# BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIF

**FILED**05/08/25
04:59 PM **A2505003** 

Application of the City of Mountain House for an Order Authorizing a Public Railroad Crossing of the Union Pacific Railroad Tracy Subdivision Track with Mountain House Parkway (milepost 75.54) within the City of Mountain House, County of San Joaquin, State of California.

Application No.	

### **APPLICATION**

The City of Mountain House, a municipal corporation of California (hereinafter referred to as the District), hereby submits this Application to the California Public Utilities Commission (hereinafter referred to as the CPUC) for an order approving the construction of one new at-grade crossing, the extension of Mountain House Parkway, across and over the Union Pacific Railroad Tracy Subdivision (hereinafter referred to as the Railroad), near milepost (MP) 75.54 (DOT # 971 765 E) in Mountain House, County of San Joaquin, State of California (see Exhibit A).

### BACKGROUND

The City of Mountain House Master Planned Community (hereinafter referred to as the Project) is currently under construction and encompasses up to 16,000 homes. Approximately 4,500 of these homes will be located north of the Railroad, which bisects Mountain House. These homes are bordered by Old River to the north and the Railroad to the south. As part of this Project as authorized by CPUC Decision 06-06-052, June 26, 2006, the Central Parkway grade separation over the Union Pacific Railroad (UPRR) track was constructed in 2008 to improve access from one side of the Railroad to the other. The Central Parkway will be the primary means of travel for the public living north of the Railroad once the Project is finished. All the current and future residents must cross the Railroad to access all roads leaving the area including Byron Road, I-205, and I-580.

Prior to the construction of the Central Parkway grade separation in 2008, there were five existing at-grade crossings in the Project area of Mountain House. The five at-grade crossings were as follows: Kelso Road, CPUC 001B-74.20, DOT #751855W, a public crossing; MP 74.94, DOT #751856D, a private crossing; MP 75.18, DOT #751857K, a private crossing; Henderson Road, CPUC 001B-75.60, DOT #751858S, a public crossing; and Wicklund Road, CPUC 001B-76.40, DOT #751859Y, a public crossing. The two private crossings have since been physically removed; Kelso Road is to be abandoned and removed; Henderson Road is to be abandoned and removed; and Wicklund Road is to be abandoned and removed.

All of these crossings were included in the Environmental Impact Report (EIR) that was completed in 1994. The 1994 EIR included an additional at-grade crossing, for a total of three (3) at-grade crossings at project completion. Initially, UPRR did not comment on the 3 at-grade crossings proposed in the 1994 EIR. More recently, UPRR did state their concern about the number of at-grade crossings to Trimark Communities, the Developer of the Mountain House Master Plan. These discussions led to a compromise. Only two (2) at-grade crossings are now planned for the Mountain House Community: Mountain House Parkway and Great Valley Parkway. UPRR generated an agreement letter dated January 14, 2008, (see Exhibit E) that indicates UPRR is in concurrence with the

Mountain House "Project" that provides the new grade-separated crossing of Central Parkway, the removal of Kelso Road public at-grade crossing (in exchange for the new at-grade crossing at Great Valley Parkway), the installation of the new Mountain House Parkway at-grade crossing, the removal of the two private at-grade crossings, and the removal of both Henderson and Wicklund public at-grade crossings.

In support of its Application, Applicant respectfully shows:

- 1. The identity of the Applicant: The City of Mountain House, Incorporated in the County of San Joaquin, a political subdivision of the State of California.
- Correspondence and communications concerning this Application should be directed to:

Steve Pinkerton
City Manager
City of Mountain House
251 E. Main Street
Mountain House, CA 95391
Phone: (209) 831-2300

3. Pursuant to the requirements of Rule 3.7 of the Public Utilities Commission's Rules of Practice and Procedure, Applicant provides the following information:

Email: spinkerton@sjgov.org

- a. The new Mountain House Parkway at-grade crossing will be located adjacent to Byron Road at Mountain House Parkway, Mountain House, California, and the proposed railroad milepost will be 75.54 with DOT # 971 765 E.
- b. A Project aerial location map prepared by the Applicant and legal description are attached as Exhibits A and D, respectively.
- c. Three existing public at-grade crossings, one at MP 74.20, Kelso Road (DOT # 751 855 W), one at MP 75.60, Henderson Road (DOT #751858S), and the other at MP 76.40, Wicklund Road (DOT #751859Y), will be abandoned and removed as part of the UPRR agreement letter dated January 14, 2008.

- d. Two private at-grade crossings, one at MP 74.94 (DOT #751856D) and the other at MP 75.18 (DOT #751857K), have been removed as part of the UPRR agreement letter dated January 14, 2008.
- e. A separation of grade is not practicable and is not economically or physically feasible at the proposed at-grade crossing. The at-grade crossing has been planned for over 30 years, and it has been evaluated and approved through two separate CEQA processes. Today the land is zoned and improved with roads and public utility infrastructure. Converting the proposed Mountain House Parkway at-grade crossing into a grade-separated crossing would have a severe economic impact, resulting in the loss of developable acreage. In addition to the cost of an additional 300-foot-long grade-separated crossing, a controlled access interchange would be required to connect the residences of Mountain House to Byron Road. A controlled access interchange would require rezoning of land uses and condemnation of private property. Furthermore, there is already significant public utility infrastructure now in the ground that would have to be relocated for a grade-separated crossing.
- f. The Mountain House Parkway at-grade crossing consists of four lanes in the westbound direction (one left turn lane, two through lanes, and one right turn lane) and two lanes in the eastbound direction (both through lanes) with a non-mountable concrete curb island (median), 10 feet wide, separating the two traffic directions. There will be an Americans with Disabilities Act (ADA)—compliant sidewalk on the west side of the roadway separated from the roadway by decomposed granite surface and concrete curbs. The sidewalk will be continuous through the crossing and behind the warning devices. Warning devices include two Commission Standard 9's with side flashing lights for the eastbound traffic direction, with one on the left in the median island and one on the right side behind the curb. The two Commission Standard 9's for the westbound traffic direction will have one placed on the left in the median island and one on the right side behind the curb. The future posted roadway speed at all crossings will be 45 mph. Standard MUTCD advance warning signs, pavement markings and striping, and

ADA-compliant tactile warning strips at the pedestrian sidewalks 17 feet from centerline of track will be provided. A new dedicated right turn lane from northbound Byron Road to Mountain House Parkway will be provided. The pedestrian sidewalk crossing will have a Commission Standard 8 for the crossing on the opposite side of the track from the Commission Standard 9. Standard UPRR concrete crossing panels will be used for the roadway surface across the tracks. The new crossing will have preemption for the adjacent intersection of Byron Road and Mountain House Parkway. Preemption plans and calculations are included in Exhibit F.

- g. Details of the proposed railroad crossing, which include plan and profile, are attached as Exhibit B.
- h. A profile of the roadway is shown on the plan attached as Exhibit C.
- 4. The undersigned certifies that a copy of this Application has been sent to the following:

California Public Utilities Commission Docket Office 505 Van Ness Avenue, Room 2001 San Francisco, CA 94102

> City of Mountain House 251 E. Main Street Mountain House, CA 95391

Union Pacific Railroad Company 9451 Atkinson Street Roseville, CA 95747 IT IS REQUESTED THAT the Public Utilities Commission of the State of California grant an order authorizing the City of Mountain House to construct and maintain a public atgrade crossing at Mountain House Parkway.

