

October 4<sup>th</sup>, 2018

Ms. Elaheh Hadipour, P.E.  
Project Manager,  
Caltrans District 8  
464 West 4<sup>th</sup> Street  
San Bernardino, CA 92401

**Subject:       Route 60/ World Logistics Center (WLC) Parkway Location Hydraulics Report and Summary Floodplain Encroachment Report – EA 0M590 – Caltrans Project No. 0813000109**

The attached Technical Information for the Location Hydraulic Study and Summary Floodplain Encroachment Report are submitted as Technical Studies in support of the subject project.

The project site, in the City of Moreno Valley (The City) and unincorporated Riverside County, falls within Federal Agency Management Agency (FEMA) Panels 0605C0760G and 06065C0770G dated August 28, 2008. The project is within a FEMA Zone X (shaded) mapped floodplain. Zone X (shaded) is defined as "Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood".

The project lies primarily within the City of Moreno Valley, but the northeast quadrant of the interchange is in unincorporated Riverside County. The land use within and surrounding the project site is sparsely developed with the exception of the 1.8 million square foot Skechers high-cube warehouse. The existing topography north of the project site primarily slopes gently at 3 percent to 4 percent from north to south. Four culverts cross Route 60 from north to south, which will be extended on their upstream ends as part of the project improvements. The south side of the project is mostly developed on the Skechers site. East of WLC Parkway is undeveloped.

The State of California Department of Water Resources (DWR) has developed Awareness Floodplain Maps to identify all pertinent flood hazard areas for areas that are not mapped under the FEMA National Flood Insurance Program (NFIP) and to provide the community and residents an additional tool in understanding potential flood hazards currently not mapped as a regulated floodplain. The DWR does not impose guidelines or restrictions for an awareness floodplain. An Awareness Floodplain is mapped within the project area. The majority of the Awareness Floodplain falls within the City and a small portion, the northeast quadrant of the interchange, is in unincorporated Riverside County. The local flood control agency, Riverside County Flood Control and Water Conservation District (RCFC&WCD), has adopted the Awareness Floodplain for Unincorporated Riverside County areas where RCFC&WCD acts as the Floodplain Manager. As the Floodplain Manger for the unincorporated areas, it is RCFC&WCD policy to adopt and regulate Awareness Floodplains in the same manner as a FEMA Flood Hazard Zone. Within the City, the City acts as the Floodplain Manger however, and has not adopted the Awareness Floodplain as a Flood Hazard Zone. Therefore, the larger portion of the Awareness Floodplain in Moreno Valley is not regulated. See Exhibits 1, 1.1, 2 and 2.1 for depiction of the regulated and non-regulated Flood Awareness Areas of the project.

Awareness Floodplains are designated as 100-year floodplains using approximate assessment procedures. Awareness Floodplains are flood prone areas without specific depths and other flood hazard data. The Federal regulations for encroachment of floodplains states:

*"Local, State, and Federal water resources and floodplain management agencies should be consulted to determine if the proposed highway action is consistent with existing watershed and floodplain management programs and to obtain current information on development and proposed actions in the affected watersheds." - 23 CFR 650.111 (f)*

Therefore, this report considers the Awareness Floodplain in unincorporated Riverside County in the same manner as a FEMA Zone A Special Flood Hazard Area. Zone A floodplains are areas subject to inundation by the 1-percent-annual-chance flood event. Because detailed hydraulic analyses have not been performed, no Base Flood Elevations (BFEs) or flood depths are shown. A FEMA Zone A Special Flood Hazard Area is different in presentation than an Awareness Floodplain Boundary, however. A FEMA Zone A boundary typically represents the probable water surface elevation and the shape depicts the area of inundation expected during the base flood event. On a National Flood Insurance Program (NFIP) Flood Insurance Rate Map (FIRM), a Special Flood Area conforms to bridge openings or will show backwater areas as bridge structures are overtopped and flanked. The California Department of Water Resources describes the Awareness Floodplain Maps as: *"The awareness maps identify the 100-year flood hazard areas using approximate assessment procedures. These floodplains will be shown simply as flood prone areas without specific depths and other flood hazard data."* ([http://www.water.ca.gov/floodmgmt/lrafmo/fmb/fes/awareness\\_floodplain\\_maps/](http://www.water.ca.gov/floodmgmt/lrafmo/fmb/fes/awareness_floodplain_maps/)).

The awareness floodplain boundary near Route 60/ WLC Parkway appears to be bounded by the base of "The Badlands" area labeled on the Sunnymead Quadrangle and the toe of Mount Russell in the San Jacinto Range. Studying the topographic contours, it becomes apparent that the Awareness Floodplain Mapping does not represent the flooding patterns of a single stream or a boundary based on a geographic or hydraulic condition. Rather the mapping shows an area of unknown flood hazards resulting from the numerous streams and alluvial fans in the area. Many of the streams and alluvial fans within the Awareness Floodplain Boundary are not tributary to the SR-60/ WLC Parkway Street interchange, and their contribution actually flows away from the project (i.e Reche Canyon is principally tributary to Moreno Beach Drive Road and the culverts to the west). This bears out the DWR definition that the Awareness Floodplain Boundary does not reflect a similar level of detail and is simply a "flood prone" area.

To address the lack of detail in the Awareness Floodplain Mapping, a linked one-dimensional/two-dimensional hydraulic model (XPSWMM) was used to assess the existing flooding patterns and perform a comparison to the proposed condition. XPSWMM is a comprehensive software for dynamic modeling of storm water, river systems, floodplains and sanitary or combined systems. It combines one-dimensional (1D) calculations for upstream to downstream flow with two-dimensional (2D) overland flow calculations.

Two Build Alternatives, a No-Build Alternative, and two Design Variations were studied for the SR-60/ WLC Parkway Interchange Improvement Project. Alternative 2 is a modified partial cloverleaf interchange. Design Variation 2a also is a modified partial cloverleaf interchange with partial realignment of Eucalyptus Avenue. Alternative 6 is a modified partial cloverleaf with roundabout intersections. Design Variation 6a is also a modified partial cloverleaf with roundabout intersections with partial realignment of Eucalyptus Avenue. Each Build Alternative would feature new entrance and exit ramps for WLC Parkway traffic crossing Route 60.

Alternative 2 includes new ramps in all quadrants except the northeast quadrant. The existing WB ramps and EB ramps in the northeast quadrant will be eliminated. Only minor grading for ramp removal and sliver widening along the eastbound and westbound roadways are anticipated for the area in RCFC&WCD jurisdiction. Similar to Alternative 2, Design Variation 2a would realign Eucalyptus Avenue to join WLC Parkway approximately 900' south of the existing Eucalyptus Avenue/WLC Parkway intersection. Alternative 6 also includes new ramps in all quadrants but the northeast quadrant, and the existing WB ramps and EB ramps will be eliminated in this alternative also. Similar to Design Variation 2a, Design Variation 6a would also realign Eucalyptus Avenue to join WLC Parkway approximately 900' south of the existing Eucalyptus Avenue/WLC Parkway Street intersection. As part of Design Variation 2a and 6a, a new culvert may be required in Eucalyptus Avenue to maintain passage of

a small swale. The grading footprint covers approximately 3.4 acres each for Alternative 2 and Design Variation 2a and 3.1 acres each for Alternative 6 and Design Variation 6a within the RCFC&WCD jurisdiction.

The attached Exhibits 1, 1.1, 2 and 2.1 show the relationship of both alternatives and design variations to the Awareness Floodplain. Based on the footprint of the alternatives and the estimated vertical profile, Alternative 2 was selected as the most conservative scenario for hydraulic modeling.

The XPSWMM models used hydrographs for the nearby canyons, developed by Michael Baker International in 2008 in support of the Highland Fairview (Sketchers) complex. These models combined the existing topography with the proposed grading for Alternative 2 (the potentially most impactful). Culverts were extended to meet the new roadway grading plane, and channels and culverts were added to the model to maintain existing drainage patterns.

