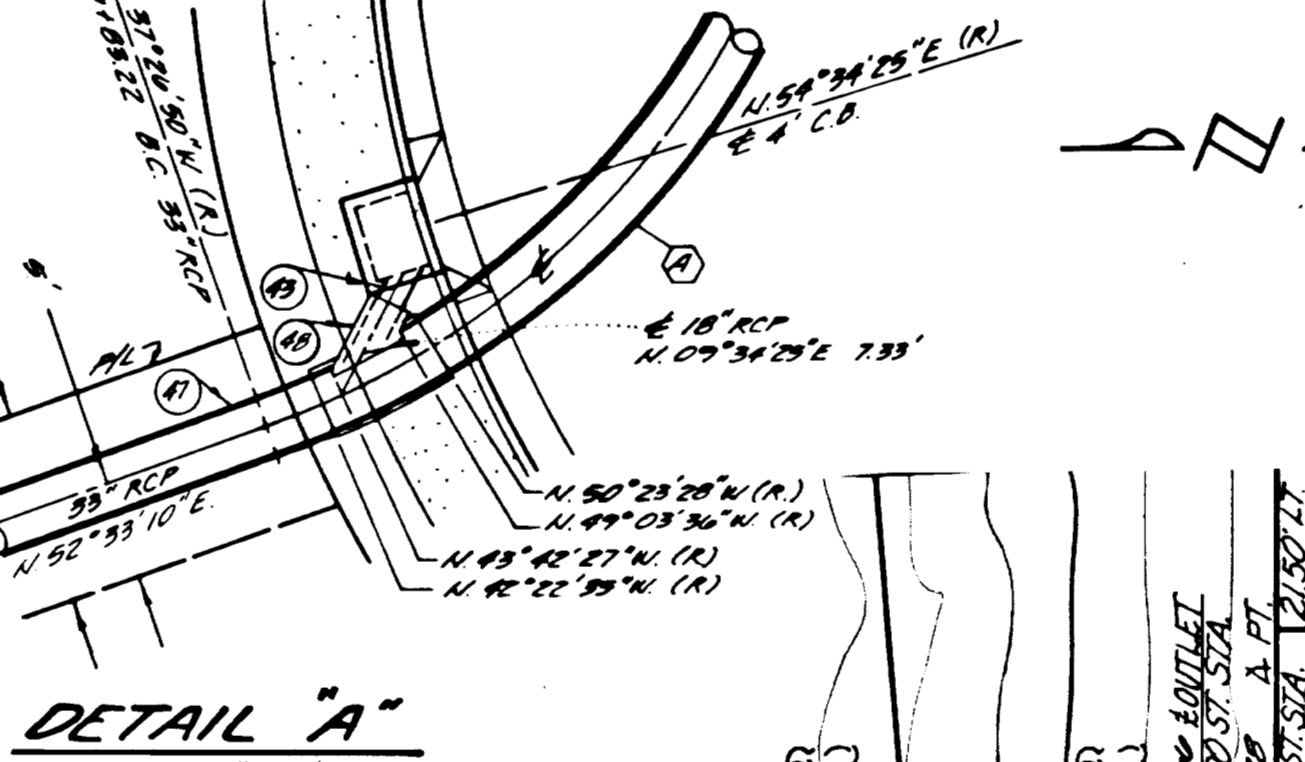
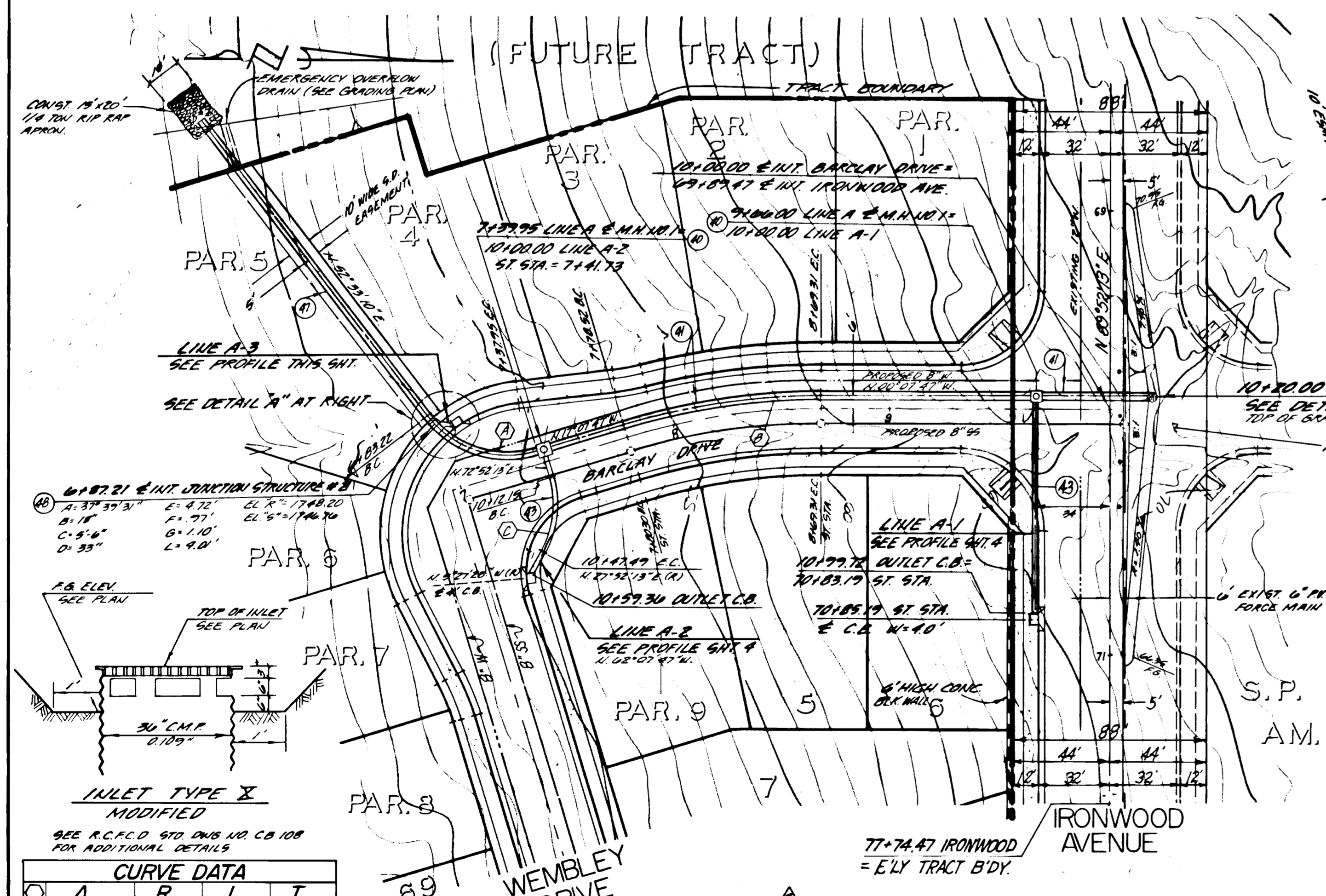
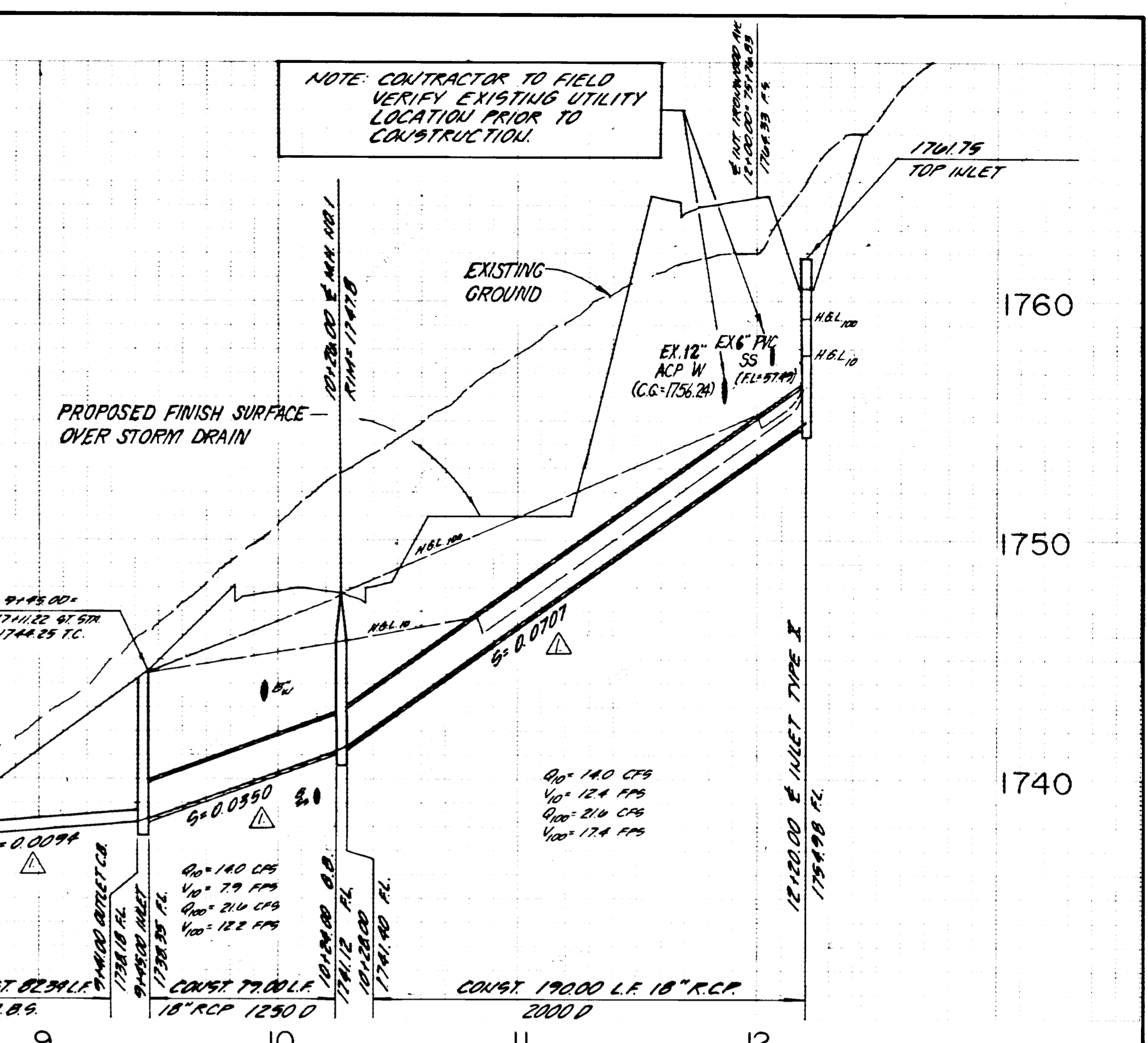
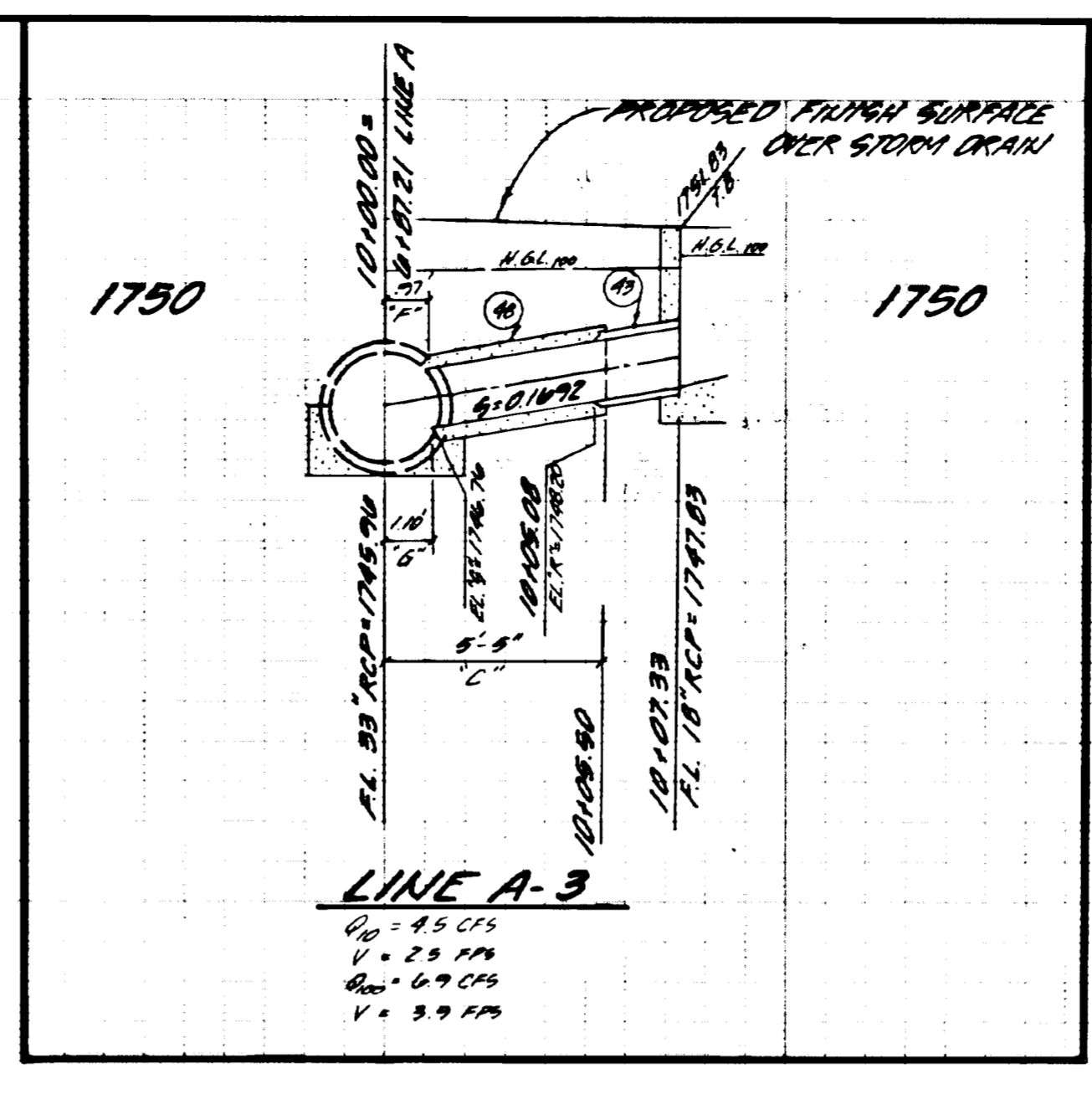
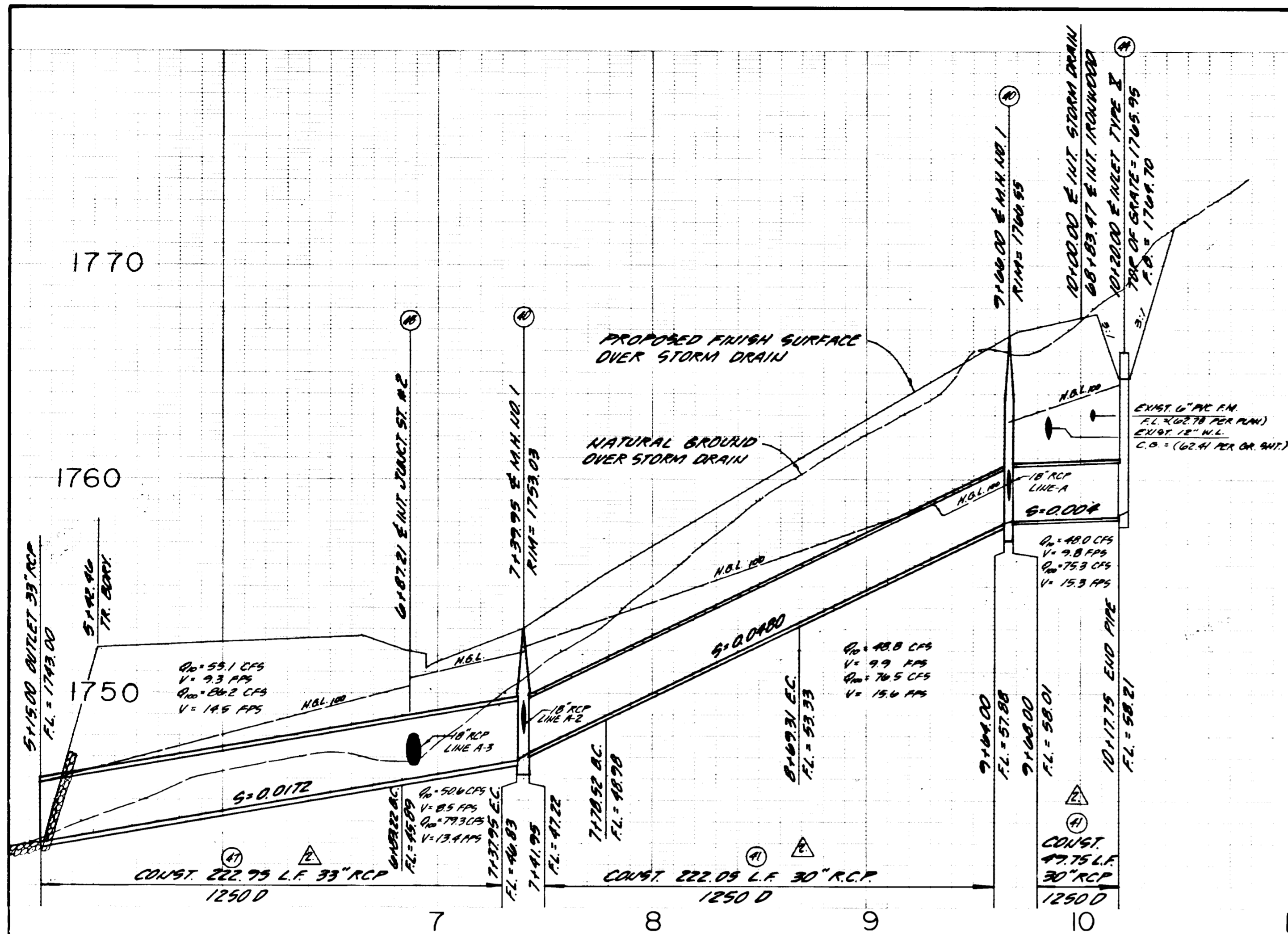
**BARCLAY DRIVE**

CURVE DATA				
Δ	R	L	T	
1	20'000"	25'	99.27'	25.00'
2	20'000"	55'	54.98'	35.00'
3	14'20'30"	580'	80.11'	40.20'
4	17'000"	300'	89.01'	44.84'
5	17'000"	200'	83.08'	41.85'



<b>REVISIONS:</b> 1. REVISED STREET PROFILE ON BARCLAY 2. REVISED WEMBLEY & BARCLAY INTERSECTION TO RUNDLE 3. 1/28/85 4. 2/18/85	APPROVED BY: <i>Shay Mark...</i> REGISTERED CIVIL ENGINEER NO. 13116 DATE: 6/1/85	GFB & ASSOCIATES, INC. 6809 INDIANA AVENUE SUITE 201 RIVERSIDE, CA. 92506 (714) 781-0811	TRACT NO. 19533-1 COUNTY OF RIVERSIDE <b>STREET IMPROVEMENT PLAN</b> <b>SHEFFIELD DR. &amp; BARCLAY DR.</b> SECTION 2, T.3S., R.4W.	<b>5</b> OF 7 SHEETS FILE NO.
	APPROVED BY: <i>...</i> RIVERSIDE COUNTY, CALIF. FOR ROAD COMMISSIONERS DATE: 9/4/85			

Attachment - Appendix E - Preliminary Drainage Study (4070) - General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map PEN19-0150



CURVE DATA			
Δ	R	L	T
67°40'57"	45.00'	54.73'	31.32'
17°00'00"	304.00'	90.79'	45.73'
45°00'00"	45.00'	35.34'	18.64'

**LINE 'A'**

CONSTRUCTION NOTES CONT'D

- ① CONSTRUCT 33" R.C.P. (1250 D)
- ② CONSTRUCT JUNCTION STRUCTURE NO. 2 PER R.C.F.C.D. 570 DWS. NO. 05-227

- CONSTRUCTION NOTES**
- ① CONSTRUCT MANHOLE NO. 1 PER R.C.F.C.D. 570 DWS. NO. 05-227
  - ② CONSTRUCT 30" R.C.P. (1250-D)
  - ③ CONSTRUCT 18" R.C.P. (2000 D)
  - ④ CONSTRUCT 18" R.C.P. (1250 D)
  - ⑤ CONSTRUCT INLET TYPE X PER R.C.F.C.D. 570 DWS. NO. CO. 108 MODIFIED PER DETAIL THIS SHT.
  - ⑥ CONSTRUCT 6" A.B.S. BLEEDER LINE
  - ⑦ CONSTRUCT 6" A.B.S. CURB OUTLET PER DETAIL ON SHT. 4

REVISIONS:

1	REVISED LINE A & B FOR COVERED BY PROFILE, & REVISED MAN LOCATION ON LINE B	DATE: 6/1/85
2	REVISED LINE A ALIGNMENT	DATE: 2/10/96

APPROVED BY:

*[Signature]*  
REGISTERED CIVIL ENGINEER NO. 12172

APPROVED BY:

*[Signature]*  
RIVERSIDE COUNTY, CALIF. FOR ROAD COMMISSIONER

DATE: 9/4/85

GFB & ASSOCIATES, INC.  
6809 INDIANA AVENUE SUITE 201  
RIVERSIDE, CA 92506 (714) 781-0811

SCALE: HORIZ. 1" = 40'  
VERT. 1" = 4'

BENCH MARK: SEE SHEET NO. 1

DATE MAY, 1985

TRACT NO. 19533-1  
COUNTY OF RIVERSIDE

STORM DRAIN IMPROVEMENT PLAN

SECTION 2, T.3S., R.4W.

7 OF 7 SHEETS

FILE NO.

**IRONWOOD AVENUE STREET PLAN (EXCERPT)**

---

FLOW RATES SHOWN ON THESE PLAN SETS USED AS DISCHARGES ONTO DMA-B

Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and



GENERAL NOTES

- ALL WORK SHALL CONFORM TO THE CONTRACT DOCUMENTS IN EFFECT AT THE TIME OF BID, STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION "GREENBOOK" LATEST EDITION, THE CITY OF MORENO VALLEY "STANDARD PLANS" AND CALTRANS "STANDARD PLANS" (LATEST EDITION) AS NOTED ON THE PLANS AND IN THE SPECIAL PROVISIONS.
- ALL TRAFFIC SIGNAL WORK SHALL CONFORM TO THE CONTRACT DOCUMENTS IN EFFECT AT THE TIME OF BID, SECTION 86 "SIGNALS AND LIGHTING" OF CALTRANS STANDARD SPECIFICATIONS, CALTRANS STANDARD PLANS, AND THE SPECIAL PROVISIONS.
- TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE M.U.T.C.D. PART 6 "TEMPORARY TRAFFIC CONTROL" AND M.U.T.C.D. CALIFORNIA SUPPLEMENT PART 6 "TEMPORARY TRAFFIC CONTROL."
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A CITY OF MORENO VALLEY BUSINESS LICENSE AND ENCROACHMENT PERMIT.
- PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT, PROVIDE ALERT NUMBER TO CITY ENGINEER AND ALL NECESSARY UTILITY COMPANIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FILE AN APPLICATION FOR A FIRE HYDRANT METER WITH THE APPROPRIATE WATER AGENCY.
- REQUEST FOR INSPECTION TO THE CITY OF MORENO VALLEY SHALL BE MADE BY THE CONTRACTOR AT LEAST TWENTY-FOUR (24) HOURS BEFORE THE SERVICES THEREOF WILL BE REQUIRED AT (951) 413-3130.
- WORK IN PUBLIC STREETS, ONCE BEGUN, SHALL BE WITHOUT DELAY SO AS TO PROVIDE MINIMUM INCONVENIENCE TO ADJACENT PROPERTY OWNERS AND TO THE TRAVELING PUBLIC. FAILURE TO COMPLY WILL BE A VIOLATION OF THE CONTRACT. CONTRACTOR SHALL PROVIDE ACCESS TO RESIDENCES AND BUSINESSES AT ALL TIMES.
- NO PUBLIC TRAVELED STREET SHALL BE CLOSED TO TRAFFIC WITHOUT PRIOR CITY COUNCIL APPROVAL.
- PROVISIONS SHALL BE MADE BY THE CONTRACTOR AT ALL TIMES FOR CONTRIBUTORY DRAINAGE.
- THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES, CONDUITS OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS, THESE LOCATIONS ARE APPROXIMATE. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ANY UTILITY LINES SHOWN AND OTHER LINES NOT ON RECORD OR NOT SHOWN ON THESE PLANS.
- THE CONTRACTOR SHALL EXCAVATE INSPECTION HOLES (POT HOLES) AND DETERMINE THE LOCATION AND DEPTH OF ALL UNDERGROUND STRUCTURES AND UTILITIES THAT ARE IN THE VICINITY OF OR THAT MAY BE AFFECTED BY THE PROPOSED IMPROVEMENT WORK PRIOR TO ANY CONSTRUCTION WORK WHICH COULD DAMAGE OR CONFLICT WITH SAID STRUCTURES OR UTILITIES.
- THE CONTRACTOR SHALL PROTECT IN PLACE ALL EXISTING TRAFFIC SIGNAL CONDUIT WITHIN 6" ABOVE PROPOSED SUB GRADE SURFACE AND ALL CONDUIT BELOW PROPOSED SUBGRADE SURFACE. ALL EXISTING CONDUIT THAT IS MORE THAN 6" ABOVE THE PROPOSED SUBGRADE SURFACE SHALL BE RELOCATED TO WITHIN 6" BELOW PROPOSED SUBGRADE SURFACE.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF THE IMPROVEMENTS CONFLICT WITH EXISTING FACILITIES AND WORK IN THE CONFLICTING LOCATION SHALL STOP.
- ANY ALTERATIONS OR VARIANCES FROM THE PLANS, EXCEPT MINOR ADJUSTMENTS IN THE FIELD TO MEET EXISTING CONDITIONS, SHALL BE REQUESTED IN WRITING AND MAY NOT BE INSTITUTED UNTIL APPROVED BY THE CITY ENGINEER OR REPRESENTATIVES ACTING SPECIFICALLY ON THE CITY ENGINEERS INSTRUCTIONS.
- INSPECTION BY THE CITY INSPECTOR SHALL NOT, IN ANY WAY, RELIEVE THE CONTRACTOR OF HIS/HER OBLIGATIONS TO COMPLETELY AND DILIGENTLY PERFORM ALL WORK IN COMPLIANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
- ALL ELEVATIONS SHOWN ON THE PLANS ARE ESTABLISHED BY LOCAL BENCH MARKS. SURVEY MONUMENTS SHALL BE PROTECTED IN PLACE.
- ALL A.C. AND P.C.C. SHALL BE SAWCUT UNLESS OTHERWISE SPECIFIED.
- NO TRENCHES EXCEPT CURB AND GUTTER, SHALL BE LEFT OPEN OVERNIGHT UNLESS APPROVED BY THE CITY ENGINEER IN WRITING.
- ALL UTILITIES SHALL BE INSTALLED, INSPECTED, TESTED AND APPROVED BY THE APPROPRIATE UTILITY COMPANY PRIOR TO PAVING. PROOF OF SUCH INSPECTION/APPROVAL SHALL BE SUPPLIED TO THE CITY INSPECTOR OR REPRESENTATIVE.
- IRRIGATION LINES WITHIN ANY CITY STREET SHALL HAVE A 30" MINIMUM COVER FROM FINISH SURFACE, UNLESS SAID IRRIGATION LINE HAS BEEN APPROVED BY THE CITY ENGINEER IN WRITING TO BE ENCASED IN CONCRETE OR BEDDED IN A SPECIAL CONCRETE CRADLE.
- THE CONTRACTOR SHALL COMPACT THE UPPER SIX INCHES OF SUBGRADE/AGGREGATE BASE TO A MINIMUM RELATIVE DENSITY OF 90/95 PERCENT RESPECTIVELY PER ASTM 1556-82 TESTING METHOD, OR AS DIRECTED BY THE ENGINEER.
- SUBGRADE MATERIAL PLACED FOR CURB, GUTTER, DRIVEWAY APPROACHES, AND SIDEWALKS SHALL BE TO A RELATIVE COMPACTION OF 90 PERCENT.
- ALL PORTLAND CEMENT CONCRETE (PCC) REMOVALS, INCLUDING, BUT NOT LIMITED TO CROSS GUTTERS, CURBS, DRIVEWAY APPROACHES, SIDEWALK AND SPANDRELS SHALL BE MADE BY REMOVING AND REPLACING THE ENTIRE SECTION BETWEEN JOINTS. IF ANY UTILITY CUTS ARE MADE IN PCC IMPROVEMENTS, THE ENTIRE SECTION SHALL BE REMOVED AND REPLACED.
- CONCRETE CURBS/GUTTERS, ALLEY APPROACHES, DRIVEWAYS OR OTHER CONCRETE STRUCTURES WHICH WILL BE SUBJECTED TO VEHICULAR TRAFFIC, SHALL BE BARRICADED AND NO VEHICULAR TRAFFIC PERMITTED THEREON FOR A PERIOD OF AT LEAST SEVEN (7) DAYS FOLLOWING PLACEMENT OF THE SAID CONCRETE STRUCTURE. SHOULD THE CONTRACTOR DESIRE AN EARLIER USE OF CONSTRUCTED FACILITIES, THEN THE AFFECTED CONCRETE SHALL CONTAIN EIGHT SACKS OF CEMENT PER CUBIC YARD OF CONCRETE AND THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE CITY ENGINEER FOR TRAFFIC USE TO BE PERMITTED THEREON SEVENTY-TWO HOURS AFTER THE PLACING OF CONCRETE.
- ALL TRAFFIC CONTROL DEVICES AND SIGNS SHALL BE IN PLACE AND APPROVED BY THE CITY PRIOR TO PAVING. DELINEATION SHALL BE COMPLETED PRIOR TO STREET OPEN.
- THE CONTRACTOR SHALL NOT PLACE ASPHALT CONCRETE PAVING UNTIL SUBGRADE OR AGGREGATE BASE HAS BEEN INSPECTED AND APPROVED BY THE CITY AND SHALL INCLUDE A COPY OF THE CERTIFICATION OF BASE/COMPACTION BY THE GEOTECHNICAL ENGINEER.
- THE CONTRACTOR SHALL PLACE THE FINISH (CAP) COURSE PAVING AFTER ALL BASE COURSE PAVING HAS BEEN COMPLETED. TACK COAT SHALL BE PLACED BETWEEN ALL COURSES OF PAVING.
- THE CONTRACTOR SHALL ADJUST WATER VALVE COVERS TO FINISH GRADE DURING PAVING, LOOSEN AFTER PAVING, AND PAINT BLUE.
- BLUE DOTS SHALL BE INSTALLED TO INDICATE THE LOCATION OF FIRE HYDRANTS.
- ALL TREE BRANCHES OVER-HANGING THE SIDEWALK SHALL BE TRIMMED CLEAR TO A MINIMUM HEIGHT OF 10 FEET ABOVE FINISHED SURFACE/GROUND SURFACE AND BRANCHES OVER-HANGING THE ROADWAY SHALL BE TRIMMED CLEAR TO A MINIMUM HEIGHT OF 18 FEET.
- ALL IRRIGATION SHALL BE RELOCATED BEHIND IMPROVEMENTS, AND REPLACED WITH THE SAME STANDARD OF MATERIALS OR HIGHER. ALL LANDSCAPING SHALL COMPLY WITH THE CITY LANDSCAPING DEVELOPMENT GUIDELINES AND SPECIFICATIONS.

# STREET IMPROVEMENT PLANS

## IRONWOOD AVENUE

### FROM DAY STREET TO BARCLAY DRIVE

#### PROJECT NO. 10-41570027



THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE INVITING BIDS" OF THE CONTRACT SPECIFICATIONS.

#### ENGINEER'S NOTICE TO CONTRACTORS

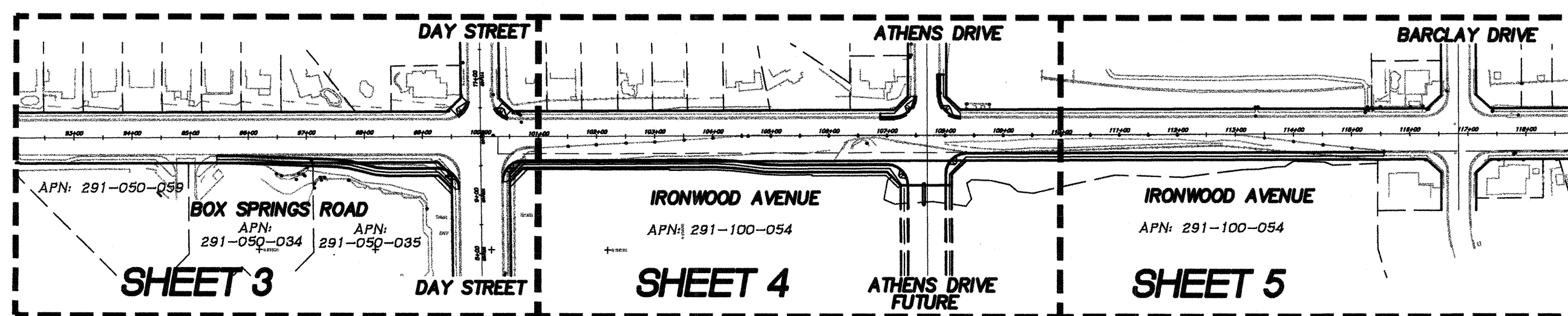
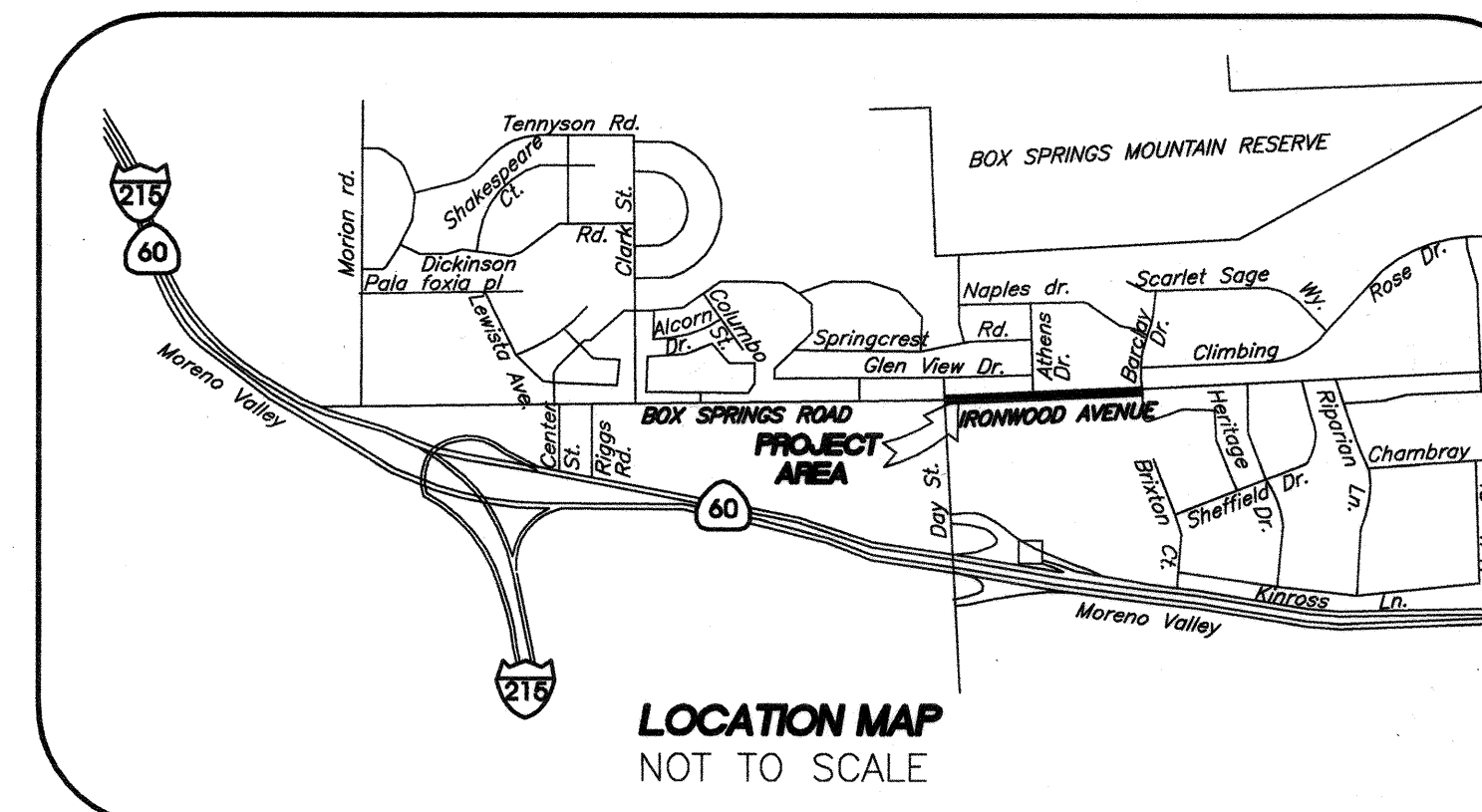
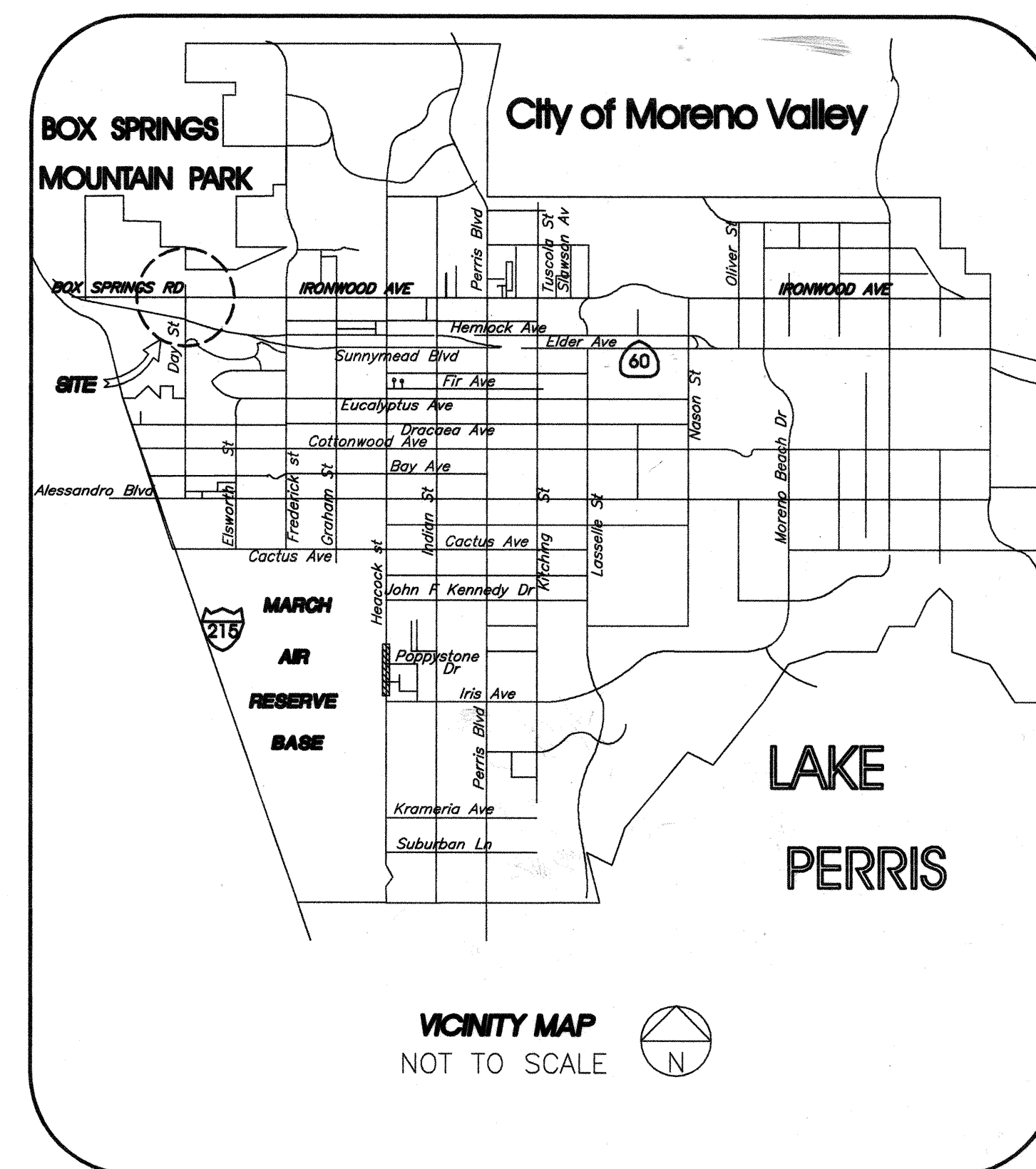
THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OF STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THESE LOCATIONS ARE APPROXIMATE AND SHALL BE CONFIRMED IN FIELD BY THE CONTRACTOR, SO THAT ANY NECESSARY ADJUSTMENT CAN BE MADE IN ALIGNMENT AND/OR GRADE OF THE PROPOSED IMPROVEMENT. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ANY UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.

#### INDEX SHEET

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IRONWOOD RETAINING WALL PLANS AND PROFILES	6-7
IRONWOOD RETAINING WALL NOTES AND DETAILS	8
STORM DRAIN IMPROVEMENTS	9
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IRONWOOD AVENUE ELECTRICAL IMPROVEMENTS	40-42

#### 2007 CALIFORNIA BUILDING CODE

ANY RETAINING WALL SPECIAL INSPECTIONS AS OCCURS SHALL CONFORM TO THE PROVISIONS OF 2007 CALIFORNIA BUILDING CODE SECTIONS 1704. ADDITIONAL INSPECTIONS REQUIREMENTS SHALL BE PER 2007 CBC SECTIONS 1705-1709.



#### ABBREVIATIONS

A	Adjacent Angle	EP	Edge of Pavement	V	Difference in Elevation between the TC and the Invert of the CB at the Outlet
AC	Asphaltic Concrete and	EVC	End Vertical Curve	VC	Vertical Curve
@	at	Exist.	Existing	V.C.P.	Vitrified Clay Pipe
Ave.	Avenue	FG	Finished Grade	W	West or Width of CB opening
B	Diameter of Lateral Pipe	F.H.	Fire Hydrant	WIF	Wrought Iron Fence
BC	Begin Curve	FL	Flow Line	2:1	Slope of one foot measured vertically for every two feet measured horizontally
BCR	Begin Curb Return	F.M.	Force Main		
BVC	Begin Vertical Curve	FS	Finished Surface		
B/W	Back of sidewalk	GB	Grade Brake		
B.M.	Bench Mark	Gr.	Grade		
Blvd.	Boulevard	G1	Incoming Grade		
C.B.	Catch Basin	G2	Outgoing Grade		
C.B.C.	California Building Code	H	Height		
C.F.	Curb Face	INV.	Invert Elevation of Pipe		
C&G	Curb & Gutter	INT.	Intersection		
☉ or C/L	Centerline	LF	Linear Foot		
CLF	Chain Link Fence	Lt.	Left		
C.M.P.	Corrugated Metal Pipe	Max.	Maximum		
CP	Connector Pipe	M.H.	Manhole		
Dia., D1, D2	Diameter	M.U.T.C.D.	Manual on Uniform Traffic Control Devices		
Drive	Drive	MOV	Middle Of Vertical Curve		
Dwy.	Driveway	Min.	Minimum		
E	East	N.	North		
EC	End Curve	No.	Number		
ECR	End Curb Return	N.T.S.	Not To Scale		
El.	Elevation	%	Percent		
E.M.W.D.	Eastern Municipal Water District	PCC	Portland Cement Concrete		
		P	Property Line		
		PRC	Point of Reverse Curve		
		Proj.	Project		
		Prop.	Proposed		
		PI	Point of Intersection		
		PVI	Point of Vertical Intersection		
		P.P.	Power Pole		
		R.C.P.	Reinforced Concrete Pipe		
		Rd.	Road		
		Rdwy.	Roadway		
		R/S	Record of Survey		
		Rt.	Right		
		R/W	Right of Way		
		S.	South		
		SD	Storm Drain		
		SF	Square Foot		
		Sta.	Station		
		Spec.	Specification		
		S.S.	Sanitary Sewer		
		St.	Street		
		Std.	Standard		
		S.P.P.W.C.	Standard Plans for Public Works Construction		
		S.W.	Sidewalk		
		SWR.	Sewer		
		Ret.	Retaining		
		Tan.	Tangent Line for Curve		
		TC	Top of Curb		
		TF	Top of Footing		
		TW	Top of Wall		
		Tr.	Tract		

#### DECLARATION OF DESIGN ENGINEER OF RECORD

I HEREBY DECLARE THAT THE DESIGN OF THE IMPROVEMENTS AS SHOWN ON THESE PLANS COMPLIES WITH PROFESSIONAL ENGINEERING STANDARD AND PRACTICES. AS THE ENGINEER IN RESPONSIBLE CHARGE OF DESIGN OF THESE IMPROVEMENTS, I ASSUME FULL RESPONSIBLE CHARGE FOR SUCH DESIGN. I UNDERSTAND AND ACKNOWLEDGE THAT THE PLAN CHECK OF THESE PLANS BY THE CITY OF MORENO VALLEY IS A REVIEW FOR THE LIMITED PURPOSE OF ENSURING THAT THE PLANS COMPLY WITH CITY PROCEDURES, APPLICABLE POLICIES AND ORDINANCES. THE PLAN CHECK IS NOT A DETERMINATION OF THE TECHNICAL ADEQUACY OF THE DESIGN OF THE IMPROVEMENTS. SUCH PLAN CHECK DOES NOT, THEREFORE, RELIEVE ME OF MY RESPONSIBILITY FOR THE DESIGN OF THESE IMPROVEMENTS. AS ENGINEER OF RECORD (E.O.R.), I AGREE TO INDEMNIFY AND HOLD THE CITY OF MORENO VALLEY, THE COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF MORENO VALLEY (RDA), AND THE MORENO VALLEY COMMUNITY SERVICE DISTRICT (CSD), ITS OFFICERS, AGENTS AND EMPLOYEES HARMLESS FROM ANY AND ALL LIABILITY OF CLAIMS, DAMAGES OR INJURIES TO ANY PERSON OR PROPERTY WHICH MIGHT ARISE FROM THE NEGLIGENT ACTS, ERRORS OR OMISSIONS OF THE ENGINEER OF RECORD.

I ALSO HEREBY DECLARE THAT I HAVE COMPARED THESE PLANS WITH ALL APPLICABLE A.D.A. AND TITLE 24 REQUIREMENTS FOR DISABILITY ACCESS FOR THIS PUBLIC PROJECT, AND THESE PLANS ARE IN FULL COMPLIANCE WITH THOSE REQUIREMENTS.