Dated	4/29/2025			

Respectfully submitted,

Docusigned by:

Steve Pinkerton

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Steve Pinkerton
City Manager
City of Mountain House
251 E. Main Street
Mountain House, CA 95391
Phone: (209) 831-2300

Email: spinkerton@sjgov.org

### **EXHIBITS**

### List of Application Exhibits

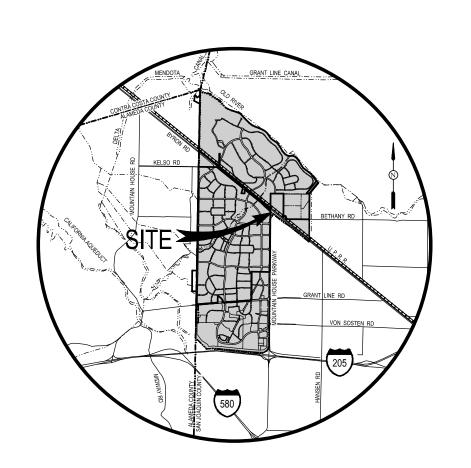
- A. Project Vicinity Maps
- B. UPRR Crossing Plan and Railroad Profile
- C. Mountain House Parkway Profile and Roadway Plans with Henderson Road and Wicklund Road Removal Plans
- D. Crossing Legal Description
- E. UPRR Agreement Letter Dated January 14, 2008 and UPRR Concurrence
- F. Preemption Calculations and Traffic Signal Plans
- G. Scoping Memo
- H. Verification

**Supporting Documentation** 

Notice of Availability Certificate of Service

# **Exhibit A**

# **Project Vicinity Maps**



# IMPROVEMENT PLANS BYRON ROAD & MOUNTAIN HOUSE PARKWAY RAILROAD CROSSING IMPROVEMENTS

DIAL TOLL FREE

1-800-227-2600

AT LEAST TWO DAYS
BEFORE YOU DIG

UNDERGROUND SERVICE ALERT OF NORTHERN CALIFORNIA

COMM MITY SERVICES DISTRICT
Approved By
DEVON CROWE
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ENGINEER V

DRAWN BY:

LWL

Approx

PROJ. ENGR.

LWL

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PROJECT STATES OF CIVIL PROJECT PROJEC

) 866-0322 (55.00 p.m.) 375-1877 (25.00 p.m.) 275-1877 (25.00 p.m.

SAN RAMON • (925) 866-03
SACRAMENTO • (916) 375-18

WWW.CBANDG.COM

SURVEYORS • PLANNE

& MOUNTAIN HOUSE PARKV
IT PLANS - RAILROAD CROSSINC
COVER SHEET

BYRON RC IMPROVEI

OF:

Comp. File No. IP01.dwg
Plan File No. 0731A

SHEET:

DOT #971765E UPRR TRACY SUBDIVISION MP 74.54

MOUNTAIN HOUSE

SAN JOAQUIN COUNTY, CALIFORNIA

## PROJECT INFORMATION:

VICINITY MAP

NOT TO SCALE

1. OWNER/DEVELOPER: MOUNTAIN HOUSE DEVELOPERS, LLC. 230 S. STERLING WAY

MOUNTAIN HOUSE, CALIFORNIA 94391
(925) 580-0777

DAVID SARGENT

2633 CAMINO RAMON, STE. 350 SAN RAMON, CALIFORNIA 94583 (925) 866–0322

TERRY REEVES, RCE 75174

STEVE HARRIS, RGE 2804

ENGEO INCORPORATED
580 NORTH WILMA AVENUE, SUITE A
RIPON, CA. 95366
(209) 835-0610

4. RAILROAD ENGINEER: HDR

SOILS ENGINEER:

100 PRINGLE AVENUE, SUITE 400 WALNUT CREEK, CA 94596

5. SIGNAL ENGINEER: WOOD RODGERS

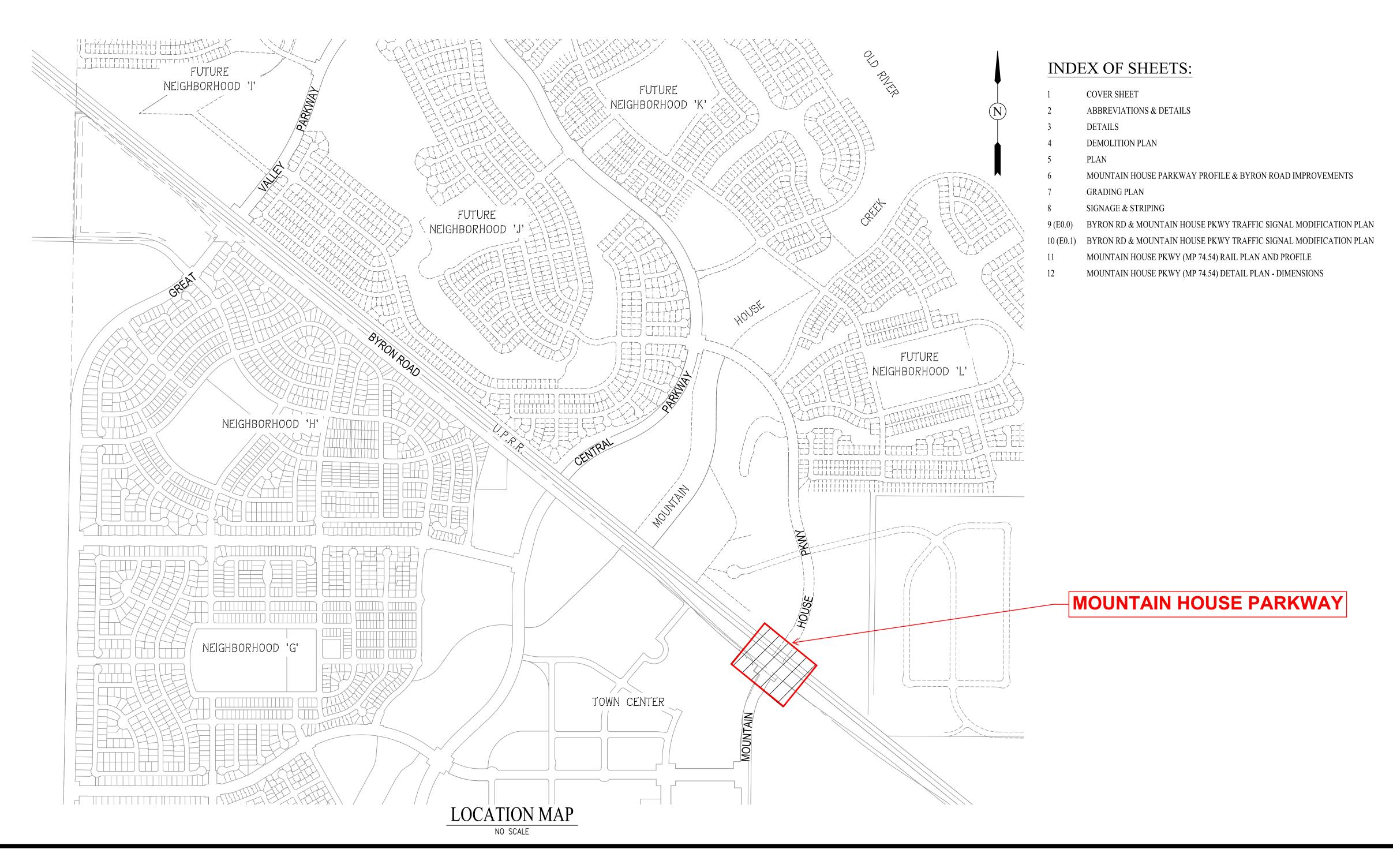
4670 WILLOW ROAD, SUITE 125 PLEASANTON, CA 94588 (925) 847-1556 KARRIE MOSCA, RCE 60815