Exhibits 3 and 4 show the existing condition flow patterns and depths. The large-scale Exhibit 3 shows the overall patterns of flow emanating from "The Badlands". Exhibit 4 illustrates the depth of water at a lower viewpoint elevation. Exhibits 5 and 6 contain similar views of the project location with the proposed roadway shown and the preliminary grading and drainage improvements in place. These exhibits demonstrate:

1. The flow patterns within the area north of SR-60 do not flood the entire area as the Awareness floodplain boundary would imply.
2. The project area under RCFC&WCD Floodplain Management does not actually contain any large canyon outfalls and appears to be largely free of flooding during a base flood event.
3. Flooding across SR-60 near Redlands Boulevard Interchange occurs in the existing condition, but the proposed interchange at WLC Parkway does not exacerbate the flooding. Neither does the WLC Parkway Interchange alleviate the condition. The flooding patterns near Redlands Boulevard is unchanged.
4. No flooding occurs around the WLC Parkway Interchange in either the proposed or existing conditions.
5. Depths of flow at the upstream end of the four cross culverts is the same, or is somewhat reduced by the improved distribution of the streams along the toe of the proposed Westbound On-Ramp. Further study will be required during final design to evaluate this in more detail. Based on the preliminary grading, the extension of the four culverts is not anticipated to adversely impact the existing flood depths.

The Caltrans Standard Environmental Reference, Chapter 17, provides the guidance and definitions for evaluation of floodplains and encroachments. Two particularly relevant definitions are the:

***Longitudinal Encroachment*** - An encroachment that is parallel to the direction of flow.  
(Example: A highway that runs along the edge of a river is, usually considered a longitudinal encroachment.)

***Transverse Encroachment*** - An encroachment that is perpendicular to the direction of flow.  
(Example: A bridge encroachment on the floodplain is normally considered to be transverse encroachment.)

In future design stages when an alternative is chosen, any impacts to the floodplain should be presented to RCFC&WCD as part of the drainage study. As a result, and if and where required, RCFC&WCD will process the floodplain impacts similar to a FEMA Conditional Letter of Map Revision/Letter of Map Revision (CLOMR/LOMR) and edit the awareness floodplain boundary. The foregoing discussion regarding the XPSWMM model and the resulting exhibits support that the Awareness Floodplain Boundary can be amended to more accurately reflect the actual flow patterns.

The proposed project will not impact a regulated Floodplain. The extant Awareness Floodplain Boundary does not represent the actual boundaries of the Base Flood. The boundaries for the Base Flood have been mapped using XPSWMM in both the existing and most conservative proposed condition (Alt. 2). The proposed grading for both alternatives includes a channel along the toe of the embankment that confines the Base Flood Floodplain in the northwestern quadrant of the WLC Parkway Interchange. Although this proposed longitudinal encroachment confines the Base Flood within an area that is not regulated as a floodplain (by the City), the

confinement does not raise the risk of overtopping the SR-60 mainline. There is no Potential Risk to Life and Property because the proposal does not change a Base Flood Elevation, Channel, or create an additional potential overtopping condition. The existing Route 60 or WLC Parkway is not negatively affected by this project, so there is no change to the Emergency Vehicle Access, School Bus or Mail Routes. The Potential Risks to Natural and Beneficial Floodplain Values are none because the project encroachment into the regulated floodplain is limited to minor grading and the FEMA Zone X portion is not regulated by FEMA. The project does not pose a Risk for Incompatible Floodplain Development because the development in the area is subject to further environmental processing and review. Future development in the area has designated under the City of Moreno Valley General Plan that would both consist of primarily residential land use (one dwelling/acre) with a small portion of office buildings on the north side of Route 60. Only minor improvements or grading are proposed for the northeast quadrant in the regulated Awareness Floodplain. The majority of the improvements are in the other three quadrants of the interchange. This will serve to minimize any floodplain impacts in the regulated area. Therefore, the **Assessment of the Level of Risk level is LOW.**

Based on the foregoing discussion, the attachments, and as defined by *23 CFR 650 Subpart A*, the encroachment that would occur from the implementation of the proposed project would be classified as **MINIMAL.**

Should you have any questions or require additional information, do not hesitate to call me at 949-855-7082.

Sincerely,



Bradley M. Losey, P.E.  
Michael Baker International, Surface Water

Attached:

- Location Hydraulics Study (same as Figure 804.7A Technical Information for Location Hydraulic Study located in chapter 804 of the Highway Design Manual)
- Summary Floodplain Encroachment Report (Same as Figure 804.7B Floodplain Evaluation Report Summary located in chapter 804 of the Highway Design Manual)
- Location Hydraulics Study Flood Hazard Mapping, Exhibit 1 and 1.1 and Exhibit 2 and 2.1
- SR-60/ WLC Parkway – 2D Floodplain Analysis, Exhibits 3, 4, 5, and 6
- NFIP Firmette Panels 06065C0760G and 06065C0770G
- Awareness Floodplain Mapping, Floodplain Boundaries – Riverside County, Sunnymead Quadrangle

C: Rebecca Young, Gary Warkentin, John Moynier

## LOCATION HYDRAULIC STUDY FORM \*

District: 08 County: Riverside Rte.: SR-60 P.M.: 20.0-22.0  
EA: 0M590 PN: 081300109 Bridge No.: NA

### Floodplain Description:

The project site, in the city of Moreno Valley and unincorporated Riverside County, falls within Federal Emergency Management Agency (FEMA) Panels 06065C0760G and 06065C0770G dated August 28, 2008. The project is within a FEMA Zone X (shaded) mapped floodplain. Zone X (shaded) is defined as "Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood". Additionally, the local flood control agency, the Riverside County Flood Control and Water Conservation District (RCFCWCD), has adopted a California Department of Water Resources (DWR) Awareness Floodplain for the floodplain in their jurisdiction, in the northeastern quadrant of the proposed project interchange. The Awareness Floodplain is also present within the city of Moreno Valley's jurisdiction, throughout the majority of the project site. The city, however, has not adopted this floodplain boundary. The Awareness Floodplain is evaluated in the same manner as a FEMA Zone A floodplain for this project.

1. Description of Proposal: (include any physical barriers i.e. concrete barriers, soundwalls, etc. and design elements to minimize floodplain impacts)

Two Build Alternatives, a No-Build Alternative, and two Design Variations were studied for the SR-60/WLC Parkway Interchange Improvement Project. Alternative 2 is a modified partial cloverleaf interchange. Design Variation 2a also is a modified partial cloverleaf interchange with partial realignment of Eucalyptus Avenue. Alternative 6 is a modified partial cloverleaf with roundabout intersections. Design Variation 6a is also a modified partial cloverleaf with roundabout intersections with partial realignment of Eucalyptus Avenue. Each Build Alternative would feature new entrance and exit ramps for WLC Parkway traffic crossing Route 60. Alternative 2 includes new ramps in all quadrants except the northeast quadrant. The existing WB ramps and EB ramps in the northeast quadrant will be eliminated. Only minor grading for ramp removal and sliver widening along the eastbound and westbound roadways are anticipated for the area in RCFC&WCD jurisdiction. Similar to Alternative 2, Design Variation 2a would realign Eucalyptus Avenue to join WLC Parkway approximately 900' south of the existing Eucalyptus Avenue/ WLC Parkway intersection. Alternative 6 also includes new ramps in all quadrants but the northeast quadrant, and the existing WB ramps and EB ramps will be eliminated in this alternative also. Similar to Design Variation 2a, Design Variation 6a would also realign Eucalyptus Avenue to join WLC Parkway approximately 900' south of the existing Eucalyptus Avenue/ WLC Parkway intersection. As part of Design Variation 2a and 6a, a new culvert may be required in Eucalyptus Avenue to maintain passage of a small swale. The grading footprint covers approximately 3.4 acres for Alternative 2 and Design Variation 2a and 3.1 acres each for each Alternative 6 and Design Variation 6a within the RCFC&WCD jurisdiction.