NAME: *Steve J. Hosford* RCE NO. 42280  
DATE: *Aug 3, 2010*

#### LEGEND

	LIMITS OF AC PAVEMENT OVER BASE COURSE		LIMITS OF EXISTING PAVEMENT TO BE REMOVED
	LIMITS OF COLDMILL AND AC OVERLAY		LIMITS OF EXISTING CURB & GUTTER AND SIDEWALK TO BE REMOVED
	LIMITS OF 1.5\"/>		LIMITS OF AC PAVEMENT PER STORM DRAIN TRENCH BACKFILL
	POST CONSTRUCTION EROSION CONTROL		LIMITS OF SLURRY SEAL

NO WORK SHALL BE DONE ON THIS SITE UNTIL THE UTILITY COMPANIES HAVE BEEN NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert

Call: TOLL FREE 1-800-227-2600

TRUCK WORKING DAYS BEFORE YOU DIG

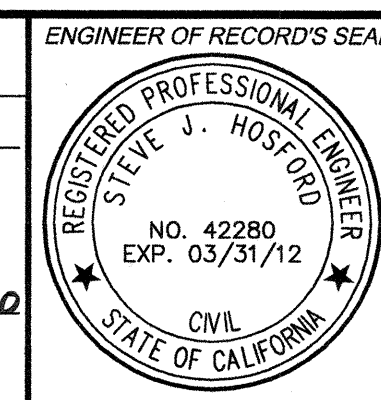
BENCH MARK	BASIS OF BEARING					
A 2 1/4\"/>	BEARINGS ARE BASED ON THE CENTERLINE OF BOX SPRINGS ROAD AS SHOWN ON TRACT NO. 20272-2, FILED IN MAP BOOK 188 OF MAPS, AT PAGES 10 THROUGH 12 INCLUSIVE, IN THE OFFICE OF THE RECORDER OF RIVERSIDE COUNTY, BEING NORTH 89°43'30\"/>					
MARK	DATE	INITIAL	DESCRIPTION	REC.	APPR.	DATE
			REVISION			

#### CITY OF MORENO VALLEY APPROVALS

APPROVED BY	DATE	BY
<i>Prem Kumar</i>	8/4/10	JAK
<i>Chris A. Vogt</i>	8/5/10	CLW

DEPT. P.W. DIR./ASST. CITY ENGINEER  
R.C.E. #C24243 EXP. 12/31/2010

CHRIS A. VOGT  
PUBLIC WORKS DIRECTOR/CITY ENGINEER  
R.C.E. #C42280 EXP. 06/30/2011



**AEI CASC CONSULTING**

937 SOUTH VIA LATA SUITE 500  
COLTON, CA 92324  
PH. (909) 783-0101 FAX (909) 783-0108

PREPARED UNDER SUPERVISION OF

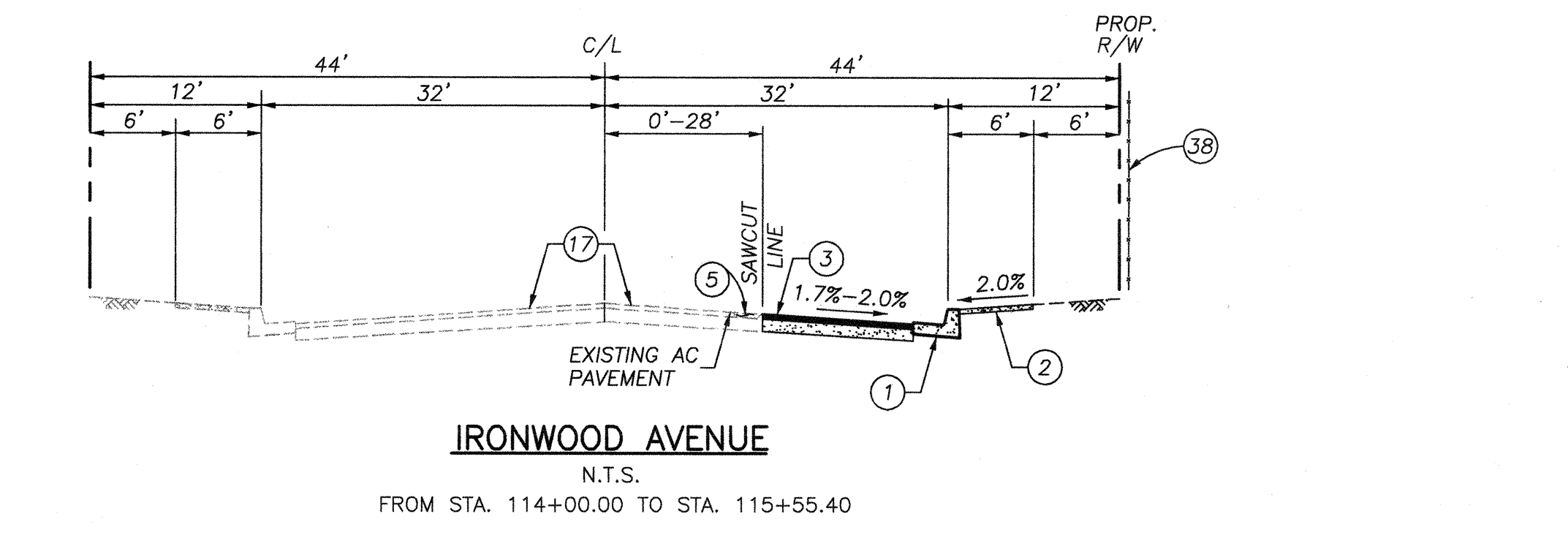
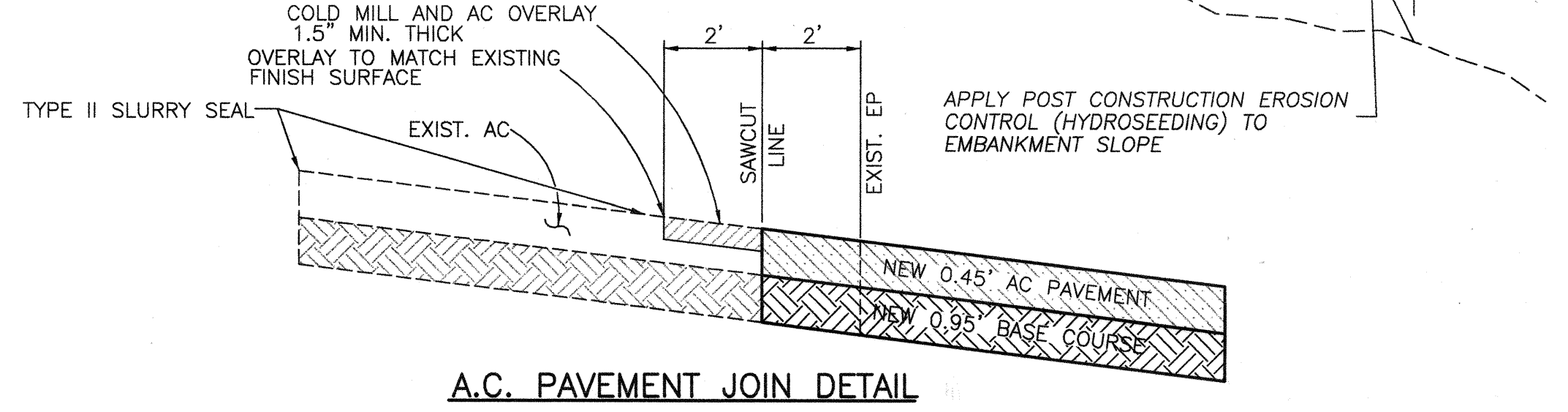
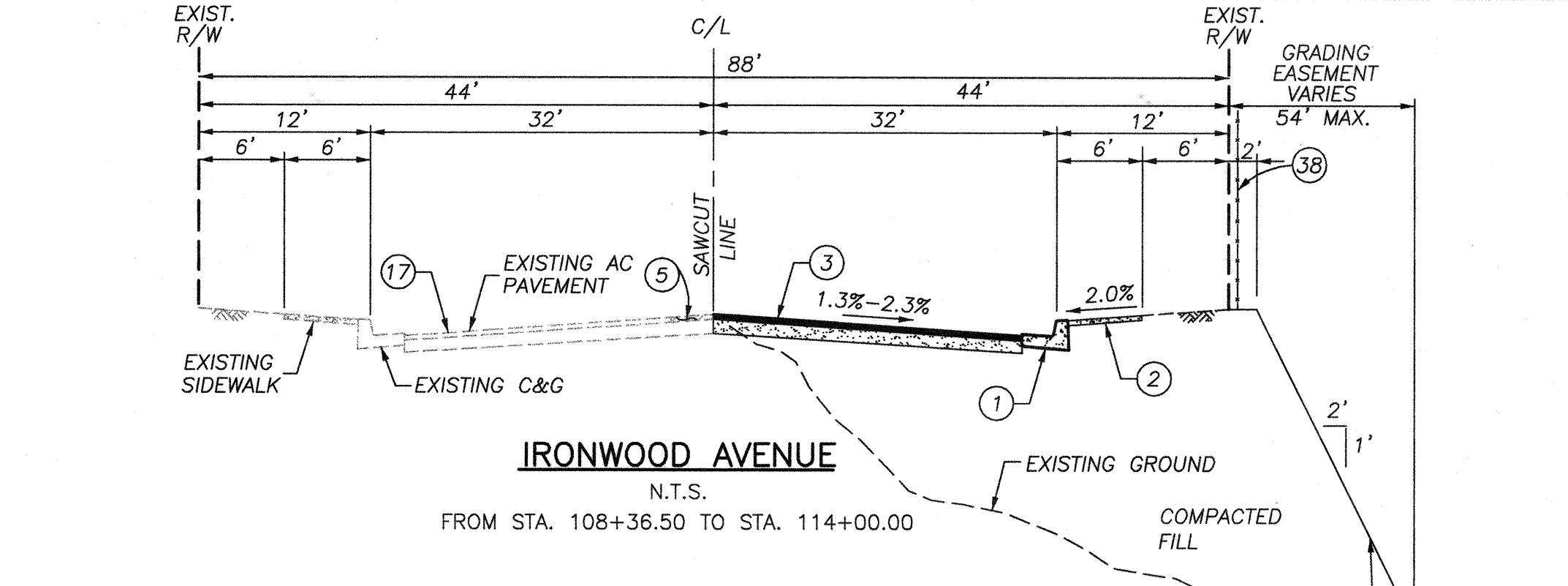
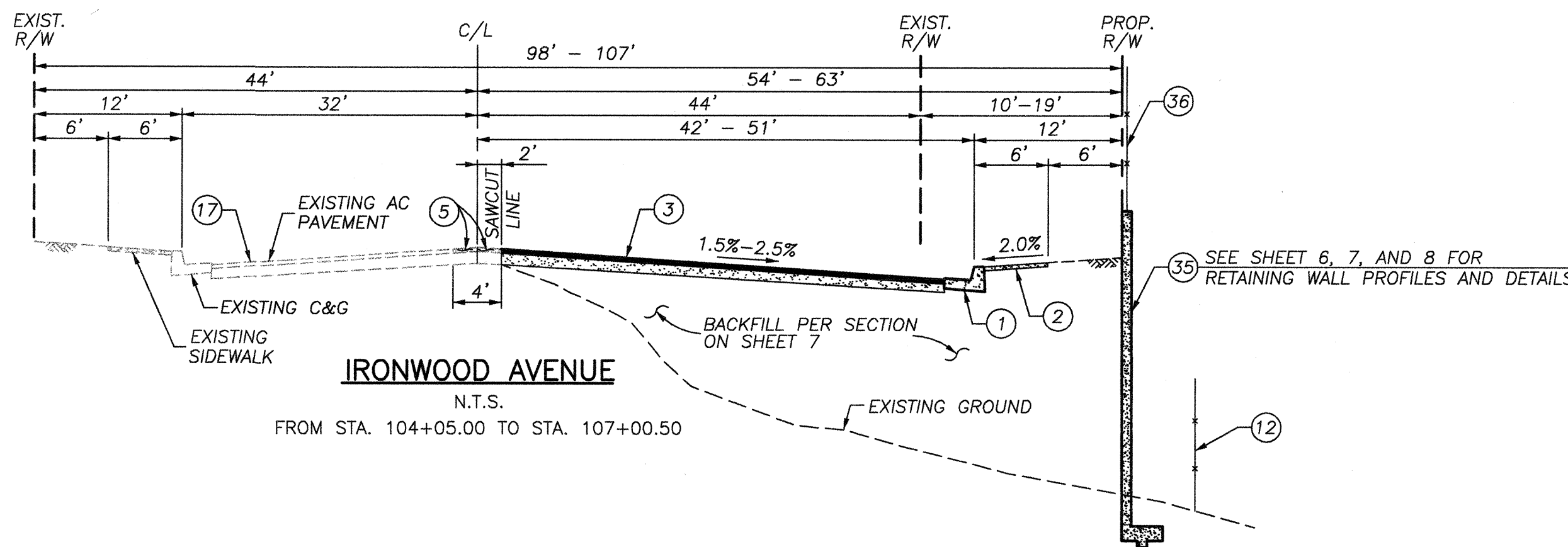
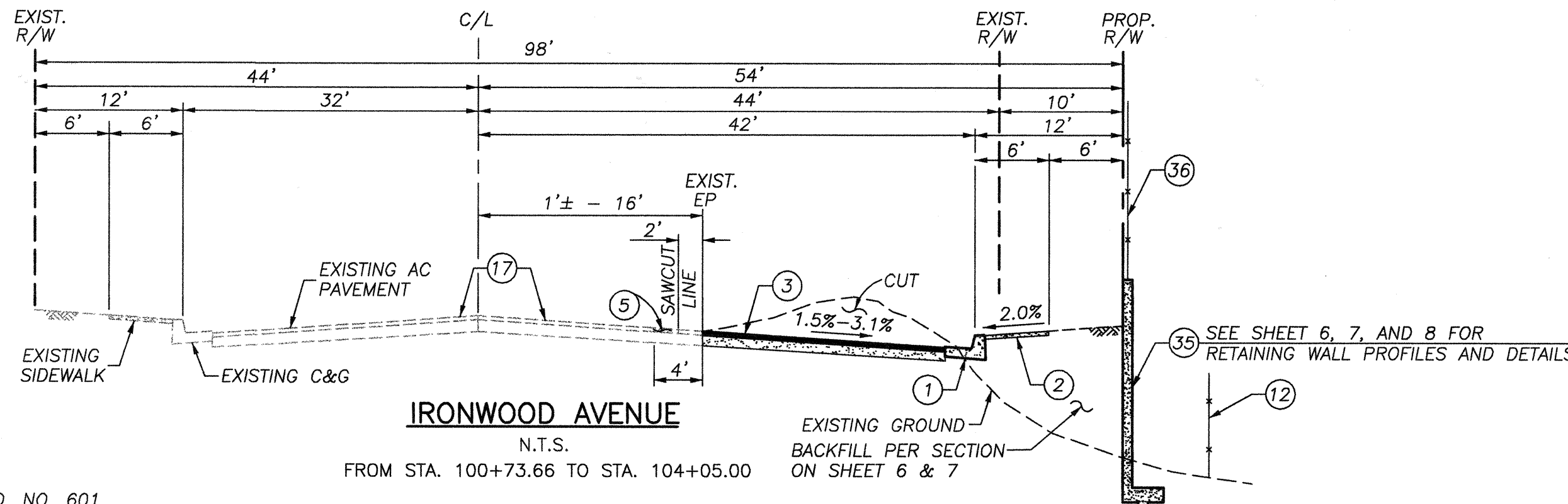
*Steve J. Hosford* 9-3-10  
STEVE J. HOSFORD DATE  
RCE 42280 Exp. Date: 03/31/12

CITY OF MORENO VALLEY  
STREET IMPROVEMENT PLANS  
IRONWOOD AVENUE  
FROM DAY STREET TO BARCLAY DRIVE  
TITLE SHEET

ACCT. NO. 897.91727  
SHEET 1 NO. 42  
CITY I.D. NO.

CONSTRUCTION NOTES

- 1 CONSTRUCT TYPE 8 INTEGRAL CURB AND GUTTER PER CITY OF MORENO VALLEY STD. NO. 201.
2 CONSTRUCT 4" THICK PCC SIDEWALK PER CITY OF MORENO VALLEY STD. NO. 210.
3 CONSTRUCT 0.45' AC PAVEMENT OVER 0.95' BASE COURSE.
4 CONSTRUCT HANDICAPPED ACCESS RAMP TYPE 1 PER CITY OF MORENO VALLEY STD. NO. 214A.
5 COLDMILL 1.5" AND APPLY 1.5" THICK AND 2' MIN. WIDTH AC OVERLAY.
6 SAWCUT AND REMOVE EXISTING AC PAVEMENT (SEE AC PAVEMENT JOIN DETAIL HEREON).
7 REMOVE AND DISPOSE EXISTING CURB AND GUTTER.
8 REMOVE AND DISPOSE EXISTING SIDEWALK.
9 REMOVE AND DISPOSE EXISTING AC BERM.
10 REMOVE AND DISPOSE EXISTING CONCRETE PAD.
11 REMOVE EXISTING TREE AND BUSHES AS NOTED ON PLAN.
12 RELOCATE EXISTING CHAIN LINK FENCE TEMPORARILY TO EDGE OF CONSTRUCTION LIMITS FOR SECURITY REMOVE UPON COMPLETION OF WROUGHT IRON FENCE.
13 PROTECT STREET CENTERLINE MONUMENT AND ADJUST LID TO GRADE PER CITY OF MORENO VALLEY STD. NO. 601.
14 APPLY 1.5" AC OVERLAY ONLY.
15 ADJUST SEWER MANHOLE RIM TO GRADE.
16 REMOVE FLASHING BEACON AND CONDUIT AND PULL BOX PER TRAFFIC SIGNAL PLAN.
17 APPLY SLURRY SEAL TO EXISTING AC PAVEMENT.
18 RELOCATE OR REMOVE TRAFFIC SIGN PER SIGNING AND STRIPING PLAN.
19 CONSTRUCT 4' WALK GATE AND END POSTS PER SPPWC STD. DWG. NO. 600-3.
22 REMOVE TRAFFIC SIGNAL PULLBOX PER SIGNAL INTERCONNECT PLAN.
26 RELOCATE TELEMETRY WIRE AND TERMINAL ENCLOSURE PER E.M.W.D. STD. B-533.
30 RELOCATE FIBER OPTIC BY OTHERS (CONTRACTOR IS TO COORDINATE WITH SUNEYSYS).
32 ADJUST WATER VALVE CAN AND LID TO GRADE.
33 PROTECT IN PLACE.
34 CONSTRUCT METAL BEAM GUARD RAILING PER CITY OF MORENO VALLEY STD. NO. 413A AND 413B.
35 CONSTRUCT TAN "SPLIT FACE" MASONRY BLOCK RETAINING WALL PER DETAIL A, B, C, AND D ON SHEET 8. SEE PROFILE ON SHEET 6 AND 7.
36 CONSTRUCT 5' HIGH WROUGHT IRON FENCE ON TOP OF RETAINING WALL PER WROUGHT IRON DETAIL AND FENCE POST INSTALLATION DETAIL ON SHEET 8.
37 CONSTRUCT DETECTABLE WARNING SURFACE PER CITY OF MORENO VALLEY STD. NO. 214C.
38 RELOCATE EXISTING CHAIN LINK FENCE PERMANENTLY TO ONE FOOT BEHIND RIGHT OF WAY AND INSTALL END POST AS APPLICABLE.
40 CONSTRUCT 6" CF TO 8" CF CURB TRANSITION.
41 CONSTRUCT 18" RCP PER PLAN (D LOAD PER PLAN).
42 CONSTRUCT 30" RCP PER PLAN (D LOAD PER PLAN).
43 CONSTRUCT CATCH BASIN PER SPPWC STD. DWG. NO. 300-2.
44 CONSTRUCT LOCAL DEPRESSION PER SPPWC STD. DWG. NO. 313-2 CASE "E".
45 CONSTRUCT MONOLITHIC CATCH BASIN CONNECTION PER SPPWC STD. DWG. NO. 308-1.
46 CONSTRUCT MANHOLE PER SPPWC STD. DWG. NO. 321-1.
47 CONSTRUCT JUNCTION STRUCTURE PER SPPWC STD. DWG. NO. 331-2.
48 CONSTRUCT CONCRETE COLLAR PER SPPWC STD. DWG. NO. 380-3.
49 REMOVE INTERFERING PORTIONS OF EXISTING STORM DRAIN PIPE AND/OR STRUCTURE. FILL ABANDONED PORTION WITH SLURRY.
50 CONSTRUCT TRENCH BACKFILL PER CITY OF MORENO VALLEY STD. DWG. NO. 602A, 602B AND 602C AS APPLICABLE.
51 RECONNECT EXISTING 12" PIPE TO THE PROPOSED CATCH BASIN.
52 CONSTRUCT CONCRETE FLARED END SECTIONS PER CALTRANS STD. DWG. NO. D94B.
53 CONSTRUCT 1/4 TON RIPRAP CHANNEL, T=3' WITH 9" THICK-CRUSHED AGGREGATE BASE FILTER BLANKET AND NON-WOVEN FILTER FABRIC PER DETAILS ON SHEET 9.
54 CONSTRUCT 6" (8" THICK) CONCRETE CUT-OFF WALL PER DETAIL 1 ON SHEET 9.

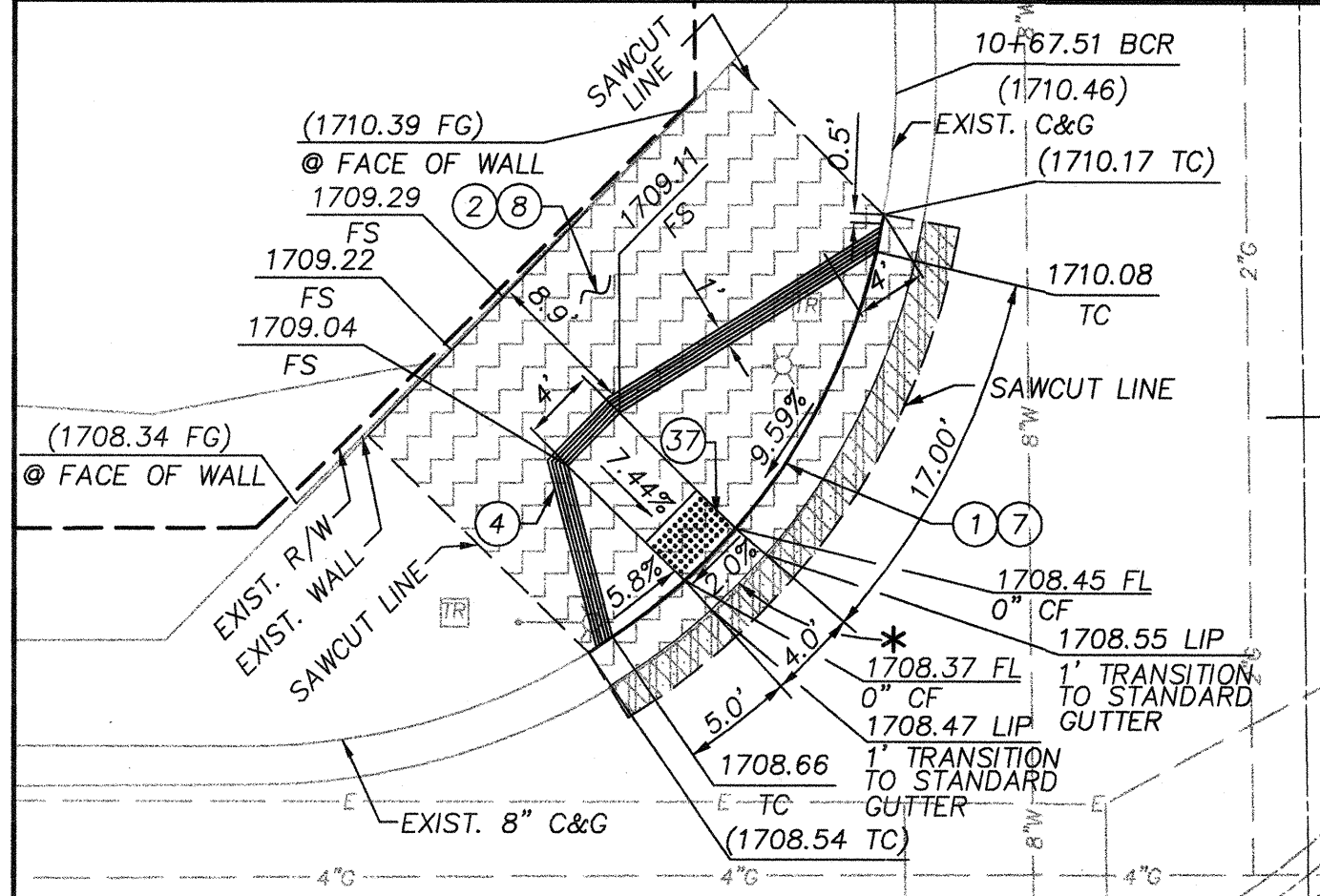


LEGEND
LIMITS OF AC PAVEMENT OVER BASE COURSE
LIMITS OF 1.5" AC OVERLAY ONLY
LIMITS OF COLDMILL AND AC OVERLAY
LIMITS OF AC PAVEMENT PER STORM DRAIN TRENCH BACKFILL
LIMITS OF EXISTING PAVEMENT TO BE REMOVED
POST CONSTRUCTION EROSION CONTROL
LIMITS OF EXISTING CURB & GUTTER AND SIDEWALK TO BE REMOVED
LIMITS OF SLURRY SEAL

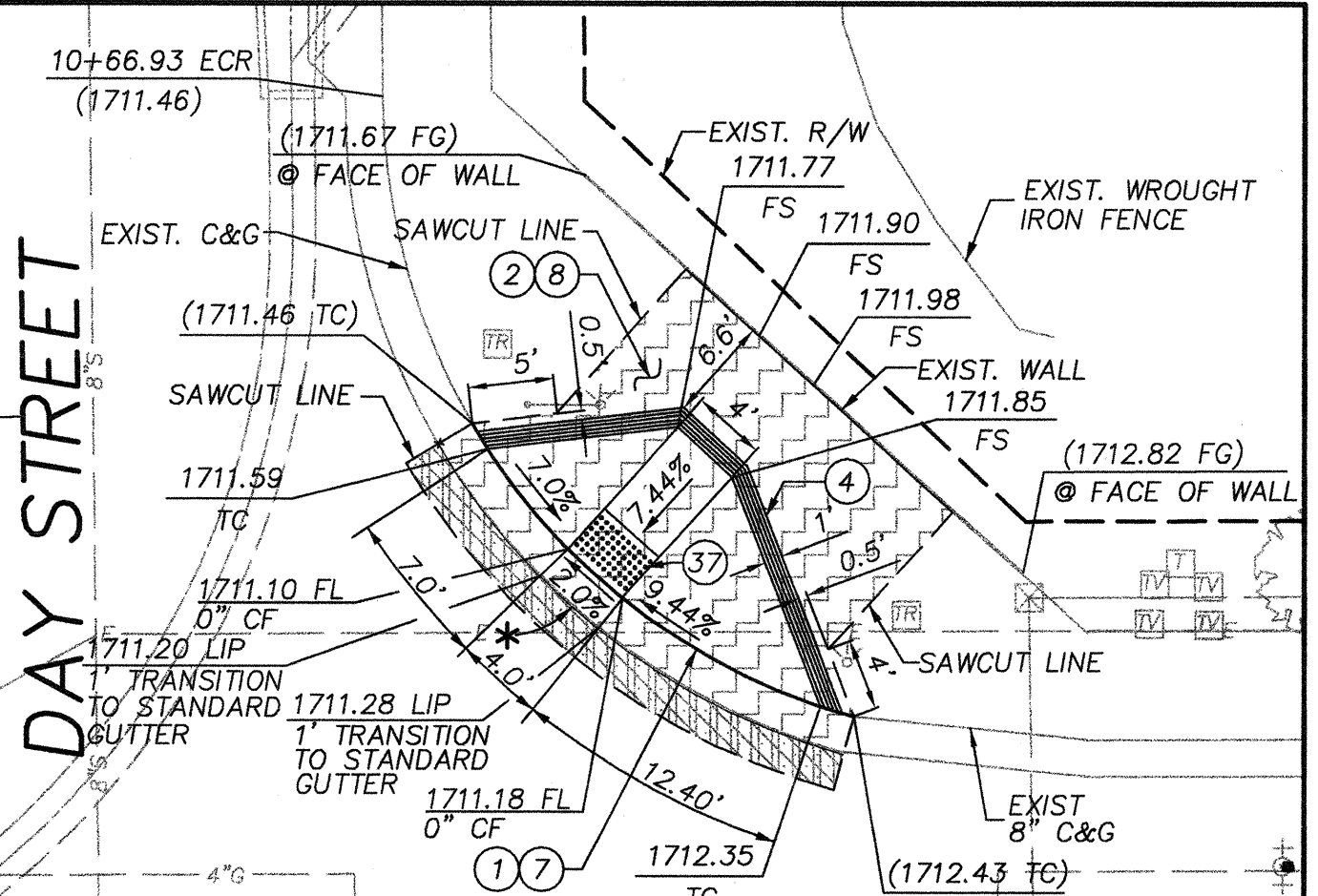
SEE SHEET 29 FOR LOCATIONS OF PROJECT CONSTRUCTION AND PROJECT LOCATION SIGNS.

\* 5% MAXIMUM SLOPE FROM LIP OF GUTTER TO FLOW LINE AT RAMP

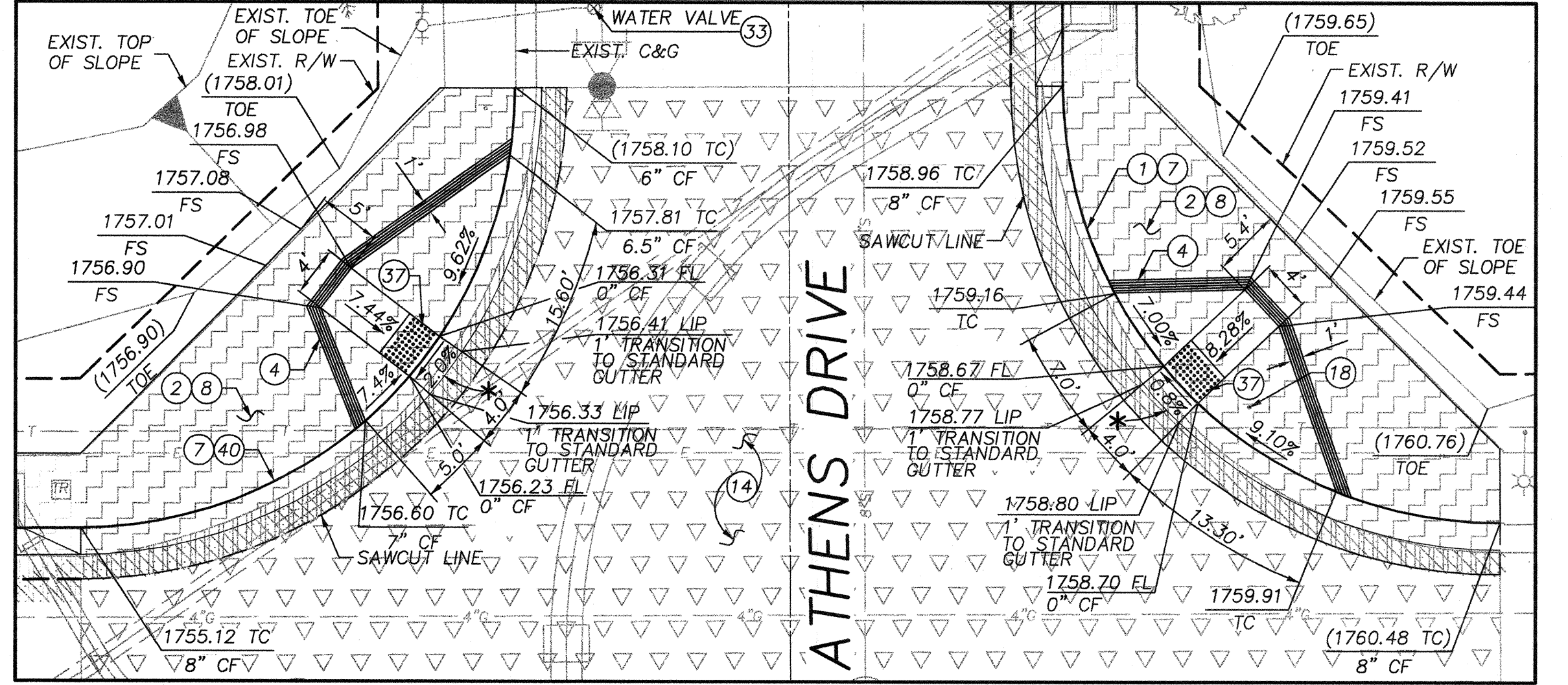
NO WORK SHALL BE DONE ON THIS SITE UNTIL BELIEVED OF INTENTION TO GRADE OR EXCAVATE. Underground Service Alert



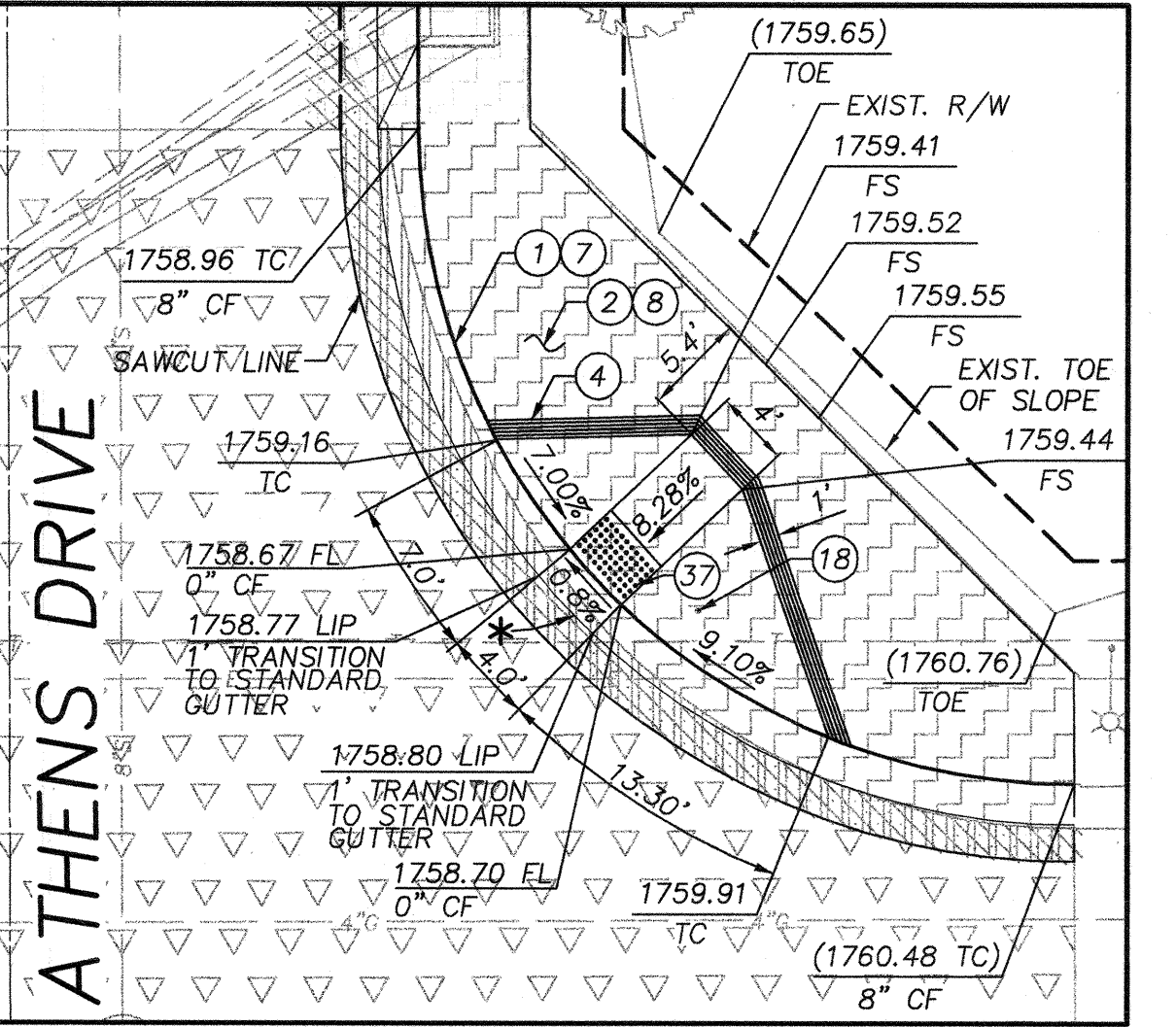
BOX SPRINGS ROAD DETAIL "A" SCALE 1:10



IRONWOOD AVENUE DETAIL "B" SCALE 1:10



IRONWOOD AVENUE DETAIL "C" SCALE 1:10



ATHENS DRIVE DETAIL "D" SCALE 1:10

Table with columns: BENCH MARK, BASIS OF BEARING, MARK, DATE, INITIAL, DESCRIPTION, REVISION, REC. APPR. DATE.

CITY OF MORENO VALLEY APPROVALS
APPROVED BY: SUPERVISING SENIOR ENGINEER, CITY TRAFFIC ENGINEER, MAINTENANCE AND OPERATIONS MANAGER, SENIOR ENGINEER
DATE: 8/4/10

ENGINEER OF RECORD'S SEAL
STEVE J. HOSFORD
REGISTERED PROFESSIONAL ENGINEER
NO. 42280
EXP. 03/31/12
CIVIL
STATE OF CALIFORNIA

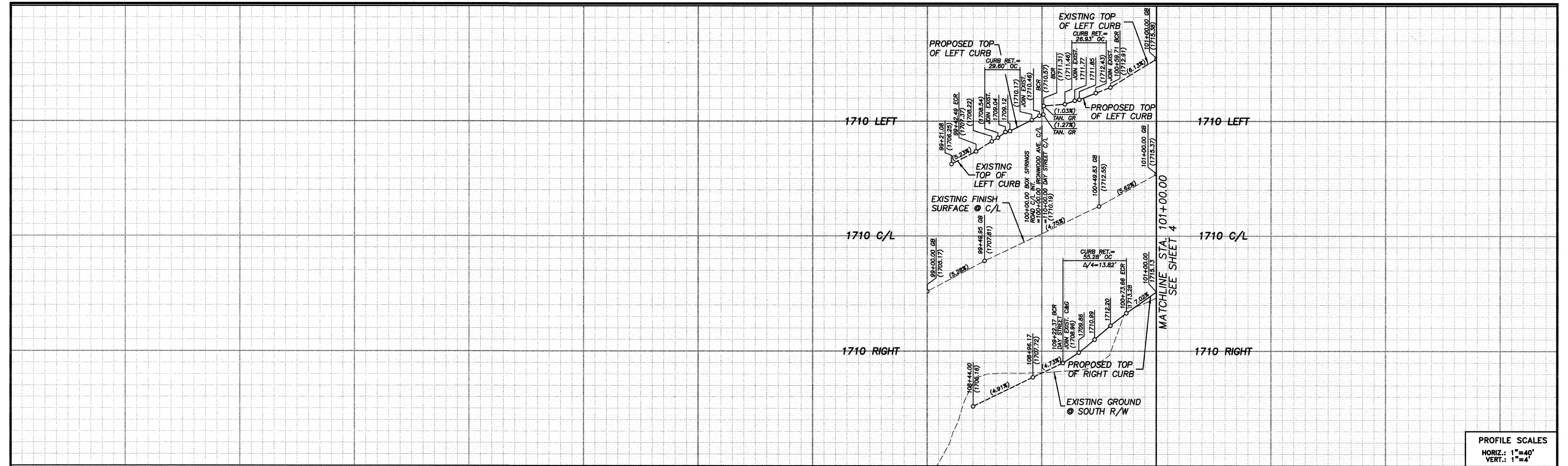
AEI CASC CONSULTING
937 SOUTH VIA LATA SUITE 500
COLTON, CA 92324
PH. (909) 783-0101 FAX (909) 783-0108

PREPARED UNDER SUPERVISION OF
STEVE J. HOSFORD
DATE: 8/3/10
RCE #2280 Exp. Date: 03/31/12

CITY OF MORENO VALLEY
STREET IMPROVEMENT PLANS
IRONWOOD AVENUE
TYPICAL SECTION & DETAILS

ACCT. NO. 897.91727
SHEET 2 NO. 42
CITY T. D. NO.

Attachment: Appendix E - Preliminary Drainage Study (4070) - General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map PEN19-0150



**PROFILE SCALES**  
 HORIZ.: 1"=40'  
 VERT.: 1"=4'

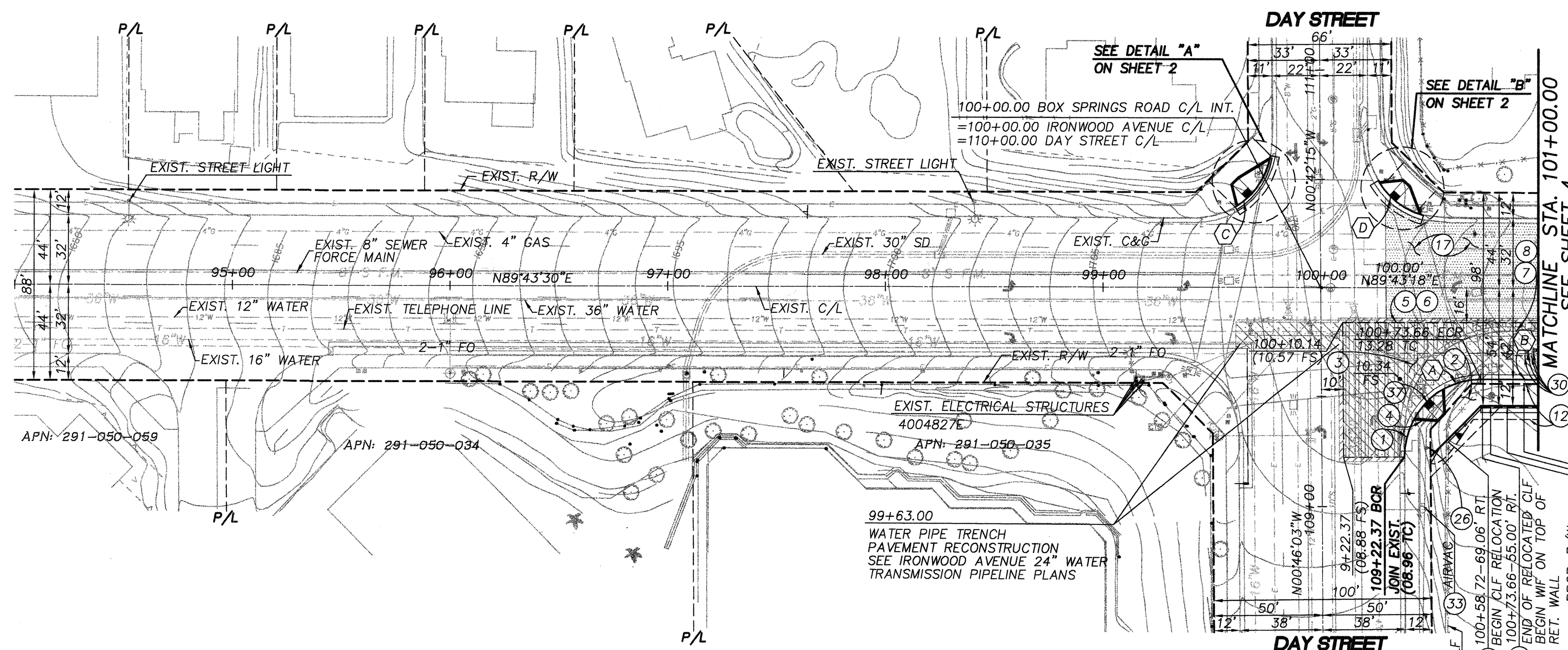
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**LEGEND**

- LIMITS OF AC PAVEMENT OVER BASE COARSE
- LIMITS OF COLDMILL AND AC OVERLAY
- LIMITS OF EXISTING PAVEMENT TO BE REMOVED
- LIMITS OF EXISTING CURB & GUTTER AND SIDEWALK TO BE REMOVED
- LIMITS OF SLURRY SEAL

**CURVE/LINE DATA**

Δ	DELTA/BEARING	RADIUS	LEN/DIST.	TANGENT
A	90°29'21"	35.00'	55.28'	35.30'
B	N89°43'18"E	-	26.34'	-
C	48°27'28"	35.00'	29.60'	15.75'
D	44°05'18"	35.00'	26.93'	14.17'

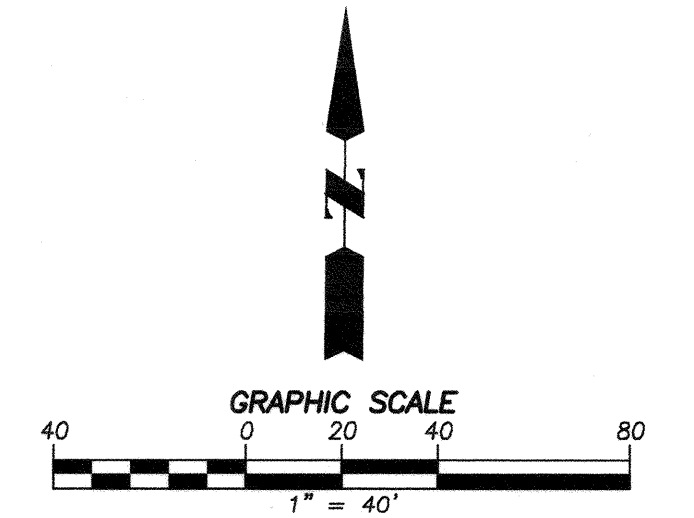


**CONSTRUCTION NOTES**

1. CONSTRUCT TYPE 8 INTEGRAL CURB AND GUTTER PER CITY OF MORENO VALLEY STD. NO. 201.
2. CONSTRUCT 4" THICK PCC SIDEWALK PER CITY OF MORENO VALLEY STD. NO. 210.
3. CONSTRUCT 0.45" AC PAVEMENT OVER 0.95" BASE COURSE.
4. CONSTRUCT HANDICAPPED ACCESS RAMP TYPE 1 PER CITY OF MORENO VALLEY STD. NO. 214A.
5. COLDMILL 1.5" AND APPLY 1.5" THICK AND 2' MIN. WIDTH AC OVERLAY.
6. SAWCUT AND REMOVE EXISTING AC PAVEMENT (SEE AC PAVEMENT JOIN DETAIL ON SHEET 2).
7. REMOVE AND DISPOSE EXISTING CURB AND GUTTER.
8. REMOVE AND DISPOSE EXISTING SIDEWALK.
9. RELOCATE EXISTING CHAIN LINK FENCE TEMPORARILY TO EDGE OF CONSTRUCTION LIMITS FOR SECURITY REMOVE AND DISPOSE UPON COMPLETION OF WROUGHT IRON FENCE.
10. APPLY SLURRY SEAL TO EXISTING AC PAVEMENT.
11. RELOCATE TELEMETRY WIRE AND TERMINAL ENCLOSURE PER E.M.W.D. STD. B-533.
12. RELOCATE FIBER OPTIC BY OTHERS.
13. PROTECT IN PLACE
14. CONSTRUCT DETECTABLE WARNING SURFACE PER CITY OF MORENO VALLEY STD. NO. 214C.
15. RELOCATE EXISTING CHAIN LINK FENCE TO ONE FOOT PERMANENTLY BEHIND RIGHT OF WAY AND INSTALL END POST AS APPLICABLE.

**BOX SPRINGS ROAD**

**IRONWOOD AVENUE**



Drawing Name: G:\561166\Engineering\STREET IMPROVEMENT PLAN\PHASE 1\561166-IRONWOOD\_ST-SHT03.dwg  
 Date: 08/03/2010 10:35am by gemth

**BENCH MARK**  
 A 2 1/4" BRASS DISK IN 2 1/4" IRON PIPE, DOWN 0.8, 33" NORTH OF THE CENTERLINE OF BOX SPRINGS ROAD AS SHOWN ON TRACT NO. 20272-2, FILED IN MAP BOOK 188 OF MAPS, AT PAGES 10 THROUGH 12 INCLUSIVE, IN THE OFFICE OF THE RECORDER OF WESTBOND STATE ROUTE 60, STAMPED "CALIFORNIA DEPARTMENT OF TRANSPORTATION RIV 60-14.46 1990 LS 5679"  
 ELEVATION: 1660.561' "NGVD 1929"

MARK	DATE	INITIAL	DESCRIPTION	REC. APPR. DATE
		E.O.R.	REVISION	

**CITY OF MORENO VALLEY APPROVALS**

APPROVED BY	DATE	BY
	8/4/10	
	8/5/10	

PREM KUMAR  
 DEPT. PW DIR. / ASST. CITY ENGINEER  
 R.C.E. #C52463 EXP. 12/31/2010

CHRIS A. WEST  
 PUBLIC WORKS DIRECTOR/CITY ENGINEER  
 R.C.E. #C4250 EXP. 06/30/2011

ENGINEER OF RECORD'S SEAL

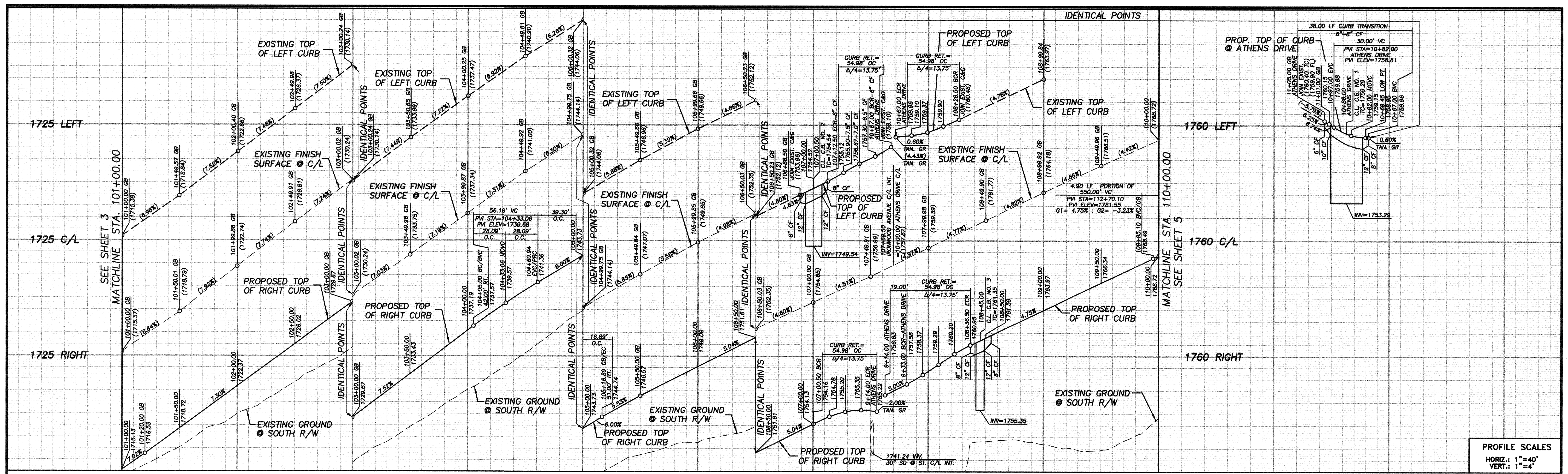
**AEI CASC CONSULTING**  
 937 SOUTH VIA LATA SUITE 500 COLTON, CA 92324  
 PH. (909) 783-0101 FAX (909) 783-0108

PREPARED UNDER SUPERVISION OF  
  
 STEVE J. HOSHFORD DATE 8/3/10  
 RCE #42280 Exp. Date: 03/31/12

CITY OF MORENO VALLEY  
 STREET IMPROVEMENT PLANS  
**IRONWOOD AVENUE**  
 STA. 100+00.00 TO STA. 101+00.00

ACCT. NO. **897.91727**  
 SHEET **3** NO. **42**  
 CITY I.D. NO.