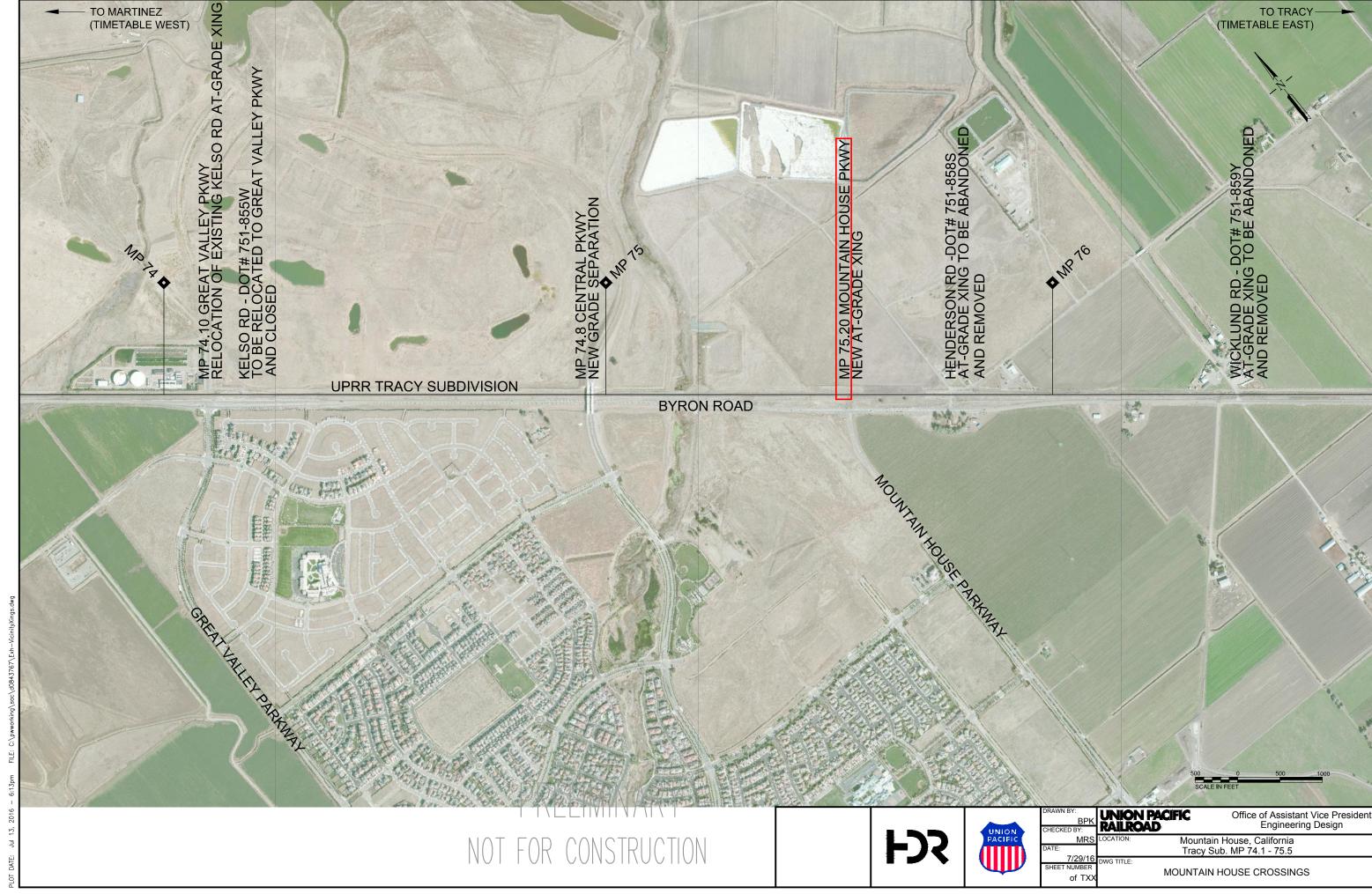
### BASIS OF BEARINGS:

THE BASIS OF BEARINGS IS TAKEN AS SOUTH 25°58'39" EAST BETWEEN STATION "MH1" AND "MH2", AS SAID STATIONS ARE SHOWN ON THE RECORD OF SURVEY FILED APRIL 14, 2004 IN BOOK 35 OF SURVEYS AT PAGE 129, SAN JOAQUIN COUNTY RECORDS, AND IS BASED ON THE CALIFORNIA COORDINATE SYSTEM ZONE 3, NAD83 (EPOCH 2002.0). DISTANCES SHOWN ARE GRID DISTANCES. TO OBTAIN GROUND DISTANCE, DIVIDE GRID DISTANCE BY THE COMBINED SCALE FACTOR OF 0.99993260 (CALCULATED AT STATION "MH1").

### BENCHMARK:

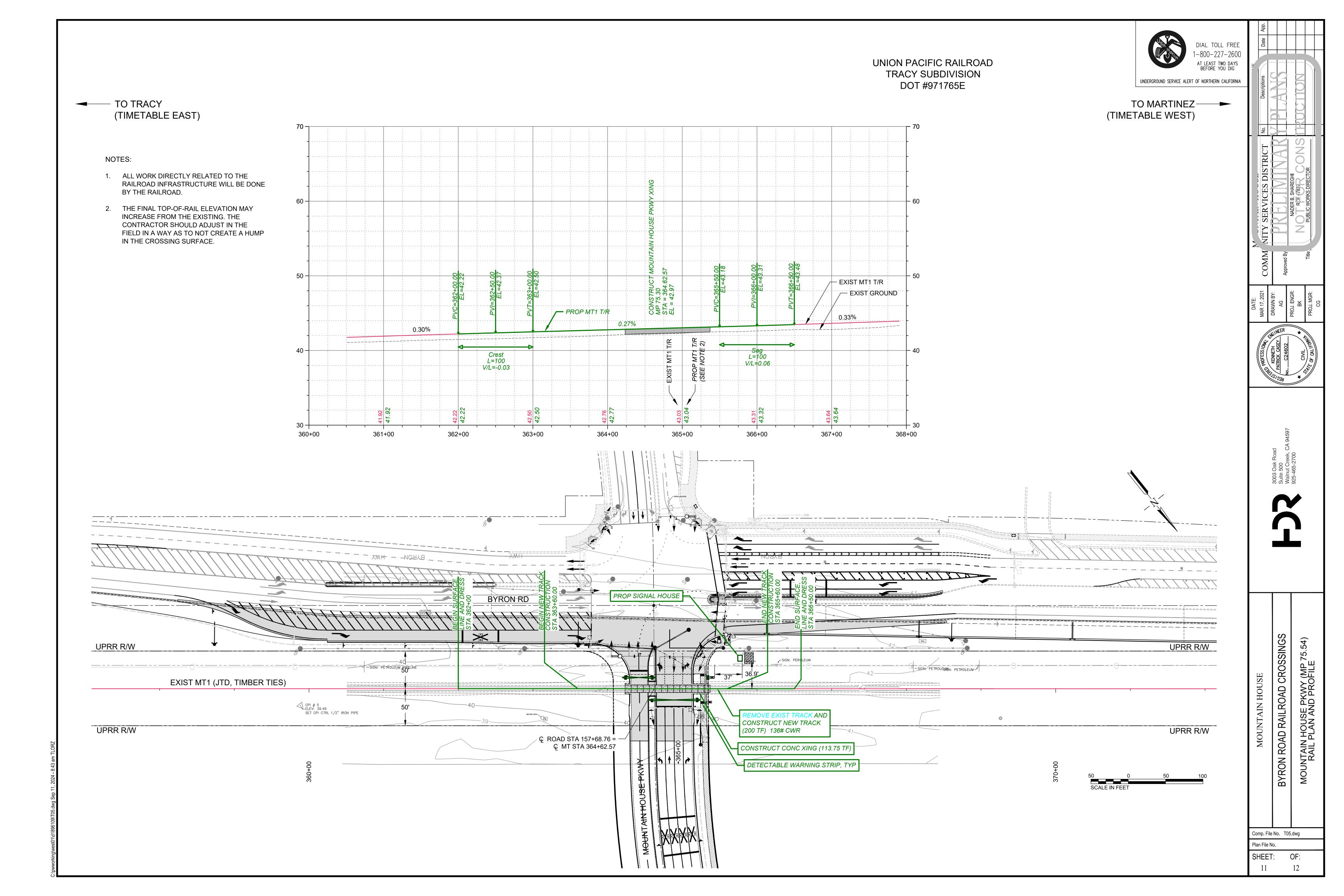
"MH1", FOUND GEODETIC WELL MONUMENT PER RECORD OF SURVEY IN BOOK 35 OF SURVEYS, AT PAGE 129. ELEVATION 40.271 (NAVD 88).