2. ADT: Current: 47,000 (2013) Projected: 149,000 (2040)

3. Hydraulic Data: Base Flood  $Q_{100} =$  N/A CFS  
WSE<sub>100</sub> = N/A The flood of record, if greater than  $Q_{100}$ :  
 $Q =$  N/A CFS WSE = N/A  
Overtopping flood  $Q =$  N/A CFS WSE = N/A  
Are NFIP maps available? YES X NO \_\_\_\_\_  
Are NFIP studies available? YES \_\_\_\_\_ NO X

4. Is the highway location alternative within a regulatory floodway?  
YES \_\_\_\_\_ NO X

5. Attach map with flood limits outlined showing all buildings or other improvements within the base floodplain.  
Potential  $Q_{100}$  backwater damages:  
A. Residences? YES \_\_\_\_\_ NO X  
B. Other Buildings? YES \_\_\_\_\_ NO X  
C. Crops? YES \_\_\_\_\_ NO X  
D. Natural and beneficial Floodplain values? YES \_\_\_\_\_ NO X

6. Type of Traffic:  
A. Emergency supply or evacuation route? YES X NO \_\_\_\_\_  
B. Emergency vehicle access? YES X NO \_\_\_\_\_  
C. Practicable detour available? YES X NO \_\_\_\_\_  
D. School bus or mail route? YES X NO \_\_\_\_\_

7. Estimated duration of traffic interruption for 100-year event hours: 0 hours

8. Estimated value of  $Q_{100}$  flood damages (if any) - moderate risk level.

A. Roadway	\$	<u>0</u>
B. Property	\$	<u>0</u>
Total	\$	<u>0</u>

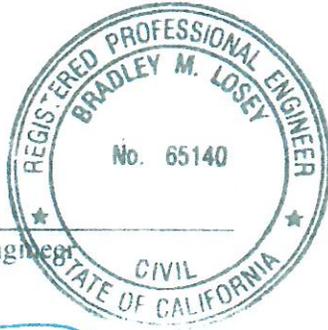
9. Assessment of Level of Risk:  
Low X Moderate \_\_\_\_\_ High \_\_\_\_\_

For High Risk projects, during design phase, additional Design Study Risk Analysis may be necessary to determine design alternative.

Is there any longitudinal encroachment, significant encroachment, or any support of incompatible Floodplain development? NO X YES \_\_\_\_\_

If yes, provide evaluation and discussion of practicability of alternatives in accordance with 23 CFR 650.113

Information developed to comply with the Federal requirement for the Location Hydraulic Study shall be retained in the project files.



PREPARED BY:

  
Signature - Consultant Project Engineer

10/4/18  
Date

CONCURRED BY:

  
Signature - Consultant Project Manager

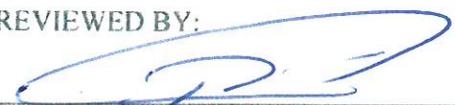
10/4/18  
Date

SUBMITTED BY:

  
Signature - City of Moreno Valley Project Manager

10/5/18  
Date

REVIEWED BY:

  
Signature - Caltrans District 8 Hydraulics Engineer

10-15-18  
Date

\* Same as Figure 804.7A Technical Information for Location Hydraulic Study located in Chapter 804 of the Highway Design Manual

## SUMMARY FLOODPLAIN ENCROACHMENT REPORT\*

District: 08 County: Riverside Rte.: SR-60 P.M.: 20.0 - 22.0  
 EA: 0M590 PN: 0813000109 Bridge No.: NA

Limits of Construction: Route 60 from Redlands Boulevard to approximately 0.5 mile east of WLC Parkway and WLC Parkway from 0.6 miles south of Route 60 to Ironwood Avenue.  
Additional improvements are on Eucalyptus Avenue from Redlands Boulevard to WLC Parkway.

### Floodplain Description:

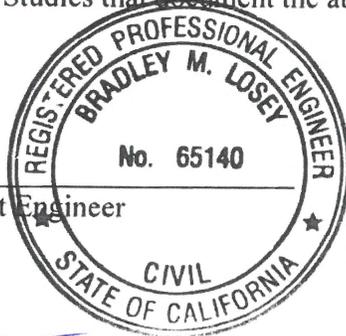
The project site, in the city of Moreno Valley and unincorporated Riverside County, falls within Federal Emergency Management Agency (FEMA) Panels 06065C0760G and 06065C0770G dated August 28, 2008. The project is within a FEMA Zone X (shaded) mapped floodplain. Zone X (shaded) is defined as "Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood". Additionally, the local flood control agency, the Riverside County Flood Control and Water Conservation District (RCFCWCD), has adopted a California Department of Water Resources (DWR) Awareness Floodplain for the floodplain in their jurisdiction, in the northeastern quadrant of the proposed project interchange. The Awareness Floodplain is also present within the city of Moreno Valley's jurisdiction, throughout the majority of the project site. The city, however, has not adopted this floodplain boundary. The Awareness Floodplain is evaluated in the same manner as a FEMA Zone A floodplain for this project.

- |   |   |  |
|---|---|--|
| 1. Is the proposed action a longitudinal encroachment of the base floodplain?   | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| 2. Are the risks associated with the implementation of the proposed action significant?   | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| 3. Will the proposed action support probable incompatible floodplain development?   | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| 4. Are there any significant impacts on natural and beneficial floodplain values?   | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| 5. Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain. | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| 6. Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q)?  | <input type="checkbox"/> Yes            | <input checked="" type="checkbox"/> No |
| 7. Are Location Hydraulic Studies that document the above answers on file? If not explain.  | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No            |

PREPARED BY:



Signature - Consultant Project Engineer



10-4-18  
Date

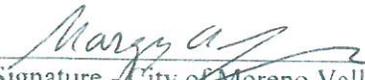
CONCURRED BY:



Signature - Consultant Project Manager

10/4/18  
Date

SUBMITTED BY:

  
Signature - City of Moreno Valley Project Manager

10/5/18  
Date

REVIEWED BY:

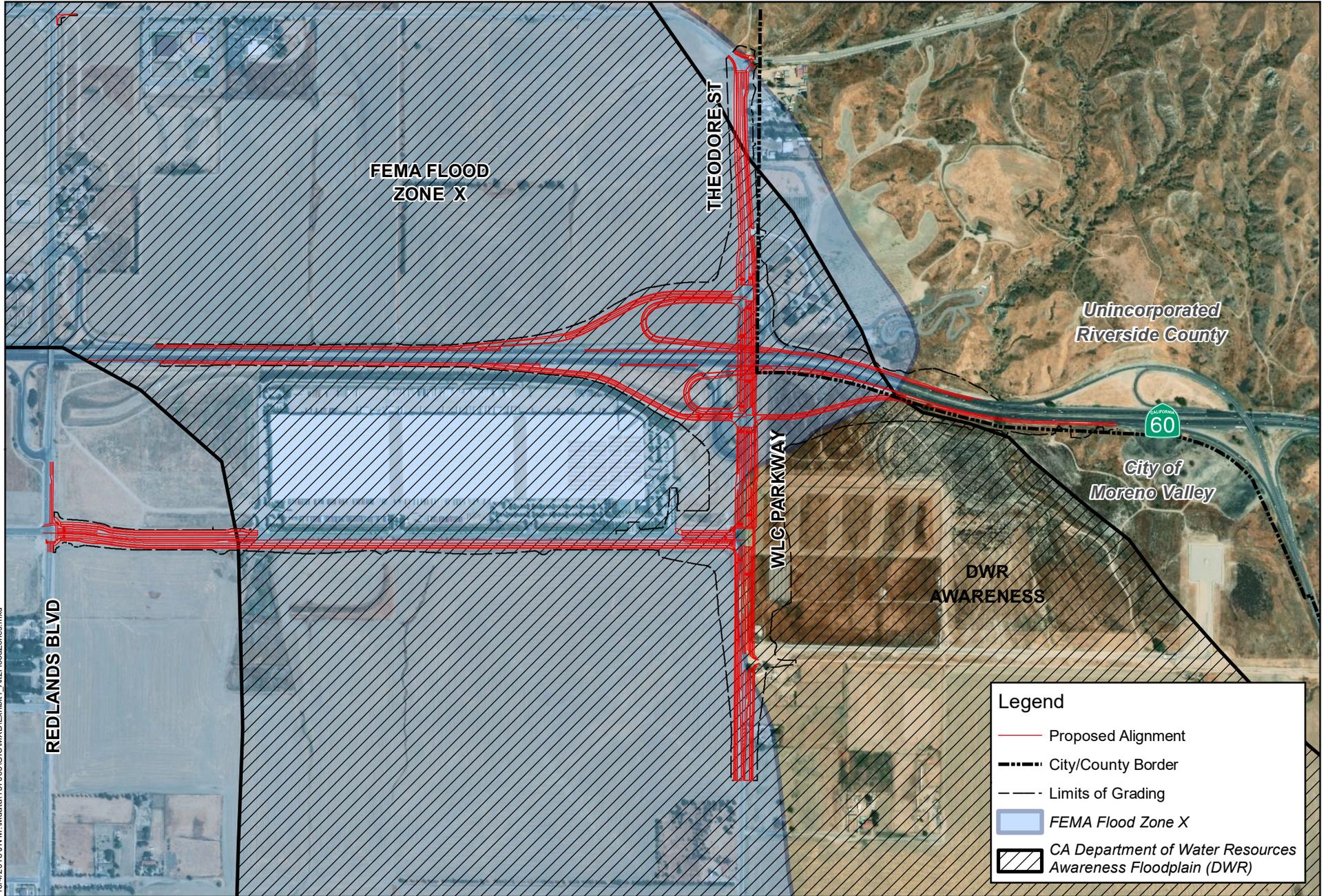
  
Signature - Caltrans District 8 Hydraulics Engineer

10-15-18  
Date

\* Same as Figure 804.7B Floodplain Evaluation Report Summary located in Chapter 804 of the Highway Design Manual