Attachment: Appendix E - Preliminary Drainage Study (4070 - General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map PEN19-0150)



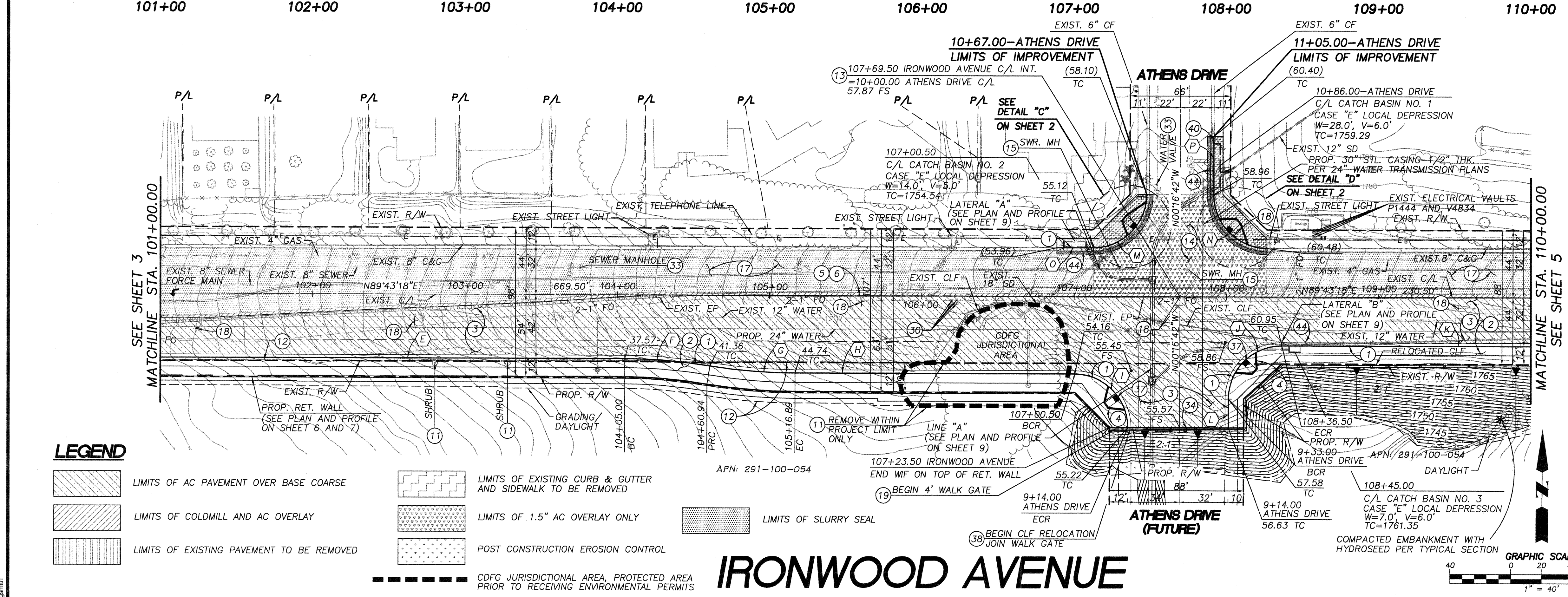
PROFILE SCALES  
 HORIZ.: 1"=40'  
 VERT.: 1"=4'

**CONSTRUCTION NOTES**

- 1) CONSTRUCT TYPE B INTEGRAL CURB AND GUTTER PER CITY OF MORENO VALLEY STD. NO. 201.
- 2) CONSTRUCT 4" THICK PCC SIDEWALK PER CITY OF MORENO VALLEY STD. NO. 210.
- 3) CONSTRUCT 0.45" AC PAVEMENT OVER 0.95" BASE COURSE.
- 4) CONSTRUCT HANDICAPPED ACCESS RAMP TYPE 1 PER CITY OF MORENO VALLEY STD. NO. 214A.
- 5) COLDMILL 1.5" AND APPLY 1.5" THICK AND 2' MIN. WIDTH AC OVERLAY.
- 6) SAWCUT AND REMOVE EXISTING AC PAVEMENT (SEE AC PAVEMENT JOIN DETAIL ON SHEET 2).
- 7) REMOVE EXISTING TREE AND BUSHES AS NOTED PER PLAN.
- 8) RELOCATE EXISTING CHAIN LINK FENCE TEMPORARILY TO EDGE OF CONSTRUCTION LIMITS FOR SECURITY REMOVE AND DISPOSE UPON COMPLETION OF WROUGHT IRON FENCE.
- 9) PROTECT STREET CENTERLINE MONUMENT AND ADJUST LID TO GRADE PER CITY OF MORENO VALLEY STD. NO. 501.
- 10) APPLY 1.5" AC OVERLAY ONLY.
- 11) ADJUST SEWER MANHOLE RIM TO GRADE.
- 12) APPLY SLURRY SEAL TO EXISTING AC PAVEMENT.
- 13) RELOCATE OR REMOVE TRAFFIC SIGN PER SIGNING AND STRIPING PLAN.
- 14) CONSTRUCT 4" WALK GATE AND END POSTS PER SPPWC STD. DWG. NO. 600-3.
- 15) RELOCATE FIBER OPTIC BY OTHERS (CONTRACTOR IS TO COORDINATE WITH SUNESYS).
- 16) PROTECT IN PLACE.
- 17) CONSTRUCT METAL BEAM GUARD RAILING PER CITY OF MORENO VALLEY STD. NO. 413A AND 413B.
- 18) CONSTRUCT DETECTABLE WARNING SURFACE PER CITY OF MORENO VALLEY STD. NO. 214C.
- 19) RELOCATE EXISTING CHAIN LINK FENCE PERMANENTLY TO ONE FOOT BEHIND RIGHT OF WAY AND INSTALL END POST AS APPLICABLE.
- 20) CONSTRUCT 6" CF TO 8" CF OF CURB TRANSITION.
- 21) CONSTRUCT LOCAL DEPRESSION PER SPPWC STD. DWG. NO. 313-2 CASE "E".

**CURVE/LINE DATA**

POINT	DELTA/BEARING	RADIUS	LEN/DIST.	TANGENT
E	N89°43'18"E	-	305.00'	-
F	09°11'51"	350.00'	56.19'	28.15'
G	09°11'51"	350.00'	56.19'	28.15'
H	N89°43'18"E	-	183.61'	-
I	90°00'00"	35.00'	54.98'	35.00'
J	90°00'00"	35.00'	54.98'	35.00'
K	N89°43'18"E	-	163.50'	-
L	N00°16'42"W	-	19.00'	-
M	90°00'00"	35.00'	54.98'	35.00'
N	90°00'00"	35.00'	54.98'	35.00'
O	N89°43'18"E	-	24.00'	-
P	N00°16'42"W	-	38.00'	-



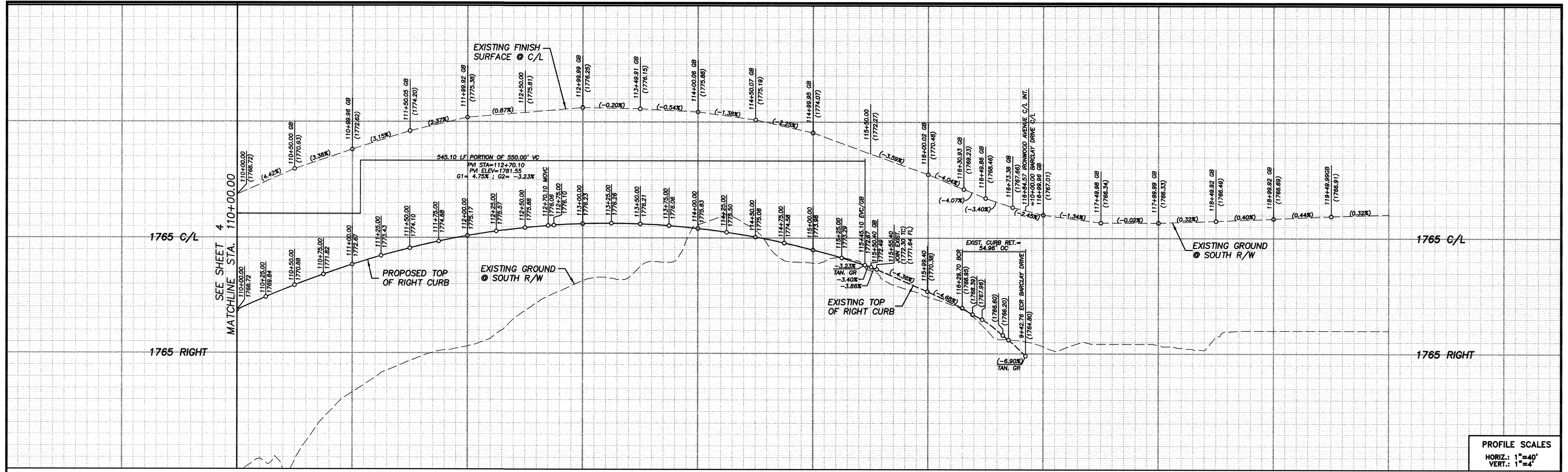
**LEGEND**

[Symbol]	LIMITS OF AC PAVEMENT OVER BASE COARSE	[Symbol]	LIMITS OF EXISTING CURB & GUTTER AND SIDEWALK TO BE REMOVED
[Symbol]	LIMITS OF COLDMILL AND AC OVERLAY	[Symbol]	LIMITS OF 1.5" AC OVERLAY ONLY
[Symbol]	LIMITS OF EXISTING PAVEMENT TO BE REMOVED	[Symbol]	POST CONSTRUCTION EROSION CONTROL
[Symbol]		[Symbol]	LIMITS OF SLURRY SEAL
[Symbol]		[Symbol]	LIMITS OF EXISTING PAVEMENT TO BE REMOVED

**IRONWOOD AVENUE**

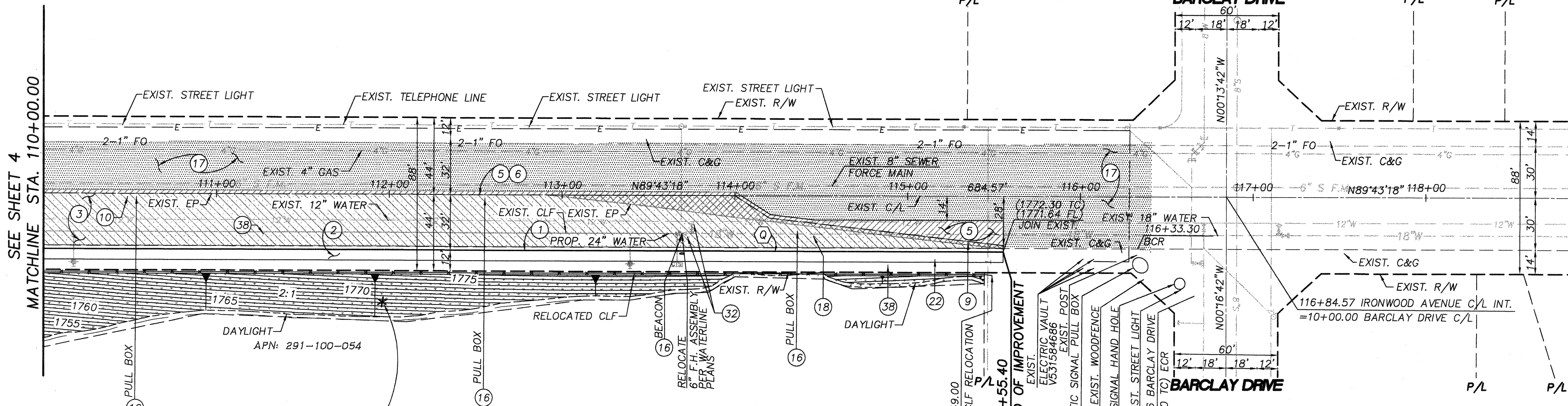
<p><b>CITY OF MORENO VALLEY APPROVALS</b></p> <p>APPROVED BY: [Signature] DATE: 8/10 BY: [Signature] DATE: 8/10</p> <p>SUPERVISING SENIOR ENGINEER: P. KUMAR DEPT. PW DIR, ASST. CITY ENGINEER R.C.E. #062483 EXP. 12/31/2010</p> <p>CITY TRAFFIC ENGINEER: [Signature] DATE: 8/10</p> <p>MAINTENANCE AND OPERATIONS MANAGER: [Signature] DATE: 8/10</p> <p>SENIOR ENGINEER: [Signature] DATE: 8/10</p>		<p>ENGINEER OF RECORD'S SEAL: [Signature] DATE: 8/10</p> <p>STEVE J. HOSFORD REGISTERED PROFESSIONAL ENGINEER NO. 42280 EXP. 03/31/12 CIVIL STATE OF CALIFORNIA</p>		<p>PREPARED UNDER SUPERVISION OF: [Signature] DATE: 8-3-10</p> <p>STEVE J. HOSFORD RCE #42280 Exp. Date: 03/31/12</p>		<p>ACCT. NO. <b>897.91727</b></p> <p>CITY OF MORENO VALLEY</p> <p>STREET IMPROVEMENT PLANS</p> <p><b>IRONWOOD AVENUE</b></p> <p>STA. 101+00.00 TO STA. 110+00.00</p> <p>SHEET <b>4</b> NO. <b>42</b></p> <p>CITY T. D. NO.</p>	
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Drawing Name: Q:\51168\Engineering\STREET IMPROVEMENT PLAN\PHASE 1\061\IRONWOOD\_ST\_S1104.dwg  
 Last Updated: Aug 03, 2010 - 11:00am by gmmh



**PROFILE SCALES**  
 HORIZ.: 1"=40'  
 VERT.: 1"=4'

110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00 118+00 119+00



- CONSTRUCTION NOTES**
- CONSTRUCT TYPE B INTEGRAL CURB AND GUTTER PER CITY OF MORENO VALLEY STD. NO. 201.
  - CONSTRUCT 4" THICK PCC SIDEWALK PER CITY OF MORENO VALLEY STD. NO. 210.
  - CONSTRUCT 0.45' AC PAVEMENT OVER 0.95' BASE COURSE.
  - COLDMILL 1.5" AND APPLY 1.5" THICK AND 2' MIN. WIDTH AC OVERLAY.
  - SAWCUT AND REMOVE EXISTING AC PAVEMENT (SEE AC PAVEMENT JOIN DETAIL HEREON).
  - REMOVE AND DISPOSE EXISTING AC BERM.
  - REMOVE AND DISPOSE EXISTING CONCRETE PAD.
  - REMOVE FLASHING BEACON AND CONDUIT AND PULL BOX PER TRAFFIC SIGNAL PLAN.
  - APPLY SLURRY SEAL TO EXISTING AC PAVEMENT.
  - RELOCATE OR REMOVE TRAFFIC SIGN PER SIGNAL AND STRIPING PLAN.
  - REMOVE TRAFFIC SIGNAL PULLBOX PER SIGNAL INTERCONNECT PLAN.
  - ADJUST WATER VALVE CAN AND LID TO GRADE.
  - RELOCATE EXISTING CHAIN LINK FENCE TO ONE FOOT BEHIND RIGHT OF WAY AND INSTALL END POST AS APPLICABLE.

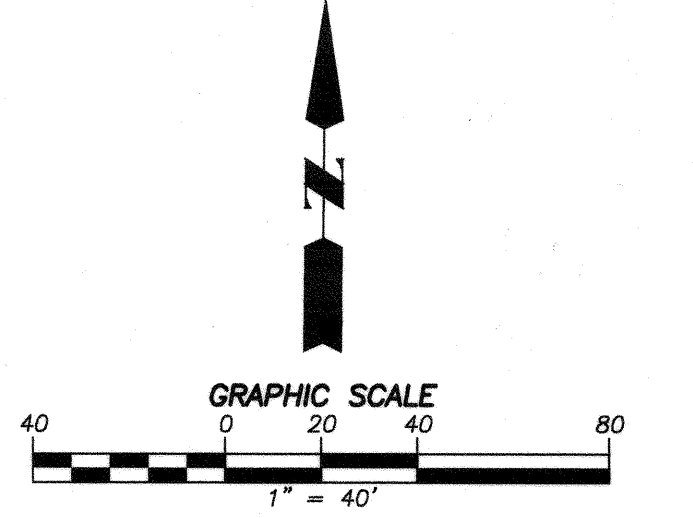
**LEGEND**

- LIMITS OF AC PAVEMENT OVER BASE COARSE
- LIMITS OF COLDMILL AND AC OVERLAY
- POST CONSTRUCTION EROSION CONTROL
- LIMITS OF SLURRY SEAL

**CURVE/LINE DATA**

DELTA/BEARING	RADIUS	LEN/DIST.	TANGENT
N89°43'18"E	-	555.40'	-

**IRONWOOD AVENUE**



**BENCH MARK**  
 A 2 1/2" BRASS DISK IN 2 1/2" IRON PIPE, DOWN 0.8, 33' NORTH OF THE WESTBOUND STATE ROUTE 60, 50 SOUTHWEST OF THE NORTHBOUND FREDERICK STREET ON RAMP TO THE WESTBOUND STATE ROUTE 60, STAMPED "CALIFORNIA DEPARTMENT OF TRANSPORTATION RIV 60-14.46 1990 1/5 5673"  
 ELEVATION: 1680.561' \*NGVD 1929\*

**BASIS OF BEARING**  
 BEARINGS ARE BASED ON THE CENTERLINE OF BOX SPRINGS ROAD AS SHOWN ON TRACT NO. 20272-2, FILED IN MAP BOOK 188 OF MAPS, AT PAGES 10 THROUGH 12 INCLUSIVE, IN THE OFFICE OF THE RECORDER OF RIVERSIDE COUNTY, BEING NORTH 89°43'30" EAST.

MARK	DATE	INITIAL	DESCRIPTION	REC.	APPR.	DATE

MARK	DATE	INITIAL	DESCRIPTION	REC.	APPR.	DATE

**CITY OF MORENO VALLEY APPROVALS**

APPROVED BY	DATE	BY
SUPERVISING SENIOR ENGINEER	2/4/10	
CITY TRAFFIC ENGINEER		
MAINTENANCE AND OPERATIONS MANAGER		
SENIOR ENGINEER	8/10	

PREM KUMAR  
 DEPT. PW DIR. / ASST. CITY ENGINEER  
 R.C.E. #C52463 EXP. 12/31/2010

CHRIS A. VOGT  
 PUBLIC WORKS DIRECTOR/CITY ENGINEER  
 R.C.E. #44280 EXP. 06/30/2011

ENGINEER OF RECORD'S SEAL  
 REGISTERED PROFESSIONAL ENGINEER  
 STEVE J. HOSFORD  
 NO. 42280  
 EXP. 03/31/12  
 CIVIL  
 STATE OF CALIFORNIA

**AEI CASC CONSULTING**  
 937 SOUTH VIA LATA SUITE 500 COLTON, CA 92324  
 PH. (909) 783-0101 FAX (909) 783-0108

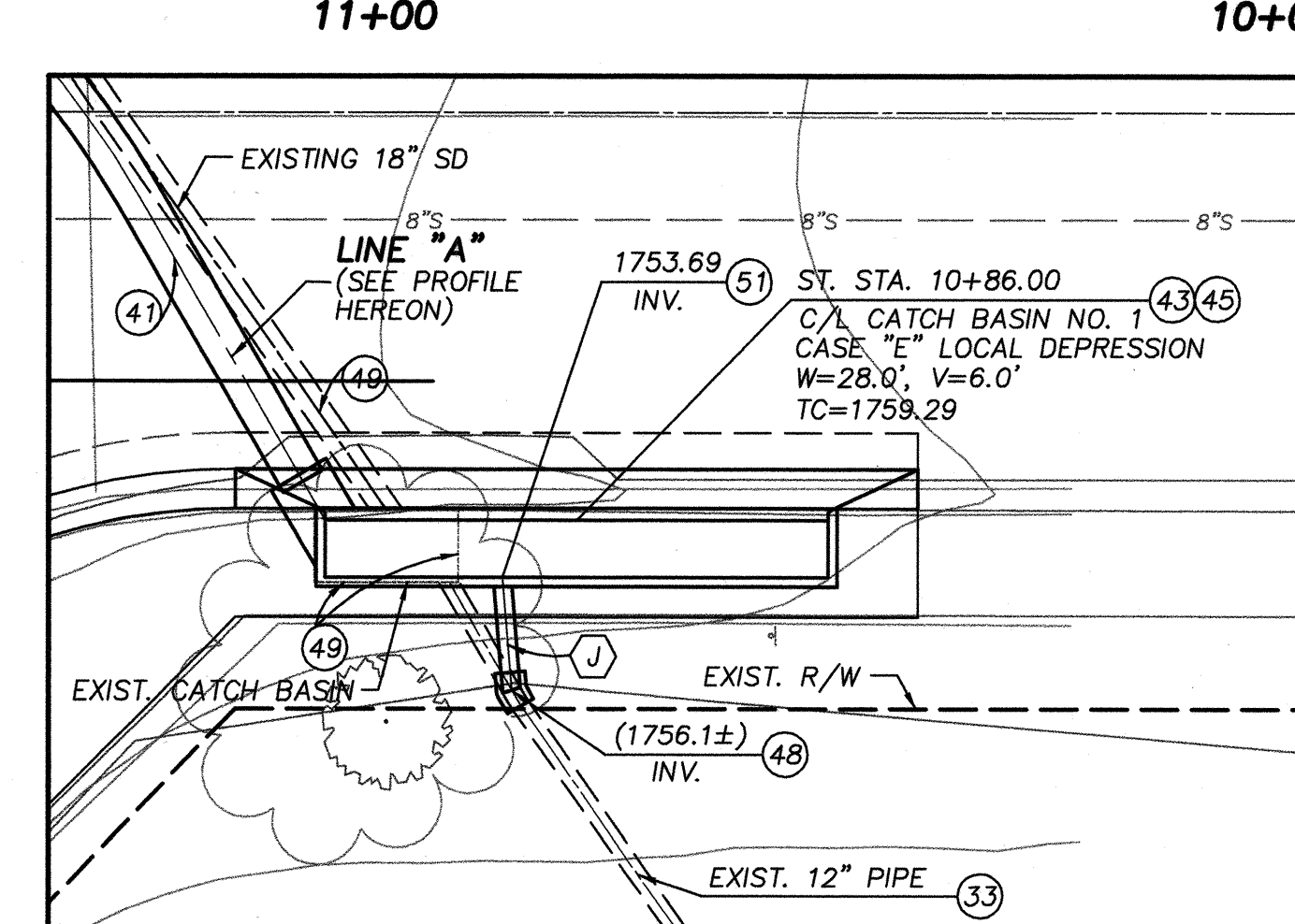
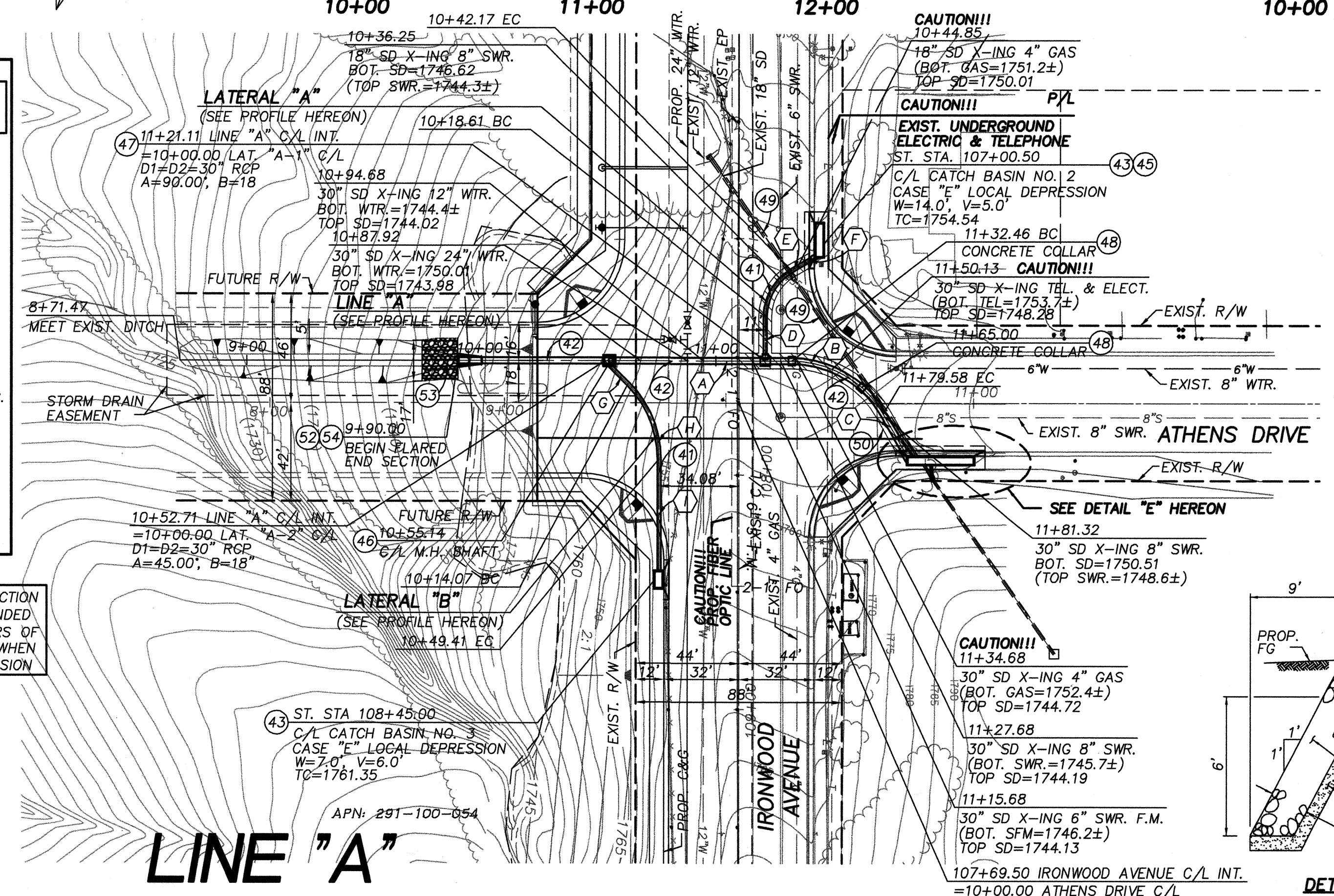
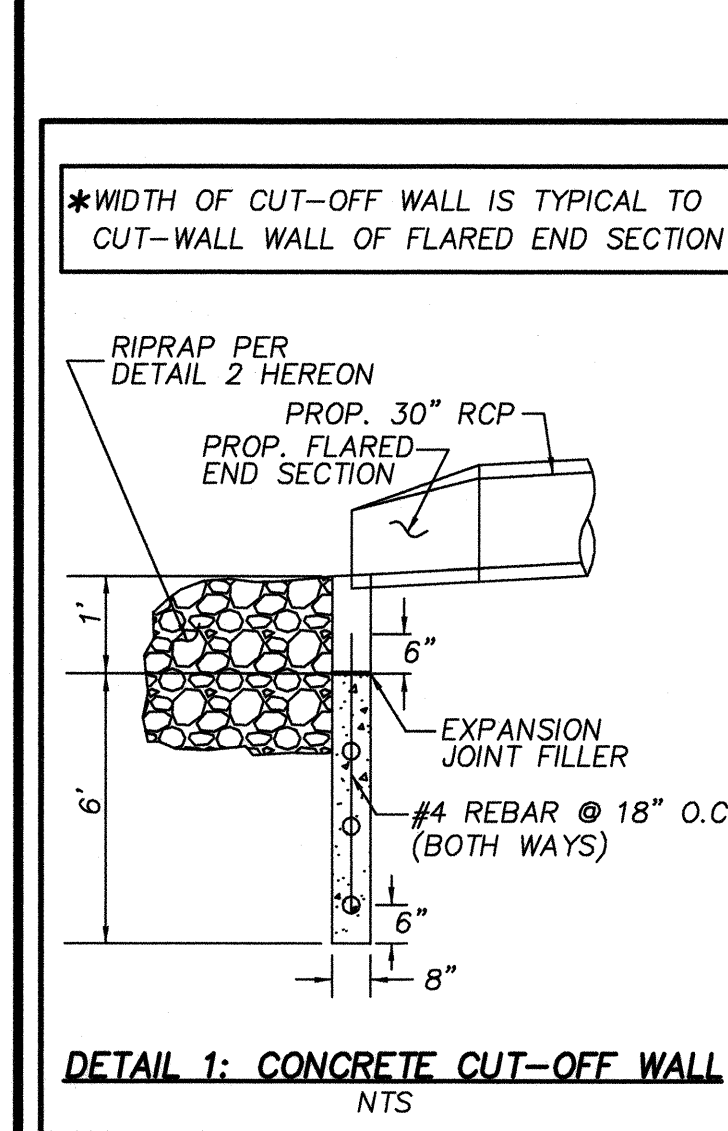
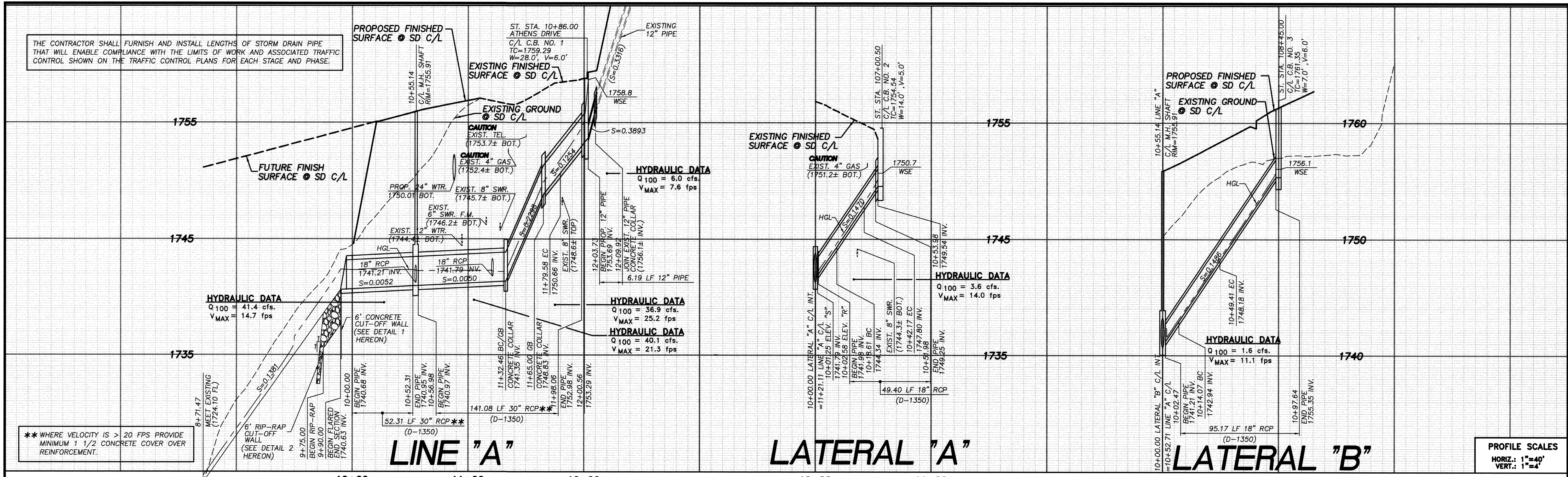
PREPARED UNDER SUPERVISION OF  
 STEVE J. HOSFORD  
 RCE #2280 Exp. Date: 03/31/12

**CITY OF MORENO VALLEY**  
 STREET IMPROVEMENT PLANS  
**IRONWOOD AVENUE**  
 STA. 110+00.00 TO STA. 115+55.40

ACCT. NO. **897.91727**  
 SHEET **5** NO. **42**  
 CITY I. D. NO.

Drawing Name: C:\S61166\Engineering\STREET IMPROVEMENT PLAN\PHASE 1\561166-IRONWOOD\_ST-SHT05.dwg  
 Last Edited: Aug 03, 2010 1:12:40pm by gsmith

Attachment: Appendix E - Preliminary Drainage Study (4070) - General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map PEN19-0150



- ### CONSTRUCTION NOTES
- (3) PROTECT IN PLACE.
  - (4) CONSTRUCT 18" RCP PER PLAN (D LOAD PER PLAN).
  - (5) CONSTRUCT 30" RCP PER PLAN (D LOAD PER PLAN).
  - (6) CONSTRUCT CATCH BASIN PER SPPWC STD. DWG. NO. 300-3.
  - (7) CONSTRUCT MONOLITHIC CATCH BASIN CONNECTION PER SPPWC STD. DWG. NO. 308-2.
  - (8) CONSTRUCT MANHOLE PER SPPWC STD. DWG. NO. 321-2.
  - (9) CONSTRUCT JUNCTION STRUCTURE PER SPPWC STD. DWG. NO. 331-3.
  - (10) CONSTRUCT CONCRETE COLLAR PER SPPWC STD. DWG. NO. 380-4.
  - (11) REMOVE INTERFERING PORTIONS OF EXISTING STORM DRAIN PIPE AND/OR STRUCTURE. FILL ABANDONED PORTION WITH SLURRY.
  - (12) CONSTRUCT TRENCH BACKFILL PER CITY OF MORENO VALLEY STD. DWG. NO. 602A, 602B AND 602C AS APPLICABLE.
  - (13) RECONNECT EXISTING 12" PIPE TO THE PROPOSED CATCH BASIN.
  - (14) CONSTRUCT CONCRETE FLARED END SECTIONS PER CALTRANS STD. DWG. NO. D94B.
  - (15) CONSTRUCT 1/4 TON RIPRAP CHANNEL, T=3' WITH 9" THICK-CRUSHED AGGREGATE BASE FILTER BLANKET AND NON-WOVEN FILTER FABRIC PER DETAILS HEREON.
  - (16) CONSTRUCT 6"-(8" THICK) CONCRETE CUT-OFF WALL PER DETAIL 1 HEREON.

### CURVE/LINE DATA

NO.	DELTA/BEARING	RADIUS	LEN/DIST.	TANGENT
(A)	N00°16'42"W	-	142.46'	-
(B)	60°00'00"	45.00'	47.12'	25.98'
(C)	N59°43'18"E	-	20.98'	-
(D)	N89°43'18"E	-	18.61'	-
(E)	60°00'00"	22.50'	23.56'	12.99'
(F)	N30°16'42"W	-	11.81'	-
(G)	N44°43'18"E	-	14.07'	-
(H)	45°00'00"	45.00'	35.34'	18.64'
(I)	N89°43'18"E	-	48.23'	-
(J)	N84°53'09"E	-	6.19'	-

\*WIDTH OF CUT-OFF WALL IS TYPICAL TO CUT-WALL WALL OF FLARED END SECTION

ALL OPEN TRENCH WORK WITHIN THE INTERSECTION OF ATHENS AND IRONWOOD SHALL BE SUSPENDED AND THE TRENCH PLATED BETWEEN THE HOURS OF 7:00 AND 8:00 AM, AND 2:00 AND 3:00 PM WHEN BOX SPRINGS ELEMENTARY SCHOOL IS IN SESSION

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE.

Underground Service Alert  
Call: TOLL FREE  
1-800-227-2600  
TWO WORKING DAYS BEFORE YOU DIG

MARK	DATE	INITIAL	DESCRIPTION	REC. APPR. DATE
			E.O.R.	

BASIS OF BEARING	
BEARINGS ARE BASED ON THE CENTERLINE OF BOX SPRINGS ROAD AS SHOWN ON TRACT NO. 20272-2, FILED IN MAP BOOK 188 OF MAPS, AT PAGES 10 THROUGH 12 INCLUSIVE, IN THE OFFICE OF THE RECORDER OF RIVERSIDE COUNTY, BEING NORTH 89°43'30" EAST.	

### CITY OF MORENO VALLEY APPROVALS

APPROVED BY	DATE	BY
PREM KUMAR SUPERVISING ENGINEER	8/4/10	
CITY TRAFFIC ENGINEER		
MANAGEMENT AND OPERATIONS MANAGER		
SENIOR ENGINEER	8/4/10	

### ENGINEER OF RECORD'S SEAL

STEVE J. HOSFORD  
REGISTERED PROFESSIONAL ENGINEER  
NO. 42280  
EXP. 03/31/10  
STATE OF CALIFORNIA

AEI CASC CONSULTING  
937 SOUTH VIA LATA SUITE 500  
COLTON, CA 92324  
PH. (909) 783-0101 FAX (909) 783-0108

PREPARED UNDER SUPERVISION OF

STEVE J. HOSFORD  
RCE #2280 Exp. Date: 03/31/10

### CITY OF MORENO VALLEY

STORM DRAIN PLANS  
IRONWOOD AVENUE  
LINE "A" STORM DRAIN  
LAT. "A", LAT. "B"

ACCT. NO. 897.91727  
SHEET 9 NO. 42  
CITY I.D. NO.

Attachment: Appendix E - Preliminary Drainage Study (4070) - General Plan Amendment PE1919-0151, Change of Zone PE1919-0152, and Tentative Parcel Map PE1919-0150

**WEST END MDP LINE CC**

---

FLOW RATES SHOWN ON THESE PLAN SETS COMPARED TO DMA-A

Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

# RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

## GENERAL NOTES

- THE CONTRACTOR SHALL CONSTRUCT THE FLOOD CONTROL IMPROVEMENTS SHOWN ON THE DRAWINGS IN CONFORMANCE WITH THE REQUIREMENTS OF THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT'S MEMORANDUM OF UNDERSTANDING STANDARD SPECIFICATIONS DATED SEPTEMBER 1984, AND DESIGN MANUAL STANDARD DRAWINGS DATED MAY 1971.
- IF AN ENCROACHMENT PERMIT IS REQUIRED FROM RIVERSIDE COUNTY FLOOD CONTROL, THEN CONTACT COEN COWENBERG AT (714) 275-1277. AFTER THE PERMIT IS ISSUED THE DISTRICT MUST BE NOTIFIED ONE WEEK PRIOR TO CONSTRUCTION.
- CONSTRUCTION INSPECTION WILL BE PERFORMED BY RIVERSIDE COUNTY FLOOD CONTROL. CONTACT LEONARD DUNN AT (714) 275-1288. THE DISTRICT MUST BE NOTIFIED TWO WEEKS PRIOR TO CONSTRUCTION.
- ALL STATIONING REFERS TO CENTERLINE OF CONSTRUCTION UNLESS OTHERWISE NOTED.
- STATIONING FOR LATERALS AND CONNECTOR PIPE REFER TO THE CENTERLINE-CENTERLINE INTERSECTION STATION.
- FORTY-EIGHT HOURS BEFORE EXCAVATION, CALL UNDERGROUND SERVICE ALERT 1-800-422-4133.
- ALL ELEVATIONS SHOWN ARE IN FEET AND DECIMALS THEREOF BASED ON U.S.C. & G.S. DATUM.
- ALL CROSS SECTIONS ARE TAKEN LOOKING DOWNSTREAM.
- ELEVATIONS OF UTILITIES ARE APPROXIMATE UNLESS OTHERWISE NOTED.
- OPENINGS RESULTING FROM THE CUTTING OR PARTIAL REMOVAL OF EXISTING CULVERTS, PIPES OR SIMILAR STRUCTURES TO BE ABANDONED SHALL BE SEALED WITH 6" OF CLASS "B" CONCRETE.
- PIPE CONNECTED TO THE MAINLINE PIPE SHALL CONFORM TO JUNCTION STRUCTURE NO. 4 (JS 229) UNLESS OTHERWISE NOTED.
- BEDDING PIPE WITH LESS THAN TWO FEET OF COVER SHALL CONFORM TO LOS ANGELES COUNTY FLOOD CONTROL DISTRICT STANDARD DRAWINGS 2-D213.3 AND 2-D177 FOR CONCRETE BACKFILL IN TRENCHES. ALL OTHER PIPE SHALL CONFORM TO RCF&WCD STD. DWG. M815.
- BH-1 INDICATES SOIL BORING LOCATIONS BASED ON THE SOILS REPORT DATED . . . LOCATIONS SHOWN ARE APPROXIMATE.
- "V" IS THE DEPTH OF INLET OF CATCH BASINS MEASURED FROM THE TOP OF CURB TO INVERT OF CONNECTOR PIPE.
- CATCH BASINS SHALL BE LOCATED SO THAT LOCAL DEPRESSION SHALL BEGIN AT EXISTING CURB RETURN JOINT, UNLESS OTHERWISE SPECIFIED.
- ALL CURBS, GUTTERS, SIDEWALKS, DRIVEWAYS AND OTHER EXISTING IMPROVEMENTS TO BE RECONSTRUCTED IN KIND AND AT THE SAME ELEVATION AND LOCATION AS THE EXISTING IMPROVEMENTS UNLESS OTHERWISE NOTED.

## INDEX

TITLE SHEET	SHEET NO.
MAINLINE PLAN AND PROFILE SHEETS	1 2-6

R.C.F.C.D. STANDARD DRAWINGS	
CB 100	CATCH BASIN NO. 1
CB 107	INLET TYPE IX MODIFIED PER DETAIL ON SHEET 6
JS 227	JUNCTION STRUCTURE NO. 2
LD 201	LOCAL DEPRESSION NO. 2 (CASE B)
LD 201	LOCAL DEPRESSION NO. 2 (CASE C)
MH 252	MANHOLE NO. 2
MH 254	MANHOLE NO. 4
TS 303	TRANSITION STRUCTURE NO. 3
M 803	CONCRETE COLLAR
M 804	TIMBER BULKHEAD

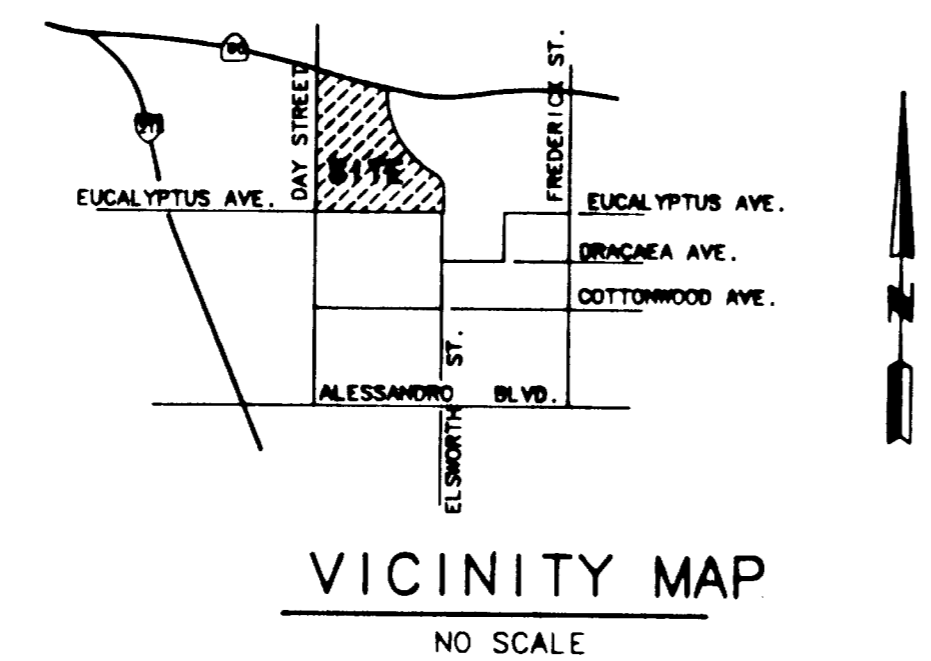
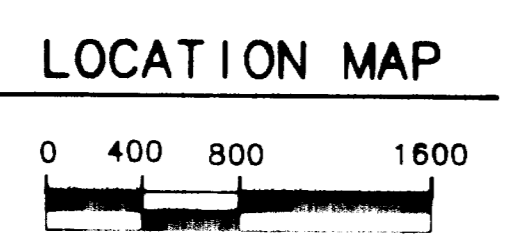
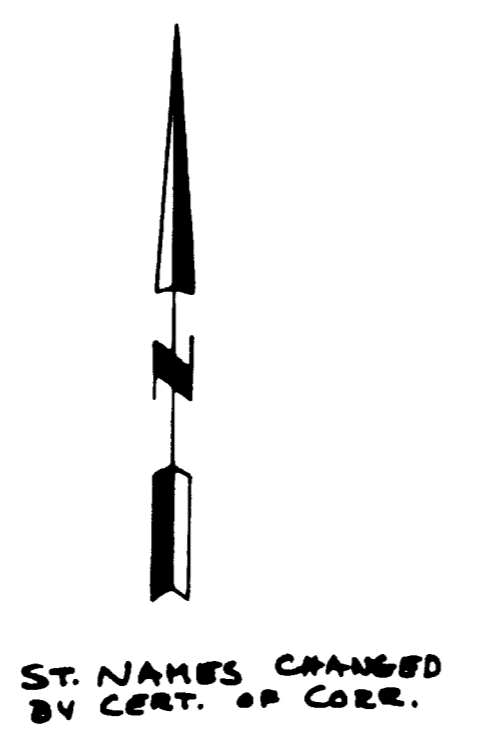
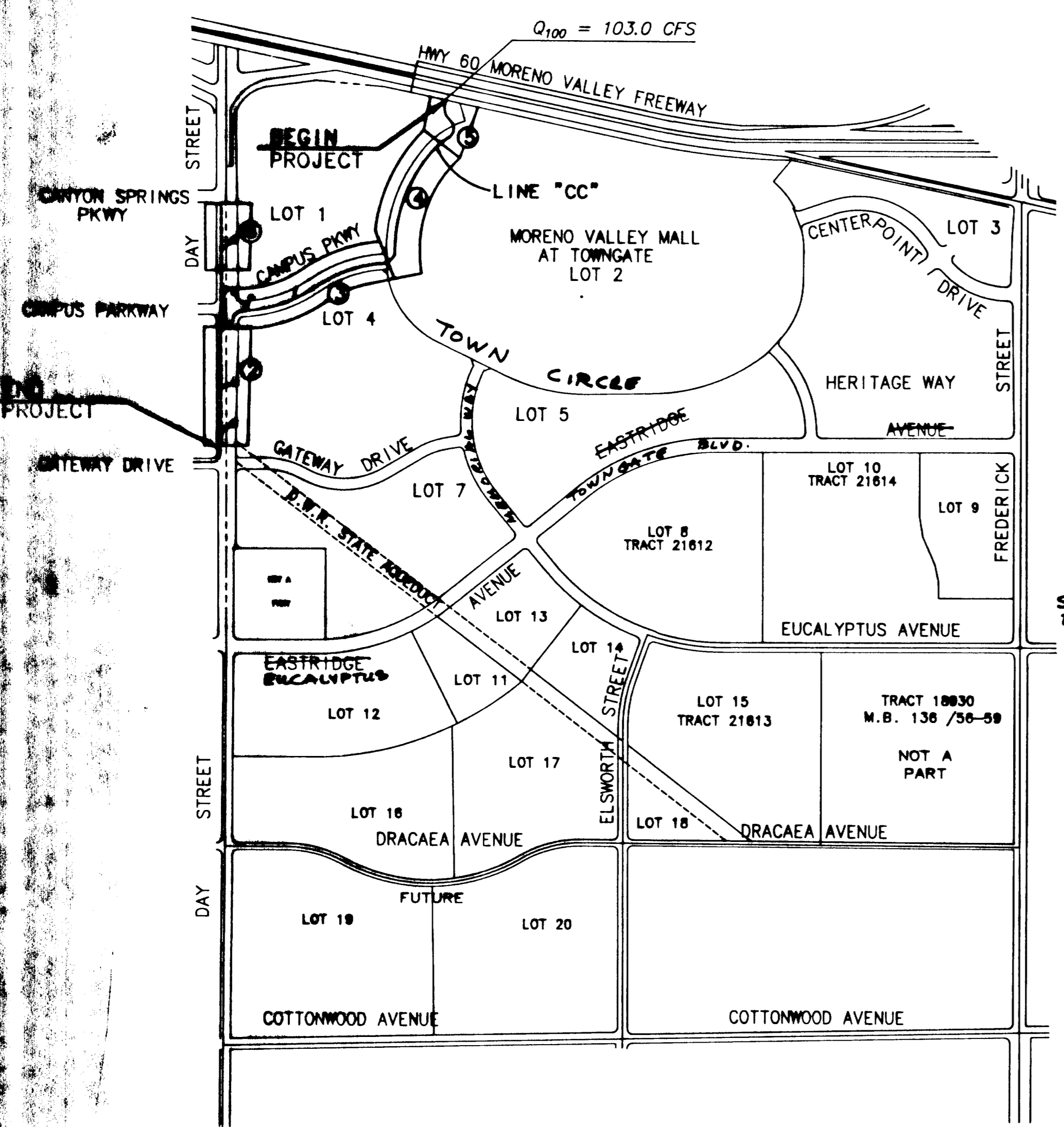
## SPECIAL NOTES

NOTICE: THE CONTRACTOR SHALL NOTIFY THE DISTRICT IN WRITING A MINIMUM OF TWO WEEKS BEFORE BEGINNING CONSTRUCTION, AND SHALL NOT BEGIN CONSTRUCTION BEFORE OBTAINING AUTHORIZATION TO PROCEED.