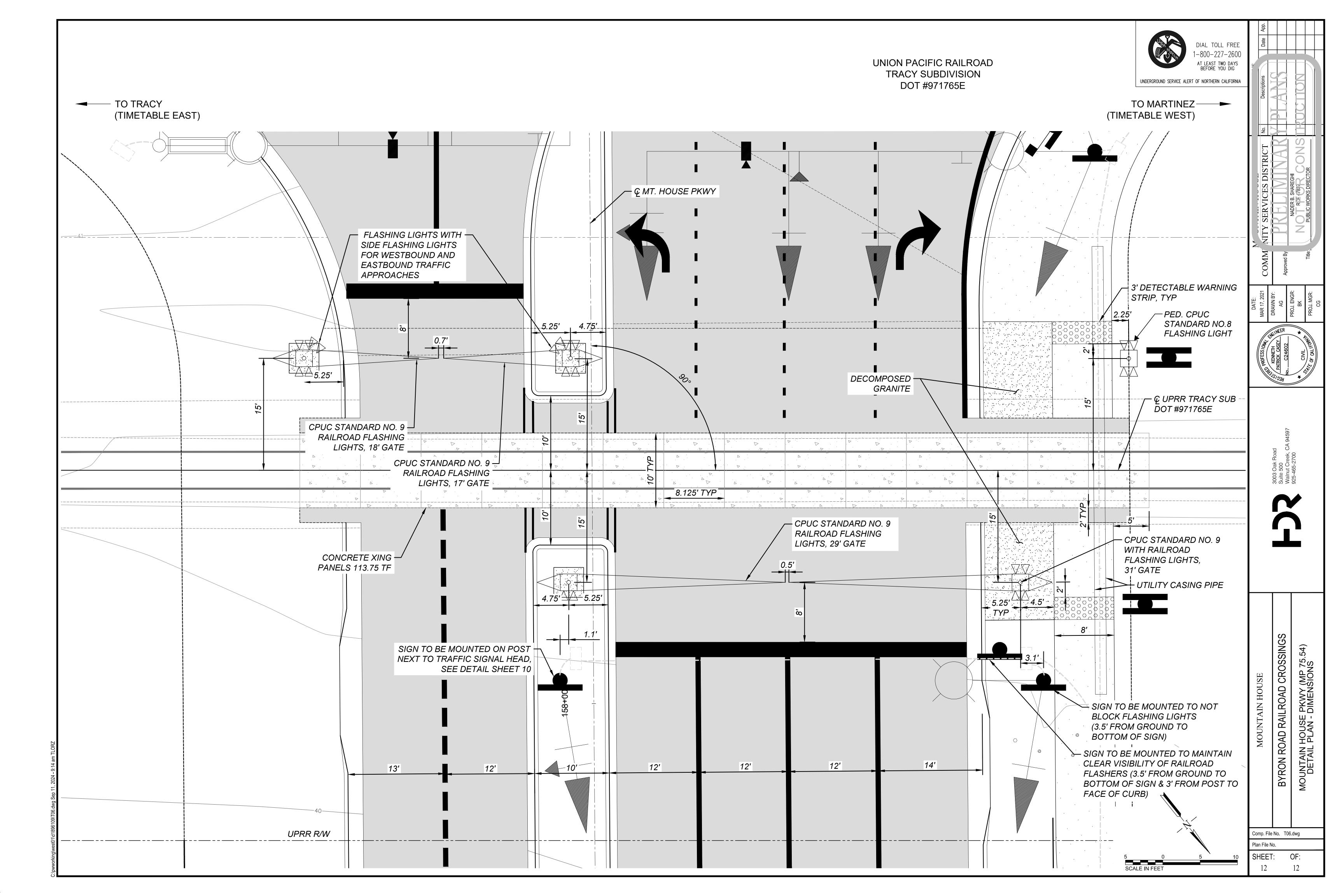




# **Exhibit B**

UPRR Crossing Plan and Railroad Profile





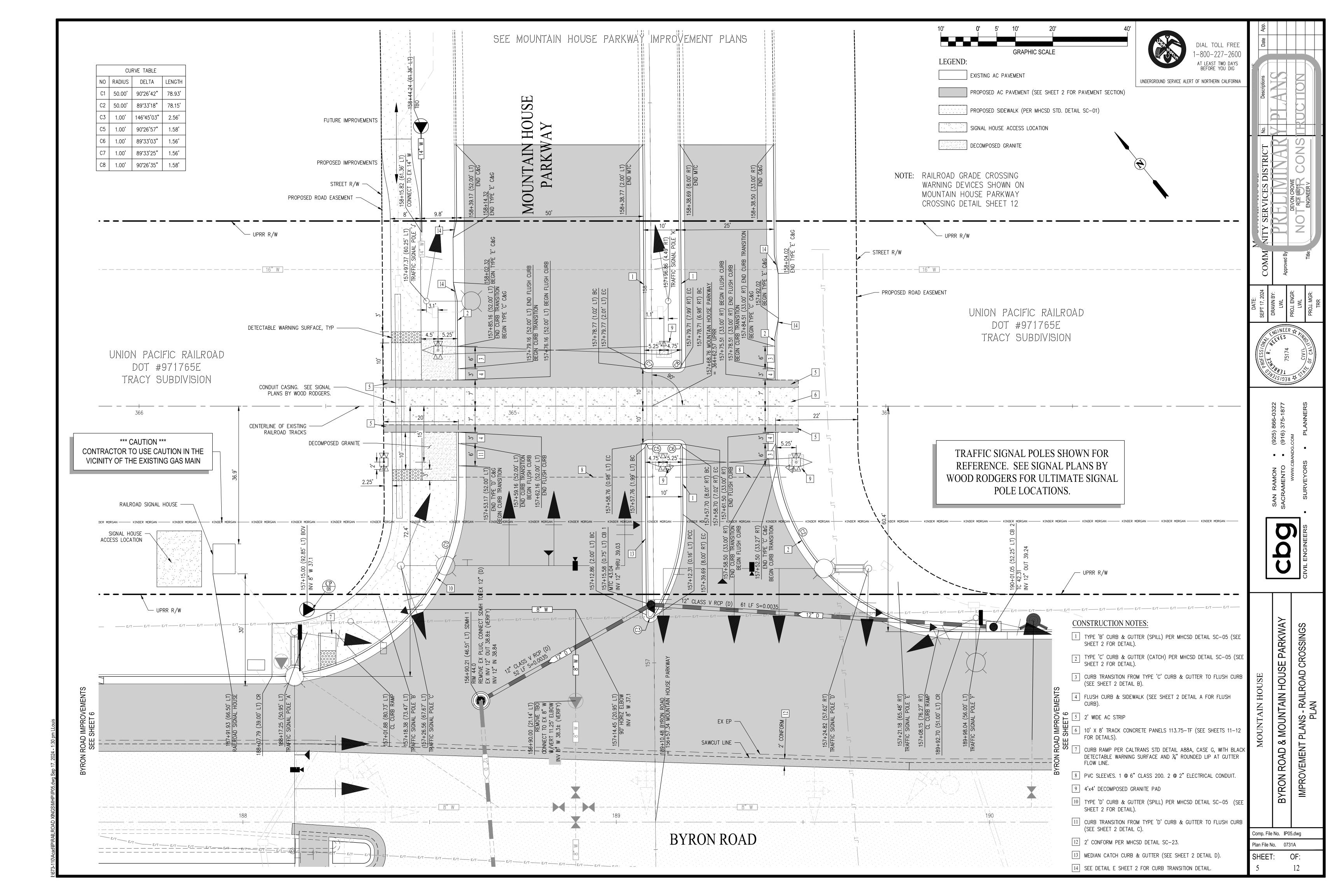
### **Exhibit C**

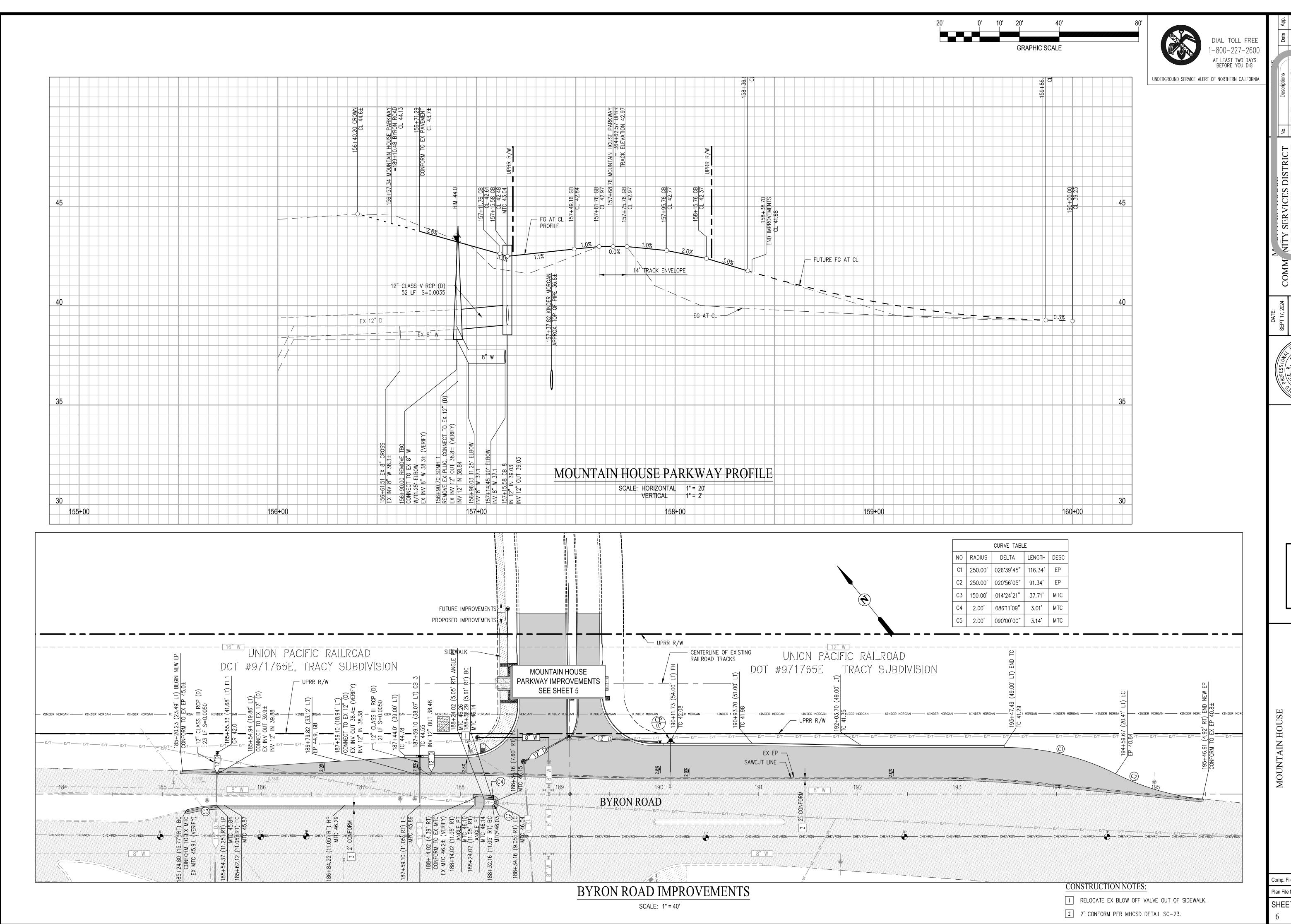
Mountain House Parkway Profile and

Roadway Plans

with

Henderson Road and Wicklund Road Removal Plans





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ERVICES DISTRICT