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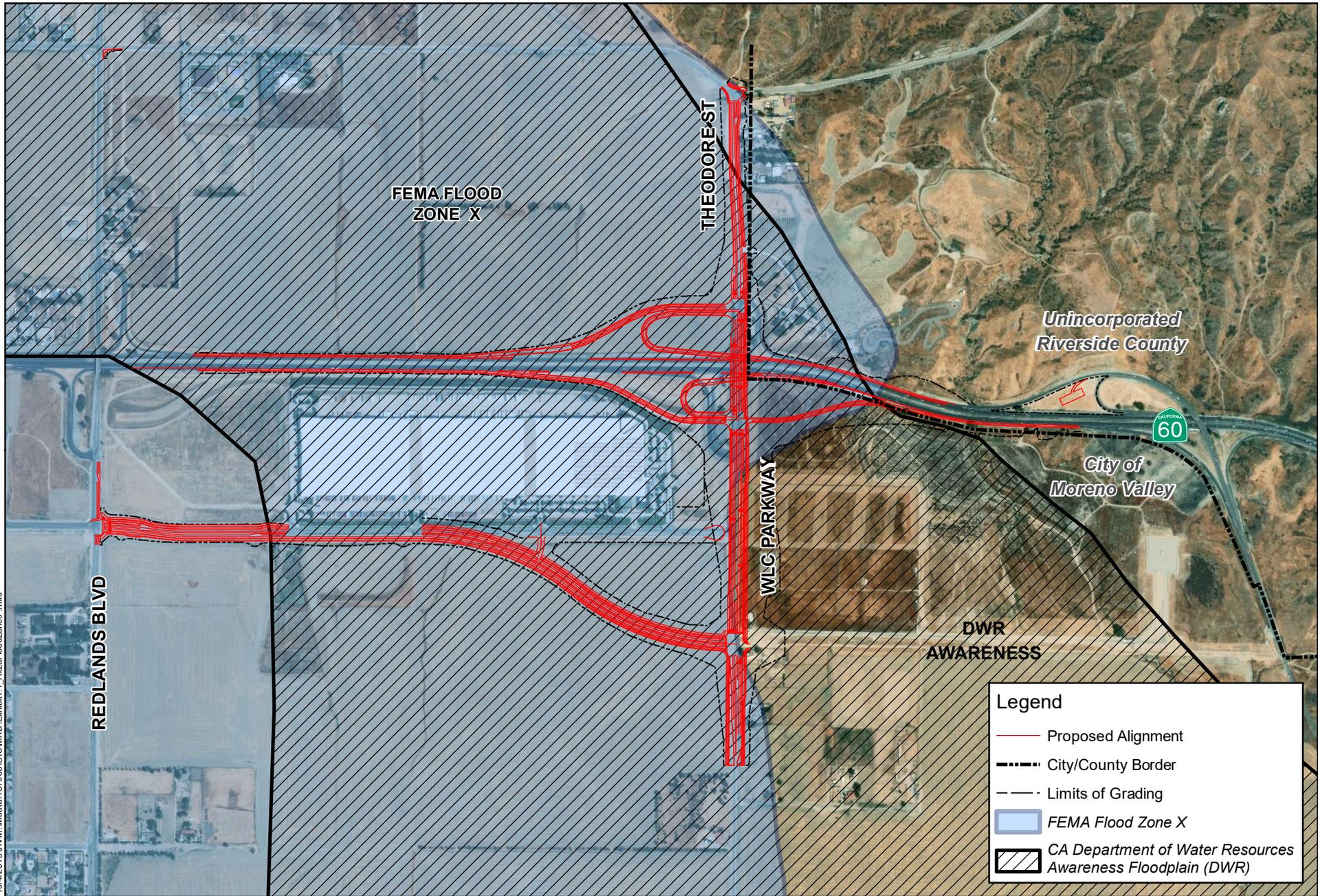


**Legend**

- Proposed Alignment
- - - City/County Border
- - - Limits of Grading
- FEMA Flood Zone X
- CA Department of Water Resources Awareness Floodplain (DWR)

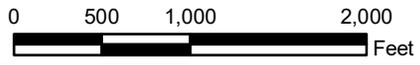


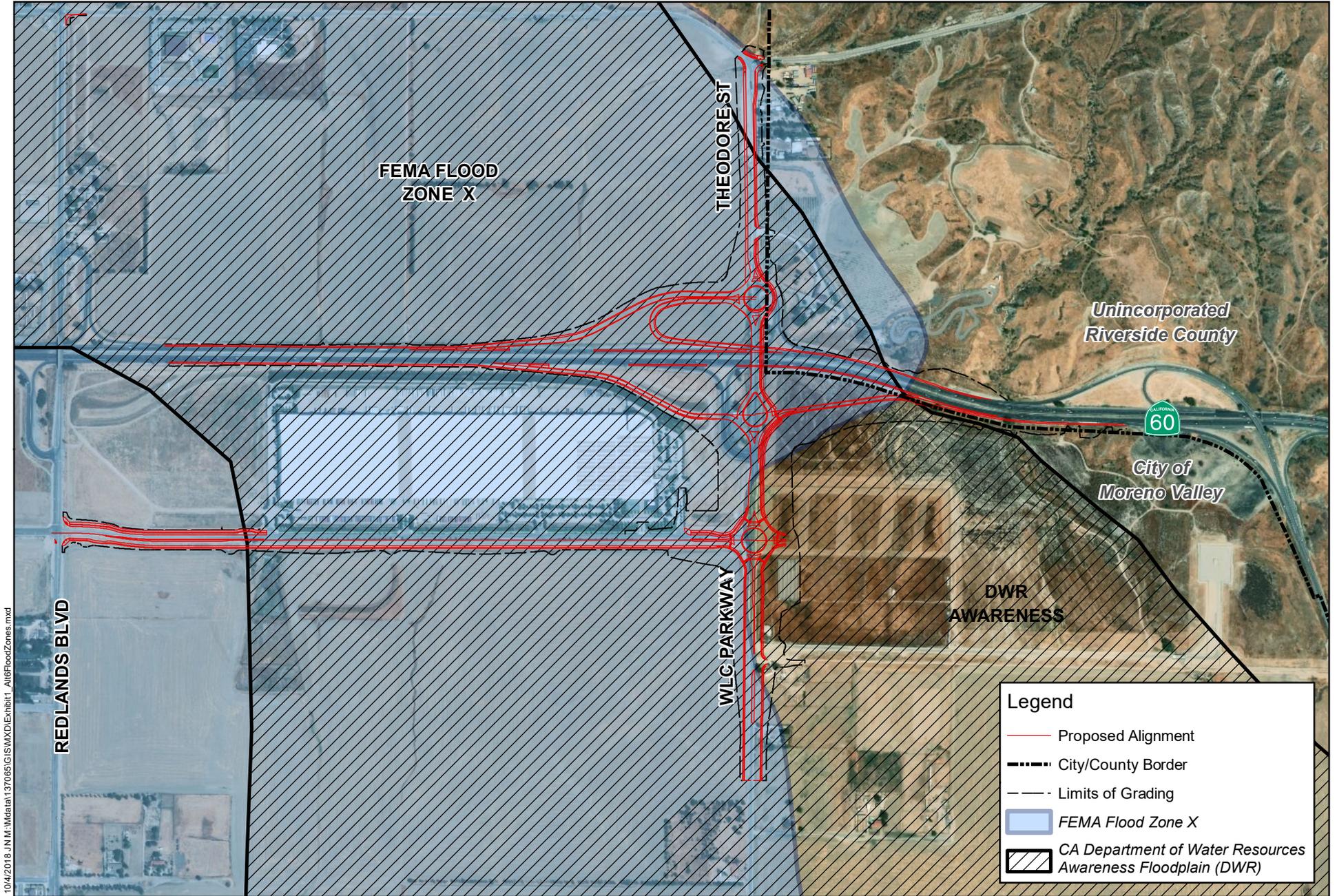
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**Legend**