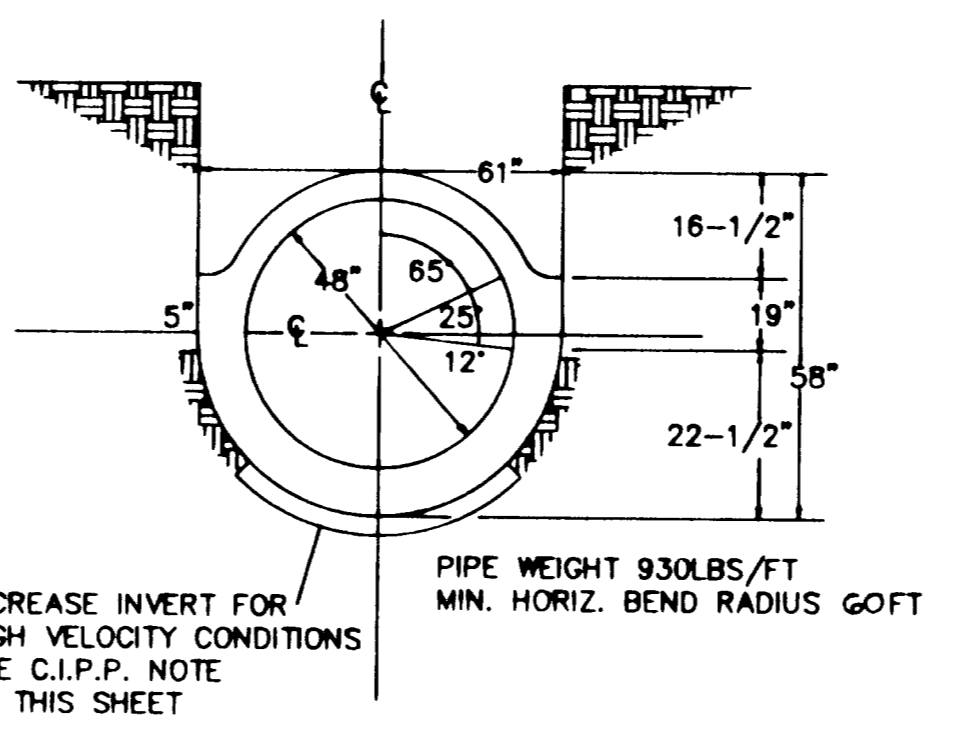
THE CONCRETE COVER ON THE INSIDE OF ALL REINFORCED CONCRETE PIPE MUST BE INCREASED TO PROVIDE A MINIMUM OF 1-1/2" OVER THE REINFORCING WHEN THE DESIGN VELOCITIES EXCEED 20 FEET PER SECOND. THE CONCRETE DESIGN STRENGTH IN THESE REACHES SHALL BE FC = 5,000 PSI FOR VELOCITIES EXCEEDING 20 FEET PER SECOND AND FC = 6,000 PSI FOR VELOCITIES EXCEEDING 30 FEET PER SECOND.

## CAST-IN-PLACE REQUIREMENTS

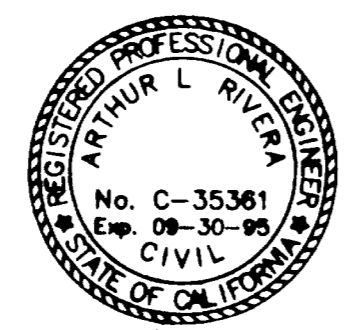
- FOR QUALITY CONTROL DURING PLACEMENT, EMPLOY AN EXPERIENCED R.C.E. OR TECHNICIAN HAVING SUITABLE C.I.P. EXPERIENCE.
- CONTROL CONCRETE BY MEANS OF 6"X 12" TEST CYLINDERS - MINIMUM OF 1 SET OF FOUR (4) CYLINDERS / 100 C.Y. AND NOT LESS THAN TWO (2) SETS CYLINDERS PER EACH DAY'S POUR
- SUPPLYING BATCH PLANT SHALL BE INSPECTED AT THE START OF CONSTRUCTION AND NOT LESS THAN ONCE EACH WEEK THEREAFTER TO OBSERVE PLANT OPERATIONS, BATCH WEIGHTS AND OTHER CONCRETE CONTROL MEASURES.
- CONCRETE MIXES SHALL NOT HAVE LESS THAN SIX (6) SACKS OF PORTLAND CEMENT / CU.YD.
- CONCRETE MIX DESIGNS SHALL BE SUBMITTED BY CONTRACTOR FOR APPROVAL PRIOR TO START OF CONSTRUCTION.
- IF AND WHEN FLOW VELOCITY EXCEEDS 10 F.P.S. A 140' SEGMENT OF THE C.I.P. INVERT SHALL BE THICKENED 2 INCHES IN WALL THICKNESS AS "SACRIFICIAL CONCRETE" TO RESIST ABRASION. COMPRESSIVE STRENGTH OF CONCRETE FOR DESIGN VELOCITIES = 20 F.P.S. SHALL BE FC = 4,000 P.S.I. FOR DESIGN VELOCITIES = 30 F.P.S. FC = 5,000 P.S.I. SHALL BE PROVIDED.
- MAXIMUM PERMISSIBLE CONCRETE SLUMP SHALL BE 2-1/2", 1-1/2" MIN. TO 2-1/2" MAX.
- CONTRACTOR SHALL ALLOW INSPECTOR INTO PIPE WHILE UNDER CONSTRUCTION & "ROD" FOR WALL THICKNESS AT A MIN OF 25 C.Y. OF THE POUR.
- AT THE END OF ALL POURS AND AT THE END OF EACH WORKING DAY THE CONTRACTOR SHALL INSTALL #4 DOWELS 24" LONG 12" INTO THE LAST POUR AT 12" CENTERS AROUND THE CIRCUMFERENCE OF CAST-IN-PLACE PIPE.
- JUNCTION STRUCTURES SHOWN ON THE PLANS ARE FOR REINFORCED CONCRETE PIPE. THE FOLLOWING SUBSTITUTIONS SHALL BE MADE FOR JUNCTION STRUCTURES FOR USE WITH CAST-IN-PLACE PIPE:
  - A JUNCTION STRUCTURE NO. 4 (J.S. 229) SHALL BE REPLACED WITH EITHER A JUNCTION STRUCTURE NO. 2 (J.S. 227) OR A TRANSITION STRUCTURE NO. 3 (T.S. 303).
  - A JUNCTION STRUCTURE NO. 2 (J.S. 227) SHALL BE REPLACED WITH A TRANSITION STRUCTURE NO. 3 (T.S. 303).
- STANDARD DRAWING NO. (J.S. 227) JUNCTION STRUCTURE NO. 2 WHEN USED WITH CAST-IN-PLACE PIPE SHALL BE MODIFIED TO INCLUDE CONCRETE BACKFILL 1 FOOT OVER THE CAST-IN-PLACE PIPE.



## TYPICAL C.I.P. SECTION

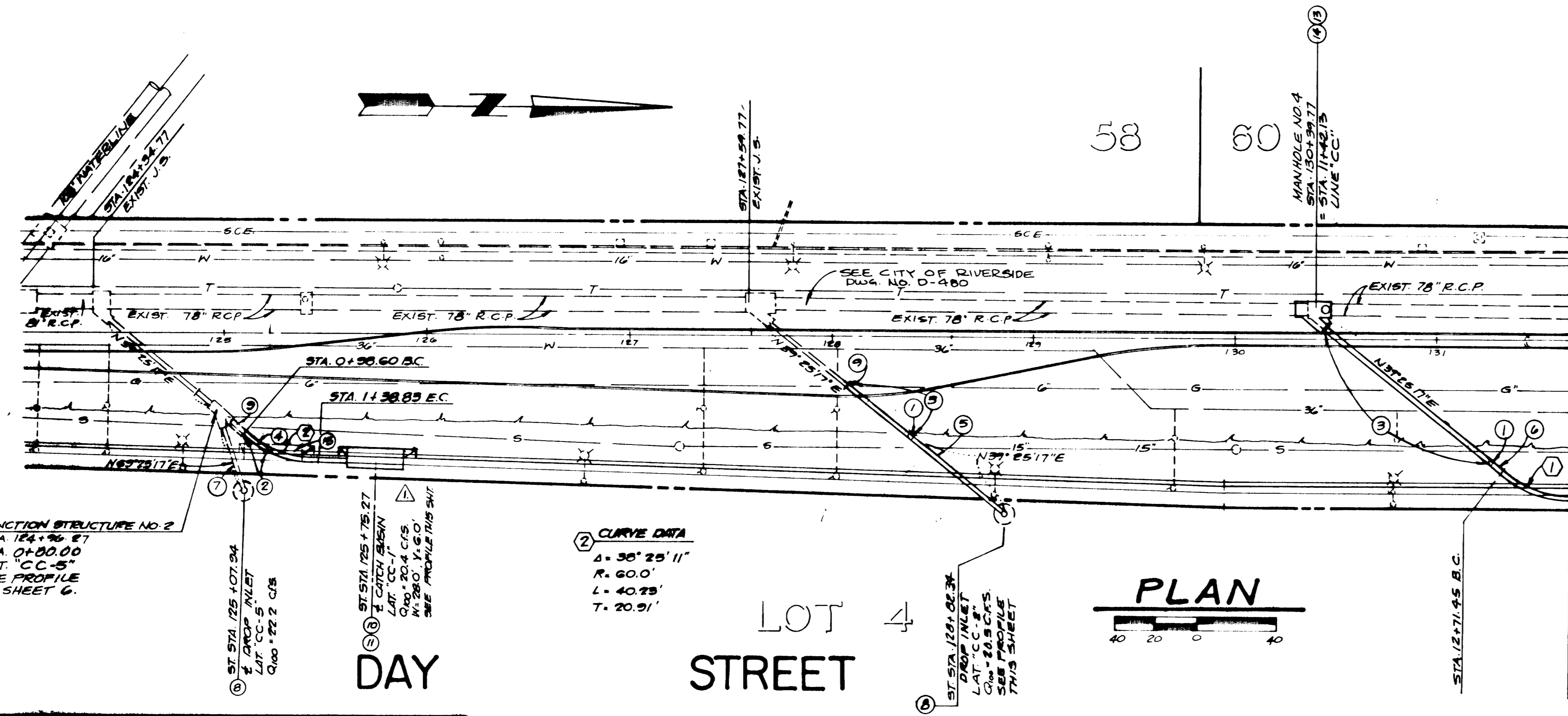
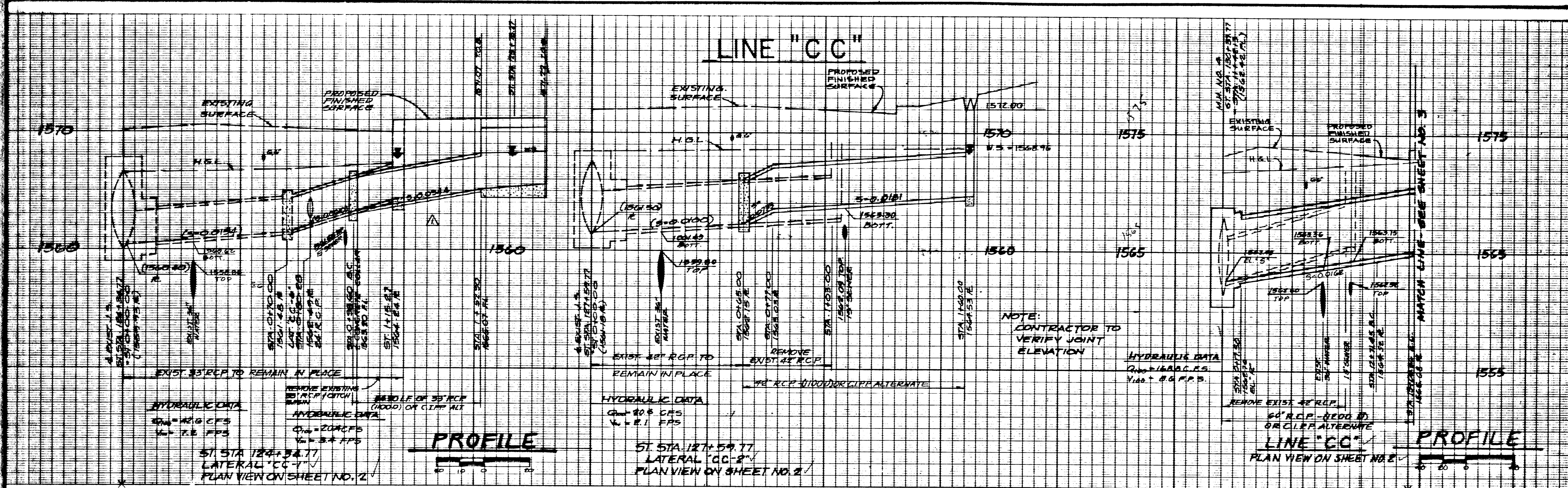


California Council of Civil Engineers & Land Surveyors  
 Undergound Service Alert  
 Call: TOLL FREE  
 1-800-422-4133  
 TWO WORKING DAYS BEFORE YOU DIG



DESIGNED BY: A.R.I.	 C.M.E. QUALITY ASSURANCE REVIEWED BY: DATE AUTHORIZED FOR RELEASE: DATE	BENCH MARK LOCATION: BETWEEN ALESSANDRO BOULEVARD AND SHERMAN AVENUE ON DAY STREET, 180' SOUTH OF SHERMAN AVENUE, 40' EAST OF DAY STREET, 20' NORTHEAST OF POWER POLE NO. 75208, C.W.T. 2' NORTHWEST OF THE SOUTHWEST CORNER OF A 6' CHAIN LINK FENCE, 1' NORTH OF A MARKER POST, A BRASS DISK STAMPED M-82-98 IN THE TOP OF A CONCRETE POST. ELEVATION: 1551.102	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT RECOMMENDED FOR APPROVAL BY: APPROVED BY: PLANNING ENGINEER: CHIEF ENGINEER: DATE:	City of Moreno Valley APPROVED BY: JOHN K. FEENSZRA R.C.E. 13870 EXP. 3/31/93 DEPUTY CITY ENGINEER DATE:	CITY OF MORENO VALLEY WEST END M.D.P. LINE "CC" STORM DRAIN TITLE SHEET TRACT 22049	PROJECT NO.
DRAWN BY: A.S.			DATE: MAY 1991				DESCRIPTION

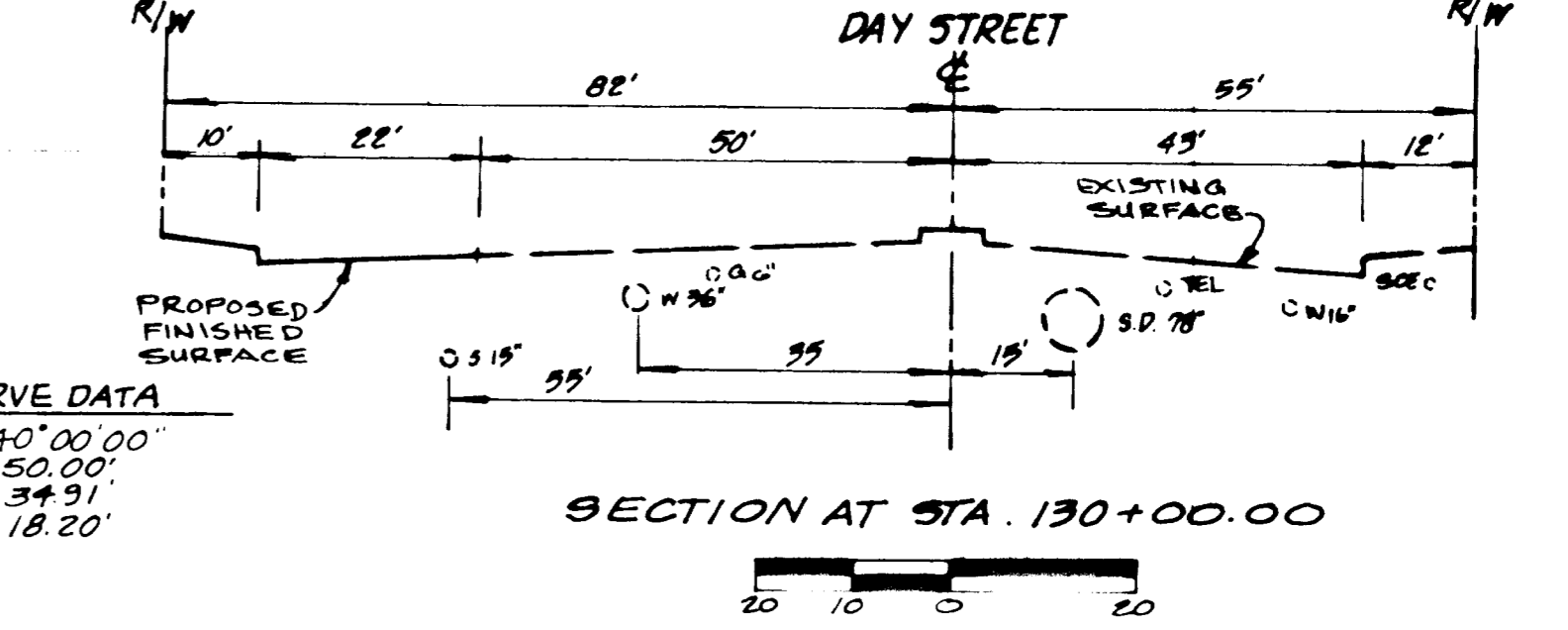




MATCH LINE 3  
SEE SHEET 3  
STA. 13+06.36 E.C.

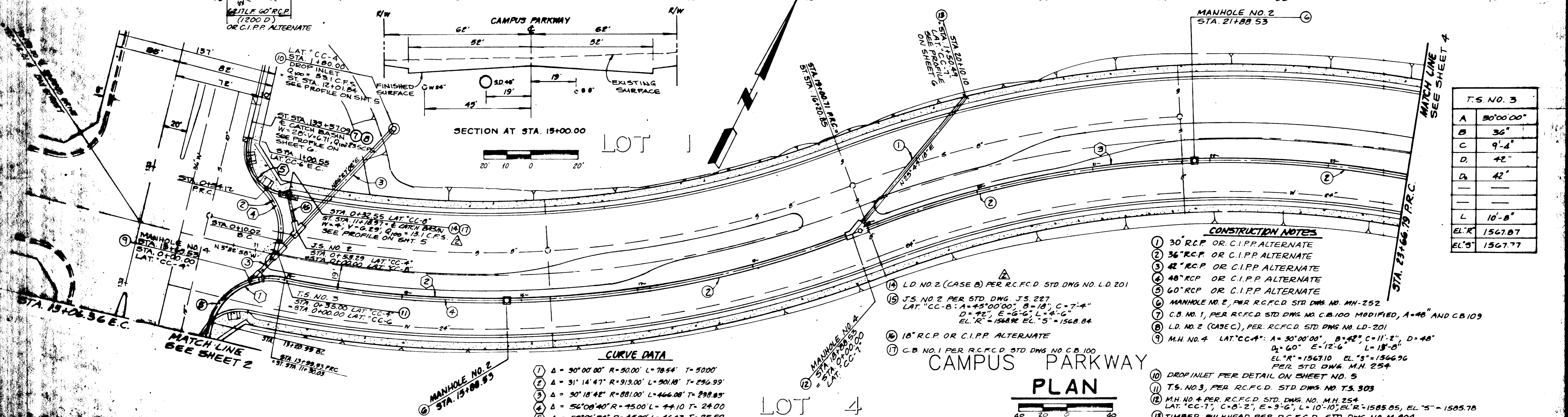
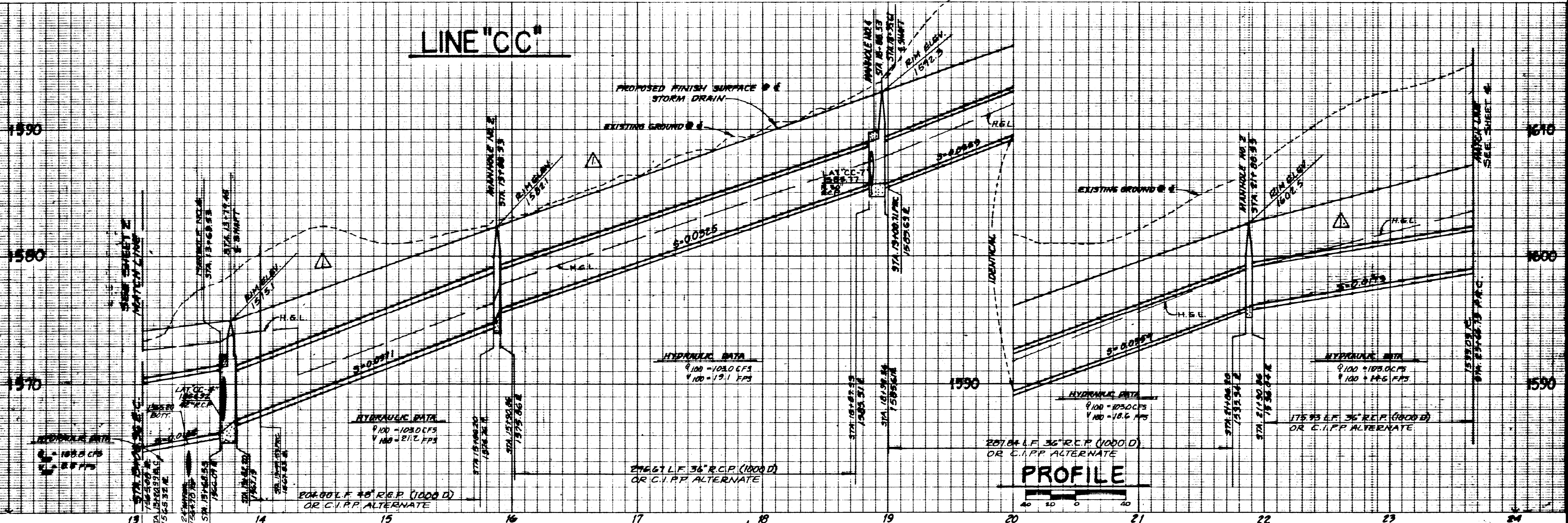
- CONSTRUCTION NOTES**
- REMOVE EXISTING DROP INLET
  - REMOVE EXISTING 33" RCP
  - REMOVE EXISTING 42" RCP
  - 33" RCP OR C.I.P.P. ALTERNATE
  - 42" RCP OR C.I.P.P. ALTERNATE
  - 60" RCP OR C.I.P.P. ALTERNATE
  - 24" RCP
  - DROP INLET PER DETAIL ON SHEET NO. 5
  - CONCRETE COLLAR PER R.C.F.C.D. STD. DWG. NO. M-205
  - C.B. NO. 1, PER R.C.F.C.D. STD. DWG. NO. C.B. 100
  - LD NO. 2 (CASE B), PER R.C.F.C.D. STD. DWG. NO. LD-201
  - J.S. NO. 2, PER R.C.F.C.D. STD. DWG. NO. J.S. 227
  - REMOVE EXISTING MANHOLE
  - M.H. NO. 4 PER R.C.F.C.D. STD. DWG. NO. M.H. 254  
LINE "CC"; C=17'-6", E=16'-6", L=17'-4",  
EL."R"=1562.70 EL."S"=1562.40
  - REMOVE EXISTING CATCH BASIN.

J.S. NO. & AT	STA. 124+36.27
A	50' 08" 00"
B	24'
C	6'-10"
D	33'
E	6'-4"
F	
G	
L	9'-10"
EL."R"	1562.70
EL."S"	1562.57



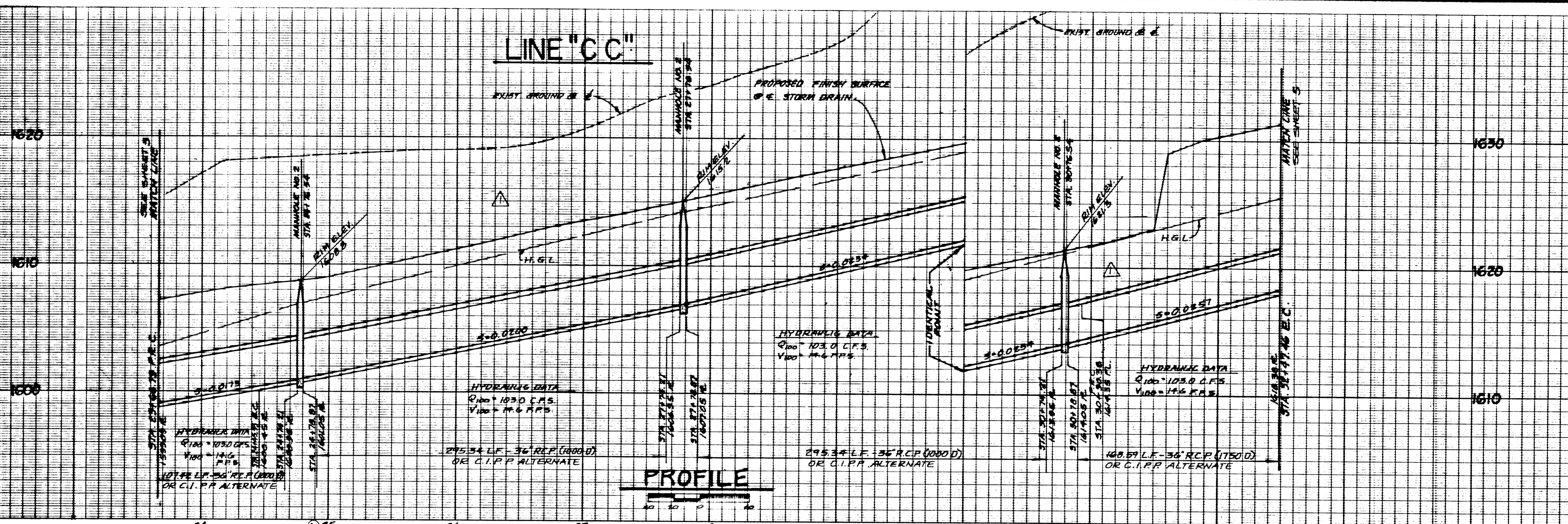
DESIGNED BY: A.R.	<p><b>ENGINEERING ASSOCIATES</b> 225 East Alhambra Drive, San Bernardino, California</p>	BENCH MARK SEE SHEET NO. 1	<p>REVISIONS</p> <table border="1"> <tr> <th>REF.</th> <th>DESCRIPTION</th> <th>APPR. DATE</th> </tr> <tr> <td>1</td> <td>ADDED LATERAL 'CC-1' PLAN &amp; PROFILE</td> <td>JKF 3-3-92</td> </tr> </table>	REF.	DESCRIPTION	APPR. DATE	1	ADDED LATERAL 'CC-1' PLAN & PROFILE	JKF 3-3-92	<p>RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT</p> <p>RECOMMENDED FOR APPROVAL BY: APPROVED BY</p>	<p>CITY OF MORENO VALLEY</p> <p>APPROVED BY: JOHN K. FEENSTRA REGISTERED CIVIL ENGINEER NO. 13870 (Exp. 3/31/93) DATE: 11/14/91</p>	<p>CITY OF MORENO VALLEY WEST END, M.D.P. LINE "CC" STA. 11+42.13 TO STA. 13+06.36 LATERALS "CC-1", "CC-2" &amp; "CC-3" TRACT 22049</p>	<p>PROJECT NO.</p> <p>DRAWING NO.</p> <p>SHEET NO. 2 OF 3</p>
REF.		DESCRIPTION	APPR. DATE										
1	ADDED LATERAL 'CC-1' PLAN & PROFILE	JKF 3-3-92											
CHECKED BY: A.L.R.	<p>DATE: JULY 1991</p>	<p>PLANNING ENGINEER</p>	<p>CHIEF ENGINEER</p>	<p>DATE: 11/14/91</p>									

# LINE "CC"



DESIGNED BY: <b>ARA</b>	<p><b>CM ENGINEERING ASSOCIATES</b> P.O. BOX 6007 1000 N. GARDEN ST. MILPITAS, CA 95034 TEL: (415) 951-1111 FAX: (415) 951-1112</p>	BENCH MARK	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	CITY OF MORENO VALLEY	CITY OF MORENO VALLEY WEST END M. D. P.	PROJECT NO.
DRAWN BY: <b>PC</b>		SEE SHEET NO. 1.	<p>REVISED 3-D ELEV'S (PROFILE)</p> <p>ADDED LATERAL CC-B &amp; C B.A.T.S.</p>	RECOMMENDED FOR APPROVAL BY: <b>APPROVED</b>	APPROVED BY: <b>JOHN K. FEENSTRA</b>	DEPUTY CITY ENGINEER	STA. 13+06.36 TO STA. 23+66.79 TRACT 22049
DATE DRAWN: <b>JULY 2001</b>	<p>APPROVED FOR THE SUBMISSION OF</p> <p><b>Arthur L. Rivera</b></p> <p>ARTHUR L. RIVERA RCE 55561 EXP. 9-30-95</p>		REF. DESCRIPTION APPR. DATE	PLANNING ENGINEER	REGISTERED CIVIL ENGINEER NO. 13870		SHEET NO.
WORKED BY: <b>A.L.R.</b>				DATE	DATE		<b>3 OF 8</b>

# LINE "C C"

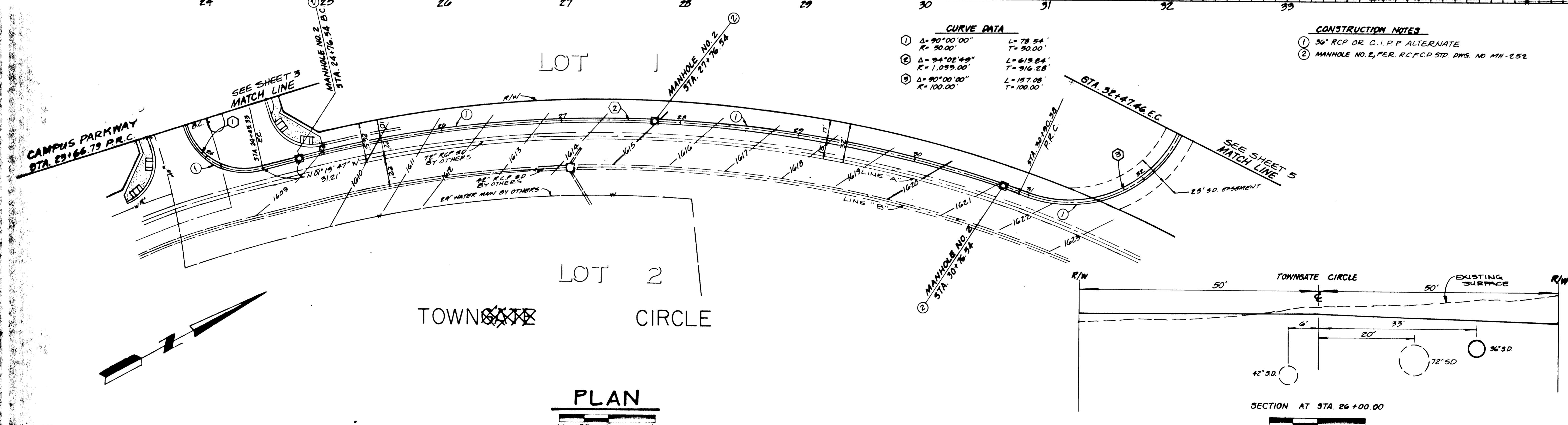


## PROFILE

**CURVE DATA**

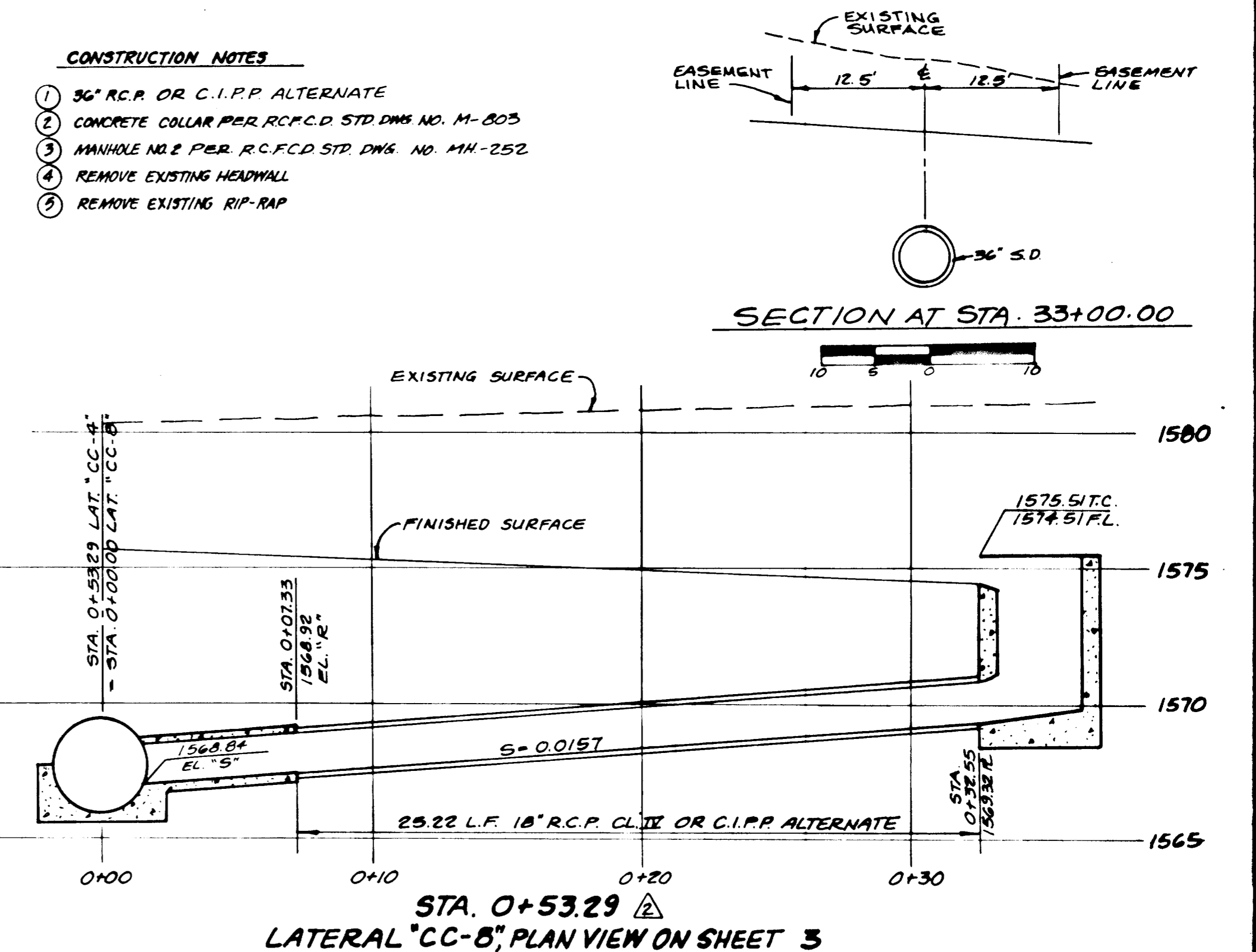
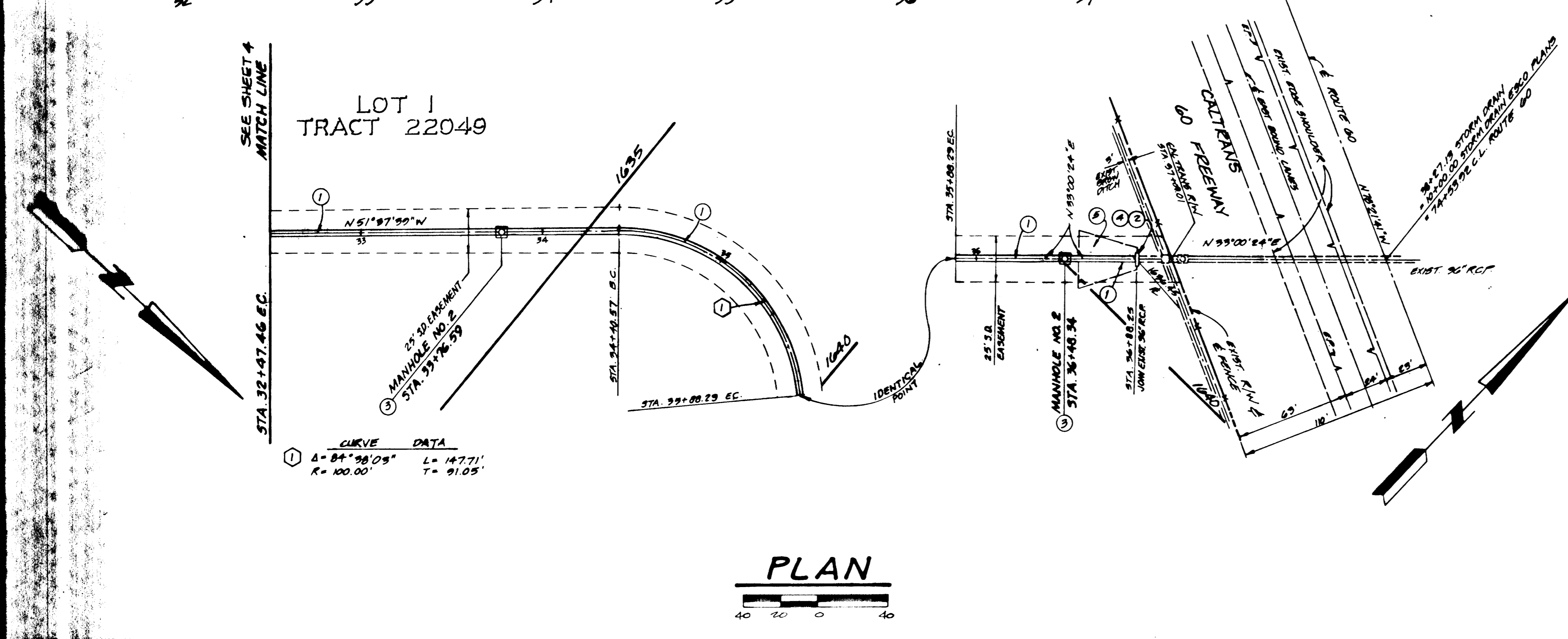
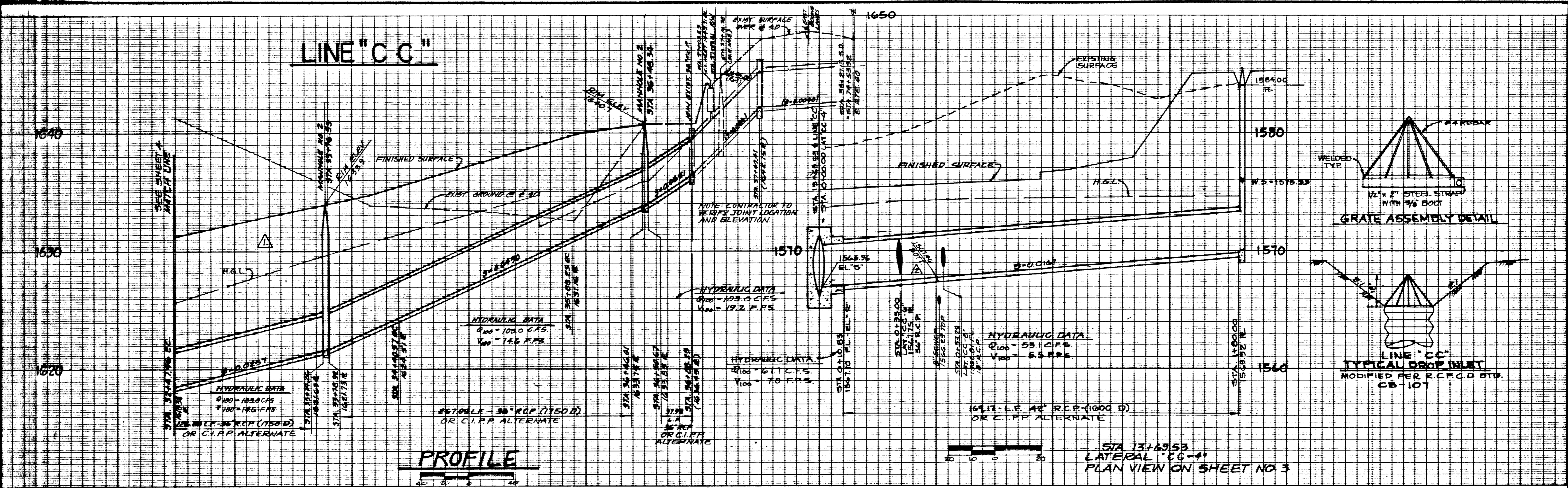
① $\Delta = 90^{\circ}00'00''$ $R = 90.00'$	$L = 78.54'$ $T = 90.00'$
② $\Delta = 94^{\circ}02'49''$ $R = 1,059.00'$	$L = 619.84'$ $T = 916.28'$
③ $\Delta = 90^{\circ}00'00''$ $R = 100.00'$	$L = 187.08'$ $T = 100.00'$

- CONSTRUCTION NOTES**
- 36" RCP OR C.I.P.P. ALTERNATE
  - MANHOLE NO. 2, PER R.C.F.C.D. STD. DMS. NO. MH-252



## PLAN

DESIGNED BY: ARI	<p><b>CM ENGINEERING ASSOCIATES</b>        1401 P.O. Box 0027 - 0042        Phone (714) 944-2024 or (714) 923-2022        250 West Airport Drive, San Bernardino, California</p>	<p>ARTHUR L. RIVERA        No. 35561        Exp. 9-30-95</p>	BENCH MARK	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT RECOMMENDED FOR APPROVAL BY: _____ APPROVED BY: _____ PLANNING ENGINEER: _____ CHIEF ENGINEER: _____ DATE: _____ DATE: _____	CITY OF MORENO VALLEY APPROVED BY: JOHN K. FEENSTRA DEPUTY CITY ENGINEER REGISTERED CIVIL ENGINEER NO. 13870 (Exp. 3/31/85) DATE: 11/14/94	CITY OF MORENO VALLEY WEST END M.D.P. LINE "C C" STA. 23+66.79 TO STA. 32+47.46 TRACT 22049	PROJECT NO.
DRAWN BY: AS			SEE SHEET NO. 1	DATE: JULY 1991				DATE: 11/14
CHECKED BY: ARI	ARTHUR L. RIVERA P.E. 35561 EXP. 9-30-95						4 OF 6	



- CONSTRUCTION NOTES**
- 1 36" R.C.P. OR C.I.P.P. ALTERNATE
  - 2 CONCRETE COLLAR PER R.C.P.C.D STD DWG NO. M-805
  - 3 MANHOLE NO. 2 PER R.C.F.C.D STD DWG NO. MH-252
  - 4 REMOVE EXISTING HEADWALL
  - 5 REMOVE EXISTING RIP-RAP

DESIGNED BY: A.L.L.	<p>CM ENGINEERING ASSOCIATES 1415 P.O. Box 6997 Phone (714) 944-0114 or (714) 944-0092 380 East Alhambra Drive, San Bernardino, California</p> <p>PREPARED UNDER THE SUPERVISION OF <i>Arthur L. Rivera</i> ARTHUR L. RIVERA RCE 35561 EXP 3-30-95 DATE 11/1/91</p>		BENCH MARK	SEE SHEET NO. 1.	<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> <tr> <td>1</td> <td>REVISED SD ELEV'S</td> <td>11/1/91</td> </tr> <tr> <td>2</td> <td>ADDED LATERAL CC-B PROFILE</td> <td>11/1/91</td> </tr> </table>	NO.	DESCRIPTION	DATE	1	REVISED SD ELEV'S	11/1/91	2	ADDED LATERAL CC-B PROFILE	11/1/91	<p>RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT</p> <p>RECOMMENDED FOR APPROVAL BY: _____ APPROVED BY: _____</p> <p>PLANNING ENGINEER: _____ CHIEF ENGINEER: _____</p> <p>DATE: _____ DATE: _____</p>	<p>CITY OF MORENO VALLEY</p> <p>APPROVED BY: JOHN K. FEENSTRA</p> <p>DEPUTY CITY ENGINEER REGISTERED CIVIL ENGINEER NO. 13870 (EXP. 3/31/93) DATE: 11/1/91</p>	<p>CITY OF MORENO VALLEY WEST END M. D. P.</p> <p>LINE "C C" STA. 32+47.46 TO STA. 36+88.25 TRACT 22049</p>	<p>PROJECT NO.</p> <p>DRAWING NO.</p> <p>SHEET NO. 5 OF 6</p>
NO.			DESCRIPTION	DATE														
1			REVISED SD ELEV'S	11/1/91														
2			ADDED LATERAL CC-B PROFILE	11/1/91														
DRAWN BY: A.C.																		
DATE DRAWN: MAY 1991																		
CHECKED BY: A.L.S.																		