BEVON CROWE

DEVON CROWE

Approved By NO

DRAWN BY:

LWL

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PROFESSION TEACH OF THE PROFESSION TO PROFES

N RAMON • (925) 866-0322
SRAMENTO • (916) 375-1877

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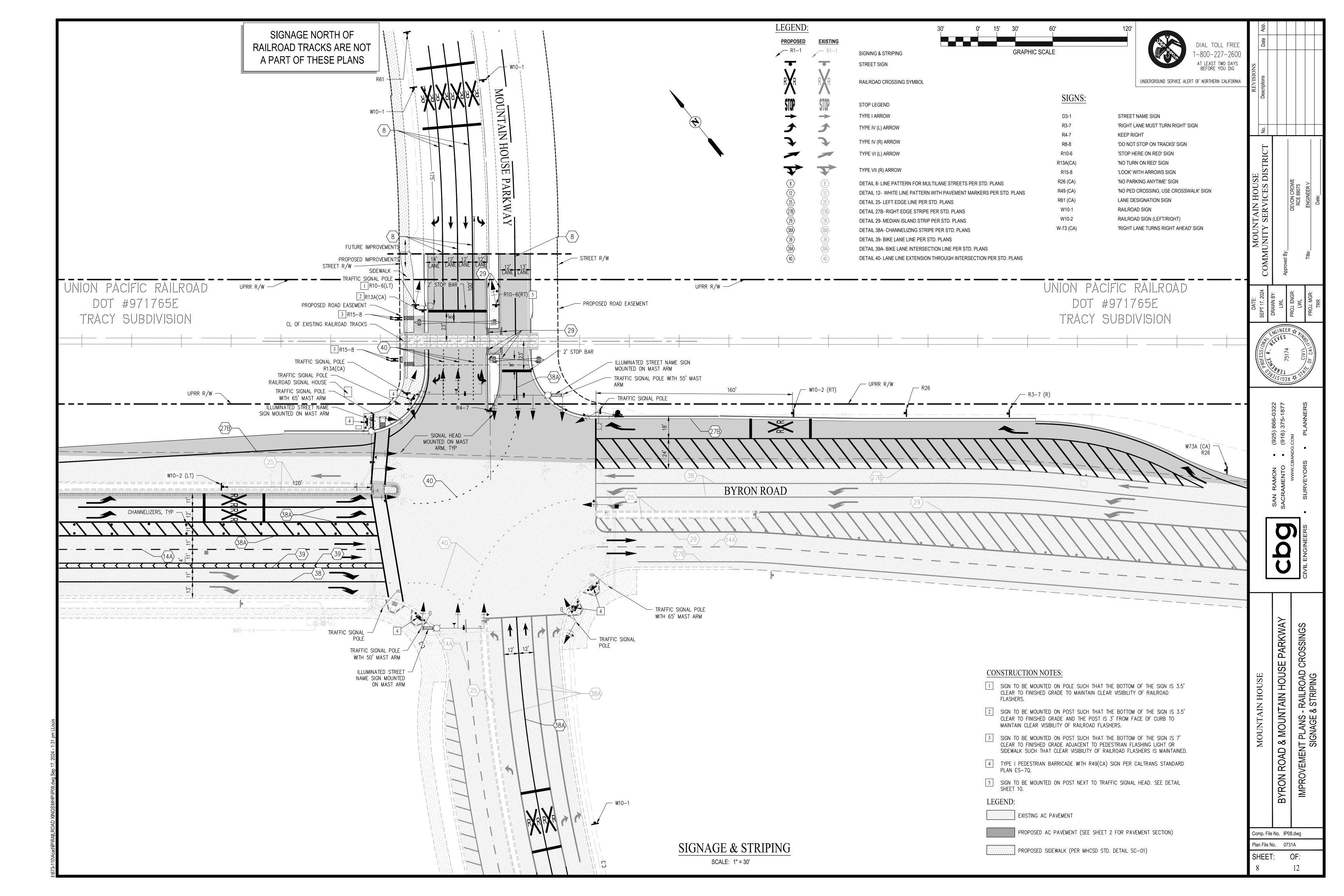
AIN HOUSE PARKWAY
AILROAD CROSSINGS
& BYRON ROAD IMPROVEMENTS