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- - - - City/County Border
- - - - Limits of Grading
- FEMA Flood Zone X
- CA Department of Water Resources Awareness Floodplain (DWR)

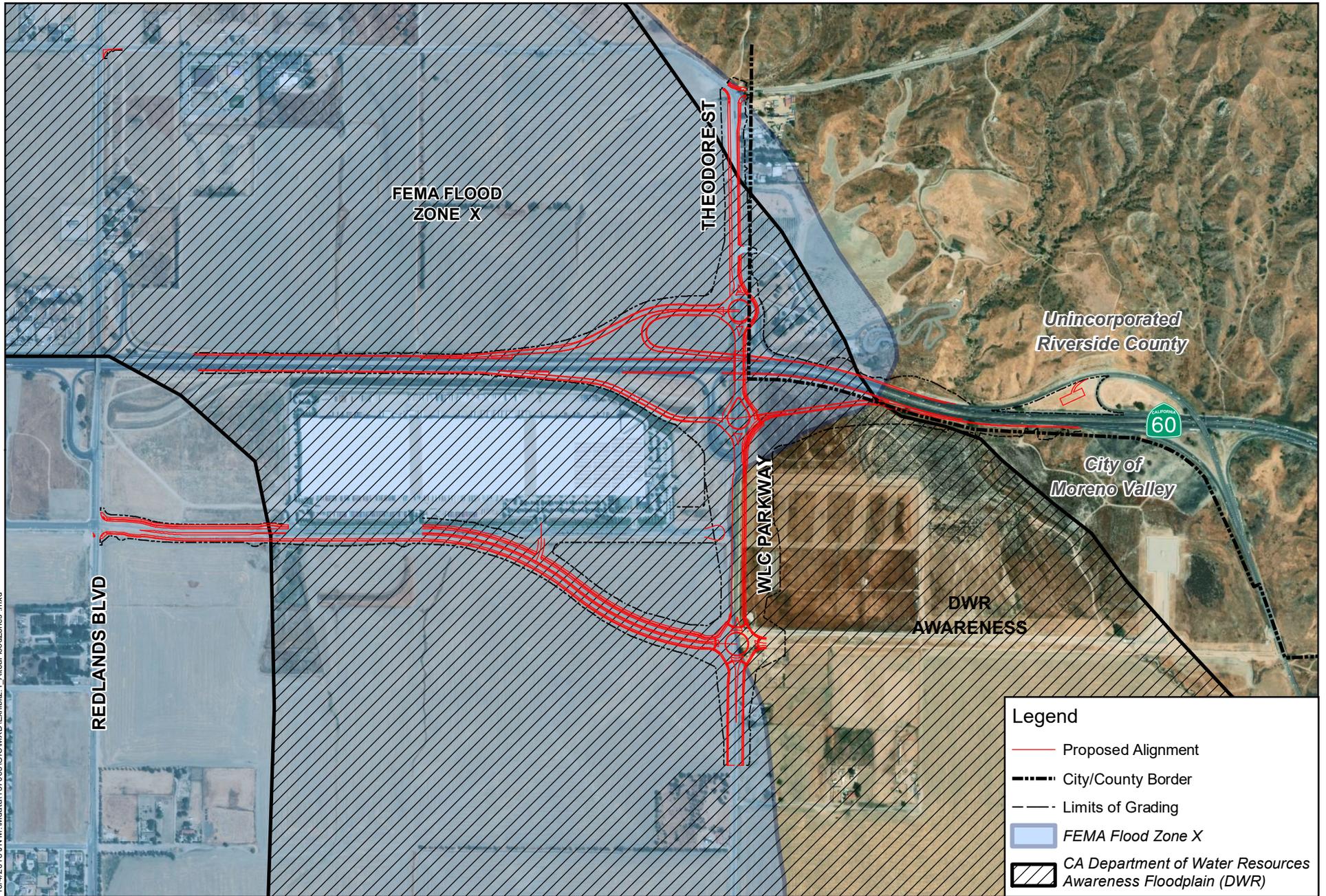




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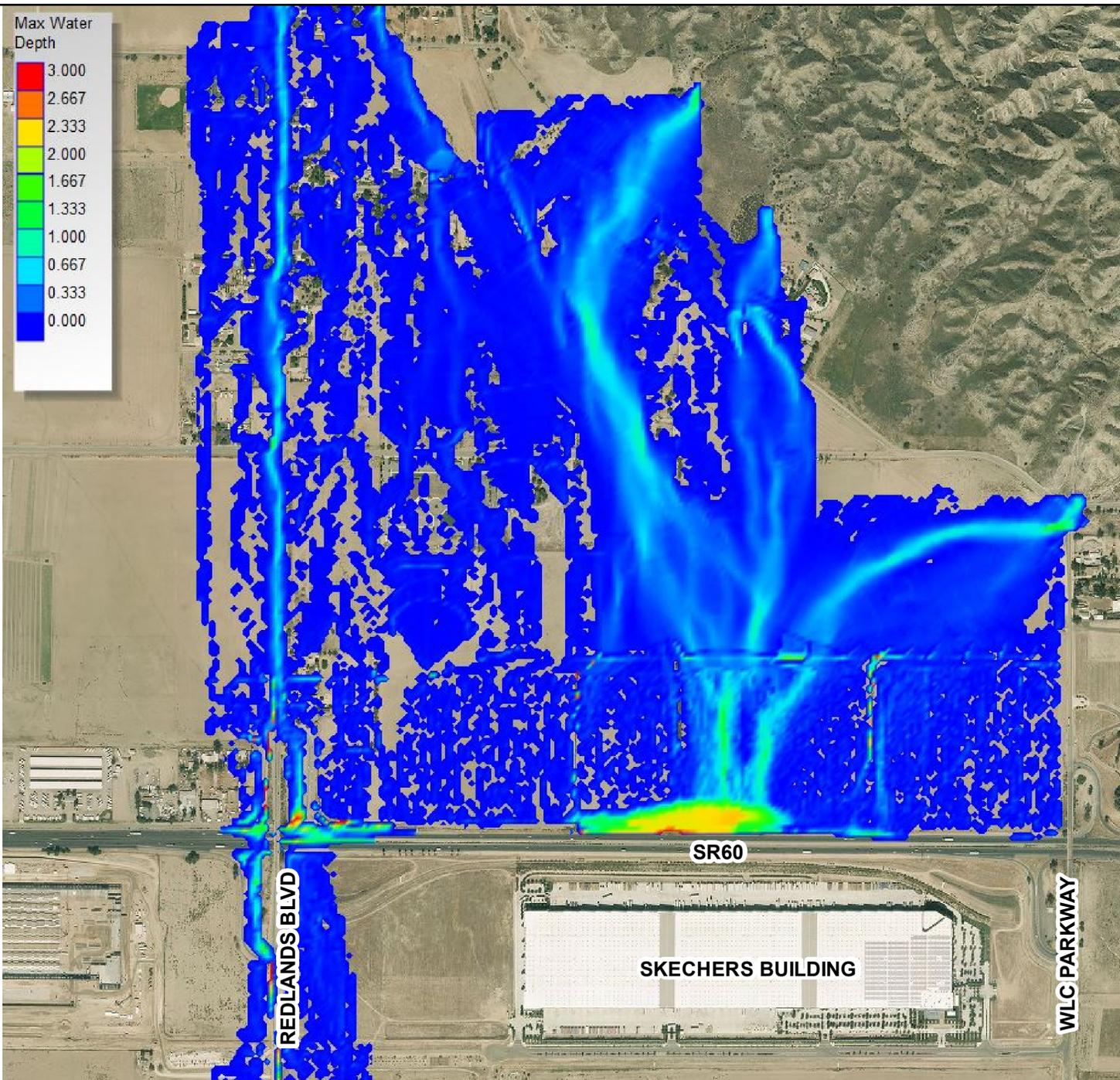