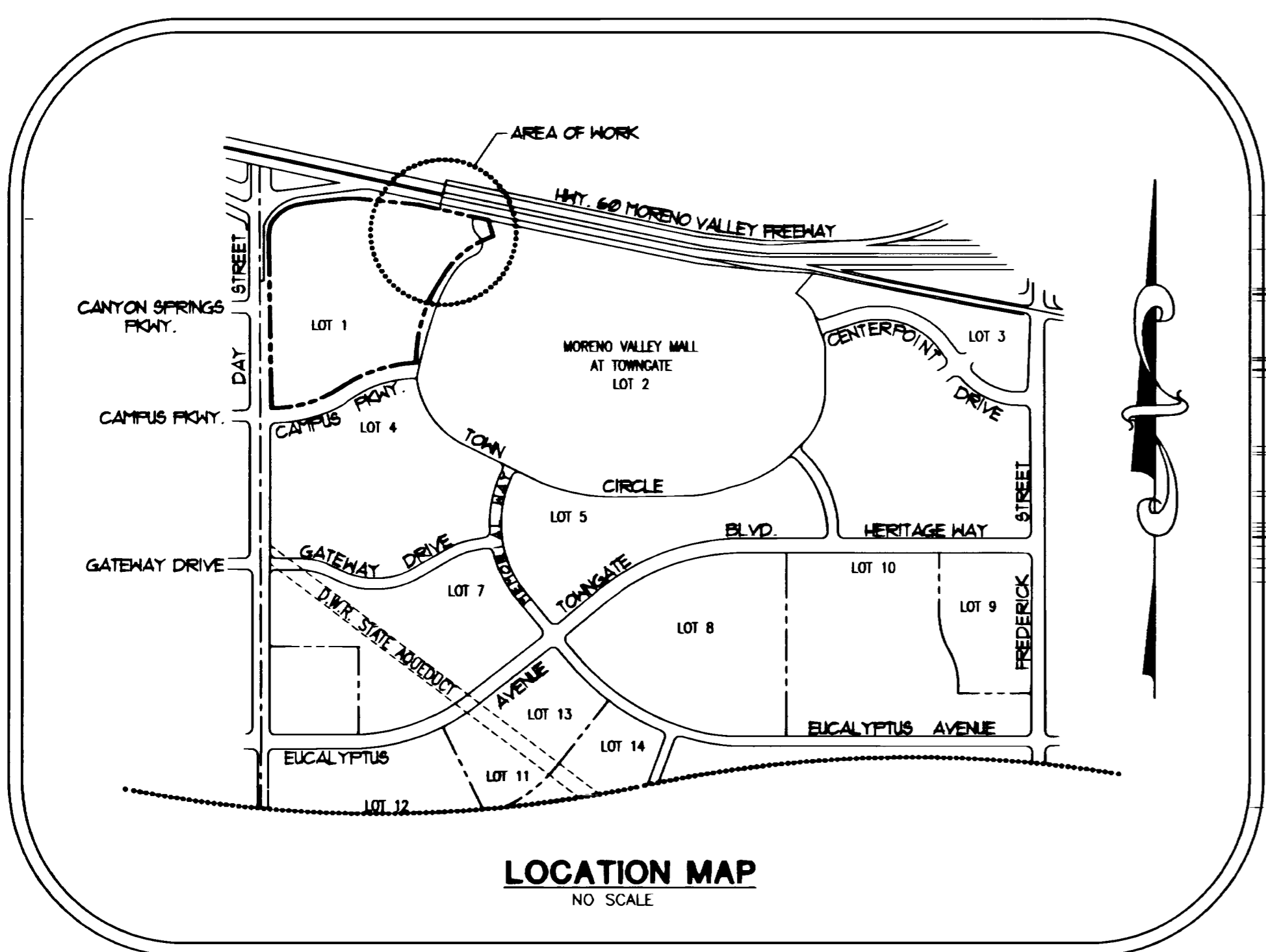


**LOWES STORM DRAIN RELOCATION PLAN**

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LINE CC RELOCATED AROUND LOWE'S DEVELOPMENT - SHOWN FOR REFERENCE ONLY

Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and



### GENERAL NOTES

1. ALL WORK CALLED FOR ON THE PLANS SHALL BE IN COMPLIANCE WITH CURRENT CITY STANDARD SPECIFICATIONS, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE CITY SPECIAL PROVISIONS FOR THE SUBJECT PROJECT.
2. THE CONTRACTOR BEFORE UNDERTAKING ANY GRADING OR CONSTRUCTION WORK OF ANY TYPE WITHIN THE PUBLIC RIGHT OF WAY, MUST FIRST OBTAIN A CONSTRUCTION PERMIT FROM THE LAND DEVELOPMENT PROCESSING CENTER.
3. A TEMPORARY STREET CLOSURE PERMIT IS REQUIRED IN ALL CASES WHERE WORK WILL INTERFERE WITH EITHER VEHICULAR OR PEDESTRIAN TRAFFIC.
4. INSPECTION BY THE CITY OF THE WORK CALLED FOR ON THE PLANS SHALL NOT, IN ANY WAY, RELIEVE THE CONTRACTOR AND/OR THE DEVELOPER OF THEIR OBLIGATION TO PERFORM THE WORK IN COMPLIANCE WITH THE PLANS AND SPECIFICATIONS.
5. ALL ALTERATIONS OR VARIANCES FROM THE PLANS, EXCEPT MINOR ADJUSTMENTS IN THE FIELD TO MEET EXISTING CONDITIONS, SHALL BE REQUESTED IN WRITING AND MAY NOT BE INSTITUTED UNTIL APPROVED BY THE CITY ENGINEER OR HIS REPRESENTATIVES.
6. ALL ELEVATIONS SHOWN ON THE PLAN ARE ESTABLISHED BY LOCAL BENCH MARK. SURVEY MONUMENTS SHALL BE PROTECTED IN PLACE.
7. QUANTITIES, AS SHOWN ON THE PLANS, ARE ESTIMATED, AND THE CONTRACTOR IS ADVISED THAT ALL FINAL QUANTITIES OF MATERIAL AND WORK IN PLACE MAY BE SOMEWHAT GREATER OR LESS THAN THOSE INDICATED ON THE PLANS.
8. IRRIGATION LINES WITHIN ANY CITY STREET SHALL HAVE A THIRTY INCH MINIMUM COVER FROM FINISH SURFACE, UNLESS SAID IRRIGATION LINE IS ENCASED IN CONCRETE OR BEDDED IN A SPECIAL CONCRETE CRADLE.
9. THE CONTRACTOR SHALL OPERATE IN A MANNER COMPLIANT WITH ALL APPLICABLE SECTIONS OF THE MUNICIPAL CODE AND COMPLIANT WITH ALL APPLICABLE CITY COUNCIL RESOLUTIONS.
10. THE LOCATION OF UNDERGROUND UTILITY OR IRRIGATION LINES, AS SHOWN ON THE PLANS, IS APPROXIMATE, AND SINCE THE ACTUAL LOCATION MAY BE SOMEWHAT DIFFERENT FROM THAT SHOWN, THE CONTRACTOR IS REQUIRED TO CONTACT THE INTERESTED UTILITY OR WATER COMPANY BEFORE EXCAVATING IN THE VICINITY OF ANY SUCH LINES.
11. PARKWAY TREES, INSTALLED BY THE DEVELOPER, SHALL BE PLANTED AND MAINTAINED IN COMPLIANCE WITH THE APPROPRIATE CITY STANDARD.
12. ALL STREET NAME AND TRAFFIC REGULATORY SIGNS INDICATED ON THE PLANS WILL BE INSTALLED BY THE DEVELOPER IN ACCORDANCE WITH THE APPROPRIATE CITY STANDARDS.
13. ALL STREET LIGHTS INDICATED ON THE PLANS SHALL BE INSTALLED BY THE LOCAL ELECTRIC UTILITY COMPANY. THE DEVELOPER SHALL WORK DIRECTLY WITH THE COMPANY WHEN THE LIGHTS ARE TO BE SERVED FROM AN UNDERGROUND SYSTEM.
14. AN APPROVED WEED KILLER SHALL BE APPLIED TO THE PREPARED BASE PRIOR TO ASPHALT PAVING IN ALL AREAS WHERE THERE IS ANY EVIDENCE OF HUMUS OR ORGANIC MATERIAL PRESENT IN THE BASE (EITHER NATIVE OR IMPORTED) MATERIAL. ALL WEED KILLERS SHALL BE APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS.
15. PROVISIONS SHALL BE MADE BY THE CONTRACTOR FOR CONTRIBUTORY DRAINAGE AT ALL TIMES.

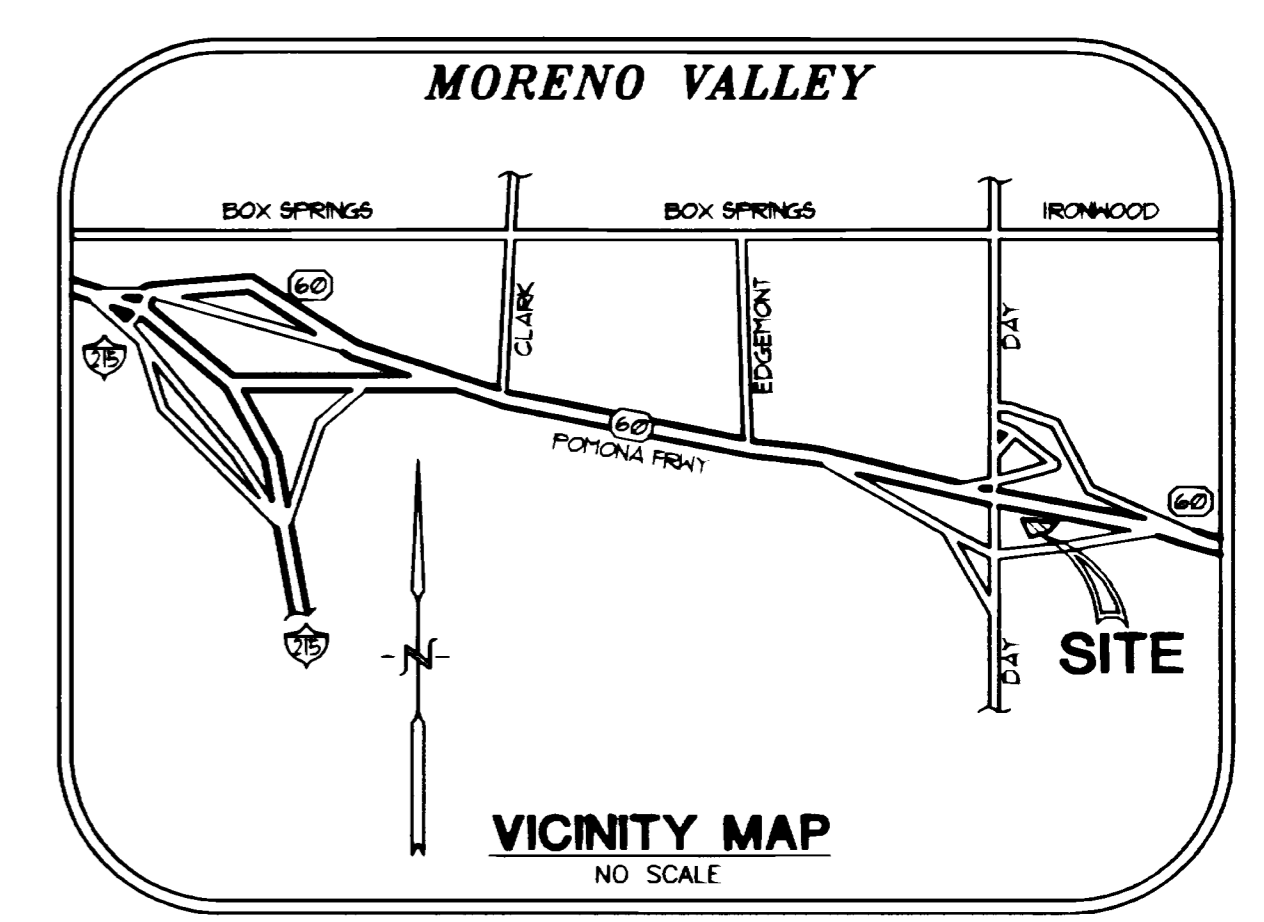
### SPECIAL NOTES

NOTICE: THE CONTRACTOR SHALL NOTIFY THE DISTRICT IN WRITING A MINIMUM OF TWO WEEKS BEFORE BEGINNING CONSTRUCTION, AND SHALL NOT BEGIN CONSTRUCTION BEFORE OBTAINING AUTHORIZATION TO PROCEED.

THE CONCRETE COVER ON THE INSIDE OF ALL REINFORCED CONCRETE PIPE MUST BE INCREASED TO PROVIDE A MINIMUM OF 1-1/2" OVER THE REINFORCING WHEN THE DESIGN VELOCITIES EXCEED 20 FEET PER SECOND. THE CONCRETE DESIGN STRENGTH IN THESE REACHES SHALL BE FC=5,000 PSI FOR VELOCITIES EXCEEDING 20 FEET PER SECOND PER SECOND AND FC=6,000 PSI FOR VELOCITIES EXCEEDING 30 FEET PER SECOND.

PRIOR TO COMMENCING ANY PROJECT A REGIONAL WATER QUALITY CONTROL BOARD SHEFF MUST BE APPROVED AND THE BOARD PERMIT NO. (WQID NO.) MUST BE PROVIDED TO THE CITY OF MORENO VALLEY.

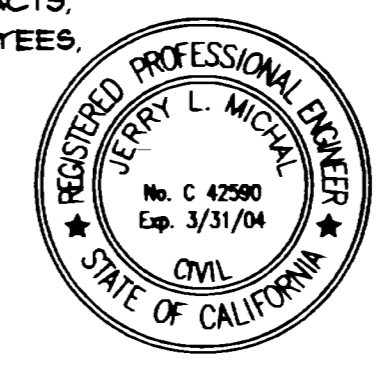
PRIOR TO ISSUANCE OF A PERMIT FOR CONSTRUCTION THE CONTRACTOR MUST ARRANGE A PRE-CONSTRUCTION MEETING WITH THE CITY INSPECTOR BY CALLING: (909) 413-3110



### DECLARATION OF ENGINEER OF RECORD

I HEREBY DECLARE THAT THE DESIGN OF THE IMPROVEMENTS AS SHOWN ON THESE PLANS COMPLIES WITH PROFESSIONAL ENGINEERING STANDARDS AND PRACTICES. AS THE ENGINEER IN RESPONSIBLE CHARGE OF THE DESIGN OF THESE IMPROVEMENTS, I ASSUME FULL RESPONSIBLE CHARGE FOR SUCH DESIGN. I UNDERSTAND AND ACKNOWLEDGE THAT THE PLAN CHECK OF THESE PLANS BY THE CITY OF MORENO VALLEY IS A REVIEW FOR THE LIMITED PURPOSE OF ENSURING THAT THE PLANS COMPLY WITH CITY PROCEDURES, APPLICABLE POLICIES AND ORDINANCES. THE PLAN CHECK IS NOT A DETERMINATION OF THE TECHNICAL ADEQUACY OF THE DESIGN OF THE IMPROVEMENTS. SUCH PLAN CHECK DOES NOT, THEREFORE, RELIEVE ME OF MY RESPONSIBILITY FOR THE DESIGN OF THESE IMPROVEMENTS. AS ENGINEER OF RECORD, I AGREE TO INDEMNIFY AND HOLD THE CITY OF MORENO VALLEY, ITS OFFICERS, AGENTS, AND EMPLOYEES HARMLESS FROM ANY AND ALL LIABILITY, CLAIMS, DAMAGES OR INJURIES TO ANY PERSON OR PROPERTY WHICH MIGHT ARISE FROM THE NEGLIGENCE, ACTS, ERRORS OR OMISSIONS OF THE ENGINEER OF RECORD, ANY EMPLOYEES, AGENTS OR CONSULTANTS.

*Jerry L. Michal* 42590 4-5-2002  
 JERRY L. MICHAL LICENSE NUMBER DATE



### R.C.F.C.D. STANDARD DRAWINGS

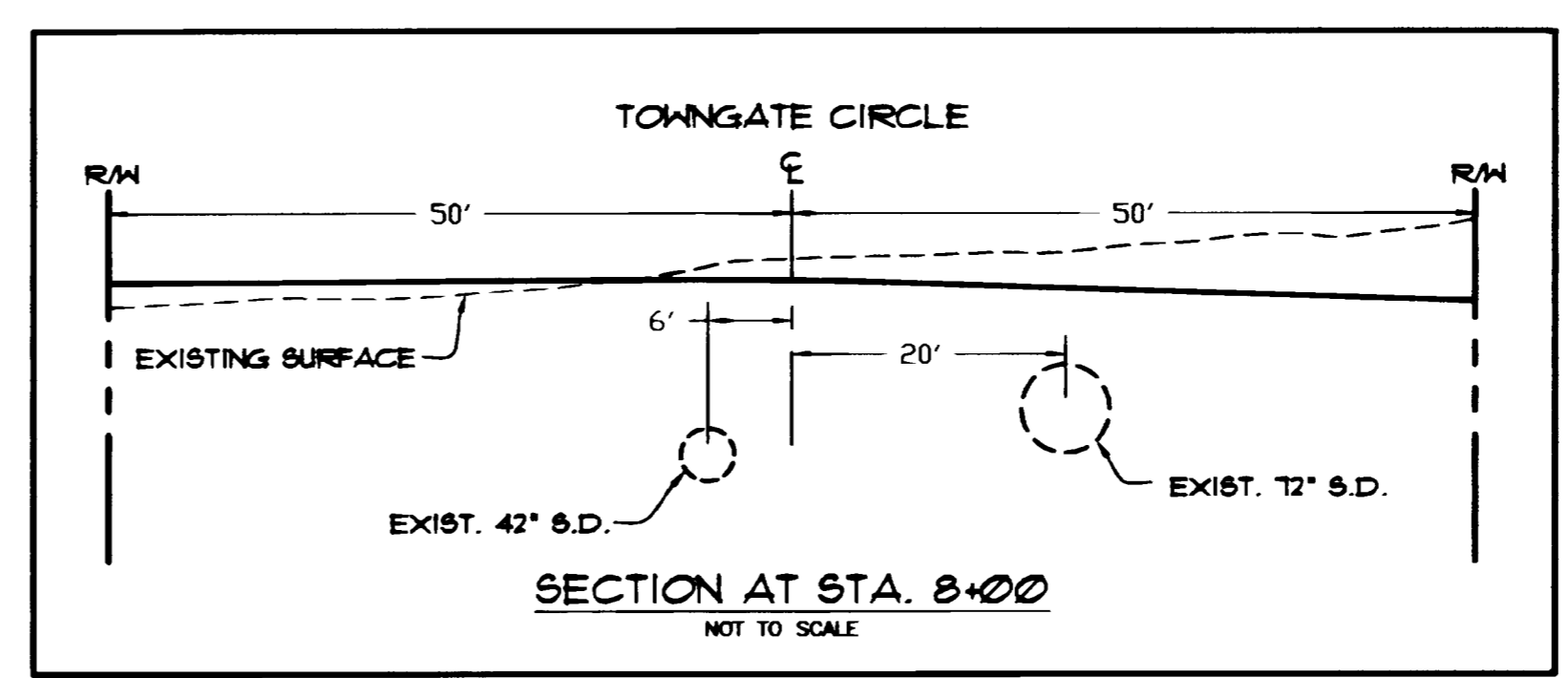
CB 100	CATCH BASIN NO. 1
CB 107	INLET TYPE IX MODIFIED PER DETAIL ON SHEET B
JS 221	JUNCTION STRUCTURE NO. 2
LD 201	LOCAL DEPRESSION NO. 2 (CASE B)
LD 201	LOCAL DEPRESSION NO. 2 (CASE C)
MH 252	MANHOLE NO. 2
MH 254	MANHOLE NO. 4
TS 303	TRANSITION STRUCTURE NO. 3
M 803	CONCRETE COLLAR
M 804	TIMBER BULKHEAD

### INDEX

1 OF 4	TITLE SHEET
2 OF 4	STORM DRAIN RELOCATION PLAN & PROFILE
3 OF 4	STORM DRAIN RELOCATION PLAN & PROFILE
4 OF 4	STORM DRAIN DEMO & RELOCATION PLAN

### STORM DRAIN GENERAL NOTES

1. THE CONTRACTOR SHALL CONSTRUCT THE FLOOD CONTROL IMPROVEMENTS SHOWN ON THE DRAWINGS IN CONFORMANCE WITH THE REQUIREMENTS OF THE RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT'S MEMORANDUM OF UNDERSTANDING STANDARD SPECIFICATIONS DATED SEPTEMBER 1984, AND DESIGN MANUAL STANDARD DRAWINGS DATED MAY 1971.
2. AN ENCROACHMENT PERMIT IS REQUIRED FROM THE CITY OF MORENO VALLEY. CONTACT CITY DESK AT AT (909) 413-3120. AFTER THE PERMIT IS ISSUED THE CITY MUST BE NOTIFIED ONE WEEK PRIOR TO CONSTRUCTION.
3. CONSTRUCTION INSPECTION WILL BE PERFORMED BY CITY OF MORENO VALLEY PUBLIC WORKS INSPECTOR. CONTACT THE PUBLIC WORK INSPECTORS AT (909) 413-3110 TWO WEEKS PRIOR TO CONSTRUCTION.
4. ALL STATIONING REFERS TO CENTERLINE OF CONSTRUCTION UNLESS OTHERWISE NOTED.
5. STATIONING FOR LATERALS AND CONNECTOR PIPE REFER TO THE CENTERLINE-CENTERLINE INTERSECTION STATION.
6. FORTY-EIGHT HOURS BEFORE EXCAVATION, CALL UNDERGROUND SERVICE ALERT (800) 422-4133.
7. ALL ELEVATIONS SHOWN ARE IN FEET AND DECIMALS THEREOF BASED ON U.S.C. & G.S. DATUM.
8. ALL CROSS SECTIONS ARE TAKEN LOOKING DOWNSTREAM.
9. ELEVATIONS OF UTILITIES ARE APPROXIMATE UNLESS OTHERWISE NOTED.
10. OPENING RESULTING FROM THE CUTTING OR PARTIAL REMOVAL OF EXISTING CULVERTS, PIPES OR SIMILAR STRUCTURES TO BE ABANDONED SHALL BE SEALED WITH 6" OF CLASS "B" CONCRETE.
11. PIPE CONNECTED TO THE MAINLINE PIPE SHALL CONFORM TO JUNCTION STRUCTURE NO. 4 (JS 225) UNLESS OTHERWISE NOTED.
12. BEDDING PIPE WITH LESS THAN TWO FEET OF COVER SHALL CONFORM TO LOS ANGELES COUNTY FLOOD CONTROL DISTRICT STANDARD DRAWINGS 2-D213.3 AND 2-D111 FOR CONCRETE BACKFILL IN TRENCHES. ALL OTHER PIPE SHALL CONFORM TO RCF & WCD STD. DWS. 1815.
13. BH-1 INDICATES SOIL BORING LOCATIONS BASED ON THE SOILS REPORT DATED 15 AUG 2001. LOCATIONS SHOWN ARE APPROXIMATE.
14. "V" IS THE DEPTH OF INLET OF CATCH BASINS MEASURED FROM THE TOP OF CURB TO INVERT OF CONNECTOR PIPE.
15. CATCH BASINS SHALL BE LOCATED SO THAT LOCAL DEPRESSION SHALL BEGIN AT EXISTING CURB RETURN JOINT, UNLESS OTHERWISE SPECIFIED.
16. ALL CURBS, GUTTERS, SIDEWALKS, DRIVEWAYS AND OTHER EXISTING IMPROVEMENTS TO BE RECONSTRUCTED IN KIND AND AT THE SAME ELEVATION AND LOCATION AS THE EXISTING IMPROVEMENTS UNLESS OTHERWISE NOTED.



California Council of Civil Engineers & Land Surveyors  
 Construction contractor agrees that in accordance with generally accepted construction practices, construction contractor will be required to assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property, that the requirement shall be made to apply continuously and not be limited to normal working hours, and construction contractor further agrees to defend, indemnify and hold design professional harmless from any and all liability, real or alleged, in connection with the performance of work on this project, excepting liability arising from the sole negligence of design professional.

UNAUTHORIZED CHANGES & USES  
 CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.

Underground Service Alert  
 Call: TOLL FREE 1-800-422-4133  
 TWO WORKING DAYS BEFORE YOU DIG

DESIGNED BY: DFS  
 DRAWN BY: JSB  
 DATE DRAWN: 4/5/02  
 CHECKED BY: J.L.M.

**ANTHONY-TAYLOR CONSULTANTS**  
 San Diego County  
 304 Enterprise St.  
 Escondido, CA 92029  
 (760) 738-8800  
 Fax (760) 738-8232

PREPARED BY: *Jerry L. Michal*  
 JERRY L. MICHAL EXP. 3/31/04

R.C.E. NO. C 42590  
 DATE 4-5-2002

C.M.E.A. QUALITY ASSURANCE  
 REVIEWED BY: DATE  
 AUTHORIZED FOR RELEASE: DATE

BENCH MARK:  
 LOCATION:  
 BETWEEN ALESSANDRO BOULEVARD AND SHERMAN AVENUE ON DAY STREET, 180' SOUTH OF SHERMAN AVENUE, 49' EAST OF DAY STREET, 28' NORTHWEST OF POWER POLE NO. 75208, CIVIL 7' NORTHWEST OF THE SOUTHWEST CORNER OF A 6' CHAIN LINK FENCE, 1' NORTH OF A MARKER POST, A BRASS DISK STAMPED M-62-09 IN THE TOP OF A CONCRETE POST.  
 ELEVATION: 1551.102

REVISIONS		
REF.	DESCRIPTION	APP'D DATE

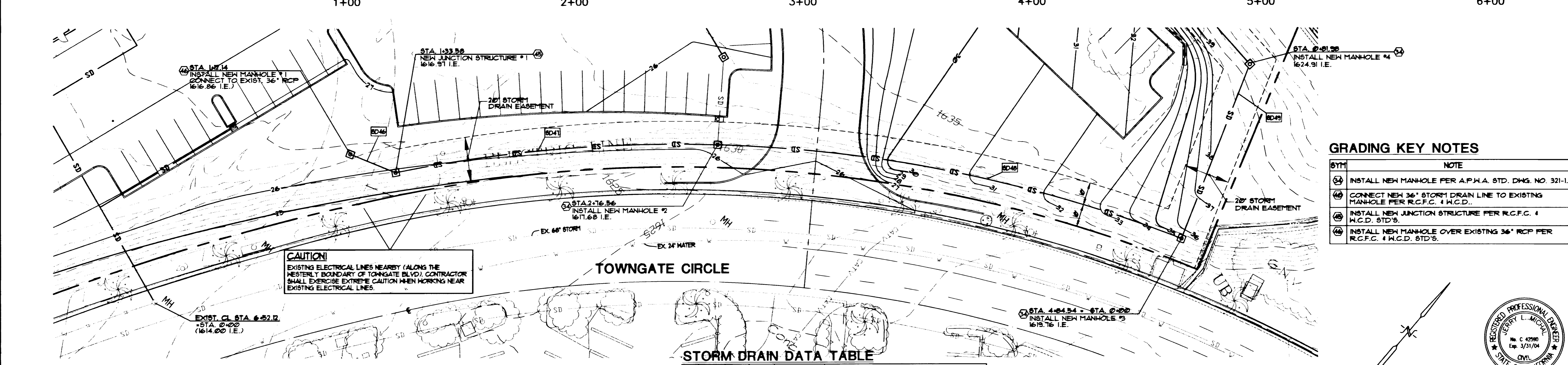
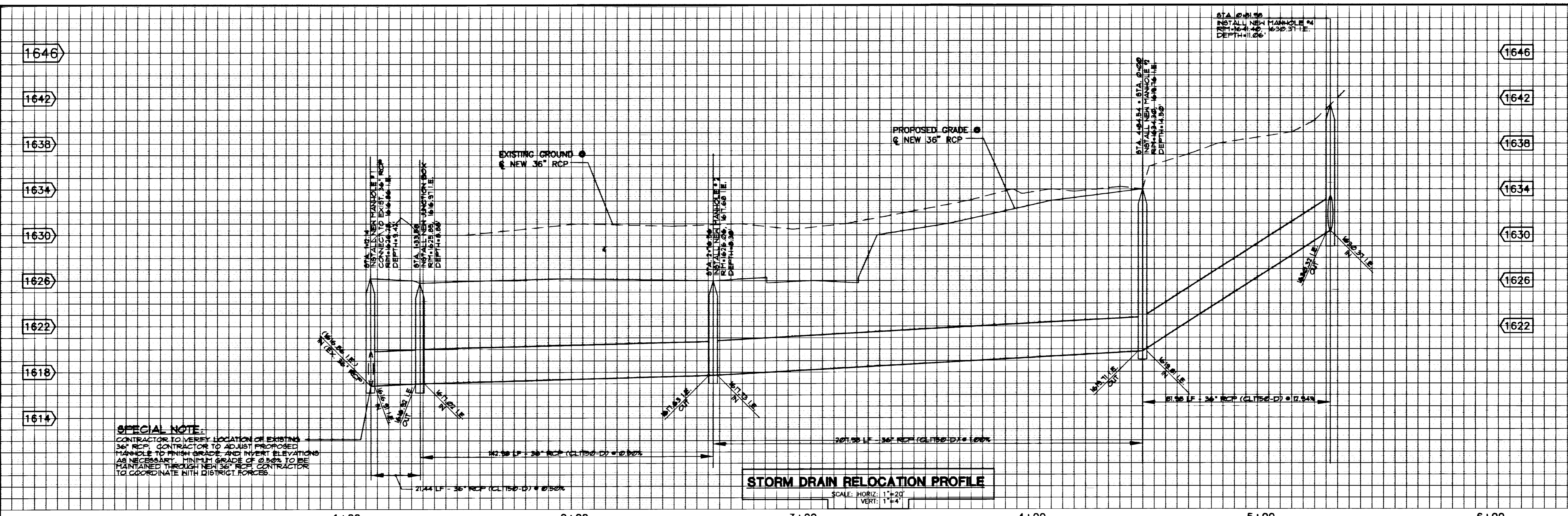
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT  
 RECOMMENDED FOR APPROVAL BY: APPROVED BY:  
 PLANNING ENGINEER: DATE: CHIEF ENGINEER: DATE:

City of Moreno Valley  
 APPROVED BY: IRENE D. PULLIAM  
 R.C.E. 20517 EXP. 9/30/05  
 CITY ENGINEER: DATE: 4/11/02

CITY OF MORENO VALLEY  
 LOWES STORM DRAIN RELOCATION PLAN  
 TITLE SHEET  
 TRACT 22049

PROJECT NO. 00-1787  
 DRAWING NO. 1787-ST-COVER.DWG  
 SHEET NO. 1 OF 4

Attachment: Appendix E - Preliminary Drainage Study (4670) : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map PEN19-0150



**STORM DRAIN DATA TABLE**

SYM	LENGTH	SIZE	SLOPE	TYPE	NOTES
SD46	21.44'	36"	0.50%	RCP-CL-1750D	BEDDING PER R.C.F.C. & W.C.D. STD. DNG. NO. M85
SD41	142.98'	36"	0.50%	RCP-CL-1750D	BEDDING PER R.C.F.C. & W.C.D. STD. DNG. NO. M85
SD48	201.98'	36"	1.00%	RCP-CL-1750D	BEDDING PER R.C.F.C. & W.C.D. STD. DNG. NO. M85
SD49	81.98'	36"	0.34%	RCP-CL-1750D	BEDDING PER R.C.F.C. & W.C.D. STD. DNG. NO. M85

California Council of Civil Engineers & Land Surveyors  
Construction contractor agrees that in accordance with generally accepted construction practices, construction contractor will be required to assume sole and complete responsibility for job site conditions during the course of construction of the project, including safety of all persons and property that the requirement shall be made to apply continuously and not be limited to normal working hours, and construction contractor further agrees to defend, indemnify and hold design professional harmless from any and all liability, real or alleged, in connection with the performance of work on this project, excepting liability arising from the sole negligence of design professional.

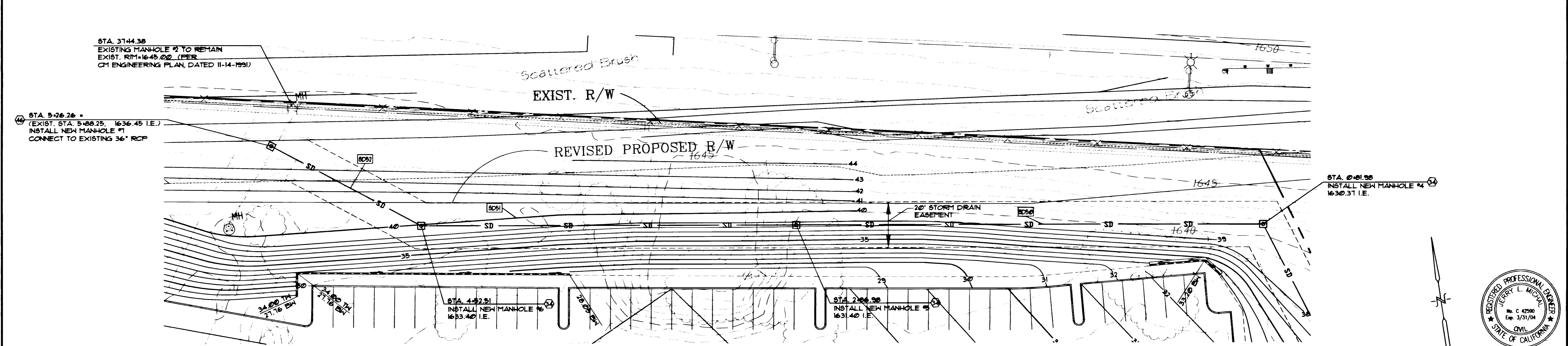
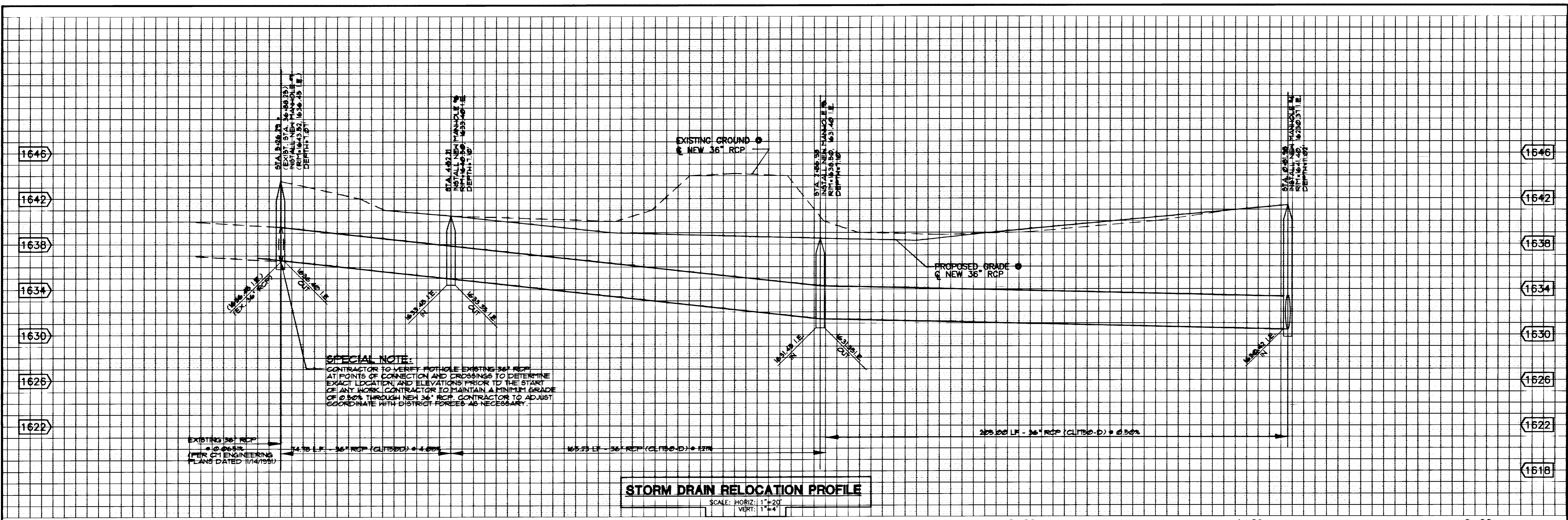
**UNAUTHORIZED CHANGES & USES**  
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**Underground Service Alert**  
Call: TOLL FREE 1-800-422-4133  
TWO WORKING DAYS BEFORE YOU DIG

DESIGNED BY: D.S.		QUALITY ASSURANCE	BENCH MARK LOCATION: BETWEEN ALESSANDRO BOULEVARD AND SHERMAN AVENUE ON DAY STREET, 180' SOUTH OF SHERMAN AVENUE, 49' EAST OF DAY STREET, 28' NORTHWEST OF POWER POLE NO. 75208, C.W.T. 2, NORTHWEST OF THE SOUTHWEST CORNER OF A 6' CHAIN LINK FENCE, 1' NORTH OF A MARKER POST, A BRASS DISK STAMPED M-62-89 IN THE TOP OF A CONCRETE POST. ELEVATION: 1551.102	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	City of Moreno Valley		CITY OF MORENO VALLEY LOWES STORM DRAIN RELOCATION PLAN	PROJECT NO. 00-1787
DRAWN BY: D.S.		REVIEWED BY: DATE	APPROVED BY: T. D. PULLIAM	PLANNING ENGINEER	APPROVED BY: TRENT D. PULLIAM	R.C.E. 20517		PLAN AND PROFILE SHEET TRACT 22049	DRAWING NO. 1787-STIM-2.DWG
DATE DRAWN: 4/5/02		AUTHORIZED FOR RELEASE: DATE	CHIEF ENGINEER	DATE	CHIEF ENGINEER	EXP. 9/30/05			SHEET NO. 2 OF 4
CHECKED BY: J.L.M.			DATE: 4/1/02		DATE: 4/1/02	CITY ENGINEER			

Attachment: Appendix E - Preliminary Drainage Study (4070) - General Plan Amendment (PEN19-0151), Change of Zone (PEN19-0152), and Tentative Parcel Map (PEN19-0150)





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1-800-422-4133  
TWO WORKING DAYS BEFORE YOU DIG

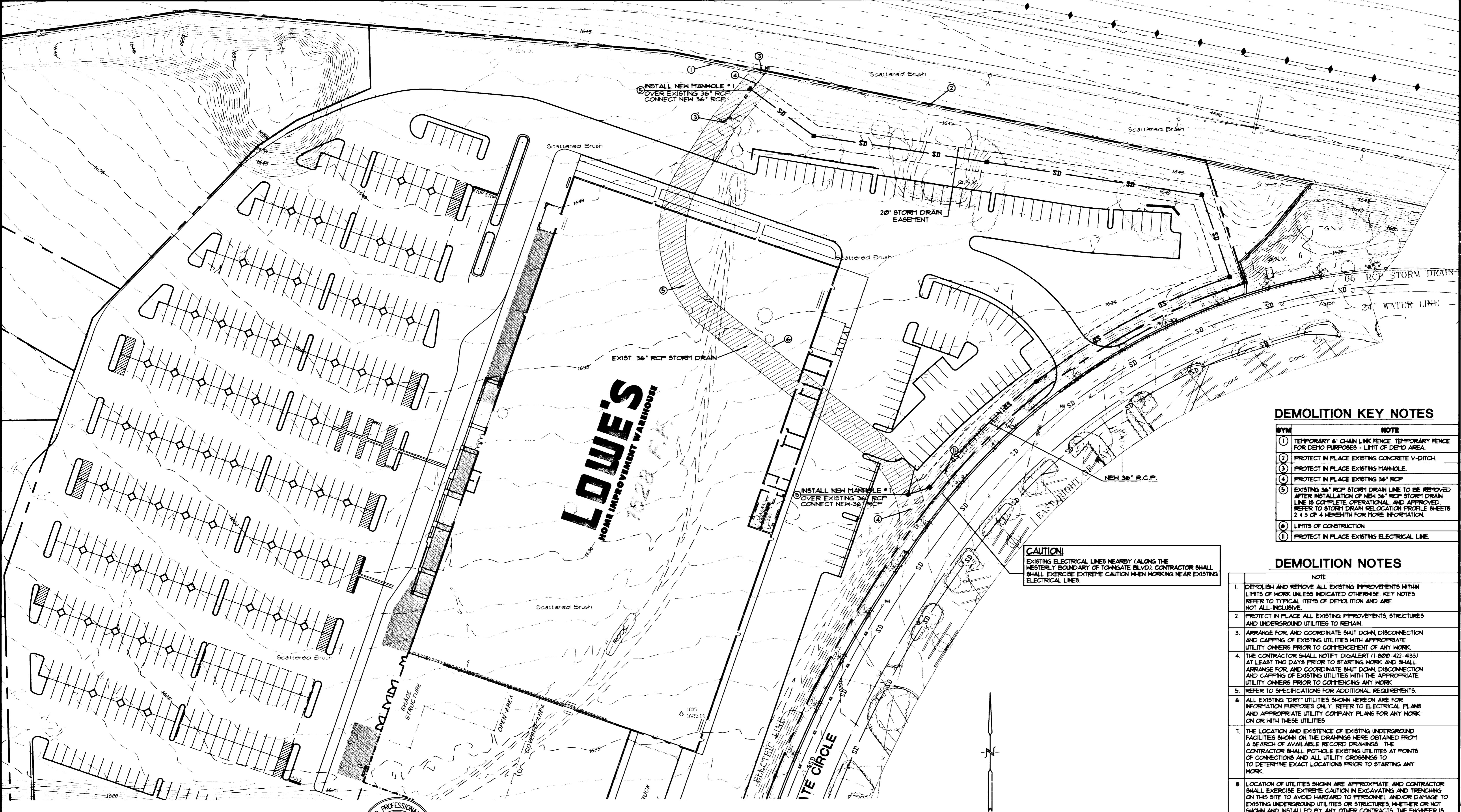
**STORM DRAIN DATA TABLE**

STM	LENGTH	SIZE	SLOPE	TYPE	NOTES
SD50	205.00'	36"	0.50%	RCP-CL-1750D	BEDDING PER R.C.F.C. 4 W.C.D. STD. DNG. NO. M85
SD51	165.23'	36"	1.2%	RCP-CL-1750D	BEDDING PER R.C.F.C. 4 W.C.D. STD. DNG. NO. M85
SD52	14.18'	36"	4.08%	RCP-CL-1750D	BEDDING PER R.C.F.C. 4 W.C.D. STD. DNG. NO. M85

**GRADING KEY NOTES**

SYM	NOTE
⊕	INSTALL NEW MANHOLE PER A.P.M.A. STD. DNG. NO. 321-1.
⊙	INSTALL NE MANHOLE OVER EXISTING 36" RCP PER R.C.F.C. 4 W.C.D. STD'S.

DESIGNED BY: DFS	<b>ANTHONY-TAYLOR CONSULTANTS</b> San Diego County 304 Enterprise St. Escondido, CA 92029 (760) 738-8800 Fax (760) 738-8232	C.M.E.A. QUALITY ASSURANCE	BENCH MARK: LOCATION: BETWEEN ALESSANDRO BOULEVARD AND SHERMAN AVENUE ON DAY STREET, 180' SOUTH OF SHERMAN AVENUE, 49' EAST OF DAY STREET, 28' NORTHWEST OF POWER POLE NO. 75208, C.M.T. 2' NORTHWEST OF THE SOUTHWEST CORNER OF A 6' CHAIN LINK FENCE, 1' NORTH OF A MARKER POST, A BRASS DISK STAMPED M-62-69 IN THE TOP OF A CONCRETE POST. ELEVATION: 1551.102	REVISIONS	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT RECOMMENDED FOR APPROVAL BY: APPROVED BY:	City of Moreno Valley APPROVED BY: TRENT D. PULLIAM R.C.E. 20517 CITY ENGINEER	CITY OF MORENO VALLEY LOWES STORM DRAIN RELOCATION PLAN PLAN AND PROFILE SHEET TRACT 22049	PROJECT NO. 00-1787 DRAWING NO. 1787-SIM-3.DWG SHEET NO. 3 OF 4
DRAWN BY: DFS		REVIEWED BY: DATE	PLANNING ENGINEER	CHIEF ENGINEER	EXP. 9/30/05 DATE: 4/10/05			
DATE DRAWN: 4/5/02		PREPARED BY: JERRY L. MICHAL EXP. 3/31/04	AUTHORIZED FOR RELEASE: DATE	DATE:				
CHECKED BY: J.L.M.								



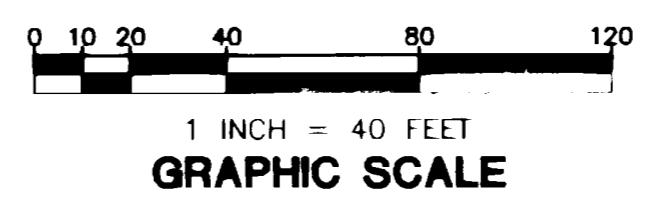
**DEMOLITION KEY NOTES**

SYM	NOTE
①	TEMPORARY 6' CHAIN LINK FENCE. TEMPORARY FENCE FOR DEMO PURPOSES - LIMIT OF DEMO AREA.
②	PROTECT IN PLACE EXISTING CONCRETE V-DITCH.
③	PROTECT IN PLACE EXISTING MANHOLE.
④	PROTECT IN PLACE EXISTING 36\"/>

**DEMOLITION NOTES**

- NOTE**
- DEMOLISH AND REMOVE ALL EXISTING IMPROVEMENTS WITHIN LIMITS OF WORK UNLESS INDICATED OTHERWISE. KEY NOTES REFER TO TYPICAL ITEMS OF DEMOLITION AND ARE NOT ALL-INCLUSIVE.
  - PROTECT IN PLACE ALL EXISTING IMPROVEMENTS, STRUCTURES AND UNDERGROUND UTILITIES TO REMAIN.
  - ARRANGE FOR AND COORDINATE SHUT DOWN, DISCONNECTION AND CAPPING OF EXISTING UTILITIES WITH APPROPRIATE UTILITY OWNERS PRIOR TO COMMENCEMENT OF ANY WORK.
  - THE CONTRACTOR SHALL NOTIFY DIGALERT (1-800-422-4133) AT LEAST TWO DAYS PRIOR TO STARTING WORK AND SHALL ARRANGE FOR AND COORDINATE SHUT DOWN, DISCONNECTION AND CAPPING OF EXISTING UTILITIES WITH THE APPROPRIATE UTILITY OWNERS PRIOR TO COMMENCING ANY WORK.
  - REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
  - ALL EXISTING "DRY" UTILITIES SHOWN HEREON ARE FOR INFORMATION PURPOSES ONLY. REFER TO ELECTRICAL PLANS AND APPROPRIATE UTILITY COMPANY PLANS FOR ANY WORK ON OR WITH THESE UTILITIES.
  - THE LOCATION AND EXISTENCE OF EXISTING UNDERGROUND FACILITIES SHOWN ON THE DRAWINGS WERE OBTAINED FROM A SEARCH OF AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL POTHOLE EXISTING UTILITIES AT POINTS OF CONNECTIONS AND ALL UTILITY CROSSINGS TO DETERMINE EXACT LOCATIONS PRIOR TO STARTING ANY WORK.
  - LOCATION OF UTILITIES SHOWN ARE APPROXIMATE AND CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID HAZARD TO PERSONNEL AND/OR DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES, WHETHER OR NOT SHOWN AND INSTALLED BY ANY OTHER CONTRACTS. THE ENGINEER IS NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN OR DETAILED AND INSTALLED BY ANY OTHER CONTRACTS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER SHOULD SUCH UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE NECESSARY ELEMENTS FOR CONSTRUCTION SAFETY.

**CAUTION!**  
EXISTING ELECTRICAL LINES NEARBY (ALONG THE WESTERLY BOUNDARY OF TONGATE BLVD). CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING ELECTRICAL LINES.



California Council of Civil Engineers & Land Surveyors  
Construction contractor agrees that in accordance with generally accepted construction practices, construction contractor will be required to assume sole and complete responsibility for job site conditions during the course of construction of the project, including safety of all persons and property, that the requirement shall be made to apply continuously and not be limited to normal working hours, and construction contractor further agrees to defend, indemnify and hold design professional harmless from any and all liability, real or alleged, in connection with the performance of work on this project, excepting liability arising from the sole negligence of design professional.

**UNAUTHORIZED CHANGES & USES**  
Contractor agrees that any changes to or use of these plans, or failure to make any changes to or use of these plans, must be in writing and must be approved by the preparer of these plans.

**Underground Service Alert**  
Call: TOLL FREE 1-800-422-4133  
TWO WORKING DAYS BEFORE YOU DIG



SHADED AREA INDICATES LIMITS OF DEMOLITION AND REMOVAL. CONTRACTOR SHALL REMOVE ALL IMPROVEMENTS WITHIN THIS AREA EXCEPT AS NOTED. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.

DESIGNED BY:	DFS
DRAWN BY:	J.S.B.
DATE DRAWN:	4/5/02
CHECKED BY:	J.L.M.