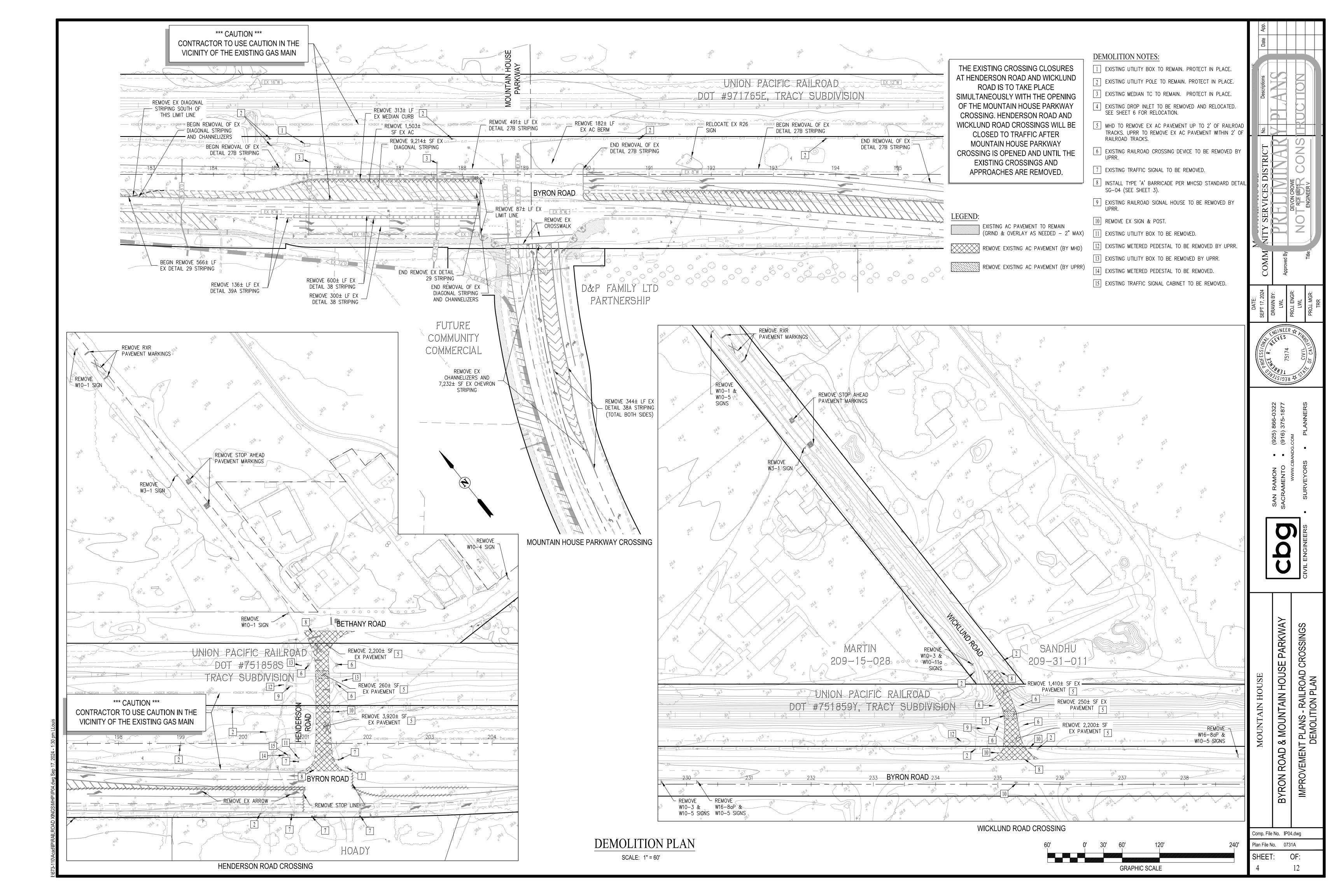
BYRON ROAD & MOUNTAIN HOUS

Comp. File No. IP06.dwg

Plan File No. 0731A

SHEET: OF:





# **Exhibit D**

# **Crossing Legal Description**

# EXHIBIT A LEGAL DESCRIPTION ROADWAY EASEMENT MOUNTAIN HOUSE PARKWAY

REAL PROPERTY SITUATE IN THE CITY OF MOUNTAIN HOUSE, COUNTY OF SAN JOAQUIN, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEING A PORTION OF A 100 FOOT WIDE STRIP OF LAND DESCRIBED IN THAT DEED TO SAN PABLO AND TULARE RAILROAD COMPANY RECORDED DECEMBER 27, 1920, IN BOOK A OF DEEDS, VOLUME 447, AT PAGE 266, SAN JOAQUIN COUNTY RECORDS, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A POINT ON THE NORTHEASTERN LINE OF SAID STRIP OF LAND, SAID POINT BEING ALSO THE WESTERN CORNER OF THE PARCEL OF LAND DESCRIBED IN THAT GRANT DEED RECORDED NOVEMBER 28, 2018, AS DOCUMENT NUMBER 2018-130022, OFFICIAL RECORDS OF SAN JOAQUIN COUNTY;

THENCE, FROM SAID POINT OF COMMENCEMENT, ALONG THE COMMON LINE OF SAID LANDS, SOUTH 51°15'35" EAST 392.51 FEET TO THE **POINT OF BEGINNING**;

THENCE, FROM SAID POINT BEGINNING, CONTINUING ALONG SAID COMMON LINE, SOUTH 51°15'35" EAST 127.00 FEET;

THENCE, LEAVING SAID COMMON LINE, SOUTH 38°17'44" WEST 60.31 FEET;

THENCE, ALONG THE ARC OF A TANGENT 40.00 FOOT RADIUS CURVE TO THE LEFT, THROUGH A CENTRAL ANGLE OF 89°16'15", AN ARC DISTANCE OF 62.32 FEET TO A POINT ON THE NORTHEASTERN LINE OF THE PARCEL OF LAND DESCRIBED IN THAT GRANT DEED RECORDED APRIL 13, 2005, AS INSTRUMENT NUMBER 2005-086246, OFFICIAL RECORDS OF SAN JOAQUIN COUNTY, SAID PARCEL BEING A PORTION OF BYRON ROAD (WIDTH VARIES);

THENCE, ALONG SAID NORTHEASTERN LINE, NORTH 51°15'35" WEST 176.58 FEET;

THENCE, LEAVING SAID NORTHEASTERN LINE, EASTERLY ALONG THE ARC OF A NON-TANGENT 30.00 FOOT RADIUS CURVE TO THE LEFT, FROM WHICH THE CENTER OF SAID CURVE BEARS NORTH 03°17'34" WEST, THROUGH A CENTRAL ANGLE OF 48°24'43", AN ARC DISTANCE OF 25.35 FEET;

THENCE, NORTH 38°17'43" EAST 77.49 FEET TO THE POINT OF BEGINNING.

CONTAINING 13,107 SQUARE FEET OF LAND, MORE OR LESS.

DISTANCES LISTED HEREIN ARE GROUND DISTANCES. TO OBTAIN GRID DISTANCES MULTIPLY BY THE COMBINED SCALE FACTOR OF 0.99993260.

ATTACHED HERETO IS EXHIBIT B, A PLAT TO ACCOMPANY LEGAL DESCRIPTION, AND BY THIS REFERENCE MADE A PART HEREOF.

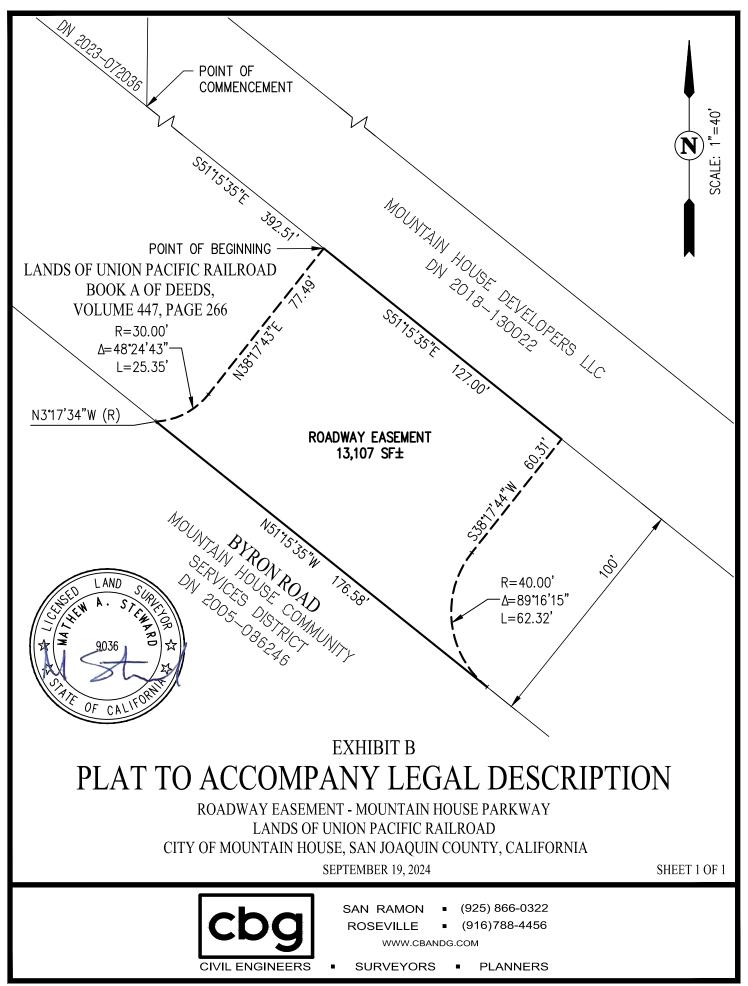
### END OF DESCRIPTION



2/19/2025

MATHEW A. STEWARD, P.L.S.