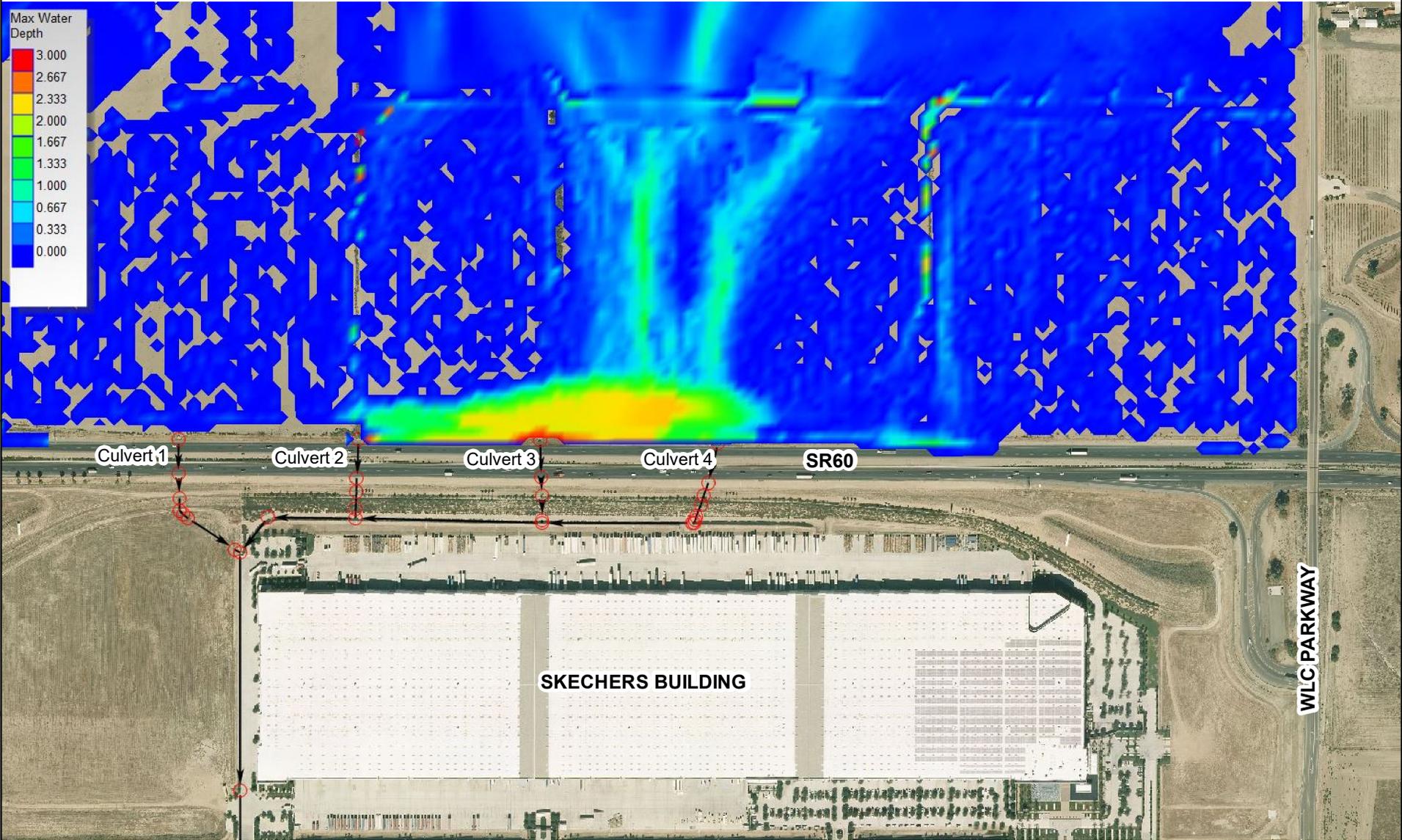
**Legend**

- Proposed Alignment
- City/County Border
- Limits of Grading
- FEMA Flood Zone X
- CA Department of Water Resources Awareness Floodplain (DWR)



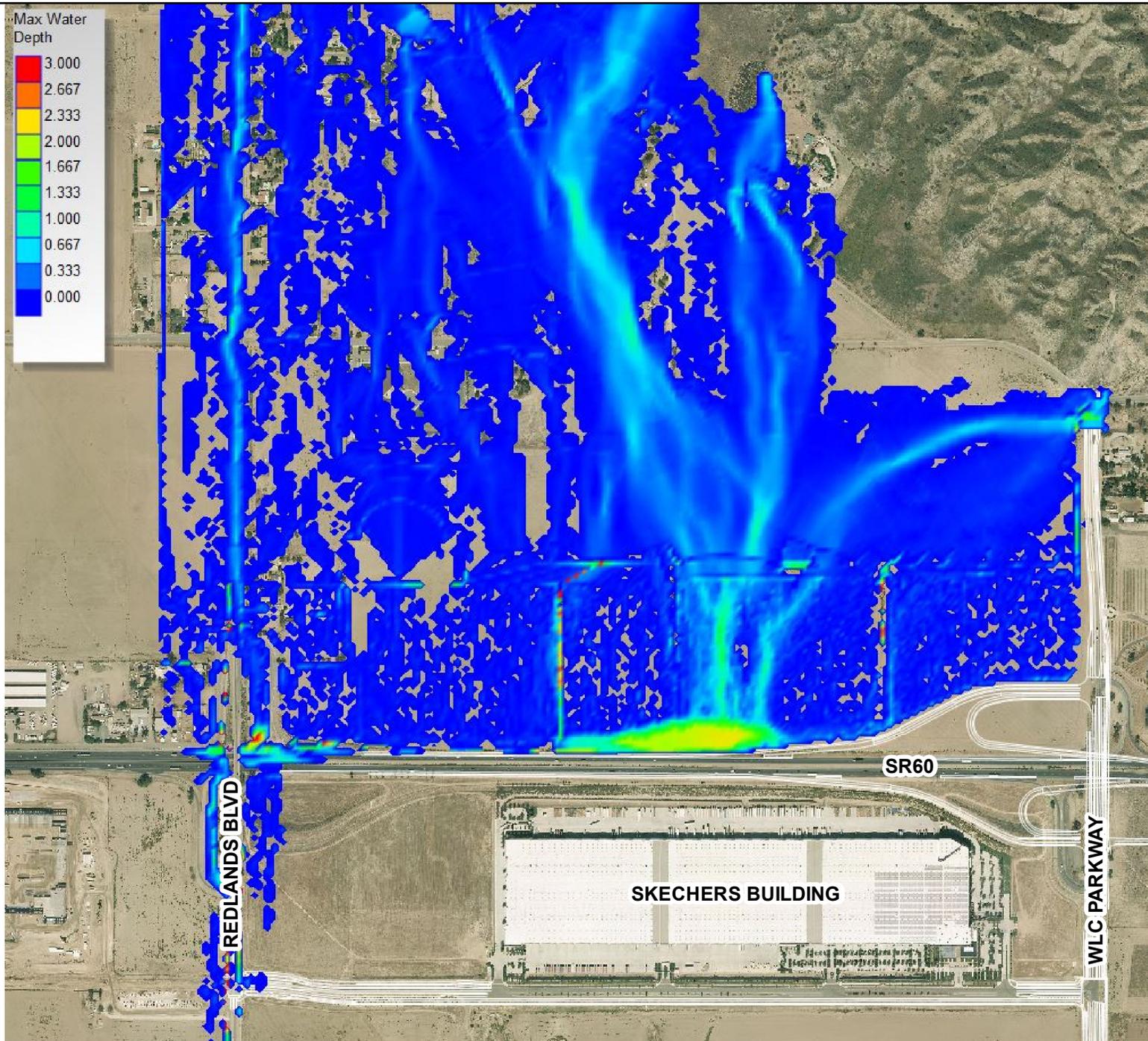
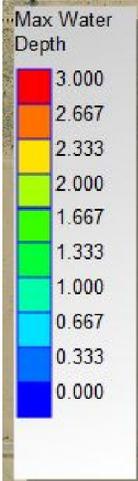
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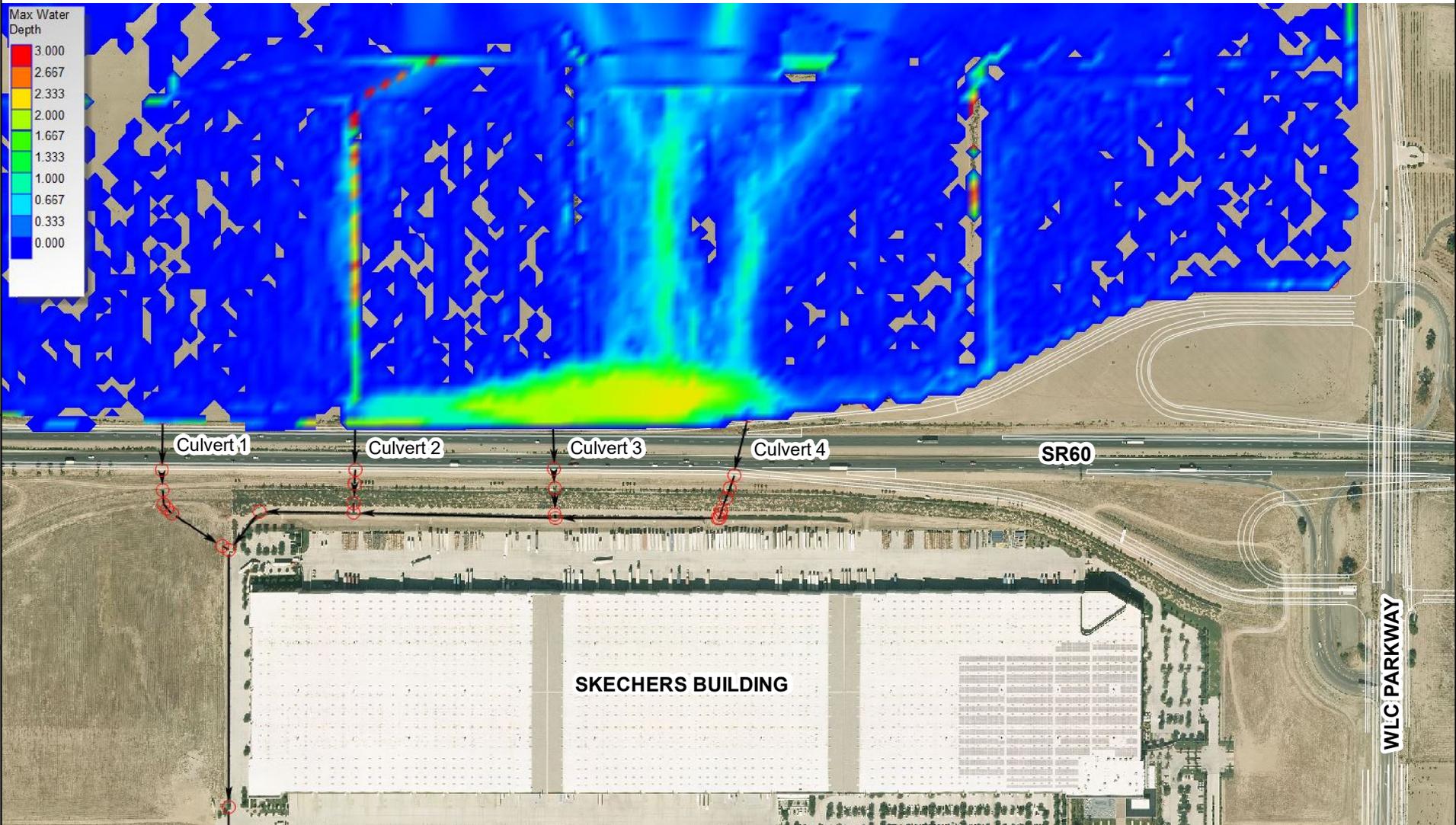