**ANTHONY-TAYLOR CONSULTANTS**  
San Diego County  
204 Enterprise St.  
Escondido, CA 92029  
(760) 738-8800  
Fax (760) 738-8232

PREPARED BY: *Jerry L. Michal*  
JERRY L. MICHAL  
R.C.E. NO. C 42590  
DATE 4-5-2002  
EXP. 3/31/04

C.M.E.A. QUALITY ASSURANCE	
REVIEWED BY	DATE
AUTHORIZED FOR RELEASE	DATE

**BENCH MARK:**  
LOCATION:  
BETWEEN ALESSANDRO BOULEVARD AND SHERMAN AVENUE ON DAY STREET, 180' SOUTH OF SHERMAN AVENUE, 49' EAST OF DAY STREET, 28' NORTHWEST OF POWER POLE NO. 72008, C.M.T. 2' NORTHWEST OF THE SOUTHWEST CORNER OF A 6' CHAIN LINK FENCE, 1' NORTH OF A MARKER POST, A BRASS DISK STAMPED M-82-69 IN THE TOP OF A CONCRETE POST.  
ELEVATION: 1551.102

REF.	DESCRIPTION	APP'D	DATE

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT	
RECOMMENDED FOR APPROVAL BY:	APPROVED BY:
PLANNING ENGINEER	CHIEF ENGINEER
DATE:	DATE:

**City of Moreno Valley**

APPROVED BY: IRENI D. PULLIAM  
R.C.E. 20517  
CITY ENGINEER

EXP. 9/30/05  
DATE: 4/10/02

**CITY OF MORENO VALLEY**  
LOWES STORM DRAIN DEMOLITION AND RELOCATION PLAN  
TRACT 22049

PROJECT NO.	00-1787
DRAWING NO.	1787-STM-siteplan.dwg
SHEET NO.	4 of 4

**CITY OF RIVERSIDE DAY STREET WIDENING PLAN (D-752)**

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THIS PLAN SHOWS EXISTING CATCH BASIN AND STORM DRAIN WITHIN DAY STREET

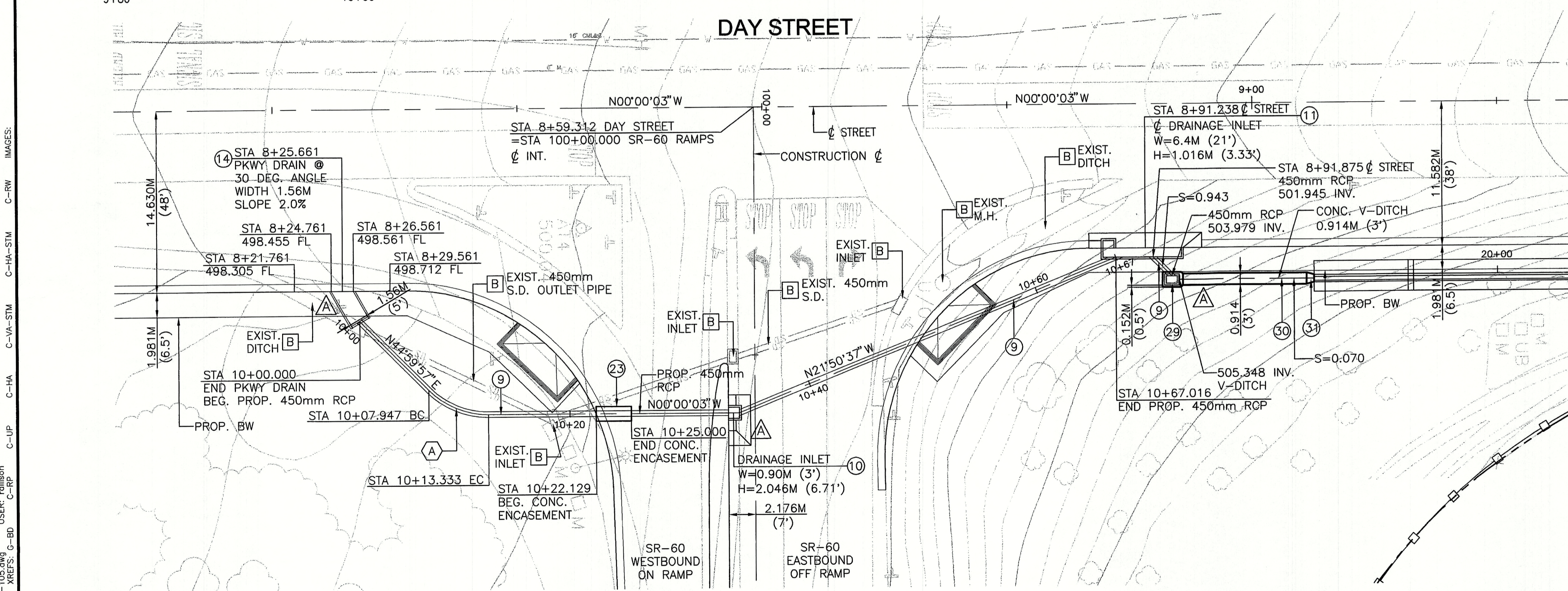
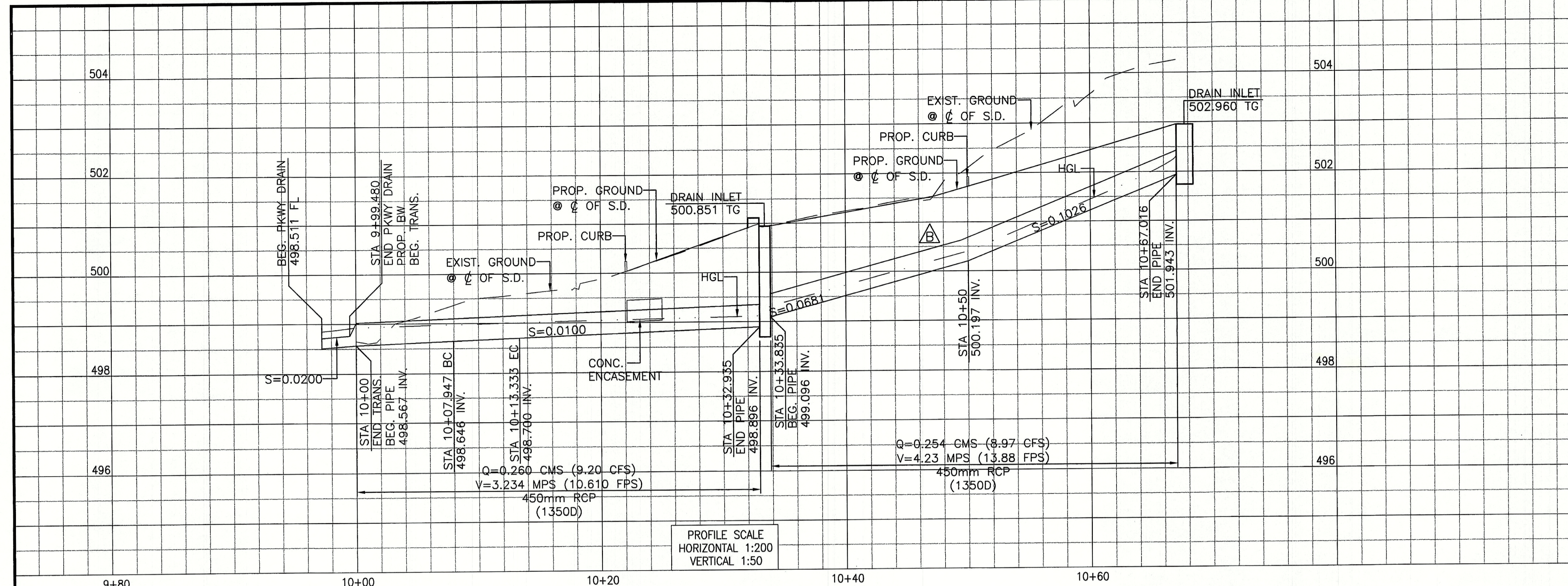
Attachment: Appendix E - Preliminary Drainage Study (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

### CONSTRUCTION NOTES

- ⑨ INSTALL 450mm (18") RCP, 1350D. SEE TRENCH BACKFILL DETAIL PER CITY OF RIVERSIDE STD. DRAWING NO. 453, AND PIPE BEDDING DETAIL, CASE II, PER CITY OF RIVERSIDE STD. DRAWING NO. 452.
- △ ⑩ CONSTRUCT DRAINAGE INLET, TYPE G4, PER CALTRANS STD. PLAN NO. D73.
- ⑪ CONSTRUCT MODIFIED DRAINAGE INLET, TYPE GOL, L=6.4M (21'), PER CALTRANS STD. PLAN NO. D72.
- △ ⑭ CONSTRUCT MODIFIED PARKWAY DRAIN AT 30 DEG. ANGLE, W=1.56M (5') & S=0.02, PER APWA STD. PLAN 151-1.
- ⑳ CONSTRUCT CONCRETE ENCASUREMENT FOR STORM DRAIN PIPE PER DETAIL 2 ON SHEET 4.
- △ ⑳ CONSTRUCT MODIFIED DRAINAGE INLET WITH SIDE OPENING, TYPE G1, PER CALTRANS STD. PLAN NO. D73. SEE DETAIL 4 ON SHEET 4 OF DWG. R-3794.
- △ ⑳ CONSTRUCT CONCRETE V-DITCH PER DETAIL 5 ON SHEET 4 OF DWG. R-3794.
- △ ⑳ CONSTRUCT CONCRETE DITCH TRANSITION PER DETAIL 6 ON SHEET 4 OF DWG. R-3794.

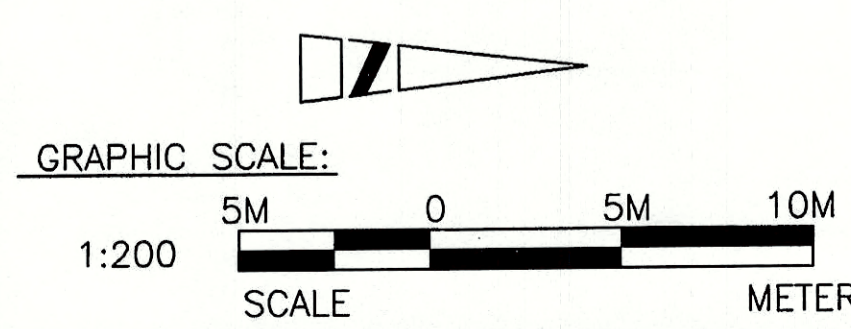
### DISPOSITION NOTES

- REMOVE BY CONTRACTOR (ITEM AS NOTED).

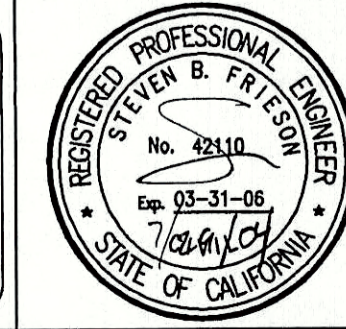


CURVE DATA				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
△ A	45°00'00"	6.858M	5.386M	2.841M

CONTRACT NO. TE-04-04  
 PERMIT NO. 08-04-NMC-0679



**IMPORTANT NOTICE**  
 Section 4216/4217 of the Government Code requires a Dig Alert identification Number to be posted before a "Hurry to Excavate" will be used. For your Dig Alert ID, Number call CALL TOLL FREE TWO WORKING DAYS BEFORE YOU DIG UNDERGROUND SERVICE ALERT 1-800-227-2600



**BOYLE ENGINEERING CORPORATION**  
 1131 W. Sixth Street  
 Suite 285  
 Ontario, CA 91762-1117  
 (909) 933-5225

REVISION TO CONSTRUCTION NOTES (10, 19, 29, 30, 31)	7-27-04
REVISION TO STORM DRAIN PROFILE	7-27-04

CITY OF MORENO VALLEY, CALIFORNIA  
 PUBLIC WORKS DEPARTMENT

APPROVED BY: [Signature] DATE: 8/12/04  
 ASST. CITY ENGINEER  
 SENIOR ENGINEER

CITY OF RIVERSIDE, CALIFORNIA  
 DEPARTMENT OF PUBLIC WORKS

APPROVED BY: [Signature] DATE: 7/20/04  
 PRINCIPAL ENGINEER  
 P.W. INSPECTION  
 TRAFFIC DIVISION  
 PUBLIC UTILITIES

DAY STREET WIDENING IMPROVEMENTS	ACCT. NO. 2390240-455023
<b>STORM DRAIN PLAN &amp; PROFILE DAY STREET</b>	<b>D-752</b>
	SHEET 1 OF 1
	KP 22.0/18.5

\* As-Built 12/15/05 IS INDEXED 9-26-06

DWG: Y:\R08\130\CAD\PlanSet\C-105.dwg USER: railston DATE: Jul 28, 2004 3:56pm XREFS: G-BD C-RP C-UP C-HA C-VA-STM C-HA-STM C-RW IMAGES:

Attachment: Appendix E - Preliminary Drainage Study (4070 - General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map PEN19-0150)



## Memorandum

To: Paul Tanguay, Fritz Duda

From: Nicholas Lowe, P.E. – Albert A. Webb Associates  
Senior Engineer

Date: March 16, 2020

Re: Trip Generation for Tentative Parcel Map No. 37750 (APNs #291-100-054 and -055) located at the Southeast Corner of Day Street and Ironwood Avenue in the City of Moreno Valley

Albert A. Webb Associates (Webb) has prepared this trip generation memo to identify any differences in potential trip generation resulting from proposed subdivision of 51± acres consisting of two existing parcels into four parcels in order to separate ownership interest in the land. The site is located on the southeast corner of Day Street and Ironwood Avenue (Project) in the City of Moreno Valley. The site is currently vacant.

Each of the two existing parcels have a General Plan Land Use designation of both commercial and residential/office per the adopted City of Moreno Valley General Plan Land Use Map depicted in **Figure 1-Existing Condition**. Currently, the commercial land use area totals 30.44 acres while the residential/office land use totals 19.17 acres. The zoning boundary is not aligned with parcel or land use boundaries.

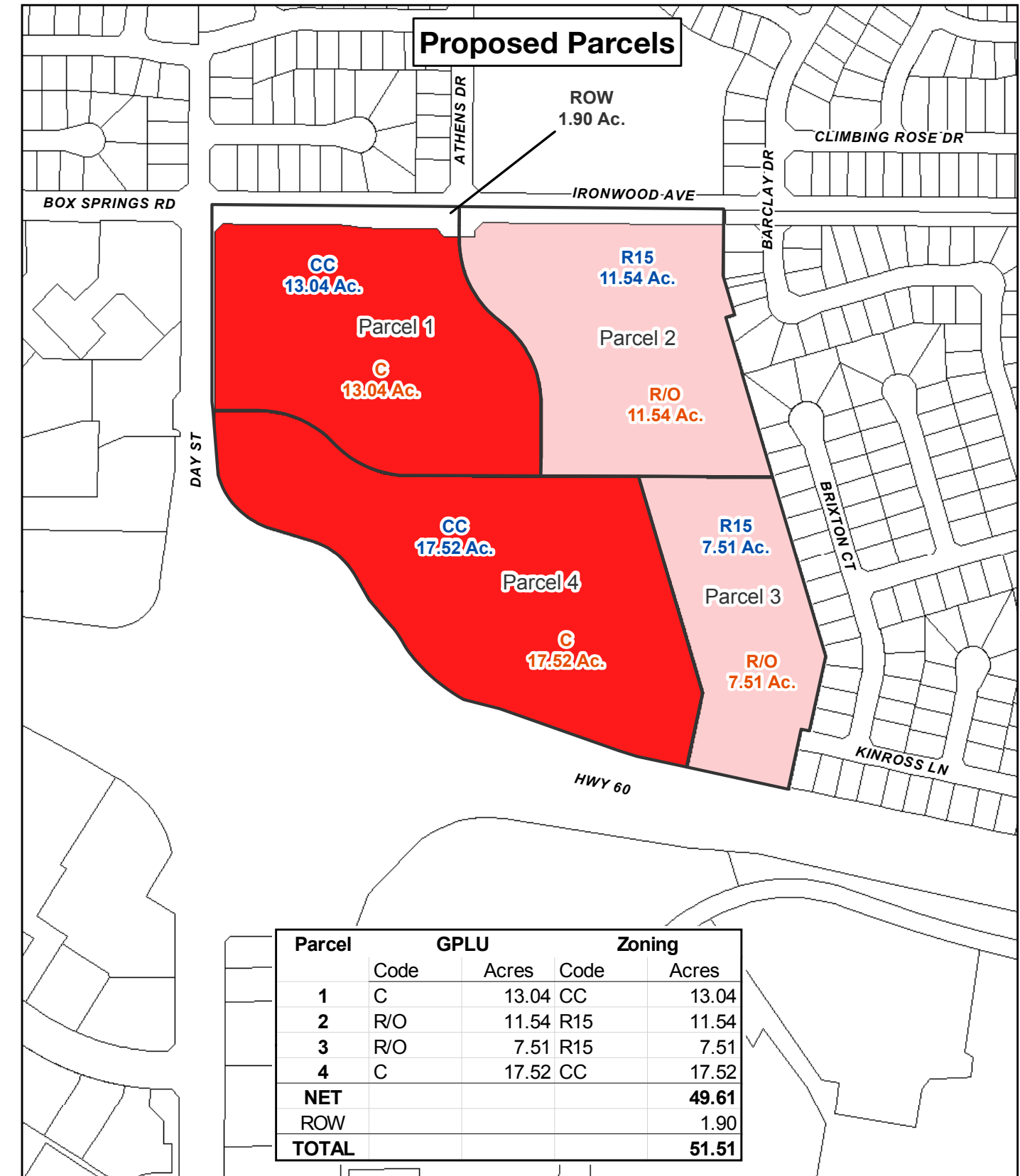
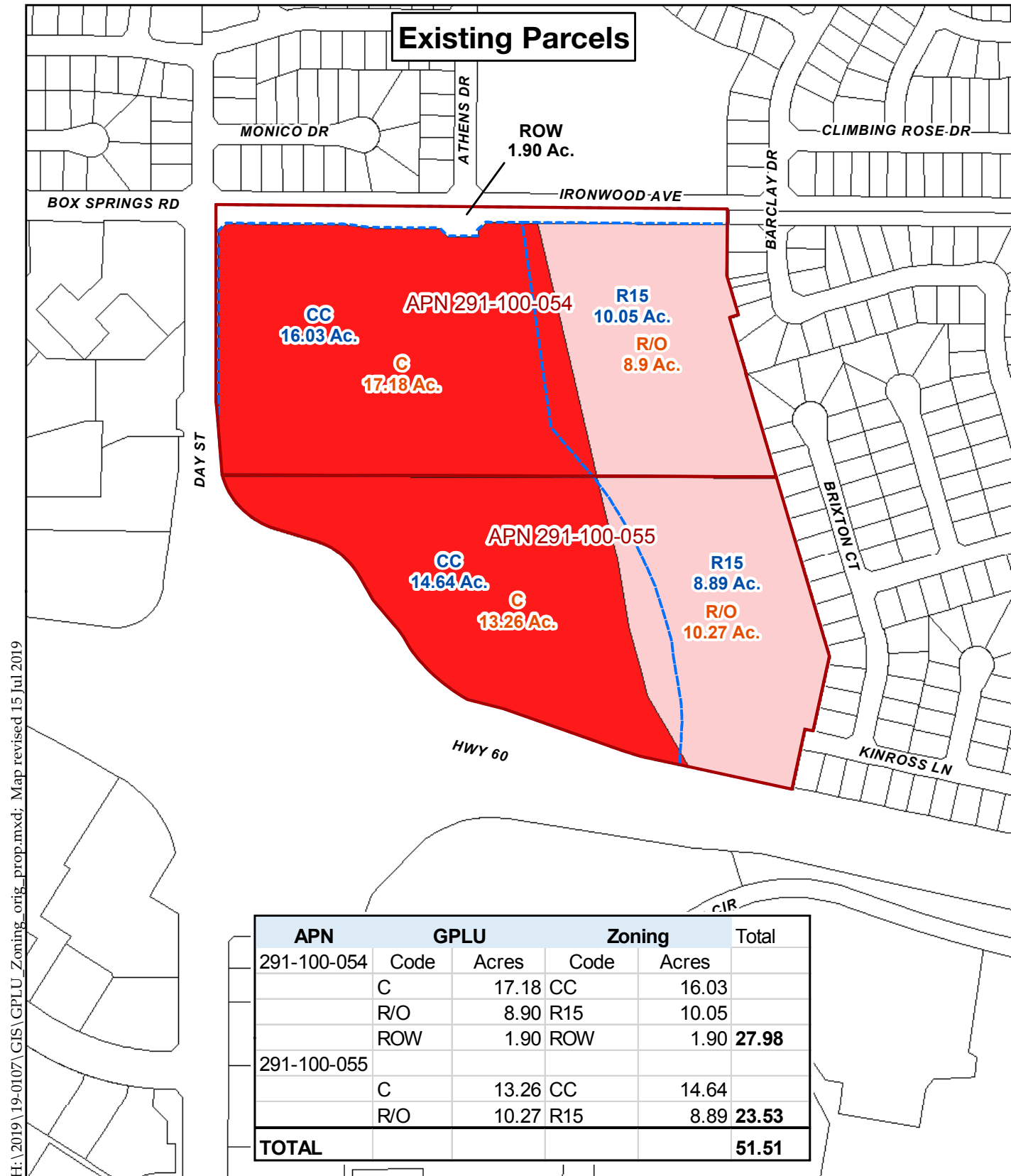
The Project proposes a General Plan Amendment to the Land Use and Change of Zone to the proposed four parcels as shown in **Figure 2-Proposed Condition**. Each proposed parcel would have homogenous general plan land use and zoning designations. The proposed General Plan Amendment will result in a commercial land use area of 30.56 acres and 19.05 acres of residential/office.

Vehicle trip generation was estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10<sup>th</sup> Edition. The 0.12 acre increase in commercial land use area (ITE Code 820) results in an estimated increase of 1 AM peak hour trip and 5 PM peak hour trips based on an increase of approximately 1,300 building square feet. This is assuming a 0.25 floor area ratio (FAR). The 0.12 acre loss in residential/office land use (ITE Code 220) area results in an estimated loss of 1 AM peak hour trip and 1 PM peak hour trip based on a decrease of approximately 2 residential units. This is assuming a 15 DU per acre maximum per the R15 zoning designation. The net difference in peak hour trip generation between the existing and proposed land use areas is 0 AM peak hour trips and an increase of 4 PM peak hour trips. Trip generation rates and Project trip generation are shown in **Table 1-Trip Generation Rates** and **Table 2-Trip Generation**.

The combined size of the two land uses is not proposed to be changed from the existing condition. The minimal change in land use for the Project area resulted in a negligible change in projected vehicle trip generation which is well under the City's Traffic Impact Analysis Preparation Guide threshold of 100 peak hour project trips. Thus, a trip generation comparison or traffic impact analysis is not needed for this subdivision Project. However, a traffic impact analysis may be required by the City when a development project at this location begins the entitlement process.

Figure 1 - Existing Condition

Figure 2 - Proposed Condition



F:\2019\19-0107\GIS\GPLU\_Zoning\_orig\_prop.mxd; Map revised 15 Jul 2019

Sources: City of Moreno Valley, 2017; Riverside Co. GIS, 2019

Note: Acreages based on Webb Survey

<span style="border: 1px solid black; padding: 2px;">APN</span> Existing Parcels	<span style="background-color: #f0f0f0; padding: 2px;">R/O</span> Residential/Office
<span style="border: 1px solid black; padding: 2px;">1</span> Proposed Parcels	<span style="background-color: #ff0000; color: white; padding: 2px;">C</span> Commercial
<span style="border: 1px dashed blue; padding: 2px;">CC</span> Zoning	

**General Plan Land Use and Zoning**

TPM 37750



Attachment: Appendix F - Trip Generation Memo (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative

**Table 1 – Trip Generation Rates**

Trip Generation Rates								
Land Use	Size	Unit	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Shopping Center (820)	1.3*	TSF	0.94	0.58	0.36	3.81	1.83	1.98
Multifamily Housing (Low-Rise) (220)	2**	DU	0.46	0.11	0.35	0.56	0.35	0.21

Trip generation rates are obtained from ITE Trip Generation Manual 10th Edition average rates.

\*0.12 acre increase = 5,227 sf increase. FAR of 0.25 results in 1,307 sf of building area.

\*\*0.12 acre decrease = 1.8 DU decrease per R15 zoning. R15 zoning maximum density is 15 DU per acre per City zoning descriptions.

**Table 2 – Trip Generation**

Trip Generation								
Land Use	Size	Unit	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Shopping Center (820)	1.3*	TSF	1	1	0	5	2	3
Multifamily Housing (Low-Rise) (220)	2**	DU	(1)	0	(1)	(1)	(1)	0
NET DIFFERENCE			0	1	(1)	4	1	3

Trip generation obtained from ITE Trip Generation Manual 10th Edition average rates.

\*0.12 acre increase = 5,227 sf increase. FAR of 0.25 results in 1,307 sf of building area.

\*\*0.12 acre decrease = 1.8 DU decrease per R15 zoning. R15 zoning maximum density is 15 DU per acre per City zoning descriptions.

Sincerely,

Nicholas R. Lowe, MS, PE  
Albert A. WEBB Associates



3/16/2020

Signature

Date

3788 McCray Street, Riverside, CA 92506  
(951) 248-4289

**CITY OF MORENO VALLEY  
MITIGATION MONITORING PROGRAM**

PEN19-0151 (General Plan Amendment), PEN19-0152 (Change of Zone), and PEN19-0150 (TPM No. 37750)

This document is the Mitigation Monitoring and Reporting Program (MMRP) for the Project (PEN19-0150, PEN19-0151, PEN19-152). This MMRP has been prepared pursuant to California Public Resources Code Section 21081.6, which requires public agencies to “adopt a reporting and monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment.” An MMRP is required for the proposed Project because the Initial Study/Mitigated Negative Declaration (IS/MND) has identified significant adverse impacts, and measures have been identified to mitigate those impacts as reflected in **Table H – Mitigation, Monitoring, and Reporting Program**, below.

**Table H – Mitigation, Monitoring, and Reporting Program**

Issue	Mitigation Measure	Implementation Timing and Responsible Party for Monitoring	Verification of Compliance		
			Initials	Date	Remarks
Biological Resources	<b>MM BIO-1:</b> Prior to grading, a 30-day Preconstruction survey shall be required. A qualified Biologist shall conduct avoidance surveys prior to any vegetation removal or soil disturbance at the Project site. The first survey shall take place 30 days prior to initiating ground disturbance and a second survey shall take place within 24 hours prior to ground disturbance. If burrowing owls are present, the Project Biologist shall consult with the California Department of Fish and Wildlife to determine if a Habitat Loss Mitigation and Relocation Program is warranted. Based on the location of the owls and if avoidance of the area is not feasible, mitigation options may range from passive relocation to habitat replacement.	Timing: Prior to Grading  Party: Applicant/Qualified Biologist			
	<b>MM BIO-2:</b> Prior to grading, a qualified Biologist shall be retained to conduct preconstruction nesting bird survey(s) during the nesting period (February 16 <sup>th</sup> through August 31). Nesting bird survey(s) shall be conducted no sooner than 14 days prior to initiation of ground disturbing activities, to document the presence or of absence of nesting birds within or directly adjacent to (i.e., within 100 ft of) the construction zone. If no active nests are found during the survey, construction activities may proceed. A qualified Biologist shall serve as a biological monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts on these nests occur.	Timing: Prior to Grading  Party: Applicant/Qualified Biologist			

Attachment: Exhibit B - Mitigation Monitoring Program (4070 : General Plan Amendment PEN19-0151,



**CITY OF MORENO VALLEY  
MITIGATION MONITORING PROGRAM**

PEN19-0151 (General Plan Amendment), PEN19-0152 (Change of Zone), and PEN19-0150 (TPM No. 37750)

Issue	Mitigation Measure	Implementation Timing and Responsible Party for Monitoring	Verification of Compliance		
			Initials	Date	Remarks
	<p>If active nests are documented during the preconstruction survey(s), species-specific measures shall be prepared by the Project Biologist and implemented to prevent abandonment of the active nest. At a minimum, grading in the vicinity of an active nest shall be monitored by a qualified Biologist. Grading in the vicinity of the nest shall be postponed until the young birds have fledged. A minimum exclusion buffer of 100 ft shall be maintained during construction, depending on the avian species and location of nest. The perimeter of the nest setback zone shall be fenced or adequately demarcated with stakes and flagging at 20-ft intervals, and construction personnel and activities shall be restricted from the area.</p> <p>If construction is proposed to be initiated during breeding season or active relocation is proposed, a burrowing owl mitigation plan shall be developed based on the City of Moreno Valley, CDFW, and USFWS requirements for the relocation of individuals to a predetermined preserve. A survey report by a qualified Biologist verifying that no active nests are present, or that the young have fledged, shall be submitted to City of Moreno Valley prior to initiation of construction activities in the nest-setback zone. A final report of the findings, prepared by a qualified Biologist, shall be submitted to City of Moreno Valley prior to construction-related activities that have the potential to disturb any active nests during the nesting season.</p> <p>Any nest permanently vacated for the season shall not require protection. If construction takes place outside of the nesting season, i.e., between September 1st and February 15th, no preconstruction nesting bird surveys shall be required.</p>				
Cultural Resources	<b>MM CULT-1:</b> During any ground disturbing activities, future implementing projects shall be required to obtain a professional archaeologist to conduct monitoring of all	Timing: During Grading			

Attachment: Exhibit B - Mitigation Monitoring Program (4070 : General Plan Amendment PEN19-0151,

**CITY OF MORENO VALLEY  
MITIGATION MONITORING PROGRAM**

PEN19-0151 (General Plan Amendment), PEN19-0152 (Change of Zone), and PEN19-0150 (TPM No. 37750)

Issue	Mitigation Measure	Implementation Timing and Responsible Party for Monitoring	Verification of Compliance		
			Initials	Date	Remarks
	<p>mass grading and trenching activities. The Project Archaeologist shall have the authority to temporarily redirect earthmoving activities in the event that suspected archaeological resources are unearthed during Project construction. The Project Archaeologist, in consultation with the Consulting Tribes Soboba Band of Luiseño Indians, Pechanga Band of Luiseño Indians, Rincon Band of Luiseño Indians, and Morongo Band of Mission Indians), the contractor, and the City, shall develop a Cultural Resources Management Plan (CRMP) in consultation pursuant to the definition in AB52 to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. A consulting tribe is defined as a tribe that initiated the AB 52 tribal consultation process for the Project, has not opted out of the AB52 consultation process, and has completed AB 52 consultation with the City as provided for in Cal Pub Res Code Section 21080.3.2(b)(1) of AB52. Details in the Plan shall include:</p> <ul style="list-style-type: none"> <li>a) Project grading and development scheduling;</li> <li>b) The Project archeologist and the Consulting Tribes(s) as defined in CULT-1 shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or</li> </ul>	<p>Party: Applicant/Qualified Archaeologist Tribal Monitor</p>			

Attachment: Exhibit B - Mitigation Monitoring Program (4070 : General Plan Amendment PEN19-0151,

**CITY OF MORENO VALLEY  
MITIGATION MONITORING PROGRAM**

PEN19-0151 (General Plan Amendment), PEN19-0152 (Change of Zone), and PEN19-0150 (TPM No. 37750)

Issue	Mitigation Measure	Implementation Timing and Responsible Party for Monitoring	Verification of Compliance		
			Initials	Date	Remarks
	grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Consulting Tribes shall make themselves available to provide the training on an as-needed basis; c) The protocols and stipulations that the contractor, City, Consulting Tribes and Project archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.				
	<b>MM CULT-2:</b> The City shall verify that the following note is included on the Grading Plan: "If any suspected archaeological resources are discovered during ground - disturbing activities and the Project Archaeologist or Native American Tribal Representatives are not present, the construction supervisor is obligated to halt work in a 100-foot radius around the find and call the Project Archaeologist and the Tribal Representatives to the site to assess the significance of the find."	Timing: Prior to Grading  Party: Applicant/Qualified Archaeologist			
	<b>MM CULT-3:</b> If potential historic or cultural resources are uncovered during excavation or construction activities at the project site, work in the affected area must cease immediately and a qualified person meeting the Secretary of the Interior's standards (36 CFR 61), Tribal Representatives, and all site monitors per the Mitigation Measures, shall be consulted by the City to evaluate the find, and as appropriate recommend alternative measures to avoid, minimize or mitigate negative effects on the historic, or prehistoric resource. Determinations and recommendations by the consultant shall be immediately submitted to the Planning Division for consideration and implemented as deemed appropriate by the Community Development Director, in consultation with the State Historic Preservation Officer (SHPO) and	Timing: During Grading  Party: Applicant/Qualified Archaeologist Tribal Monitor			

Attachment: Exhibit B - Mitigation Monitoring Program (4070 : General Plan Amendment PEN19-0151,

**CITY OF MORENO VALLEY  
MITIGATION MONITORING PROGRAM**

PEN19-0151 (General Plan Amendment), PEN19-0152 (Change of Zone), and PEN19-0150 (TPM No. 37750)

Issue	Mitigation Measure	Implementation Timing and Responsible Party for Monitoring	Verification of Compliance		
			Initials	Date	Remarks
	any and all Consulting Native American Tribes as defined in CULT-1 before any further work commences in the affected area.				
	<b>MM CULT-4:</b> If human remains are discovered, no further disturbance shall occur in the affected area until the County Coroner has made necessary findings as to origin. If the County Coroner determines that the remains are potentially Native American, the California Native American Heritage Commission shall be notified within 24 hours of the published finding to be given a reasonable opportunity to identify the “most likely descendant”. The “most likely descendant” shall then make recommendations and engage in consultations concerning the treatment of the remains (California Public Resources Code 5097.98). (GP Objective 23.3, CEQA).	Timing: During Grading  Party: Applicant/Qualified Archaeologist			
Tribal Cultural Resources	<b>MM TCR-1:</b> Prior to the issuance of a grading permit, the Developer of future implementing projects shall secure agreements with the Soboba Band of Luiseño Indians, Pechanga Band of Luiseño Indians, Rincon Band of Luiseño Indians, and Morongo Band of Mission Indians for tribal monitoring. The City is also required to provide a minimum of 30 days advance notice to the tribes of all mass grading and trenching activities. The Native American Tribal Representatives shall have the authority to temporarily halt and redirect earth moving activities in the affected area in the event that suspected archaeological resources are unearthed. If the Native American Tribal Representatives suspect that an archaeological resource may have been unearthed, the Project Archaeologist or the Tribal Representatives shall immediately redirect grading operations in a 100-foot radius around the find to allow identification and evaluation of the suspected resource. In consultation with the Native American Tribal Representatives, the Project Archaeologist shall evaluate the suspected resource and make a determination of significance pursuant to	Timing: Prior to Grading  Party: Tribal Monitor			

Attachment: Exhibit B - Mitigation Monitoring Program (4070 : General Plan Amendment PEN19-0151,

**CITY OF MORENO VALLEY  
MITIGATION MONITORING PROGRAM**

PEN19-0151 (General Plan Amendment), PEN19-0152 (Change of Zone), and PEN19-0150 (TPM No. 37750)

Issue	Mitigation Measure	Implementation Timing and Responsible Party for Monitoring	Verification of Compliance		
			Initials	Date	Remarks
	California Public Resources Code Section 21083.2. (only applicable if tribes require monitoring).				
	<p><b>MM TRC-2:</b> In the event that Native American cultural resources are discovered during the course of grading (inadvertent discoveries), the following procedures shall be carried out for final disposition of the discoveries:</p> <p>a) One or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be provided to the City of Moreno Valley Planning Department:</p> <p>i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving in the place they were found with no development affecting the integrity of the resources.</p> <p>ii. Onsite reburial of the discovered items as detailed in the treatment plan required pursuant to Mitigation Measure CR-1. This shall include measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items is permitted without the written consent of all Consulting Native American Tribal Governments as defined in CR-1. The location for the future reburial area shall be identified on a confidential exhibit on file with the City and concurred to by the Consulting Native American Tribal Governments prior to certification of the environmental document.</p>	<p>Timing: During Grading</p> <p>Party: Applicant/Qualified Archaeologist Tribal Monitor</p>			

Attachment: Exhibit B - Mitigation Monitoring Program (4070 : General Plan Amendment PEN19-0151,

PLANNING COMMISSION RESOLUTION NO. 2020-26

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY, CALIFORNIA, RECOMMENDING THAT THE CITY COUNCIL APPROVE GENERAL PLAN AMENDMENT APPLICATION NO. PEN19-0151, AN AMENDMENT TO THE GENERAL PLAN LAND USE MAP, CHANGING THE LAND USE DESIGNATION OF 0.12-ACRES FROM RESIDENTIAL/OFFICE (R/O) LAND USE TO COMMERCIAL (C) LAND USE FOR PROPERTY LOCATED AT THE SOUTHEAST CORNER OF IRONWOOD AVENUE AND DAY STREET (APNS: 291-100-054 AND 291-100-055)

**WHEREAS**, the M&F Development Company, Inc., filed Application No. PEN19-0151, requesting an amendment to the Moreno Valley General Plan, as described in the title of this resolution and the attached Exhibit A; and

**WHEREAS**, on June 25, 2020, the Planning Commission of the City of Moreno Valley held a public hearing to consider the subject applications and all of the environmental documentation prepared for the project; and

**WHEREAS**, all legal prerequisites to the adoption of this Resolution have occurred; and

**WHEREAS**, the Planning Commission considered the Initial Study prepared for the Project for the purpose of compliance with the California Environmental Quality Act (CEQA). Based on the Initial Study, including all supporting technical evidence, determined that the project impacts are expected to be less than significant with mitigation, and approval of a Mitigated Negative Declaration is an appropriate environmental determination for the Project.

**NOW, THEREFORE, BE IT RESOLVED, it is hereby found, determined and resolved by the Planning Commission of the City of Moreno Valley as follows:**

- A. This Planning Commission hereby specifically finds that all of the facts set forth above in the Resolution are true and correct.
- B. Based upon substantial evidence presented to this Planning Commission during the above-referenced meeting on June 25, 2020, including written and oral staff reports, public testimony and the record from the public hearing, this Planning Commission hereby specifically finds as follows:
  1. **Conformance with General Plan goals, objectives, policies, and programs** – The proposed general plan amendment is consistent with the General Plan, and its goals, objectives, policies, and programs.  
**FACT:** The project site has two General Plan land use designations, Commercial (C) and Residential/Office (R/O) as depicted in Figure 2-2

“Land Use Map” of the Moreno Valley General Plan. The boundaries depicted on the Land Use Map are inconsistent with both the City Zoning Atlas boundaries and the existing parcel boundaries. The proposed General Plan Amendment will amend Figure 2-2 “Land Use Map” to establish boundaries consistent with proposed zoning designations. This proposed change will result in an increase of 0.12 acres to the Commercial (C) land use designation and a reduction of 0.12 acres to the Residential/Office (R/O) land use designation.

The proposed General Plan Amendment is consistent the General Plan, and its goals, objectives, policies, and programs as it will address the existing split land use designations on Assessor Parcel Nos. 291-100-054 and 291-100-055. Addressing the split land use designation will allow for future development of the site with a combination of commercial, office, and residential uses as is intended by Ultimate Goal No. 4 “Enjoys a healthy economic climate that benefits both residents and businesses,” of the City General Plan. The proposed amendment will also providing additional commercial area within the City that is conveniently located and will provide the retail and service commercial needs of Moreno Valley residents and businesses consistent with General Plan Objective 2.4. The proposed General Plan Amendment is also consistent with General Plan goals and objectives associated with residential development including: 1) General Plan Goal 2.4 which identifies the need for a supply of housing in sufficient numbers suitable to meet the diverse needs of future residents; and 2) General Plan Objective 2.2 which states that the City will provide a wide range of residential opportunities and dwelling types to meet the demands of present and future residents of all socioeconomic groups.

Based on the evidence provided above it can be determined that the proposed project is consistent with the General Plan and does not conflict with the goals, objectives, policies, and programs established within the Plan.

2. **Health, Safety, and General Welfare** – The proposed general plan amendment will not be detrimental to the public health, safety, or general welfare.

**FACT:** The proposed General Plan Amendment is a legislative action and will not result in any direct physical impacts; therefore, the action itself could not be detrimental to the public health, safety or welfare.

The project site has a current General Plan land use designation of Commercial (C) and Residential/Office (R/O). The proposed General Plan Amendment will amend Figure 2-2 “Land Use Map” resulting in an increase of 0.12 acres to the Commercial (C) land use designation and

a reduction of 0.12 acres to the Residential/Office (R/O) land use designation. The proposed project does not include the development of the existing vacant property.

Furthermore, an initial study was prepared for the Project in compliance with the California Environmental Quality Act. The initial study found that the project did not result in any significant environmental impacts with the implementation of proposed Mitigation Measures.

There is no evidence that the proposed project will have a significant impact on public health or be materially injurious to surrounding properties of the environment as a whole.

**BE IT FURTHER RESOLVED** that the Planning Commission **HEREBY APPROVES** Resolution No. 2020-26, and **RECOMMENDS** that the City Council:

1. **APPROVE** General Plan Amendment Application No. PEN19-0151, based on the findings contained in this resolution and as depicted on the map attached as Exhibit "A".

**APPROVED** this 25<sup>th</sup> day of June 2020.

AYES:  
ABSENT:

\_\_\_\_\_  
Patricia Korzec  
Chairperson, Planning Commission

ATTEST:

APPROVED AS TO FORM:

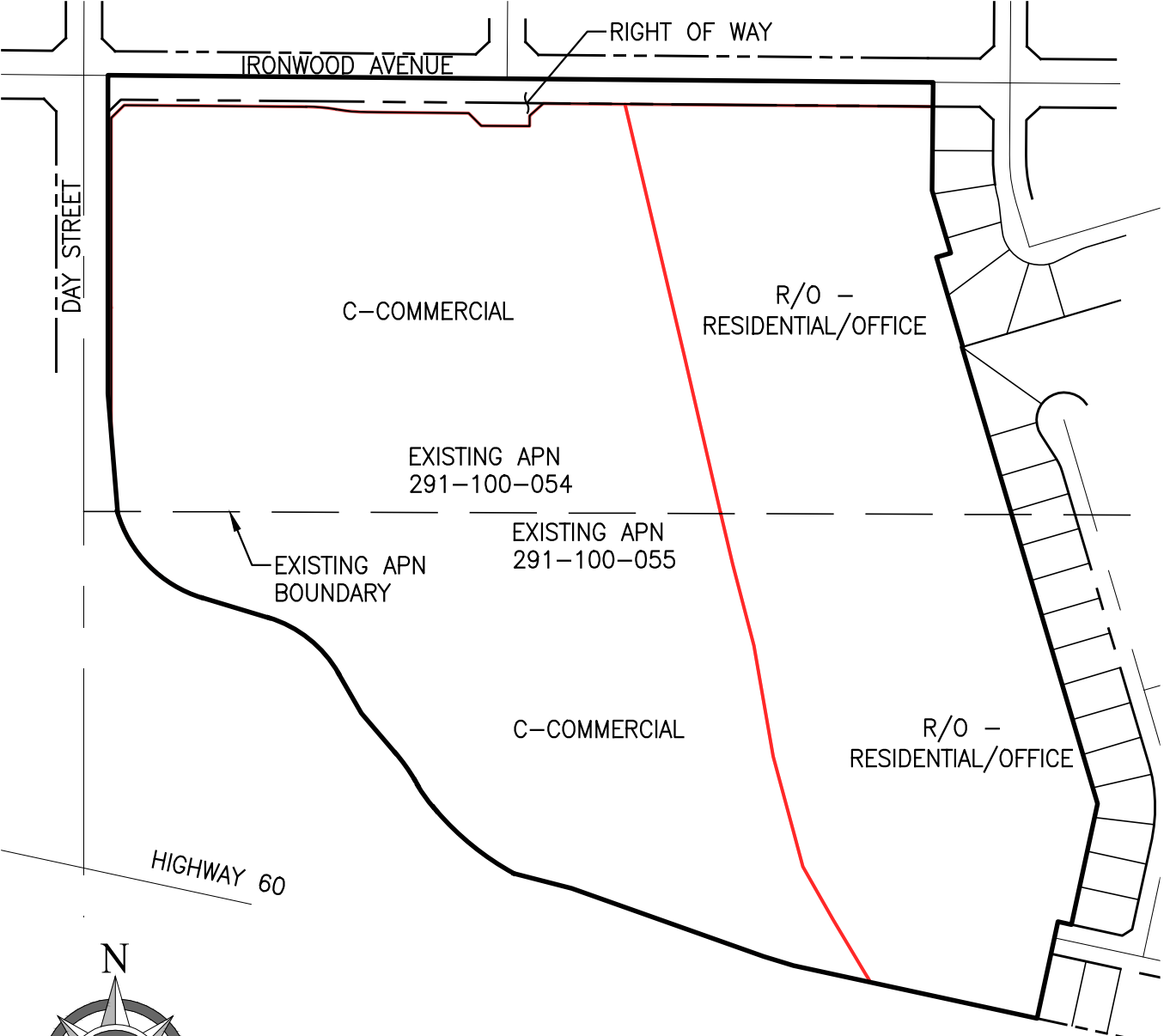
\_\_\_\_\_  
Patty Nevins, Planning Official  
Secretary to the Planning Commission

\_\_\_\_\_  
City Attorney

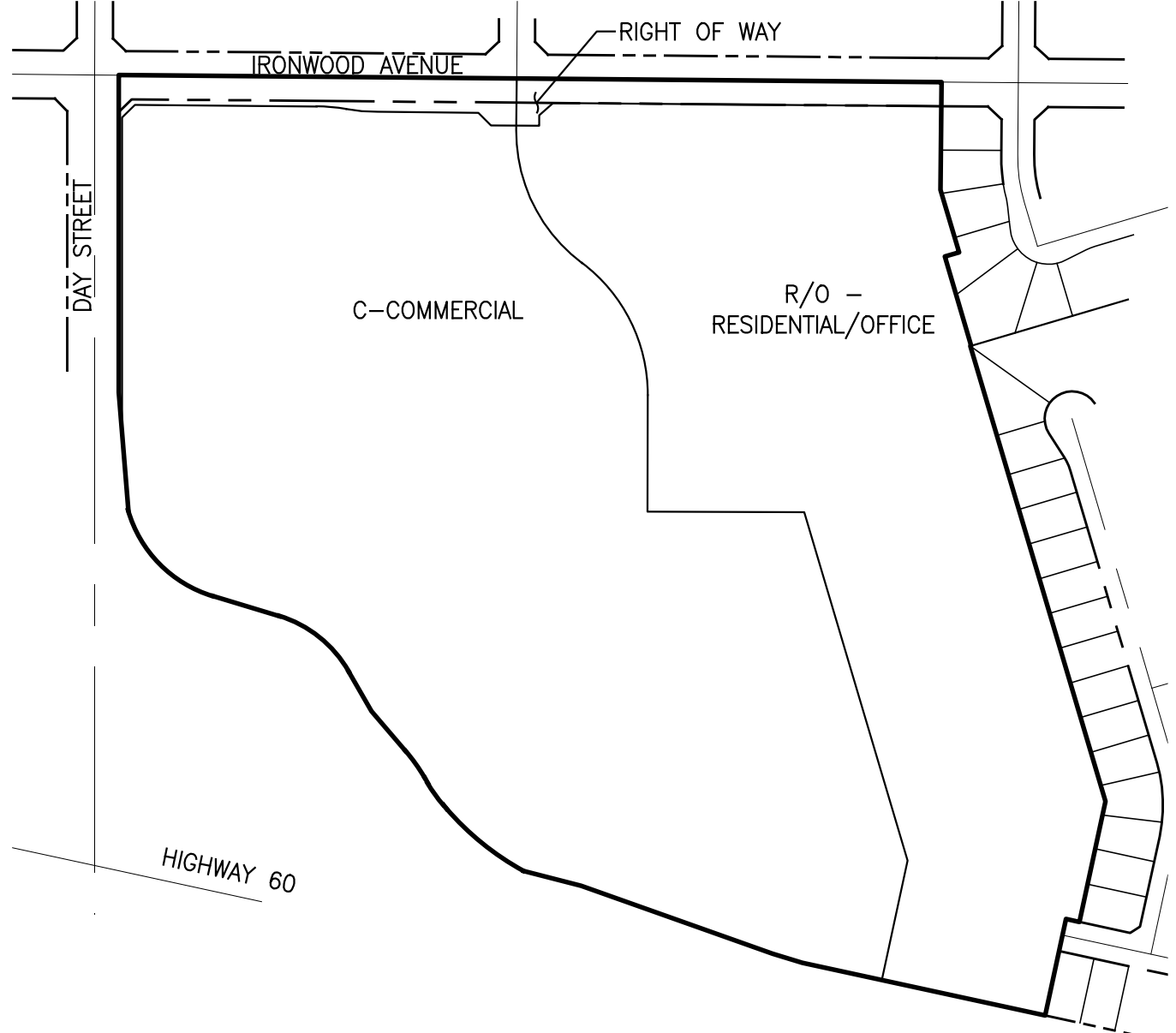
ATTACHMENTS:  
Exhibit A: General Plan Map



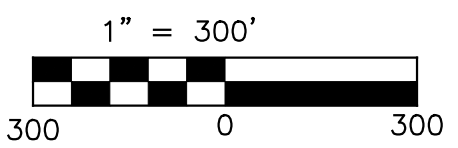
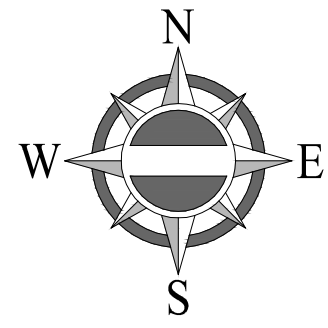
# GENERAL PLAN LAND USE EXISTING AND PROPOSED



EXISTING



PROPOSED



PLANNING COMMISSION RESOLUTION NO. 2020-27

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY RECOMMENDING THAT THE CITY COUNCIL APPROVE CHANGE OF ZONE APPLICATION NO. PEN19-0152; AN AMENDMENT TO THE OFFICIAL ZONING ATLAS CHANGING THE ZONING CLASSIFICATION OF 0.11-ACRES FROM COMMUNITY COMMERCIAL (CC) DISTRICT TO RESIDENTIAL 15 (R15) DISTRICT FOR PROPERTY LOCATED AT THE SOUTHEAST CORNER OF IRONWOOD AVENUE AND DAY STREET (APNS: 291-100-054 AND 291-100-055)

**WHEREAS**, the M&F Development Company, Inc., filed Application No. PEN19-0152, requesting an amendment to Pages 34 and 45 of the Official Zoning Atlas to the zoning classification for certain properties, as described in the title of this resolution and the attached Exhibit A; and

**WHEREAS**, the application has been evaluated in accordance with established City of Moreno Valley procedures, and with consideration of the General Plan and other applicable regulations; and

**WHEREAS**, the proposed application for the Change of Zone has been fully evaluated and considered with respect to the City's General Plan; and

**WHEREAS**, the Planning Commission considered the Initial Study prepared for the Project for the purpose of compliance with the California Environmental Quality Act (CEQA), and based on the Initial Study including all supporting technical evidence, determined that the project impacts are expected to be less than significant with mitigation, and approval of a Mitigated Negative Declaration is an appropriate environmental determination for the Project; and

**WHEREAS**, on June 25, 2020, the Planning Commission of the City of Moreno Valley held a public hearing to consider the subject applications and all of the environmental documentation prepared for the project; and

**WHEREAS**, all legal prerequisites to the adoption of this Resolution have occurred; and

**NOW, THEREFORE, BE IT RESOLVED**, it is hereby found and determined and resolved by the Planning Commission of the City of Moreno Valley as follows:

- A. This Planning Commission hereby specifically finds that all of the facts set forth above in this Resolution are true and correct.
- B. Based upon substantial evidence presented to this Planning Commission during the above-referenced meeting, including written and oral staff

reports, and the record from the public hearing, this Planning Commission hereby specifically finds as follows:

1. **Conformance with General Plan Policies** – The proposed Change of Zone is consistent with the General Plan, and its goals, objectives, policies and programs.