L.S. NO. 9036



# Parcel Map Check Report

Parcel Name: Site 1 - MHP

Description:

Process segment order counterclockwise: False

Enable mapcheck across chord: False

North:2,109,137.9506' East:6,263,870.4234'

Segment# 1: Line

Course: S51° 15' 34.94"E Length: 127.004' North: 2,109,058.4726' East: 6,263,969.4854'

Segment# 2: Line

Course: S38° 17' 44.17"W Length: 60.313'

North: 2,109,011.1375' East: 6,263,932.1083'

Segment# 3: Curve

Length: 62.323' Radius: 40.000' Delta: 89°16'15" Tangent: 39.494'

Chord: 56.207' Course: S6° 20' 23.19"E

Course In: S51° 42' 15.83"E Course Out: S39° 01' 29.46"W

RP North: 2,108,986.3487' East: 6,263,963.5012' End North: 2,108,955.2738' East: 6,263,938.3149'

Segment# 4: Line

Course: N51° 15' 34.94"W Length: 176.582' North: 2,109,065.7773' East: 6,263,800.5826'

Segment# 5: Curve

Length: 25.348' Radius: 30.000'
Delta: 48°24'43" Tangent: 13.486'

Chord: 24.601' Course: N62° 30' 04.68"E Course In: N3° 17' 33.87"W Course Out: S51° 42' 16.78"E

RP North: 2,109,095.7278' East: 6,263,798.8595' End North: 2,109,077.1363' East: 6,263,822.4043'

Segment# 6: Line

Course: N38° 17' 43.22"E Length: 77.487'

North: 2,109,137.9502' East: 6,263,870.4242'

Perimeter: 529.057' Area: 13,107.43Sq.Ft. Error Closure: 0.0008 Course: S62° 45' 35.10"E

Error North: -0.00038 East: 0.00074

Precision 1: 661,321.250

## **Exhibit E**

UPRR Agreement Letter
Dated January 14, 2008
and
UPRR Concurrence



LAW DEPARTMENT

10031 Foothills Boulevard, Suite 200, Roseville California 95747-7101

General Office: (916) 789-6400 / Facsimile (916) 789-6227

DAVID M. PICKETT General Attorney Direct: (916) 789-6218

January 14, 2008

Christopher Johnson Shea Mountain House, LLC Director of Operations 2580 Shea Center Drive Livermore, CA 94551

Kevin Peters Shea Mountain House, LLC 2580 Shea Center Drive Livermore, CA 94551

Edward Merrill Bingham McCutchen 1333 North California Blvd. Walnut Creek, CA 94596

Michael McGrew Nevmiller & Beardslee 509 West Weber Avenue, 5th Floor Stockton, CA 95203

Re: Central Parkway overcrossing

### Gentlemen:

I write to confirm that Union Pacific Railroad, Mountain House Community Services District, and Shea Homes have agreed that the private crossings located at milepost 74.94 (DOT #751856D) and 75.18 (DOT #751857K) on the Tracy Subdivision will be removed without delay when the Central Parkway overcrossing is opened for use and accepted by the Mountain House Community Services District.

1.91 673-51 MPA

SHEA HOMES

RE: Central Parkway Overcrossing

January 14, 2008

Page 2

This agreement is part of the understanding among the parties regarding the overall treatment of the location of crossings within the Mountain House development. In addition to the changes described above, Mountain House Community Services District and Shea Homes intend to close the existing public crossings at Henderson Road (DOT #751858S) and Wicklund Road (DOT #751859Y), realign the Kelso Road crossing (DOT #751855W)within approximately 300 feet of its existing alignment, and open a new public grade crossing at Mountain House Parkway (M.P. 75.4). As long as all of these changes transpire, Union Pacific will not object to applications made to the California Public Utilities Commission for the Kelso Road and Mountain House Parkway projects on the basis that additional grade crossings must be closed. Union Pacific retains its right to oppose such applications on the basis of design features.

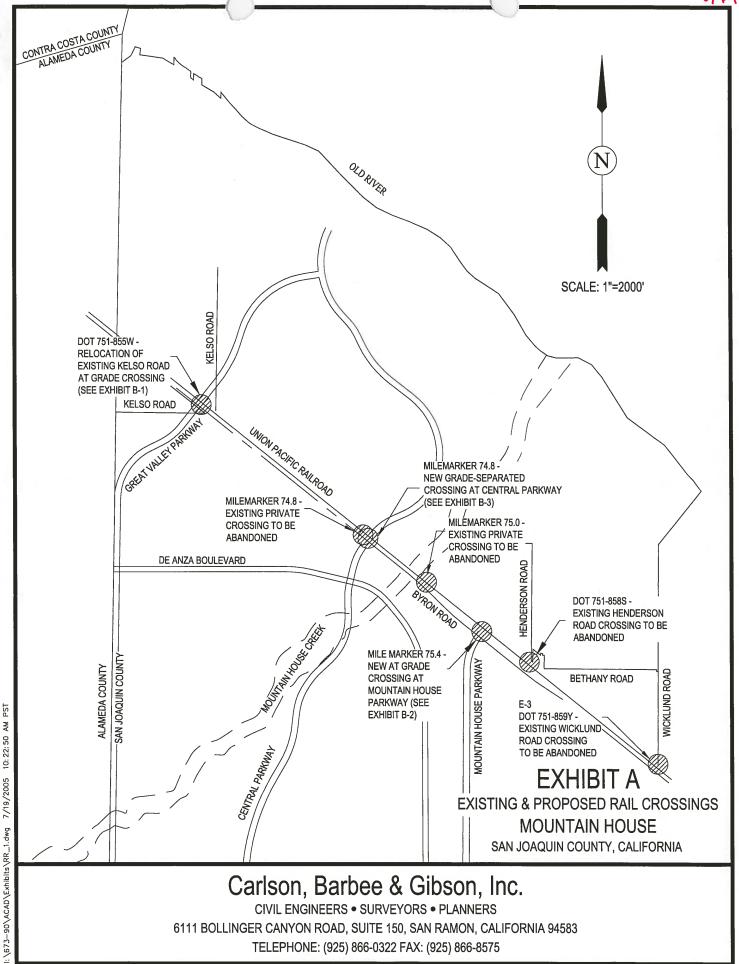
Thank you for your courtesy. Please contact me immediately if this correspondence does not accurately reflect our agreement.

Very truly yours,

DAVID M. PICKETT

DMP/lmr

cc: David Stewart, CPUC



TELEPHONE: (925) 866-0322 FAX: (925) 866-8575

1:\673-90\ACAD\Exhibits\RR\_2.dwg 7/19/2005 10:27:12 AM PST

1:\673-90\ACAD\Exhibits\rail road 061606\ACAD-RR\_2.dwg 6/16/2006

TELEPHONE: (925) 866-0322 FAX: (925) 866-8575



April 13, 2025

David R. Stewart
Utilities Engineer
California Public Utilities Commission
Rail Safety Division
(415) 806-0490
Sent Via email (David.Stewart@cpuc.ca.gov)

RE: New Public At-Grade Crossings, City of Mountain House, California, Great Valley Parkway (UPRR Tracy Subdivision MP 74.10, DOT #971764X) and Mountain House Parkway (UPRR Tracy Subdivision MP 75.54, DOT # 971765E)

Dear Mr. Stewart:

Union Pacific Railroad Company (UPRR) has been coordinating with the Mountain House community now City of Mountain House (City) for several years regarding two proposed new at-grade crossings – Great Valley Parkway (Tracy Sub MP 74.10, DOT #971764X) and Mountain House Parkway (Tracy Sub MP 75.54, DOT #971765E). In 2008, UPRR Law Department provided conditional approval of the new at-grade crossings with the understanding that three existing public at-grade crossings and two private at-grade crossings in the vicinity would be closed. In 2009, the two private at-grade crossings (DOT #751856D and DOT #751857K) were closed. Recently, the City has completed preparation of final plans for the new at-grade crossings and closure of three public at-grade crossings: Kelso Road (Tracy Sub MP 74.18, DOT #751855W), Henderson Road (Tracy Sub MP 75.76, DOT #751858S), and Wicklund Road (Tracy Sub MP 76.40, DOT #751859Y).

UPRR has reviewed and approved the Final Plans, including the new at-grade crossing designs, traffic signal preemption, and parallel fencing to separate the railroad right-of-way from proposed residential development. UPRR will continue to coordinate with the City of Mountain House on these projects and does not object to CPUC approval of these new at-grade crossings, on the condition that the City follows the UPRR Public Project process and executes Construction & Maintenance agreements for each new crossing and Crossing Closure agreements for each crossing to be closed. The preparation of the Construction and Maintenance agreements will commence after the City has approved UPRR cost estimates for all project-related work.