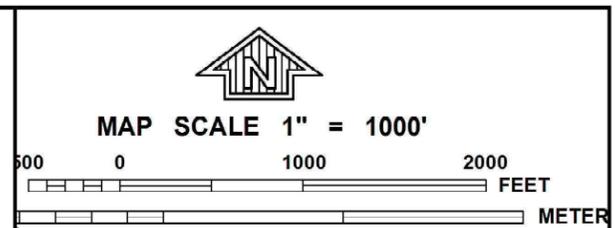
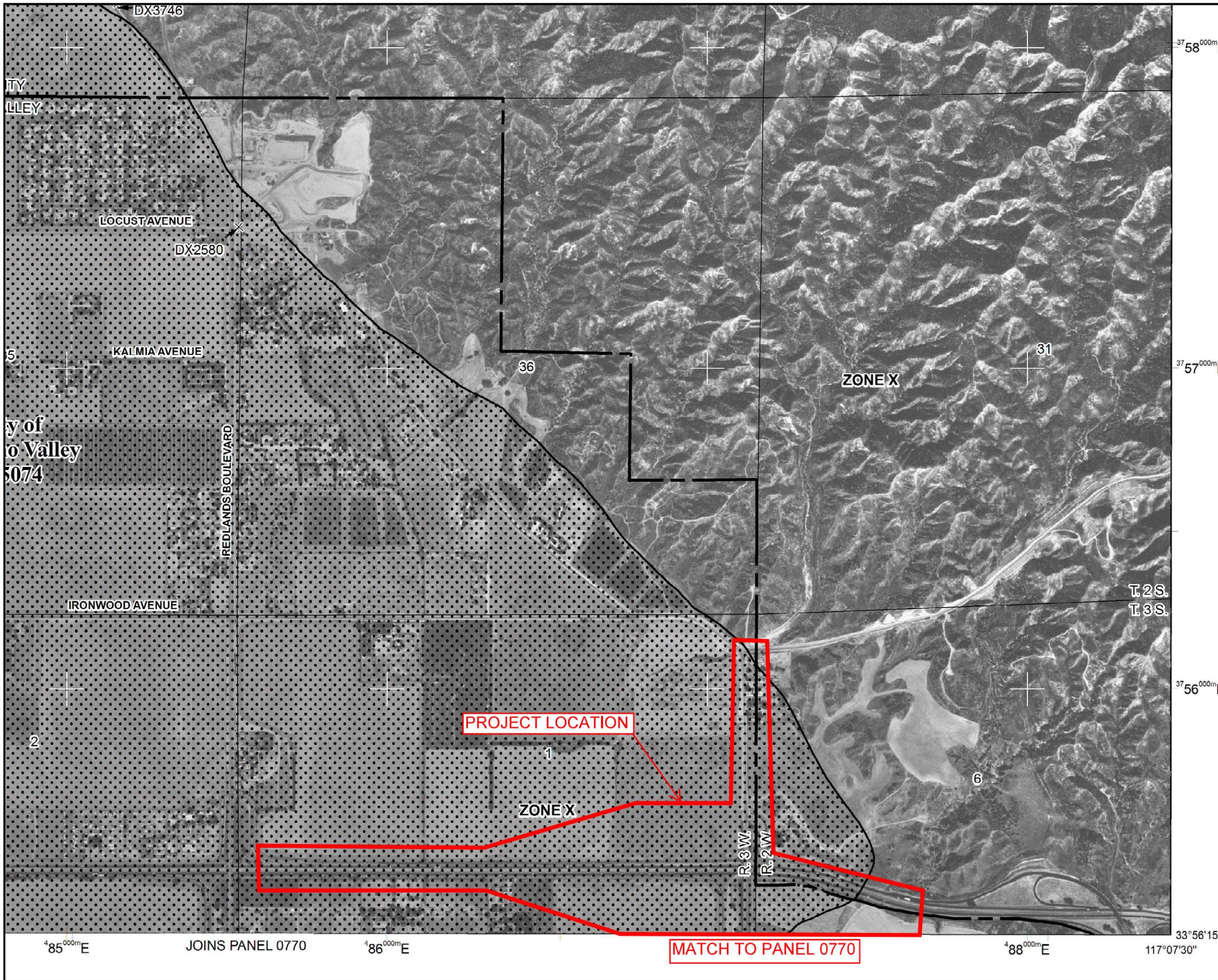
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**NFIP** PANEL 0760G

**FIRM**  
FLOOD INSURANCE RATE MAP

RIVERSIDE COUNTY,  
CALIFORNIA  
AND INCORPORATED AREAS

PANEL 760 OF 3805  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUB-FIX
MORENO VALLEY, CITY OF	065074	0760	G
RIVERSIDE COUNTY	060245	0760	G