**FACT:** The project site has two Zoning designations, Community Commercial (CC) District and Residential 15 (R15) District as depicted on the City Zoning Atlas. The boundaries depicted on the City Zoning Atlas are inconsistent with both Figure 2-2 “Land Use Map” of the City General Plan and the existing parcel boundaries. The proposed Change of Zone will amend the City Zoning Atlas to establish boundaries that are consistent with the General Plan land use designation boundaries. This proposed change will result in an increase of 0.11 acres to the Residential 15 (R15) District and a reduction of 0.11 acres to the Community Commercial (CC) District.

The proposed Change of Zone is consistent the General Plan and its goals, objectives, policies, and programs as it will address the existing split land use designations on Assessor Parcel Nos. 291-100-054 and 291-100-055. Addressing the split land use designation will allow for future development of the site with a combination of commercial, office, and residential uses as is intended by Ultimate Goal No. 4 “Enjoys a healthy economic climate that benefits both residents and businesses,” of the City General Plan. The proposed Change of Zone will also allow for future commercial development within the City that is conveniently located and will provide the retail and service commercial needs of Moreno Valley residents and businesses consistent with General Plan Objective 2.4. The proposed Change of Zone is also consistent with General Plan goals and objectives associated with residential development including: 1) General Plan Goal 2.4 which identifies the need for a supply of housing in sufficient numbers suitable to meet the diverse needs of future residents; and 2) General Plan Objective 2.2 which states that the City will provide a wide range of residential opportunities and dwelling types to meet the demands of present and future residents of all socioeconomic groups.

Based on the evidence provided above it can be determined that the proposed project is consistent with the General Plan and does not conflict with the goals, objectives, policies, and programs established within the Plan.

2. **Conformance with the Zoning Regulations** – The proposed Change of Zone is consistent with the purposes and intent of Title 9 of the City of Moreno Valley Municipal Code.

**FACT:** The project site is currently zoned Community Commercial (CC) District and Residential 15 (R15) District. The proposed Change of Zone will result in a total reduction of 0.11 acres to the Community Commercial (CC) District and an increase of 0.11 acres to the Residential 15 (R15) District.

The proposed Change of Zone will allow for a future development to comply with the provisions of Section 9.03 Residential Districts, Section 9.04 Commercial Districts, and Section 9.16 Design Guidelines of the City's Municipal Code.

3. **Health, Safety and Welfare** – The proposal will not be detrimental to the public health, safety or welfare.

**FACT:** The project site has two Zoning designations, Community Commercial (CC) District and Residential 15 (R15) District as depicted on the City Zoning Atlas. The proposed Change of Zone will amend the City Zoning Atlas resulting in an increase of 0.11-acres to the Residential 15 (R15) District and a reduction of 0.11-acres to the Community Commercial (CC) District. The proposed project does not include the development of the existing vacant property.

Furthermore, an initial study was prepared for the Project in compliance with the California Environmental Quality Act. The initial study found that the project did not result in any significant environmental impacts with the implementation of proposed Mitigation Measures.

There is no evidence that the proposed project will have a significant impact on public health or be materially injurious to surrounding properties of the environment as a whole.

**BE IT FURTHER RESOLVED** that the Planning Commission **HEREBY APPROVES** Resolution No. 2020-27, and **RECOMMENDS** that the City Council:

1. **APPROVE** Change of Zone Application No. PEN19-0152, based on the findings contained in this resolution and as depicted on the Zoning Map attached as Exhibit A.

**APPROVED** this 25<sup>th</sup> day of June 2020.

\_\_\_\_\_  
Patricia Korzec  
Chairperson, Planning Commission

ATTEST:

APPROVED AS TO FORM:

\_\_\_\_\_  
Patty Nevins, Planning Official  
Secretary to the Planning Commission

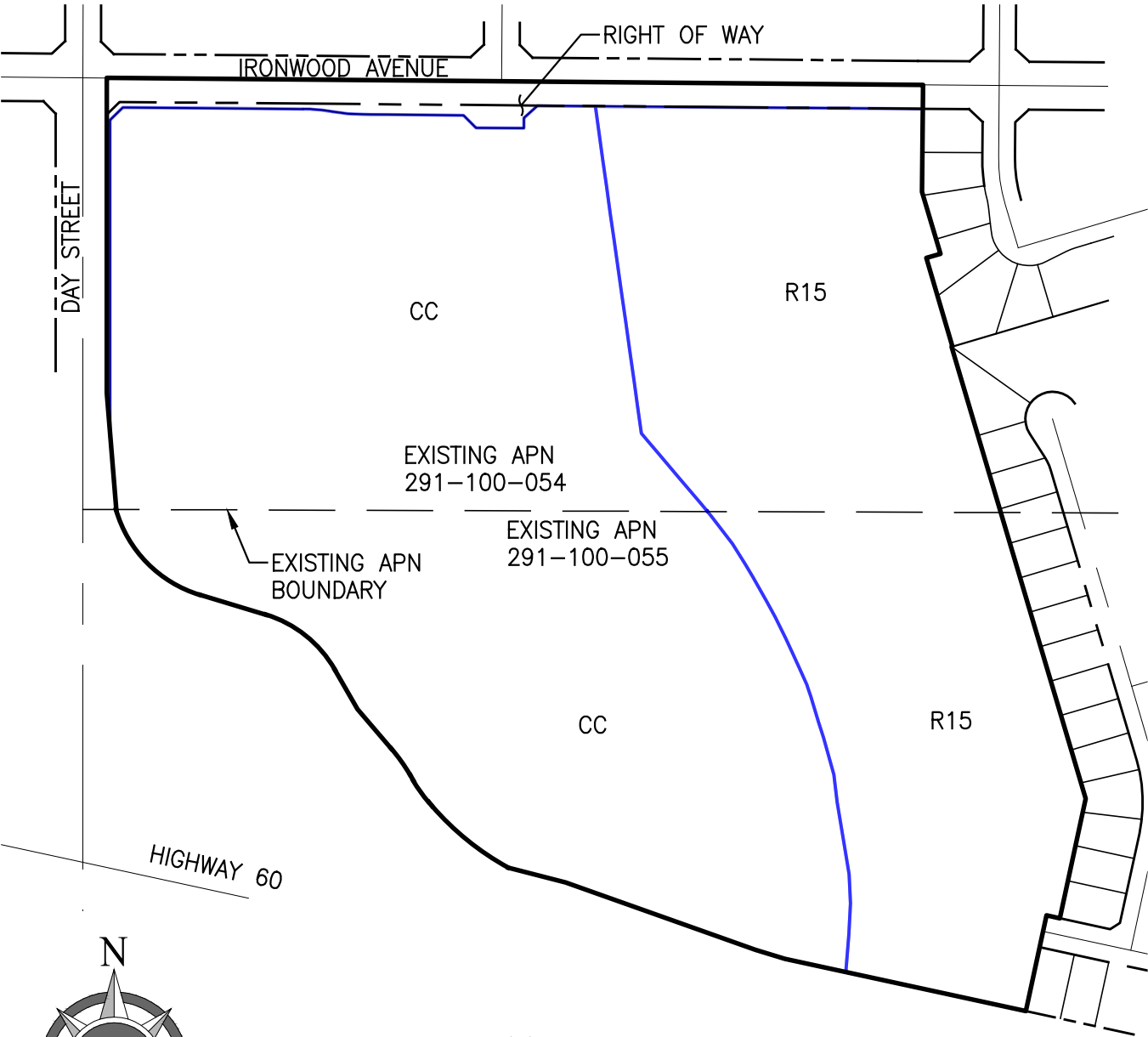
\_\_\_\_\_  
City Attorney

ATTACHMENTS:

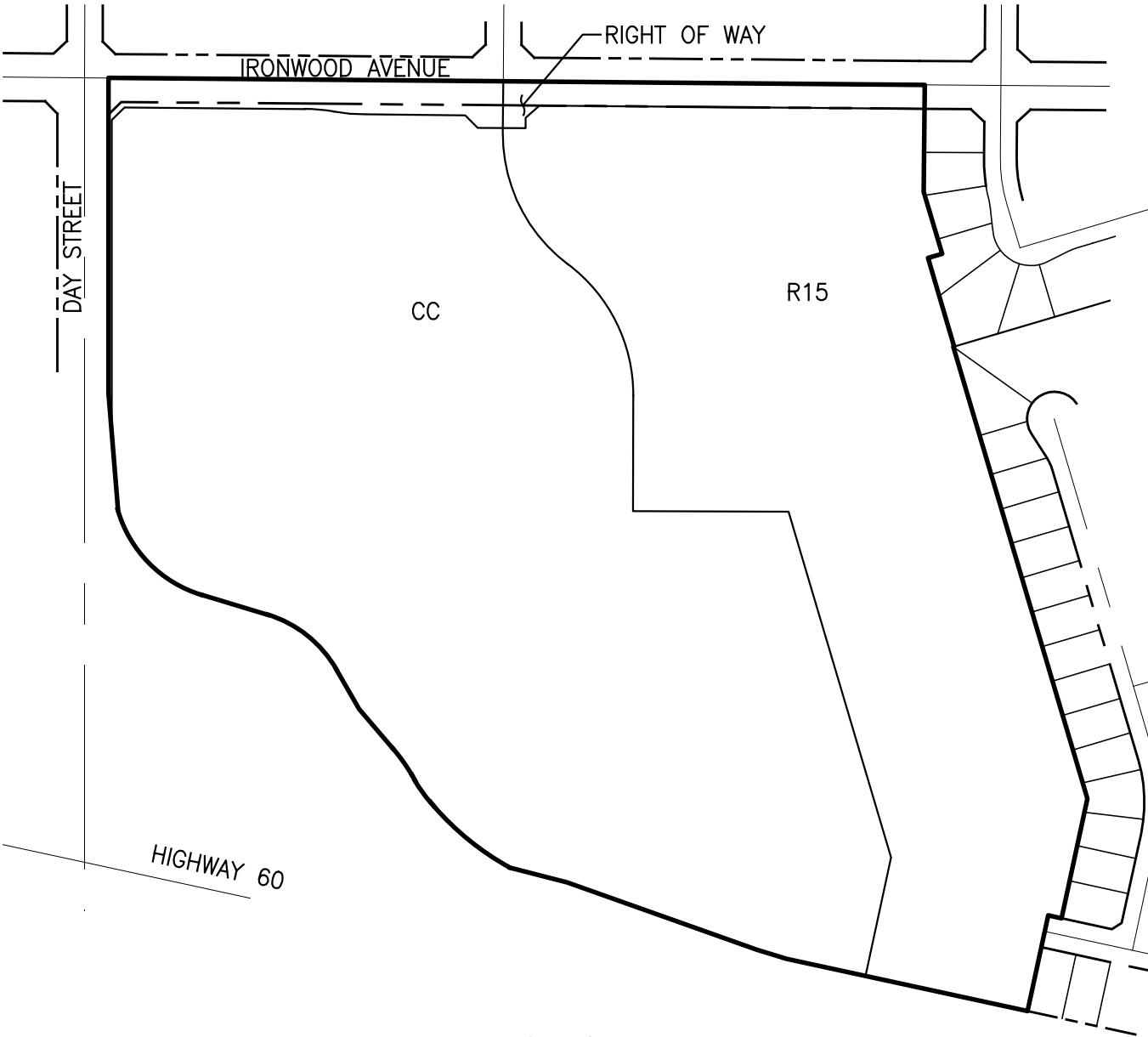
Exhibit A: Change of Zone Map

Attachment: Resolution 2020-27 - Change of Zone [Revision 4] (4070 : General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and

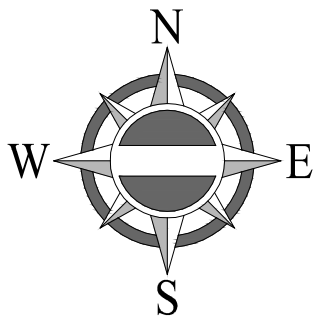
# ZONING EXISTING AND PROPOSED



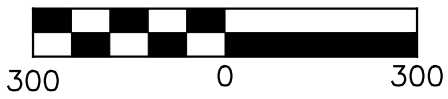
EXISTING



PROPOSED



1" = 300'



PLANNING COMMISSION RESOLUTION NO. 2020-28

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MORENO VALLEY APPROVING TENTATIVE PARCEL MAP 37750 (PEN19-0150), TO SUBDIVIDE TWO (2) EXISTING PARCELS CONSISTING OF APPROXIMATELY 51.51 ACRES INTO FOUR (4) PARCELS AND A SHARED ACCESS EASEMENT, LOCATED AT THE SOUTHEAST CORNER OF IRONWOOD AVENUE AND DAY STREET (APNS: 291-100-054 AND 291-100-055)

**WHEREAS**, the M&F Development Company, Inc., has filed an application for the approval of Tentative Parcel Map 37750 application PEN19-0150, a proposal to subdivide two (2) existing parcels consisting of approximately 51.51 gross acres identified as assessor parcel numbers 291-100-054 and 291-100-055 into four (4) parcels and a shared access easement as described in the title of this resolution; and

**WHEREAS**, the application has been evaluated in accordance with established City of Moreno Valley (City) procedures, and with consideration of the General Plan, Municipal Code, and other applicable regulations; and

**WHEREAS**, upon completion of a thorough development review process the project was appropriately agendized and noticed for a public hearing before the Planning Commission of the City of Moreno Valley (Planning Commission); and

**WHEREAS**, an environmental assessment, including an Initial Study, has been prepared to address the environmental impacts associated with the application PEN19-0150 as described above and a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program have been adopted pursuant to the California Environmental Quality Act (CEQA) as there is no evidence that the proposed Tentative Parcel Map will have a significant impact on the environment with the incorporation of mitigation measures; and

**WHEREAS**, a 20-day public review period of the Initial Study and Mitigated Negative Declaration commenced on June 5, 2020 and concluded on June 25, 2020. The public Notice of Intent to adopt the Mitigated Negative Declaration was published in the local newspaper on June 5, 2020. Public hearing notice was sent to all property owners of record within 600 feet of the project site on June 11, 2020. The public hearing notice for this project was also posted on the project site on June 12, 2020; and

**WHEREAS**, on June 25, 2020, the Planning Commission of the City of Moreno Valley conducted a public hearing to consider the application; and

**WHEREAS**, all legal prerequisites to the adoption of this Resolution have occurred; and

**WHEREAS**, pursuant to Government Code Section 66020(d)(1), **NOTICE IS HEREBY GIVEN** that this project is subject to certain fees, dedications, reservations and other exactions as provided herein: ~~and~~.

**WHEREAS**, Tentative Parcel Map application shall not be approved unless the Mitigated Negative Declaration is certified and the associated General Plan Amendment and Zone Change Applications are approved: ~~and~~.

**NOW, THEREFORE, BE IT RESOLVED**, by the Planning Commission of the City of Moreno Valley as follows:

- A. This Planning Commission hereby specifically finds that all of the facts set forth above in this Resolution are true and correct.
- B. Based upon substantial evidence presented to this Planning Commission during the above-referenced meeting on June 25, 2020, including written and oral staff reports, and the record from the public hearing, this Planning Commission hereby specifically finds as follows:
  - 1. That the proposed land division is consistent with applicable general and specific plans and the zoning ordinance;

**FACT:** The proposed land division will create a total of four parcels. Two of the parcels, approximately 19.88 gross acres, will have a zoning designation of Residential 15 (R15) District. This zoning designation provides opportunities for new housing consistent with General Plan Objective 2.2 which states that it is the intent of the City to provide a wide range of residential opportunities and dwelling types to meet the demands of present and future residents of all socioeconomic groups. The other two parcels, approximately 31.63 gross acres, will have a zoning designation of Community Commercial (CC) District. This zoning designations provides for new commercial opportunities consistent with General Plan Objective 2.4 which identifies the need to provide commercial areas within the City that are conveniently located, efficient, attractive, and have safe and easy pedestrian and vehicular circulation in order to serve the retail and service commercial needs of Moreno Valley residents and businesses.

Additionally, the project is designed in accordance with the provisions of Chapter 9.03 "Residential Districts," Chapter 9.04 "Commercial Districts," Chapter 9.16 "Design Guidelines." and Chapter 9.14 "Land Divisions" of the City's Municipal Code. The project as designed and conditioned would comply with all applicable zoning and other regulations.



The project as designed and conditioned will achieve the objectives of the City of Moreno Valley's General Plan. The proposed project is consistent with the General Plan and does not conflict with the goals, objectives, policies, and programs established within the Plan.

2. That the design or improvement of the proposed land division is consistent with applicable general and specific plans;

**FACT:** The proposed land division will create a total of four parcels. Two of the parcels, approximately 19.88 gross acres, will have a zoning designation of Residential 15 (R15) District. This zoning designation provides opportunities for new housing consistent General Plan Objective 2.2 which states that it is the intent of the City to provide a wide range of residential opportunities and dwelling types to meet the demands of present and future residents of all socioeconomic groups. The other two parcels, approximately 31.63 gross acres, will have a zoning designation of Community Commercial (CC) District. This zoning designations provides for new commercial opportunities consistent with General Plan Objective 2.4 which identifies the need to provide commercial areas within the City that are conveniently located, efficient, attractive, and have safe and easy pedestrian and vehicular circulation in order to serve the retail and service commercial needs of Moreno Valley residents and businesses. No physical improvements are proposed as part of this subdivision. Future development of the site will be required to install required site improvements in compliance with the General Plan, Municipal Code, and other applicable standards.

3. That the site of the proposed land division is physically suitable for the type of development;

**FACT:** The proposed tentative parcel map is designed and conditioned in accordance with the provisions of Chapter 9.03 "Residential Districts, Chapter 9.04 "Commercial Districts" and Chapter 9.16 "Design Guidelines" of the City's Municipal Code. For these reasons the project site is physically suitable for the proposed 4 lot subdivision.

4. That the site of the proposed land division is physically suitable for the proposed density of the development;

**FACT:** The tentative parcel map has an area of 51.51 gross acres and is designed and conditioned in accordance with the provisions of the City's Municipal Code Chapter 9.14 "Land Divisions" as well as all other applicable sections of the Municipal Code. The project site is physically suitable for the proposed density of the development.

5. That the design of the proposed land division or the proposed improvements are not likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat;

**FACT:** An Initial Study was prepared for the project for the purpose of compliance with the California Environmental Quality Act (CEQA). Based on the Initial Study, it was determined that the project impacts are expected to be less than significant with mitigation, and approval of a Mitigated Negative Declaration and a Mitigation Monitoring and Reporting Program is recommended.

Therefore, the tentative parcel map will not cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.

6. That the design of the proposed land division or type of improvements is not likely to cause serious public health problems;

**FACT:** As conditioned, the proposed parcel map would not cause serious public health problems. There are no known hazardous conditions associated with the property, the design of the land division or the type of improvements.

The proposed parcel map as designed and conditioned will ensure acceptable levels of protection from natural and man-made hazards to life, health, and property and is therefore consistent with General Plan Goal 9.6.1. The project site is located within approximately 1.1 miles from Fire Station No. 6, which is consistent with General Plan Goal 9.6.2 which requires emergency services that are adequate to meet minor emergency and major catastrophic situations.

The proposed parcel map will result in a development that would be consistent with General Plan Objective 6.1 to minimize the potential for loss of life and protect residents, workers, and visitors to the City from physical injury and property damage due to seismic ground shaking and secondary effects and General Plan Objective 6.2 to minimize the potential for loss of life and protect residents, workers, and visitors to the City from physical injury and property damage, and to minimize nuisances due to flooding.

The parcel map has been designed consistently with the City's Municipal Code Chapter 9.14 "Land Divisions" and meets all City requirements related to subdividing a property.

7. That the design of the land division or the type of improvements will not conflict with easements, acquired by the public at large, for access through or use of, property within the proposed subdivision;

**FACT:** The tentative parcel map has been designed to accommodate and not conflict with existing easements on the subject site including utility, sewer, and road easements.

8. That the proposed land division is not subject the Williamson Act pursuant to the California Land Conservation Act of 1965.

**FACT:** The project site is not utilized for agricultural purposes and is not under Williamson Act Contract. Additionally, there are no existing surrounding agricultural use, or sites under Williamson Act contract within the City limits.

9. That the proposed land division and the associated design and improvements are consistent with applicable ordinances of the city.

**FACT:** The land division proposed by Tentative Parcel Map 37750 is consistent with the City's Municipal Code Chapter 9.14 "Land Divisions" as well as the development standards established in Sections 9.03.040 "Residential site development standards" and 9.04.040 "Commercial site development standards". The land division as designed and conditioned is consistent with applicable ordinances of the city.

10. That the design of the land division provides, to the extent feasible, for future passive or natural heating and cooling opportunities in the subdivision.

**FACT:** The land division proposed by Tentative Parcel Map 37750 is consistent with the City's Municipal Code Chapter 9.14 "Land Divisions." The subdivision as designed allows for future building orientation to be such that passive or natural heating and cooling opportunities can be achieved.

11. That the effect of the proposed land division on the housing needs of the region were considered and balanced against the public service needs of the residents of Moreno Valley and available fiscal and environmental resources.

**FACT:** The project as designed is consistent with City General Plan Policy 2.2.9 which states that the primary purpose of areas designated Residential 15 is to provide a range of multi-family housing types for those not desiring dwellings on individual lots that include amenities such as common open space and recreational facilities. The maximum

allowable density shall be 15.0 dwelling units per acre. Therefore, the subdivision as designed provides housing that is balance against public service needs consistent with existing goals, objectives, policies and programs of the General Plan.

## **C. FEES, DEDICATIONS, RESERVATIONS, AND OTHER EXACTIONS**

### **1. FEES**

Impact, mitigation and other fees are due and payable under applicable ordinances and resolutions. These fees may include but are not limited to: Development Impact Fee, Transportation Uniform Mitigation Fee (TUMF), Multi-species Habitat Conservation Plan (MSHCP) Mitigation Fee, Stephens Kangaroo Habitat Conservation fee, Underground Utilities in lieu Fee, Area Drainage Plan fee, Bridge and Thoroughfare Mitigation fee (Future) and Traffic Signal Mitigation fee. The final amount of fees payable is dependent upon information provided by the applicant and will be determined at the time the fees become due and payable.

Unless otherwise provided for by this resolution, all impact fees shall be calculated and collected at the time and in the manner provided in Chapter 3.32 of the City of Moreno Valley Municipal Code or as so provided in applicable ordinances and resolutions. The City expressly reserves the right to amend the fees and the fee calculations consistent with applicable law.

### **2. DEDICATIONS, RESERVATIONS, AND OTHER EXACTIONS**

The adopted Conditions of Approval for PEN19-0150, incorporated herein by reference, include dedications, reservations, and exactions pursuant to Government Code Section 66020 (d) (1).

### **3. CITY RIGHT TO MODIFY/ADJUST; PROTEST LIMITATIONS**

The City expressly reserves the right to establish, modify or adjust any fee, dedication, reservation or other exaction to the extent permitted and as authorized by law.

Pursuant to Government Code Section 66020(d)(1), NOTICE IS FURTHER GIVEN that the 90 day period to protest the imposition of any impact fee, dedication, reservation, or other exaction described in this resolution begins on the effective date of this resolution and any such protest must be in a manner that complies with Government Code Section 66020(a) and failure to follow this procedure in a timely fashion will bar any subsequent legal action to attack, review, set aside, void or annul imposition.

The right to protest the fees, dedications, reservations, or other exactions does not apply to planning, zoning, grading, or other similar application processing fees or service fees in connection with this project and it does not apply to any fees, dedication, reservations, or other exactions of which a notice has been given similar to this, nor does it revive challenges to any fees for which the Statute of Limitations has previously expired.

**BE IT FURTHER RESOLVED** that the Planning Commission **HEREBY RECOMMENDS** that the City Council:

- 1. **APPROVE** Tentative Parcel Map 37750, PEN19-0150 based on the findings contained in the resolution and subject to the conditions of approval included as Exhibit A.

**APPROVED** on this 25<sup>th</sup> day of June, 2020.

AYES:  
NOES:  
ABSTAIN:

\_\_\_\_\_  
Patricia Korzec  
Chair, Planning Commission

ATTEST:

APPROVED AS TO FORM:

\_\_\_\_\_  
Patty Nevins, Planning Official  
Secretary to the Planning Commission

\_\_\_\_\_  
City Attorney

ATTACHMENTS:  
Exhibit A – Conditions of Approval  
Exhibit B – Tentative Parcel Map

Attachment: Resolution 2020-28 - Tentative Parcel Map 37750 [Revision 3] (4070 : General Plan Amendment PEN19-0151, Change of Zone

**CONDITIONS OF APPROVAL**

Tentative Parcel Map (PEN19-0150)

Page 1

CITY OF MORENO VALLEY  
 CONDITIONS OF APPROVAL  
 Tentative Parcel Map (PEN19-0150)

EFFECTIVE DATE:

EXPIRATION DATE:

**COMMUNITY DEVELOPMENT DEPARTMENT**Planning Division

1. The developer, or the developer's successor-in-interest, shall be responsible for maintaining any undeveloped portion of the site in a manner that provides for the control of weeds, erosion and dust. (MC 9.02.030)
2. The site shall be developed in accordance with the approved plans on file in the Community Development Department - Planning Division, the Municipal Code regulations, General Plan, and the conditions contained herein. Prior to any use of the project site or business activity being commenced thereon, all Conditions of Approval shall be completed to the satisfaction of the Planning Official. (MC 9.14.020)

Special Conditions

3. The applicant shall comply with the adopted Mitigation Monitoring and Reporting Program for the project.
4. All site plans, grading plans, landscape and irrigation plans, and street improvement plans shall be coordinated for consistency with this approval.
5. This approval shall comply with all applicable requirements of the City of Moreno Valley Municipal Code.
6. Prior to building final, the developer/owner or developer's/owner's successor-in-interest shall pay all applicable impact fees, including but not limited to Transportation Uniform Mitigation fees (TUMF), and the City's adopted Development Impact Fees. (Ord)
7. This tentative map shall expire three years after the approval date of this tentative map unless extended as provided by the City of Moreno Valley Municipal Code; otherwise it shall become null and void and of no effect whatsoever in the event the applicant or any successor in interest fails to properly file a final map before the date of expiration. (MC 9.02.230, 9.14.050, 080)

**CONDITIONS OF APPROVAL**

Tentative Parcel Map (PEN19-0150)

Page 2

8. Prior to any site disturbance and/or grading plan submittal, and or final map recordation, a mitigation monitoring fee, as provided by City ordinance, shall be paid by the applicant/owner. No City permit or approval shall be issued until such fee is paid. (CEQA)
9. Prior to issuance of a building permit, the developer/property owner or developer's successor-in-interest shall pay all applicable impact fees due at permit issuance, including but not limited to Multi-species Habitat Conservation Plan (MSHCP) mitigation fees. (Ord.)
10. Within thirty (30) days prior to any grading or other land disturbance, a pre-construction survey for Burrowing Owls shall be conducted pursuant to the established guidelines of Multiple Species Habitat Conservation Plan. The pre-construction survey shall be submitted to the Planning Division prior to any disturbance of the site and/or grading permit issuance.
11. Prior to the issuance of grading permits, a temporary project identification sign shall be erected on the site in a secure and visible manner. The sign shall be conspicuously posted at the site and remain in place until occupancy of the project. The sign shall include the following: The name and address of the development and the developer's name and address to include a 24-hour emergency phone number.
12. Prior to issuance of grading permits, the developer shall pay the applicable Stephen's' Kangaroo Rat (SKR) Habitat Conservation Plan mitigation fee.
13. The applicant shall comply with conditions of approval of the County of Riverside Airport Land Use Commission Development Review Number ZAP1375MA19.

Building Division

14. The proposed non-residential project shall comply with the latest Federal Law, Americans with Disabilities Act, and State Law, California Code of Regulations, Title 24, Chapter 11B for accessibility standards for the disabled including access to the site, exits, bathrooms, work spaces, etc.
15. Prior to submittal, all new development, including residential second units, are required to obtain a valid property address prior to permit application. Addresses can be obtained by contacting the Building Safety Division at 951.413.3350.
16. Contact the Building Safety Division for permit application submittal requirements.
17. Any construction within the city shall only be as follows: Monday through Friday seven a.m. to seven p.m.(except for holidays which occur on weekdays), eight a.m. to four p.m.; weekends and holidays (as observed by the city and described in the

**CONDITIONS OF APPROVAL**

Tentative Parcel Map (PEN19-0150)

Page 3

Moreno Valley Municipal Code Chapter 2.55), unless written approval is first obtained from the Building Official or City Engineer.

18. Building plans submitted shall be signed and sealed by a California licensed design professional as required by the State Business and Professions Code.
19. The proposed development shall be subject to the payment of required development fees as required by the City's current Fee Ordinance at the time a building application is submitted or prior to the issuance of permits as determined by the City.
20. The proposed project will be subject to approval by the Eastern Municipal Water District and all applicable fees and charges shall be paid prior to permit issuance. Contact the water district at 951.928.3777 for specific details.
21. All new structures shall be designed in conformance to the latest design standards adopted by the State of California in the California Building Code, (CBC) Part 2, Title 24, California Code of Regulations including requirements for allowable area, occupancy separations, fire suppression systems, accessibility, etc. The current code edition is the 2016 CBC.

**PUBLIC WORKS DEPARTMENT****Land Development**

22. The developer shall comply with all applicable City ordinances and resolutions including the City's Municipal Code (MC) and if subdividing land, the Government Code (GC) of the State of California, specifically Sections 66410 through 66499.58, said sections also referred to as the Subdivision Map Act (SMA). [MC 9.14.010]
23. In the event right-of-way or offsite easements are required to construct offsite improvements necessary for the orderly development of the surrounding area to meet the public health and safety needs, the developer shall make a good faith effort to acquire the needed right-of-way in accordance with the Land Development Division's administrative policy. If unsuccessful, the Developer shall enter into an agreement with the City to acquire the necessary right-of-way or offsite easements and complete the improvements at such time the City acquires the right-of-way or offsite easements which will permit the improvements to be made. The developer shall be responsible for all costs associated with the right-of-way or easement acquisition. [GC 66462.5]
24. The developer shall protect downstream properties from damage caused by alteration of drainage patterns (i.e. concentration or diversion of flow, etc). Protection shall be provided by constructing adequate drainage facilities, including,



**CONDITIONS OF APPROVAL**

Tentative Parcel Map (PEN19-0150)

Page 4

but not limited to, modifying existing facilities or by securing a drainage easement. [MC 9.14.110]

25. Public drainage easements, when required, shall be a minimum of 25 feet wide and shall be shown on the map and plan, and noted as follows: "Drainage Easement – no structures, obstructions, or encroachments by land fills are allowed." In addition, the grade within the easement area shall not exceed a 3:1 (H:V) slope, unless approved by the City Engineer.
26. This project shall submit civil engineering design plans, reports and/or documents (prepared by a registered/licensed civil engineer or land surveyor) for review and approval by the City Engineer per the current submittal requirements, prior to the indicated threshold or as required by the City Engineer. The submittal consists of, but is not limited to, the following:
  - a. Parcel Map (recordation prior to building permit issuance)

Prior to Map Approval

27. All proposed street names shall be submitted for review and approved by the City Engineer, if applicable. [MC 9.14.090(E.2.k)]
28. A copy of the Covenants, Conditions and Restrictions (CC&R's) shall be submitted for review and approved by the City Engineer. The CC&R's shall include, but not be limited to, access easements, reciprocal access, private and/or public utility easements as may be relevant to the project. In addition, for single-family residential development, bylaws and articles of incorporation shall also be included as part of the maintenance agreement for any water quality BMPs.
29. After recordation, a digital (pdf) copy of the recorded map shall be submitted to the Land Development Division.
30. Resolution of all drainage issues shall be as approved by the City Engineer.
31. If the project involves the subdivision of land, maps may be developed in phases with the approval of the City Engineer. Financial security shall be provided for all public improvements associated with each phase of the map. The boundaries of any multiple map increment shall be subject to the approval of the City Engineer. If the project does not involve the subdivision of land and it is necessary to dedicate right-of-way/easements, the developer shall make the appropriate offer of dedication by separate instrument. In either case, the City Engineer may require the dedication and construction of necessary utility, street or other improvements beyond the project boundary, if the improvements are needed for circulation, parking, access, or for the welfare or safety of the public. This approval must be

**CONDITIONS OF APPROVAL**

Tentative Parcel Map (PEN19-0150)

Page 5

obtained prior to the Developer submitting a Phasing Plan to the California Bureau of Real Estate. [MC 9.14.080(B)(C), GC 66412 & 66462.5]

32. Maps (prepared by a registered civil engineer and/or licensed surveyor) shall be submitted for review and approved by the City Engineer per the current submittal requirements.
33. All public improvement plans required for this project shall be approved by the City Engineer in order to execute the Public Improvement Agreement (PIA).
34. The developer shall comply with the requirements of the City Engineer based on recommendations of the Riverside County Flood Control District regarding the construction of County Master Plan Facilities.
35. All street dedications shall be free of all encumbrances, irrevocably offered to the public and shall continue in force until the City accepts or abandons such offers, unless otherwise approved by the City Engineer.
36. Either reciprocal access easement(s) shall be shown on the map or a separate recorded copy of a reciprocal access agreement between parcels shall be submitted to the City for review and approval.
37. The appropriate street right-of-way dedication for a cul-de-sac at the westerly terminus of Kinross Lane per City Standard Plan MVSI-163A-0.

Transportation Engineering Division

38. Final Parcel Map shall include right-of-way dedication at westerly end of Kinross Lane to accommodate a cul-de-sac per City Standard MVSI-163A-0.

**PARKS & COMMUNITY SERVICES DEPARTMENT**

39. This project is subject to current Development Impact Fees.
40. This project is required to supply a funding source for the continued maintenance, enhancement, and or retrofit of neighborhood parks, open spaces, linear parks, and/or trails systems. This can be achieved through annexing into Community Facilities District No. 1 (Park Maintenance). Please contact the Special Districts Division at 951.413.3480 or specialdistricts@moval.org to complete the annexation process.
41. This project is subject to current Quimby Fees.
42. The parcel(s) associated with this project have been incorporated into the Moreno

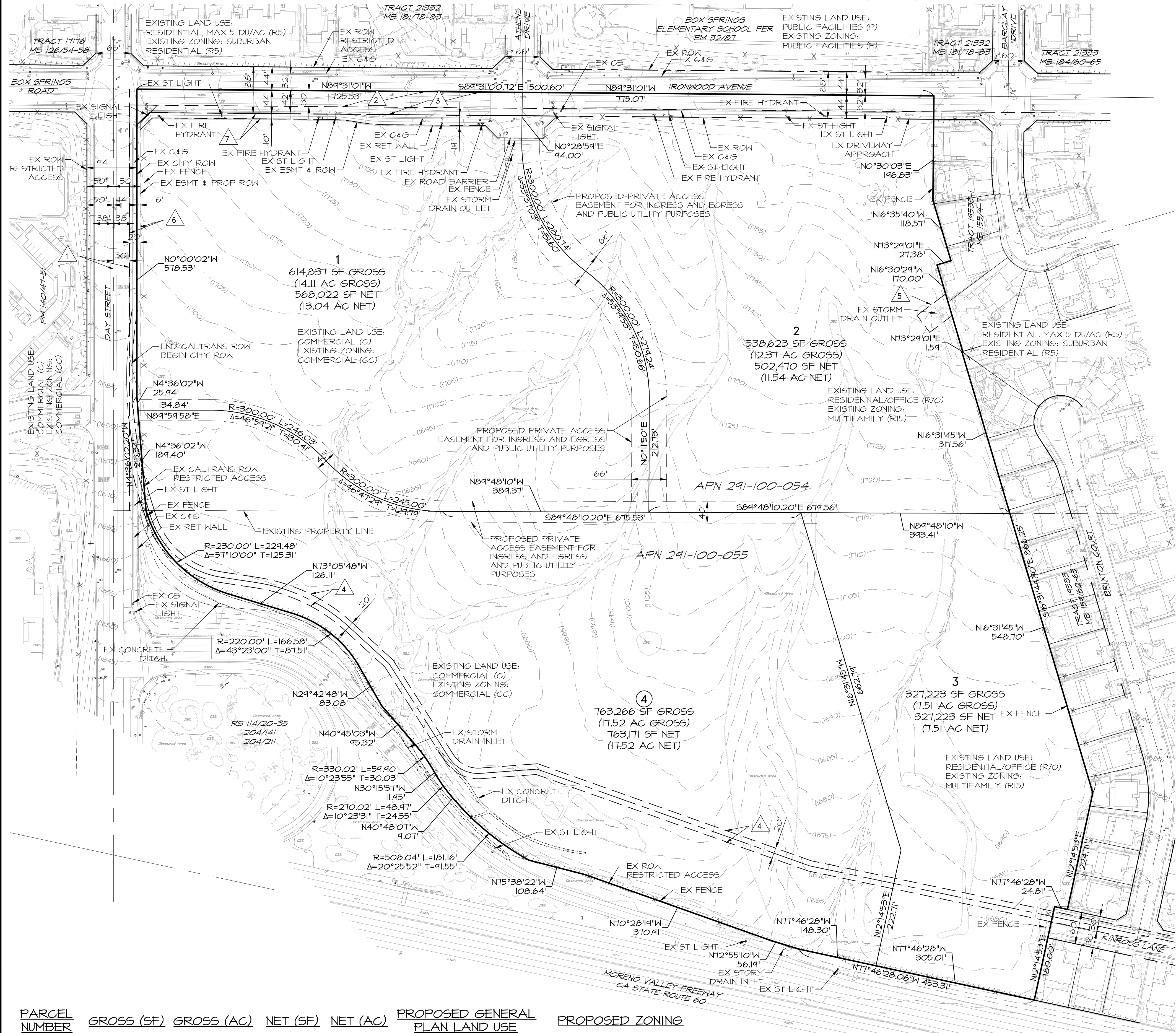
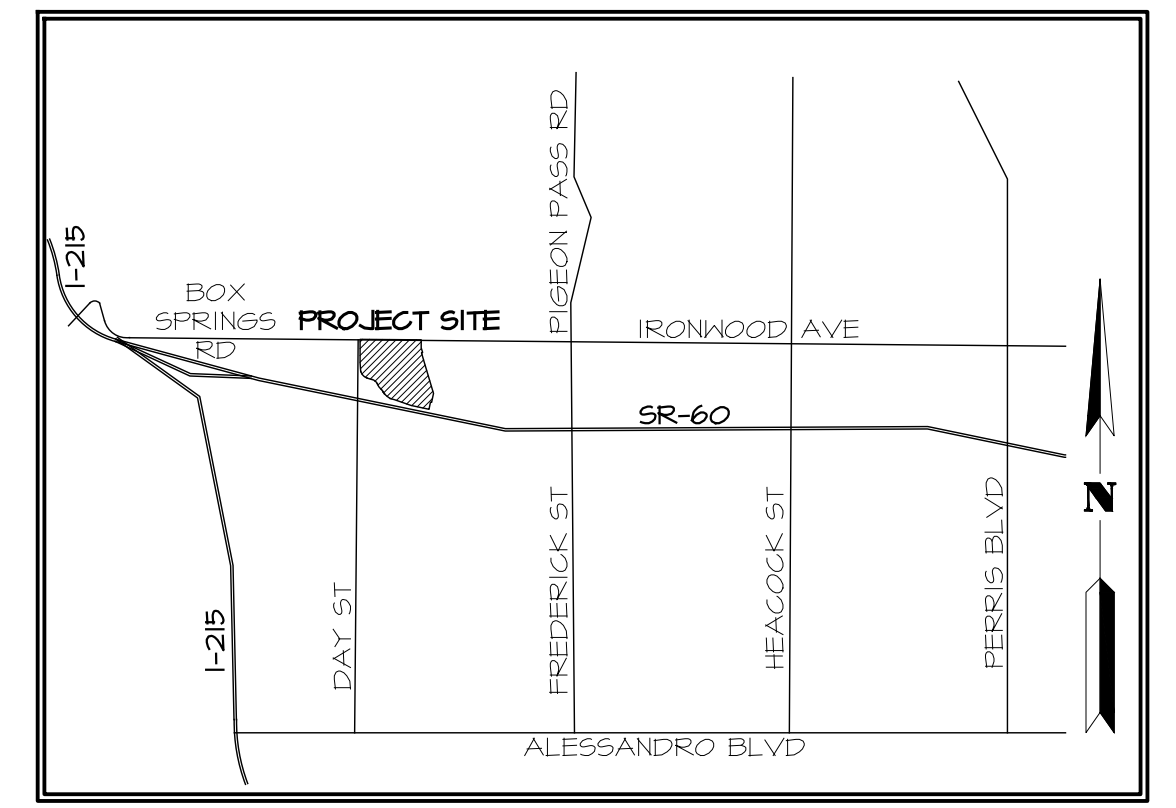
**CONDITIONS OF APPROVAL**

Tentative Parcel Map (PEN19-0150)

Page 6

Valley Community Services District Zone A (Parks and Community Services). All assessable parcels therein shall be subject to the annual Zone 'A' charge for operations and capital improvements. Proof of such shall be supplied to Parks and Community Services upon Final Map and at Building Permits.

# IN THE CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA TENTATIVE PARCEL MAP NO. 37750 LOCATED IN SECTION 2, T. 3 S., R. 4 W., S.B.M.



### OWNER (1 OF 5)

M&F DEVELOPMENT COMPANY  
3425 VIA LIDO, SUITE 250  
NEWPORT BEACH, CA 92663  
CONTACT: PAUL C. BERNARD  
PHONE: (444) 723-1100  
PBERNARD@FRITZDUDA.COM

### OWNER (2 OF 5)

TRIPLE S GROUP, LLC  
3788 MCCRAY STREET  
RIVERSIDE, CA 92506  
CONTACT: SCOTT S. WEBB  
PHONE: (951) 686-1070  
SCOTT.WEBB@WEBBASSOCIATES.COM

### OWNER (3 OF 5)

MBB, LLC  
3788 MCCRAY STREET  
RIVERSIDE, CA 92506  
CONTACT: MATTHEW E. WEBB  
PHONE: (951) 686-1070  
MATT.WEBB@WEBBASSOCIATES.COM

### OWNER (4 OF 5)

IRENE WEBB SALTER, TRUSTEE OF THE ERNEST WEBB CREDIT TRUST  
3788 MCCRAY STREET  
RIVERSIDE, CA 92506  
CONTACT: IRENE SALTER  
PHONE: (951) 686-1070  
REXANDIRENE@YAHOO.COM

### OWNER (5 OF 5)

FRITZ DUDA COMPANY, A TEXAS CORPORATION  
13355 NOEL ROAD, LB3, SUITE 2225  
DALLAS, TEXAS 75240  
CONTACT: FRITZ DUDA  
PHONE: (444) 723-1100  
FRITZDUDA@FRITZDUDA.COM

### ABBREVIATIONS

- AC ACRES
- APN ASSESSOR'S PARCEL NUMBER
- CA CALIFORNIA
- CB CATCH BASIN
- C&G CURB AND GUTTER
- E EAST
- EX EXISTING
- L LENGTH
- N NORTH
- R RADIUS
- RET RETAINING
- ROW RIGHT OF WAY
- SF SQUARE FEET
- ST STREET
- T TANGENT
- W WEST

### LEGEND

- EXISTING RETAINING WALL
- EXISTING FENCE
- EXISTING RIGHT OF WAY
- EXISTING ROW, RESTRICTED ACCESS
- EXISTING EASEMENT
- PROPOSED EASEMENT
- EXISTING STREET LIGHT
- EXISTING FIRE HYDRANT
- EXISTING CONTOURS
- EXISTING LOT LINE
- PROPOSED LOT LINE
- PROJECT BOUNDARY

### APPLICANT

M&F DEVELOPMENT COMPANY  
3425 VIA LIDO, SUITE 250  
NEWPORT BEACH, CA 92663  
CONTACT: PAUL C. BERNARD  
PHONE: (444) 723-1100  
PBERNARD@FRITZDUDA.COM

### ENGINEER

ALBERT A. WEBB ASSOCIATES  
3788 MCCRAY STREET  
RIVERSIDE, CA 92506  
CONTACT: SARAH KOHALSKI  
PHONE: (951) 686-1070  
SARAH.KOHALSKI@WEBBASSOCIATES.COM

### TOPOGRAPHY SOURCE

TOPOGRAPHY FLOWN BY  
INLAND AERIAL SURVEYS, INC.  
ON 05/03/2019

### A.P.N.

291-100-054 AND 291-100-055

### ACREAGE

51.51 GROSS ACRES  
49.61 NET ACRES  
4 LOTS

### UTILITY PROVIDERS

- WATER EASTERN MUNICIPAL WATER DISTRICT
- SEWER EASTERN MUNICIPAL WATER DISTRICT
- ELECTRICAL SOUTHERN CALIFORNIA EDISON
- GAS SOUTHERN CALIFORNIA GAS COMPANY
- TELEPHONE AT&T
- CABLE T.V. CHARTER COMMUNICATIONS

### SCHOOL DISTRICT

MORENO VALLEY UNIFIED SCHOOL DISTRICT

### PROJECT DESCRIPTION

THIS TENTATIVE PARCEL MAP PROPOSES TO SUBDIVIDE 50± ACRES CONSISTING OF APNS #291-100-054 AND -055 LOCATED AT THE SOUTHEAST CORNER OF DAY STREET AND IRONWOOD AVENUE IN THE CITY OF MORENO VALLEY. THE SITE WILL BE SUBDIVIDED INTO FOUR PARCELS WITH THE INTENT TO NEITHER INCREASE NOR DECREASE THE TOTAL ACREAGE OF C AND R/O GENERAL PLAN LAND USE DESIGNATIONS. THIS PARCEL MAP IS INTENDED TO SEPARATE PARTNERSHIP INTERESTS. NO DEVELOPMENT OR GRADING IS PROPOSED WITH THIS MAP.

### EASEMENT NOTES

- AN EASEMENT FOR ROADS AND PUBLIC UTILITIES AND INCIDENTAL PURPOSES PER BOOK 600, PAGE 303 O.R., REC. 10/27/1943
- AN EASEMENT FOR ROADS AND PIPES LINES AND INCIDENTAL PURPOSES PER INST. #1478-224404 OR, REC. 03/16/1913
- 44' DEDICATION FOR PUBLIC ROAD AND PUE PER INST. #1478-224404 OR, REC. 10/31/1918
- 20' EMDD SEWER EASEMENT PER INST. #1481-145057 OR, REC. 10/16/1981
- IRREVOCABLY DEDICATION IN PERPETUITY FOR DRAINAGE PURPOSES PER INST. #1486-174856, REC. 7/30/1986
- AN EASEMENT FOR ROADS AND PUBLIC UTILITIES AND INCIDENTAL PURPOSES PER INST. #2007-210877 OR, REC. 03/28/2007
- A PERPETUAL EASEMENT AND RIGHT OF WAY FOR PUBLIC ROADWAY PURPOSES AND P.U.E. PER INST. #2014-220691 OR, REC. 6/19/2019

### BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS SURVEY IS THE CALIFORNIA STATE PLAN COORDINATE SYSTEM, CG83, ZONE 6, BASED LOCALLY ON CONTROL STATIONS "MLFP" AND "PPBF", NAD 83 (NSRS2011).