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

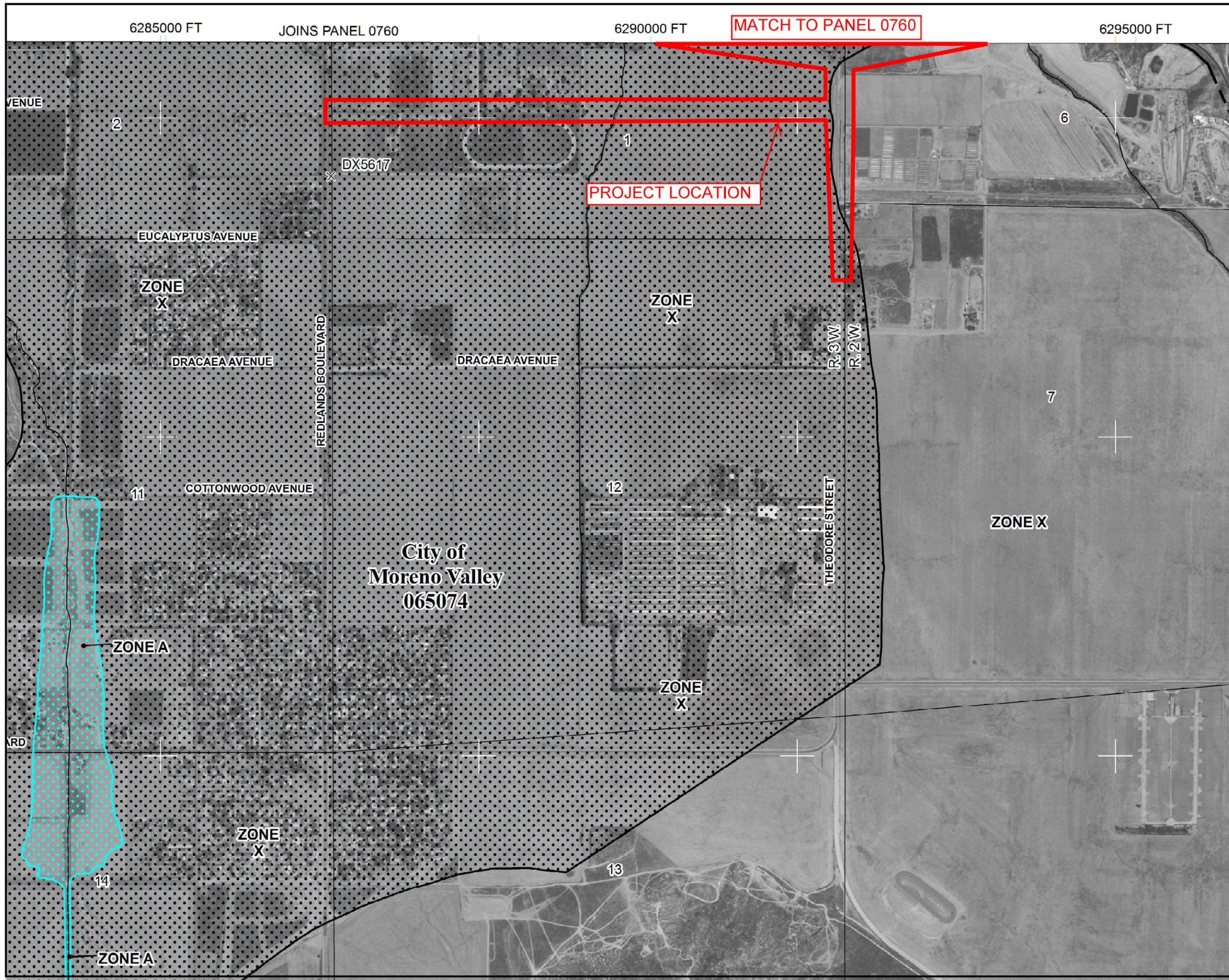
**MAP NUMBER**  
06065C0760G

**EFFECTIVE DATE**  
AUGUST 28, 2008

Federal Emergency Management Agency

**NATIONAL FLOOD INSURANCE PROGRAM**

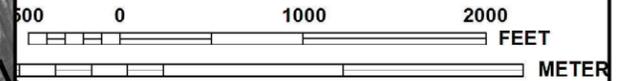
This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)



MATCH TO PANEL 0760



MAP SCALE 1" = 1000'



PROJECT LOCATION

**NFIP** PANEL 0770G

**FIRM**  
FLOOD INSURANCE RATE MAP

RIVERSIDE COUNTY,  
CALIFORNIA  
AND INCORPORATED AREAS

PANEL 770 OF 3805  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
MORENO VALLEY, CITY OF	065074	0770	G
RIVERSIDE COUNTY	060245	0770	G

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
06065C0770G

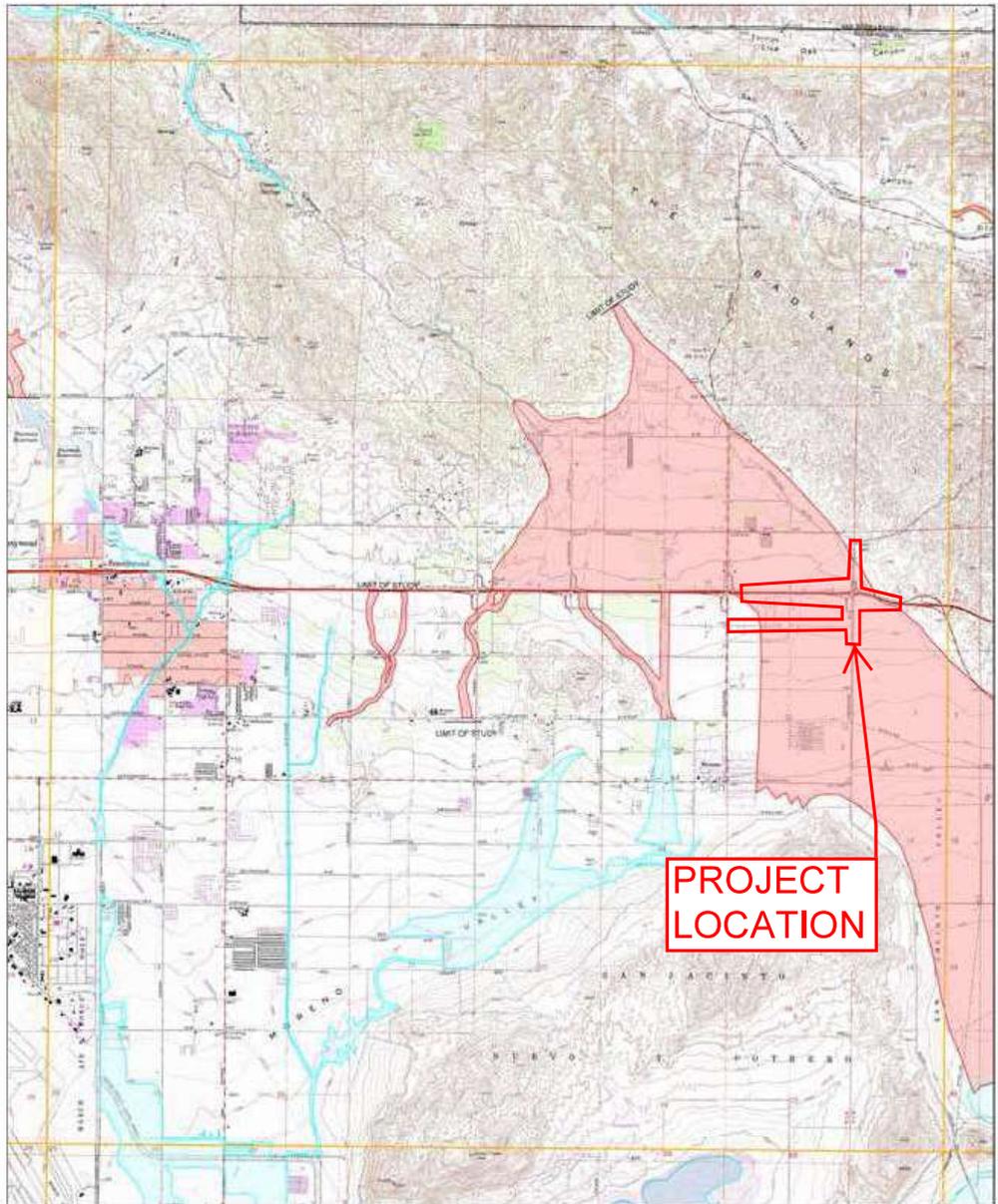
**EFFECTIVE DATE**  
AUGUST 28, 2008

Federal Emergency Management Agency

**NATIONAL FLOOD INSURANCE PROGRAM**

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

Awareness Floodplain Mapping  
Floodplain Boundaries - Riverside County  
Sunnymead Quadrangle



PROJECT  
LOCATION

Legend

-  Awareness Floodplain Boundaries (approximate)
-  FEMA Q3 FIRM Data (approximate)
-  Quadrangle Boundary
-  Riverside County boundary



0 0.5 1 2 Miles

1 inch equals 2,000 feet unless noted at 31° 4' 22"  
California State Plane, Zone 11 NAD 83