### BENCHMARK

N66 # MP 106 (PID #AB5564)  
ELEV. = 1548.42' (NAVD 88)  
DESCRIBED BY METRO WATER DISTR. 50, CALIFORNIA 1944 (TMB)  
RIVERSIDE, FROM THE INTERSECTION OF INTERSTATE 215 AND ALESSANDRO BLVD OFF RAMP, PROCEED 0.8 MILE (1.3 KM) WEST ALONG ALESSANDRO BLVD FROM 215 Fwy TO ALEXANDER ST, 44 FEET (13.4 M) SOUTH OF ALESSANDRO AND 20 FEET (6.1 M) EAST OF ALEXANDER TO A 4 FOOT (1.2 M) BY 7 FOOT (2.1 M) CONCRETE CATCH BASIN ON SOUTH SIDE OF BLVD. SET A NAD83 3 INCH BRASS DISK STAMPED MP 106 1944 FLUSH ON TOP OF THE NORTHEAST CORNER OF CATCH BASIN AND 15 FEET (0.5 M) BACK OF CURB FACE AND 6 INCHES ABOVE ROAD SURFACE. REFERENCE M&D FB 4205 06 022.  
\*\* CONVERSION FACTOR TO RIV. CO. (NGVD 29) = -2.32', BASED ON RIV. CO. BM #ML Q 298 WITH ESTABLISHED ELEVATION OF 1364.902' \*\*

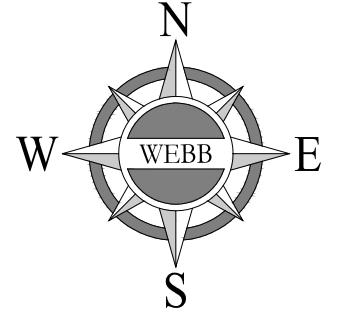
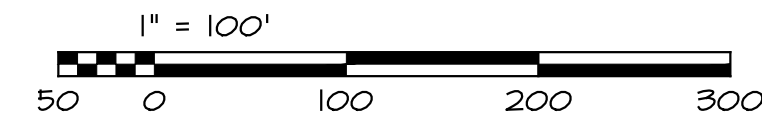
### GENERAL INFORMATION

- THOMAS BROS. MAP BOOK PAGE TIT GRID: A2.
- THIS MAP INCLUDES THE ENTIRE CONTIGUOUS OWNERSHIP OF THE LAND DIVIDER.
- PROJECT IS NOT WITHIN A SPECIFIC PLAN.
- EASEMENTS OF RECORD ARE PLOTTED HEREON.
- PROJECT IS WITHIN MORENO VALLEY ZONE A (PARKS AND COMMUNITY SERVICES) AND ZONE C (ARTERIAL STREET LIGHTING) COMMUNITY SERVICES DISTRICTS.
- LAND IS NOT WITHIN A SPECIAL STUDIES ZONE.
- LAND IS SUBJECT TO LOW LIQUEFACTION.
- LAND IS SUSCEPTIBLE TO SUBSIDENCE.
- NO EXISTING STRUCTURES OR DWELLINGS ON SITE.
- THE PROJECT IS IN THE SANTA ANA RIVER WATERSHED.
- FLOOD ZONE X, AREA OF MINIMAL FLOODING PER FEMA PANEL 06065COT346.

### SHEET INDEX

NUMBER	DESCRIPTION
1	TENTATIVE PARCEL MAP
2	LEGAL DESCRIPTION & STREET SECTIONS

PARCEL NUMBER	GROSS (SF)	GROSS (AC)	NET (SF)	NET (AC)	PROPOSED GENERAL PLAN LAND USE	PROPOSED ZONING
1	614,831	14.11	568,022	13.04	COMMERCIAL (C)	COMMERCIAL (CC)
2	538,623	12.37	502,470	11.54	RESIDENTIAL OFFICE (R/O)	MULTI-FAMILY RESIDENTIAL (R-15)
3	327,223	7.51	327,223	7.51	RESIDENTIAL OFFICE (R/O)	MULTI-FAMILY RESIDENTIAL (R-15)
4	763,266	17.52	763,171	17.52	COMMERCIAL (C)	COMMERCIAL (CC)
<b>TOTAL</b>	<b>2,243,814</b>	<b>51.51</b>	<b>2,160,886</b>	<b>49.61</b>		



SCALE: 1" = 100'  
DATE: 9/26/2019  
DESIGNED: ABE  
CHECKED: SKK  
PLN CK REF: F.B.  
PLOT DATE: 28-Sep-19

**ALBERT A. WEBB ASSOCIATES** ENGINEERING CONSULTANTS  
3788 MCCRAY STREET RIVERSIDE CA 92506  
PH. (951) 686-1070 FAX (951) 788-1256

**TENTATIVE PARCEL MAP No. 37750  
PEN19-0150**

**CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE**

W.O. 2019-0107  
SHEET 1  
OF 2 SHEETS  
DWG. NO.

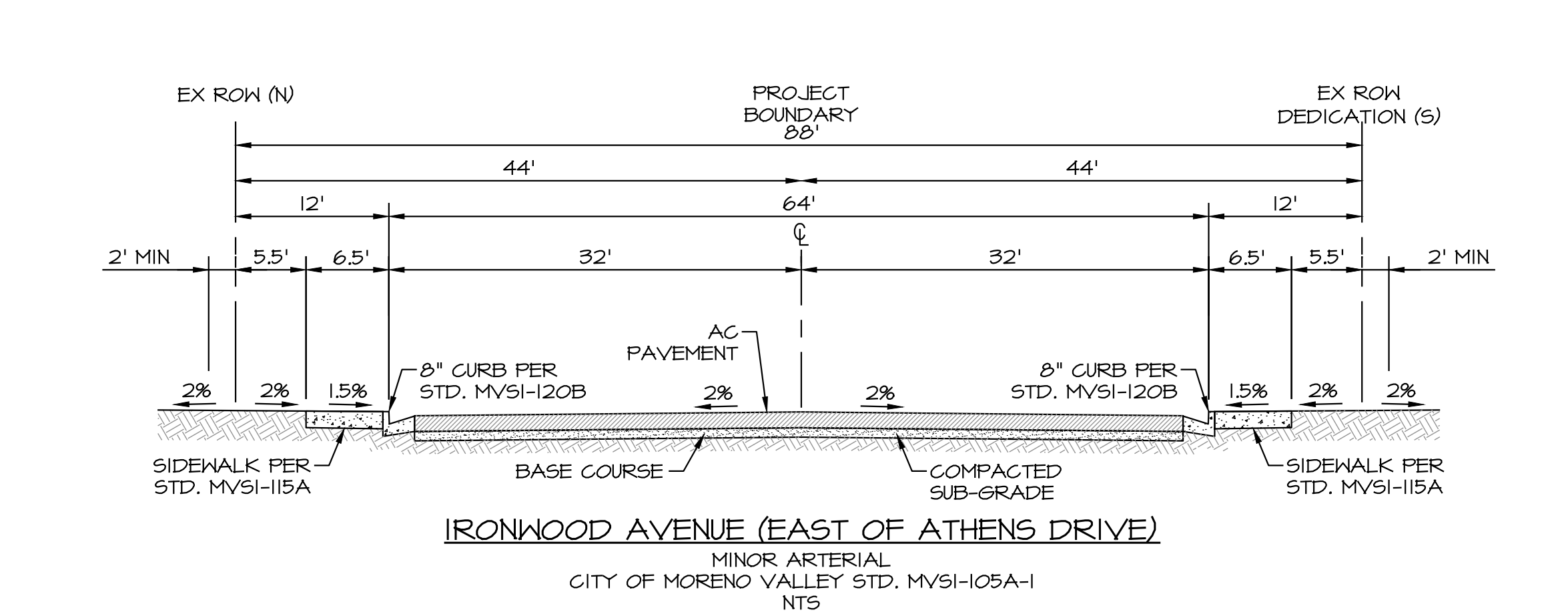
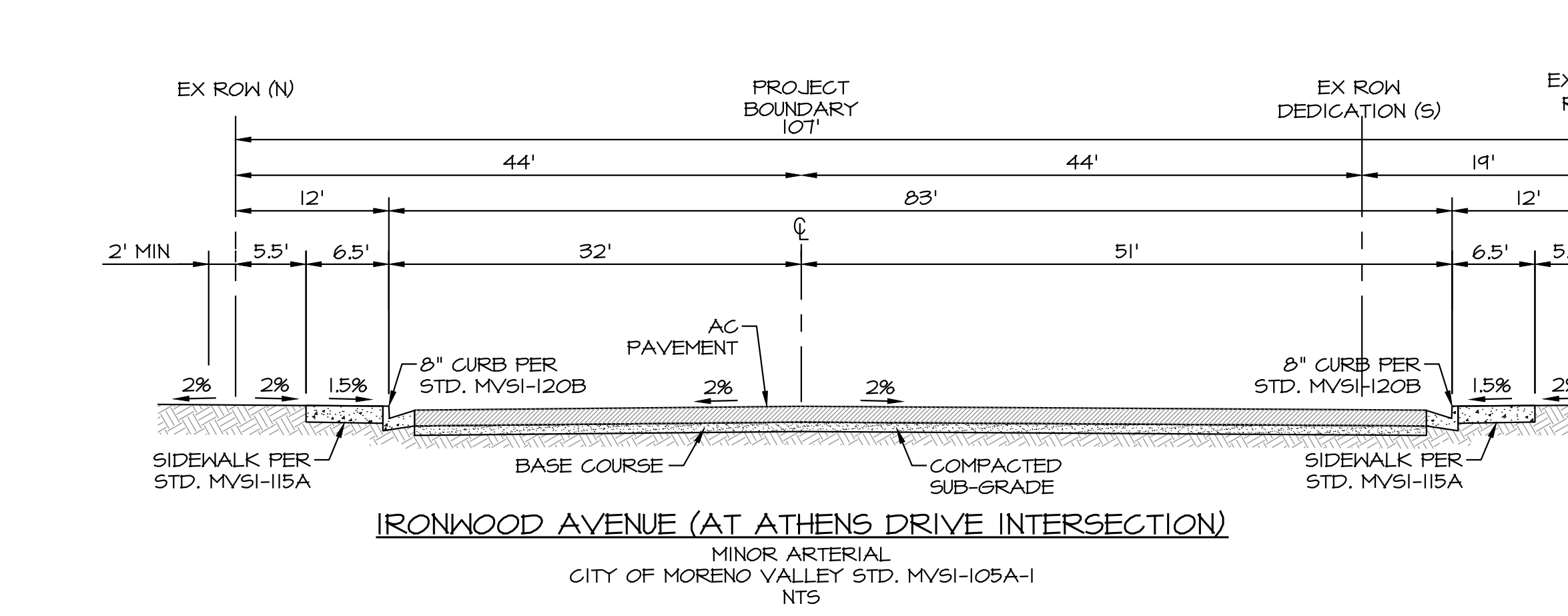
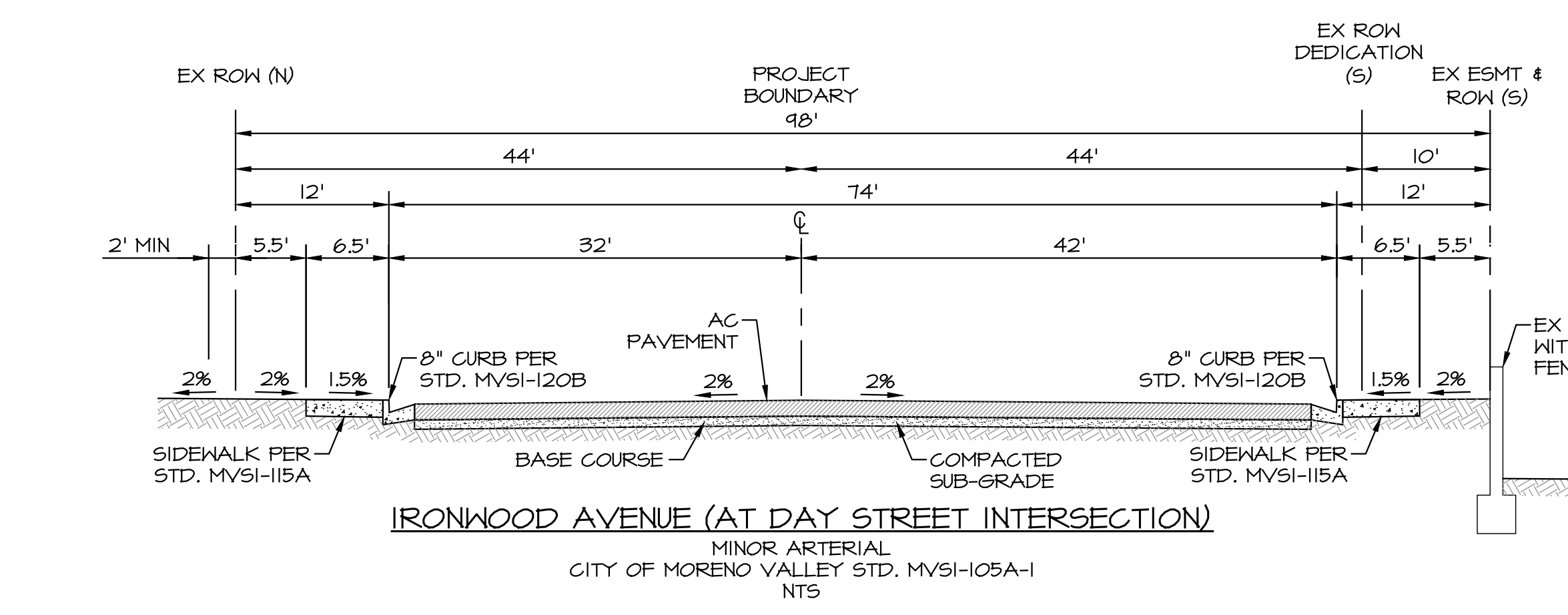
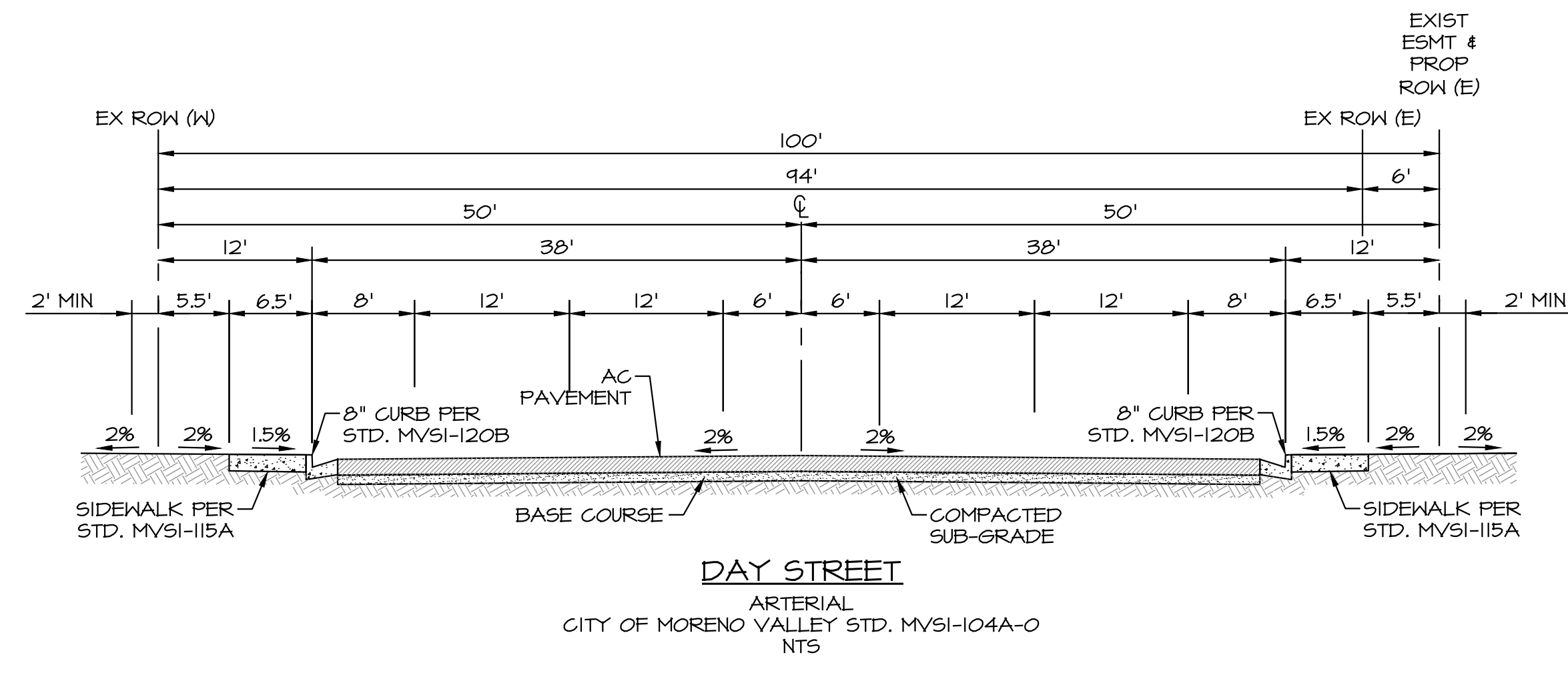
Attachment: Exhibit B - Tentative Parcel Map 37750 - General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map PEN19-0150

LEGAL DESCRIPTION

PER FIRST AMERICAN TITLE REPORT, DATED MAY 8, 2019

PARCEL 1: SECTION 2, TOWNSHIP 3 SOUTH, RANGE 4 WEST, SAN BERNARDINO BASE AND MERIDIAN, ACCORDING TO GOVERNMENT SURVEY THEREOF; EXCEPTING THEREFROM THAT PORTION LYING SOUTHERLY OF THE FOLLOWING DESCRIBED LINE; BEGINNING ON THE EAST LINE OF SAID SECTION 2 AT A POINT BEING NORTH 00 DEGREES 13' WEST (RECORDED AS SOUTH 00 DEGREES 18' EAST), A DISTANCE OF 4711.50 FEET FROM THE SOUTHEAST CORNER OF SAID SECTION 2; THENCE SOUTH 84 DEGREES 42' 30" WEST (RECORDED AS SOUTH 84 DEGREES 37' 30" WEST), A DISTANCE OF 5304.12 FEET TO A POINT IN THE WEST LINE OF SAID SECTION 2, SAID POINT BEING NORTH 00 DEGREES 35' WEST, A DISTANCE OF 4711.50 FEET FROM THE SOUTHWEST CORNER OF SAID SECTION 2; ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE STATE OF CALIFORNIA FOR FREEWAY PURPOSES, BY DEED RECORDED DECEMBER 12, 1961 AS INSTRUMENT NO. 10628T OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE COUNTY OF RIVERSIDE BY DEED RECORDED NOVEMBER 13, 1978 AS INSTRUMENT NO. 238738 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; ALSO EXCEPTING THEREFROM THAT PORTION DESCRIBED AS FOLLOWS: BEGINNING ON THE EAST LINE OF SAID SECTION 2 AT POINT BEING NORTH 00 DEGREES 13' 31" WEST (RECORDED AS SOUTH 00 DEGREES 18' EAST), A DISTANCE OF 4711.50 FEET FROM THE SOUTHEAST CORNER OF SAID SECTION 2; THENCE SOUTH 84 DEGREES 42' 30" WEST (RECORDED AS SOUTH 84 DEGREES 37' 30" WEST), ALONG THE NORTH LINE OF THE SOUTH 4711.50 FEET OF SAID SECTION 2, A DISTANCE OF 1804.00 FEET; THENCE NORTHWESTERLY, A DISTANCE OF 800.00 FEET, MORE OR LESS, TO A POINT IN THE NORTH LINE OF SAID SECTION 2, DISTANT THEREON WESTERLY 1970.00 FEET FROM THE NORTHEAST CORNER OF SAID SECTION 2; THENCE EASTERLY ALONG SAID NORTH LINE, A DISTANCE OF 1970.00 FEET TO THE NORTHEAST CORNER OF SAID SECTION 2; THENCE SOUTH 00 DEGREES 13' 31" EAST ALONG SAID EAST LINE, A DISTANCE OF 767.00 FEET, MORE OR LESS, TO THE POINT OF BEGINNING; ALSO EXCEPTING THEREFROM THAT PORTION DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 2; THENCE SOUTH 84 DEGREES 52' 13" WEST ALONG THE NORTH LINE OF SAID SECTION, A DISTANCE OF 1970.00 FEET TO A POINT THEREIN FOR THE TRUE POINT OF BEGINNING, SAID POINT BEING THE NORTHWESTERLY CORNER OF THAT CERTAIN PARCEL OF LAND DESCRIBED IN THE DEED TO ROBERT H. GRANT, ET AL, RECORDED FEBRUARY 2, 1979 AS INSTRUMENT NO. 23712 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; THENCE SOUTH 12 DEGREES 24' 24" EAST ALONG THE WESTERLY LINE OF SOUTHWESTERLY CORNER THEREOF; THENCE SOUTH 84 DEGREES 26' 17" WEST ALONG THE WESTERLY PROLONGATION OF THE SOUTHWESTERLY LINE OF SAID PARCEL SO DESCRIBED, A DISTANCE OF 81.24 FEET; THENCE NORTH 00 DEGREES 07' 18" EAST, A DISTANCE OF 25.56 FEET; THENCE NORTH 04 DEGREES 03' 14" WEST, A DISTANCE OF 198.60 FEET; THENCE NORTH 17 DEGREES 07' 47" WEST, A DISTANCE OF 416.51 FEET; THENCE NORTH 00 DEGREES 07' 47" WEST, A DISTANCE OF 155.58 TO A POINT IN THE NORTH LINE OF SAID SECTION 2; THENCE NORTH 84 DEGREES 52' 13" EAST ALONG SAID NORTH LINE, A DISTANCE OF 65.00 FEET TO THE TRUE POINT OF BEGINNING; ALSO EXCEPTING THEREFROM TRACT 14233-1 AS SHOWN BY MAP ON FILE IN BOOK 140, PAGES 14, 15, 16 AND 17 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; ALSO EXCEPTING THEREFROM TRACT 14533 AS SHOWN BY MAP ON FILE IN BOOK 154, PAGES 62 TO 65, INCLUSIVE OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; ALSO EXCEPTING THEREFROM TRACT 14533-1 AS SHOWN BY MAP ON FILE IN BOOK 155, PAGES 4 TO 7, INCLUSIVE OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

PARCEL 2: ALL THAT PORTION OF THE SOUTH 4711.50 FEET OF SECTION 2, TOWNSHIP 3 SOUTH, RANGE 4 WEST, SAN BERNARDINO BASE AND MERIDIAN, ACCORDING TO THE OFFICIAL PLAT THEREOF, LYING NORTHERLY OF THE NORTHERLY LINE OF THAT PORTION OF SAID SECTION DESCRIBED IN DEED TO THE STATE OF CALIFORNIA, RECORDED SEPTEMBER 21, 1954 IN BOOK 1632 PAGE 324 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; EXCEPTING THEREFROM THAT PORTION LYING EASTERLY OF THE FOLLOWING DESCRIBED LINE: BEGINNING AT A POINT ON THE NORTH LINE OF SAID SOUTH 4711.50 FEET OF SECTION 2, DISTANT THEREON SOUTH 84 DEGREES 42' 30" WEST (RECORDED AS SOUTH 84 DEGREES 37' 30" WEST), A DISTANCE OF 1804.00 FEET FROM THE NORTHEAST CORNER THEREOF; THENCE SOUTH 05 DEGREES 45' 00" WEST, A DISTANCE OF 230.00 FEET; THENCE SOUTH 27 DEGREES 30' 00" WEST, A DISTANCE OF 415.00 FEET; THENCE SOUTH 18 DEGREES 05' 00" EAST, A DISTANCE OF 265.00 FEET; THENCE SOUTH 27 DEGREES 30' 00" WEST, A DISTANCE OF 400.00 FEET, MORE OR LESS, TO A POINT IN THE NORTHERLY LINE OF THE PARCEL CONVEYED TO THE STATE OF CALIFORNIA AS AFORESAID; ALSO EXCEPTING THEREFROM THAT PORTION DESCRIBED AS PARCELS "A" AND "C" IN DEED TO THE STATE OF CALIFORNIA, RECORDED MAY 25, 1962 AS INSTRUMENT NO. 48464 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; ALSO EXCEPTING THEREFROM THAT PORTION DESCRIBED IN DEED TO THE STATE OF CALIFORNIA, RECORDED JUNE 26, 1967 AS INSTRUMENT NO. 54476 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; ALSO EXCEPTING THEREFROM THAT PORTION DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWESTERLY CORNER OF THAT CERTAIN PARCEL OF LAND DESCRIBED IN THE DEED TO RICHARD L. OWEN, ET AL, RECORDED DECEMBER 6, 1978 AS INSTRUMENT NO. 256105 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; THENCE SOUTH 05 DEGREES 38' 41" WEST, A DISTANCE OF 230.00 FEET; THENCE SOUTH 27 DEGREES 23' 47" WEST, A DISTANCE OF 415.00 FEET; THENCE SOUTH 18 DEGREES 11' 13" EAST, A DISTANCE OF 265.00 FEET; THE LAST THREE COURSES AND DISTANCES FOLLOW THE WESTERLY LINE OF SAID PARCEL SO DESCRIBED IN DEED TO OWEN AS AFORESAID; THENCE SOUTH 27 DEGREES 23' 47" WEST ALONG SAID WESTERLY LINE OF SAID PARCEL SO DESCRIBED, A DISTANCE OF 366.41 FEET TO A POINT THEREIN; THENCE NORTH 08 DEGREES 29' 00" EAST, A DISTANCE OF 139.42 FEET; THENCE NORTH 05 DEGREES 13' 25" EAST, A DISTANCE OF 549.19 FEET; THENCE NORTH 20 DEGREES 22' 18" EAST, A DISTANCE OF 344.34 FEET; THENCE NORTH 12 DEGREES 53' 19" EAST, A DISTANCE OF 125.00 FEET; THENCE NORTH 00 DEGREES 07' 18" EAST, A DISTANCE OF 44.38 FEET TO A POINT IN THE WESTERLY PROLONGATION OF THE NORTHERLY LINE OF SAID PARCEL SO DESCRIBED IN DEED TO OWEN AS AFORESAID; THENCE NORTH 84 DEGREES 37' 17" EAST ALONG SAID WESTERLY PROLONGATION, A DISTANCE OF 81.24 FEET TO THE TRUE POINT OF BEGINNING; ALSO EXCEPTING THEREFROM TRACT 14233-1 AS SHOWN BY MAP ON FILE IN BOOK 140 PAGES 14, 15, 16 AND 17 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; ALSO EXCEPTING THEREFROM TRACT 14233 AS SHOWN BY MAP ON FILE IN BOOK 149 PAGES 22 THROUGH 25 OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; ALSO EXCEPTING THEREFROM TRACT 14533 AS SHOWN BY MAP ON FILE IN BOOK 154 PAGES 62 TO 65, INCLUSIVE OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; ALSO EXCEPTING THEREFROM TRACT 14533-1 AS SHOWN BY MAP ON FILE IN BOOK 155 PAGES 4 TO 7, INCLUSIVE OF MAPS, RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; ALSO EXCEPTING THEREFROM THAT PORTION CONVEYED TO THE CITY OF MORENO VALLEY, A MUNICIPAL CORPORATION BY GRANT DEED RECORDED AUGUST 3, 1983 AS INSTRUMENT NO. 301918 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; EXCEPTING FROM PARCELS 1 AND 2 HEREINABOVE DESCRIBED ALL OIL, OIL RIGHTS, MINERALS, MINERAL RIGHTS, NATURAL GAS RIGHTS, AND OTHER HYDROCARBONS BY WHATSOEVER NAME KNOWN THAT MAY BE WITHIN OR UNDER SAID PROPERTY TOGETHER WITH THE PERPETUAL RIGHT OF DRILLING, MINING, EXPLORING AND OPERATING THEREFOR AND STORING AND REMOVING THE SAME FROM SAID PROPERTY OR ANY OTHER LAND, INCLUDING THE RIGHT TO WHIPSTOCK OR DIRECTIONALLY DRILL OR MINE FROM LANDS OTHER THAN THOSE HEREINABOVE DESCRIBED, OIL AND GAS WELLS, TUNNELS AND SHAFTS INTO, THROUGH OR ACROSS THE SUBSURFACE OF THE LAND HEREINABOVE DESCRIBED, AND TO BOTTOM SUCH WHIPSTOCKED OR DIRECTIONALLY DRILLED WELLS, TUNNELS, AND SHAFTS UNDER AND BENEATH OR BEYOND THE EXTERIOR LIMITS THEREOF, AND TO RETUNNEL, REDRILL, EQUIP, MAINTAIN, REPAIR, DEEPEN AND OPERATE ANY SUCH WELLS OR MINES, WITHOUT, HOWEVER, THE RIGHT TO DRILL, MINE, STORE, EXPLORE AND OPERATE THROUGH THE SUBSURFACE OR THE TOP 500 FEET OF SUBSURFACE OF THE PROPERTY HEREINABOVE DESCRIBED, AS CONVEYED TO ROSSHEAD PETROLEUM COMPANY BY DEED RECORDED APRIL 6, 1981 AS INSTRUMENT NO. 60358 OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA.

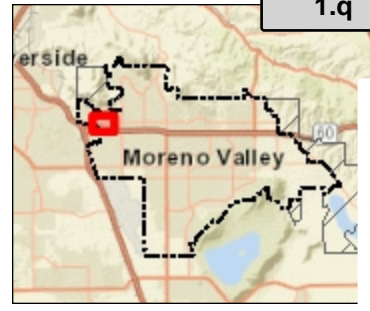


SCALE: NTS	DATE: 9/26/2019	DESIGNED: ABE	CHECKED: SKK	PLN CK REF: F.B.	DATE: 26-Sep-19	W.O. 2019-0107	SHEET 2	OF 2 SHEETS	DWG. NO.
REVISIONS						TENTATIVE PARCEL MAP No. 37750			
CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE						CITY OF MORENO VALLEY, COUNTY OF RIVERSIDE			

Attachment: Exhibit B - Tentative Parcel Map 37750 (4070 - General Plan Amendment PEN19-0151, Change of Zone PEN19-0152, and Tentative Parcel Map PEN19-0150)

Packet Pg. 269

# Aerial Photograph



- Legend**
- Public Facilities
    - Public Facilities
    - ★ Fire Stations
  - Parcels
  - ⊞ City Boundary
  - ⊞ Sphere of Influence



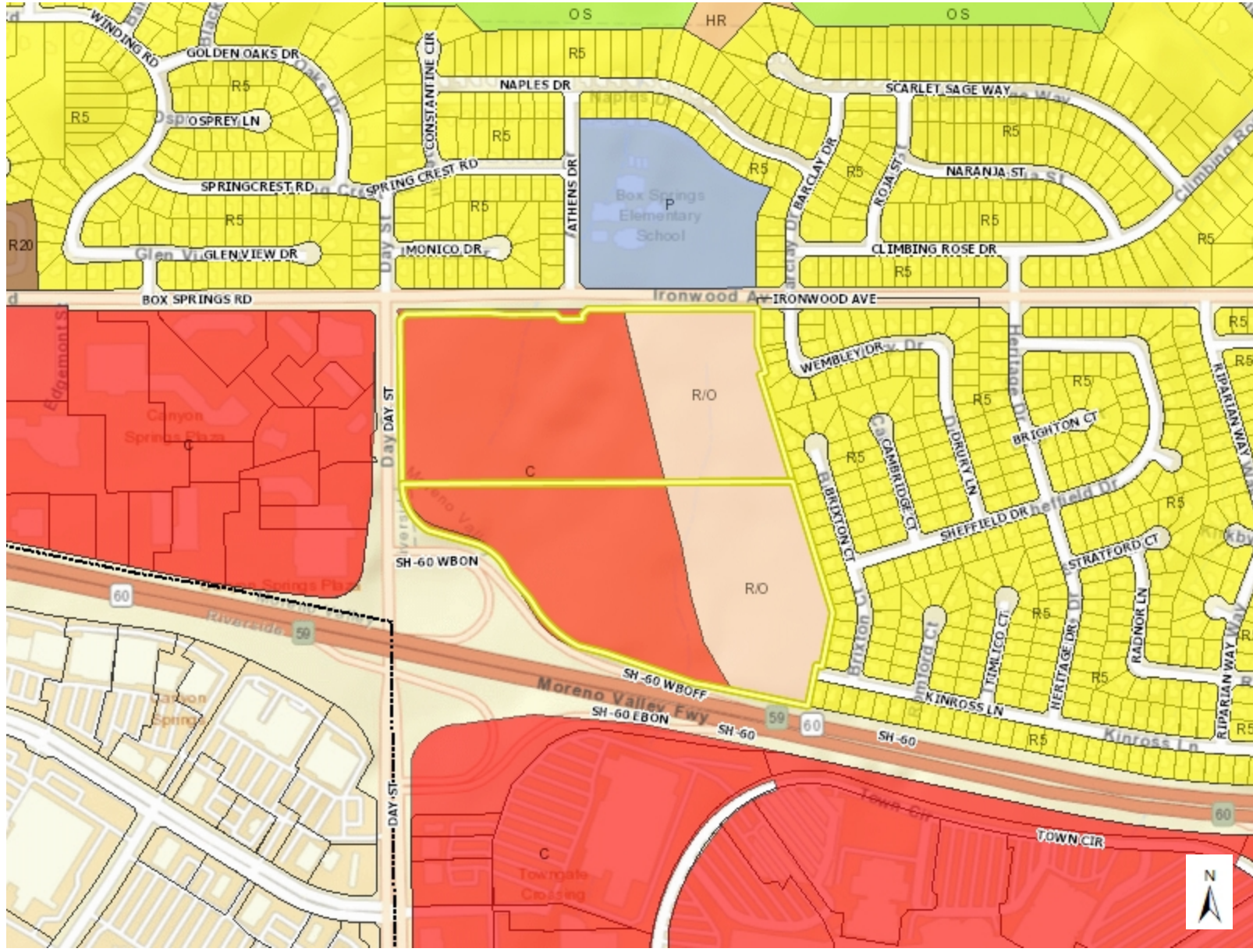
Image Source: Nearmap

Notes:

1,261.9      0      630.96      1,261.9 Feet

*DISCLAIMER: The information shown on this map was compiled from the City of Moreno Valley GIS and Riverside County GIS. The land base and facility information on this map is for display purposes only and should not be relied upon without independent verification as to its accuracy. Riverside County and City of Moreno Valley will not be held responsible for any claims, losses or damages resulting from the use of this map.*

# Existing General Plan



### Legend

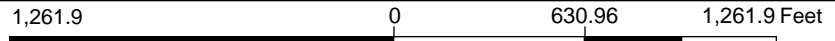
#### Land Use

- Residential: Max. 1 du/ac
- Mixed Use
- Residential: Max. 2 du/ac
- Rural Residential: Max 2.5 du/ac
- Residential: Max. 3 du/ac
- Residential: Max. 5 du/ac
- Residential: Max. 5 or 15 du/ac
- Residential: Max. 10 du/ac
- Residential: Max. 15 du/ac
- Residential: Max. 20 du/ac
- Residential: Max. 30 du/ac
- Hillside Residential
- Planned Residential
- Residential/Office
- Office
- Commercial
- Business Park/Light Industrial
- Open Space
- Public Facilities
- Floodplain

#### Master Plan of Trails

- Bridge
- Improved
- Multiuse
- Proposed

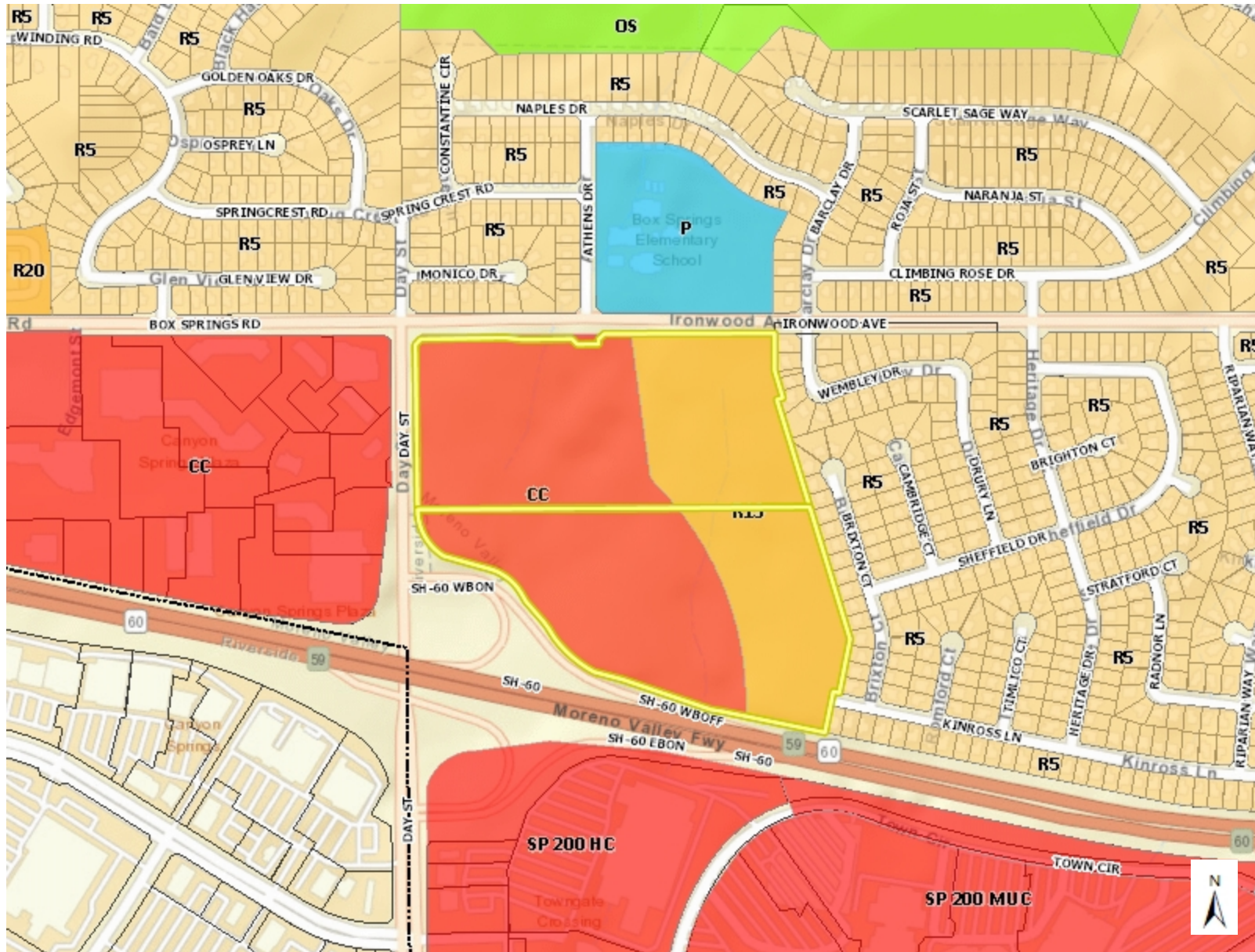
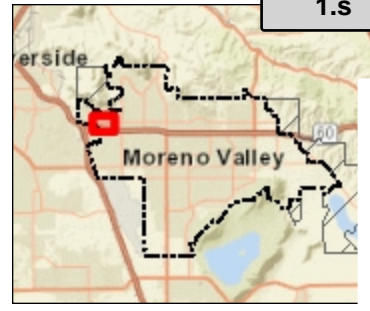
### Notes:



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Attachment: Existing General Plan Map [Revision 1] (4070 : General Plan Amendment PEN19-0151,

# Existing Zoning Map



### Legend

**Zoning**

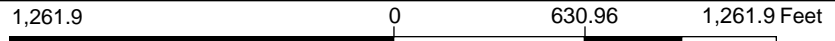
- Commercial
- Industrial/Business Park
- Public Facilities
- Office
- Planned Development
- Large Lot Residential
- Residential Agriculture 2 DU/AC
- Residential 2 DU/AC
- Suburban Residential
- Multi-family
- Open Space/Park

**Master Plan of Trails**

- Bridge
- Improved
- Multiuse
- Proposed
- Regional
- State

**Road Labels**

- Parcels
- City Boundary
- Sphere of Influence



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Notes:

Attachment: Existing Zoning Map [Revision 1] (4070 : General Plan Amendment PEN19-0151, Change of





City of Moreno Valley  
Community Development Department  
Planning Division  
City Hall Council Chamber  
14177 Frederick Street  
Moreno Valley, CA 92553

# **NOTICE OF PUBLIC HEARING (VIA TELECONFERENCE ONLY)**

## **PURSUANT TO COVID-19 GOVERNOR EXECUTIVE ORDER N-29-20**



Notice of Teleconferenced Public Hearing before the Planning Commission of the City of Moreno Valley:

**DATE & TIME:** June 25, 2020 at 7:00 P.M. **VIA TELECONFERENCE ONLY**

### **COVID-19 TELECONFERENCE INSTRUCTIONS:**

For Teleconference Meeting public participation instructions please see agenda at <http://morenovalleyca.igq2.com/Citizens/default.aspx>

**PROJECT LOCATION:** Southeast corner of Ironwood Avenue and Day St (APN: 291-100-054 & 291-100-055), in District 2.

**CASE NUMBER(s):** PEN19-0150, PEN19-0151, & PEN19-0152

**CASE PLANNER:** Gabriel Diaz, Associate Planner  
(951) 413-3226 or [gabriel@moval.org](mailto:gabriel@moval.org)

- <APN>
- <Property Owner>
- <Street Address>
- <City, State, Zip>

**Attachment: Public Hearing Notice (4070 : General Plan**

# NOTICE OF PUBLIC HEARING (VIA TELECONFERENCE ONLY)

1.t

**PROPOSAL:** A proposed General Plan Amendment (GPA) amending Figure 2-2 “Land Use Map” of the Moreno Valley General Plan to adjust the land use designation boundaries by increasing the Commercial (C) GP land uses designation by 0.12-acres and reducing the Residential/Office (R/O) GP land uses designation by 0.12-acres. A proposed Zone Change (ZC) amending the City of Moreno Valley Zoning Atlas to adjust the zoning district boundaries by increasing the Residential (R15) District by 0.11-acres and reducing the Community Commercial (CC) District by 0.11- acres. The proposed GPA and ZC amendments will address a 0.23 acre discrepancy between Figure 2-2 “Land Use Map” and the Zoning Atlas. A proposed Tentative Parcel Map application (TPM No. 37750) will subdivide approximately 51.51-acres of land Assessor Parcel Numbers 291-100-054 and 291-100-055, into four parcels. The boundaries of the proposed GP land use and zoning designations will also be consistent with proposed Tentative Parcel Map 37750 boundaries.

**ENVIRONMENTAL DETERMINATION:** The project has been evaluated against criteria set forth in the California Environmental Quality Act (CEQA) Guidelines Section 15070 and has determined that although the proposed project could have a significant effect on the environment there will not be a significant effect in this case because mitigation measures have been required of the project that will reduce potential impact to a less than significant level. Therefore, a Mitigated Negative Declaration is recommended for the project.

**PUBLIC HEARING:** All interested parties will be provided an opportunity to submit oral testimony during the teleconferenced Public Hearing and/or provide written testimony during or prior to the teleconferenced Public Hearing. The application file and related environmental documents may be inspected by appointment at the Community Development Department at 14177 Frederick Street, Moreno Valley, California by calling (951) 413-3206 during normal business hours (7:30 a.m. to 5:30 p.m., Monday through Thursday).

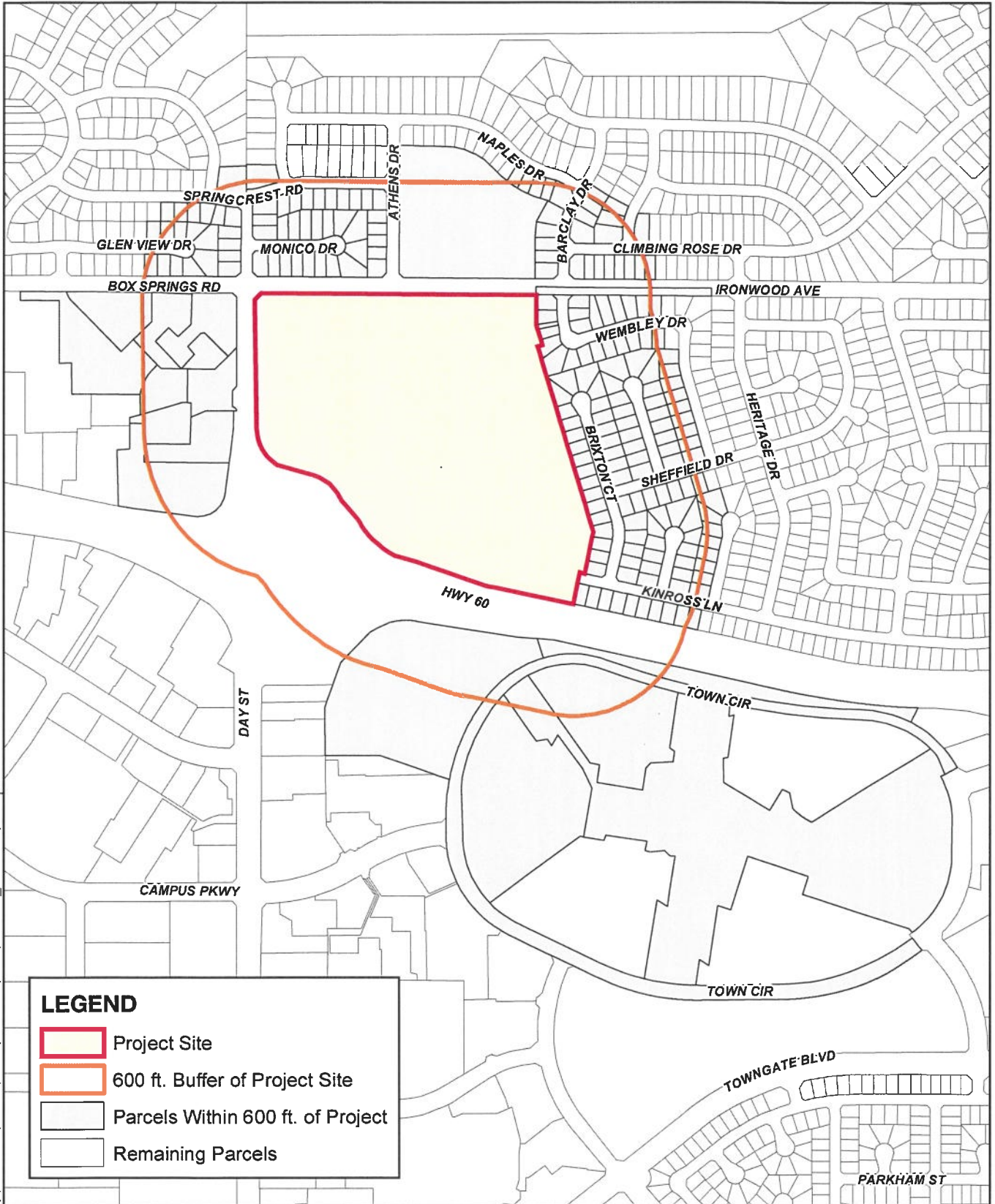
**COVID-19 – IMPORTANT NOTICES:** Please note that due to the COVID-19 pandemic situation, staff will attempt to make reasonable arrangements to ensure accessibility to inspect the aforementioned records. **In addition, special instructions on how to effectively participate in the teleconferenced Public Hearing, as approved by Governor Executive Order N-25-20, will be posted at <http://morenovalleyca.igm2.com/Citizens/default.aspx> and will be described in the Planning Commission agenda.**

**PLEASE NOTE:** The Planning Commission may consider and approve changes to the proposed items under consideration during the teleconferenced Public Hearing.

**GOVERNMENT CODE § 65009 NOTICE:** If you challenge any of the proposed actions taken by the Planning Commission in court, you may be limited to raising only those issues you or someone else raised during the teleconferenced Public Hearing described in this notice, or written correspondence delivered to the Planning Division of the City of Moreno Valley during or prior to, the teleconferenced Public Hearing.

*Upon request and in compliance with the Americans with Disabilities Act of 1990, any person with a disability who requires a modification or accommodation in order to participate in a meeting should direct such request to Guy Pegan, ADA Coordinator, at 951.413.3120 at least 48 hours before the meeting. The 48-hour notification will enable the City to make reasonable arrangements to ensure accessibility.*

\\elsinore\WO4\2019\19-0107\GIS\Parcels 600.mxd; Map created 27 Feb 2020



Source: Riverside Co. GIS, Jan. 2020.

### Parcels Within 600 ft. of Project

TPM 37750