Please contact Cliff Cessna or me if you have questions or wish to discuss further. Thank you.

Very truly yours,

Signed by:

Amber Stoffel's

Amber L. Stoffel's

Manager I Industry and Public Projects

cc: Clifford Cessna, UPRR Contractor (<a href="mailto:ccessna@benesch.com">ccessna@benesch.com</a>)
Steven Pinkerton, City Manager, City of Mountain House (spinkerton@sjgov.org)

# **Exhibit F**

Preemption Calculations and Traffic Signal Plans

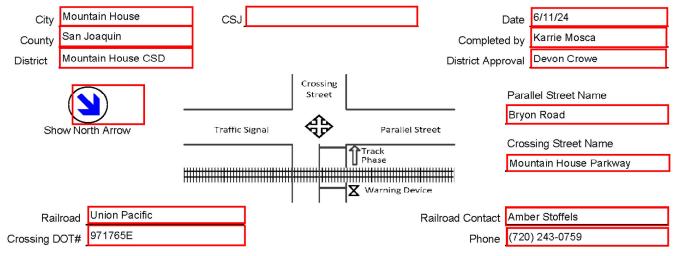
does not include pedestrian clearance time during right of way transfer (Line 22)

Version 07/12/2017 RESET

> Form 2304 (Rev. 7/17)

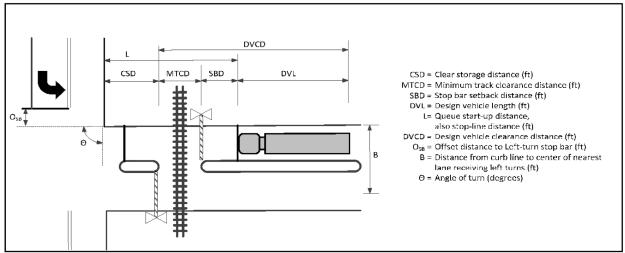


### **Texas Department of Transportation GUIDE FOR DETERMINING TIME REQUIREMENTS FOR** TRAFFIC SIGNAL PREEMPTION AT HIGHWAY-RAIL GRADE CROSSINGS



NOTE: After approval by the District, a copy of this form, along with the traffic signal design sheets and the phasing diagrams for normal and preempted operation, shall be placed in the traffic signal cabinet. See Section 7 for traffic signal timings.

### SECTION 1: GEOMETRY DATA & DEFAULTS



GEOMETRIC DATA FOR CROSSING	<u>Remarks</u>
1. Clear storage distance (CSD, feet)	75
Minimum track clearance distance (MTCD, feet)	24
Stop bar setback distance (SBD, feet)	14 Enter "0" if no stop bar is present
4. Width of receiving approach (B, feet)4.	76
5. Offset distance of left turn stop bar (O <sub>SB,</sub> feet)	45
6. Approach grade. % ( 0 if approach is on downgrade)6.	2.5
7. Angle of turn at Intersection (⊖, degrees)	90
DESIGN VEHICLE DATA	
8. Select Design Vehicle	
School Bus Intermediate Truck	✓ Interstate Semi-Truck
9. Default design vehicle length (feet)	75 Based on selected Design Vehicle
a. Additional vehicle length, if needed (feet)9a.	0 Use only if "Other" selected as Design Vehicle
10. Total design vehicle length (DVL, feet)	75 Sum of line 9 and 9a
11. Centerline turning radius of design vehicle (R, feet)	41 Based on selected Design Vehicle

19

Default value

### SECTION 2: RIGHT-OF-WAY TRANSFER TIME CALCULATION

Pree	mpt verification and response time			<u>Rer</u>	<u>narks</u>	
13.	Preempt delay time (seconds)	)				
14.	Controller response time to preempt (seconds)	.0	Manut	acturer:	Eagle	
			Firmw	are Version:	SEPAC	
15.	Preempt verification and response time (seconds): add lines 13 and 14		15.	0.0	1	
	(		10.		J 	
Wor	st-case conflicting vehicle time		\/alue		<u>narks</u> ted to meet local	
		0	condit		led to meet local	
		0				_
		.5				_
		.4				_
			<b>5</b> 0			_
20.	Worst-case conflicting vehicle time (seconds): add lines 16 through 19	20	5.9			
					<u>narks</u>	
	st-case conflicting pedestrian time		Value condit		ted to meet local	
21.	Minimum walk time during right-of-way transfer (seconds)	0		5-22/22 in	for pedestrian	
22.	Pedestrian clearance time during right-of-way transfer (seconds)	0		tion guidance	•	
23.	Vehicle yellow change time, if not included on line 22 (seconds)	.0				
24.	Vehicle red clearance time, if not included on line 22 (seconds)	.0				
25.	Worst-case conflicting pedestrian time (seconds): add lines 21 through 24	25.	0.0			
		_		•		
Wor	st-case conflicting vehicle or conflicting pedestrian time				7	
26.	Worst-case conflicting vehicle or conflicting pedestrian time (seconds): maximum of lines 20 and 25		26.	5.9		
27						
ZI.	Right-of-way transfer time (seconds): add lines 15 and 26			······ 21.	5.9	
SEC	TION 3: QUEUE CLEARANCE TIME CALCULATION			<u>Remarks</u>	<u> </u>	
	TION 3: QUEUE CLEARANCE TIME CALCULATION  Are there left-turns towards the tracks?			<u>Remarks</u>	<u> </u>	
28.	Are there left-turns towards the tracks? Yes No	LTL = TF	R <b>0/1</b> 80	Remarks	<u> </u>	
28. 29.	Are there left-turns towards the tracks?	LTL = ∏F		Remarks	5	
28. 29.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):	Default va	alue		- line 11) + line 29	+
28. 29. 30.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):	Default value Equation:	alue : (line 4 + li	ne 5 + line 12	- line 11) + line 29	
28. 29. 30.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):	Default value Equation:	alue : (line 4 + li	ne 5 + line 12		
28. 29. 30. 31.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):  Travel speed of left-turning truck (S <sub>LTT</sub> , mph):  Distance required to clear left-turning truck from travel lanes on track clearance approach (feet):  Additional time required to clear left-turning truck from travel lanes on track clearance approach (seconds):  Worst-case Left Turning Truck time (seconds):	Default volume 10 Equation: line 10 Equation: line 19]	alue : (line 4 + li	ne 5 + line 12	- line 11) + line 29	
28. 29. 30. 31.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):  Travel speed of left-turning truck (S <sub>LTT</sub> , mph):  Distance required to clear left-turning truck from travel lanes on track clearance approach (feet):  Additional time required to clear left-turning truck from travel lanes on track clearance approach (seconds):  10.3	Default volume 10 Equation: line 10 Equation: line 19]	alue : (line 4 + li : [(line 31 *	ne 5 + line 12	- line 11) + line 29	
28. 29. 30. 31. 32.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):  Travel speed of left-turning truck (S <sub>LTT</sub> , mph):  Distance required to clear left-turning truck from travel lanes on track clearance approach (feet):  Additional time required to clear left-turning truck from travel lanes on track clearance approach (seconds):  Worst-case Left Turning Truck time (seconds):  if Line 28 = 'Yes', use line 32; otherwise Use 0	Default volume 10 Equation: line 10 Equation: line 19]	alue : (line 4 + li : [(line 31 *	ne 5 + line 12	- line 11) + line 29	
28. 29. 30. 31. 32. 33.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):  Travel speed of left-turning truck (S <sub>LTT</sub> , mph):  Distance required to clear left-turning truck from travel lanes on track clearance approach (feet):  Additional time required to clear left-turning truck from travel lanes on track clearance approach (seconds):  Worst-case Left Turning Truck time (seconds):  if Line 28 = 'Yes', use line 32; otherwise Use 0	Default value Equation: line 10  Equation: line 19]  33.	alue : (line 4 + li : [(line 31 *	ne 5 + line 12	- line 11) + line 29	
28. 29. 30. 31. 32. 33.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):	Default value Equation: line 10  Equation: line 19]  33.	alue : (line 4 + li : [(line 31 *	ne 5 + line 12	- line 11) + line 29	
28. 29. 30. 31. 32. 33. 34. 35.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):	Default vi Equation: line 10 Equation: line 19]  33.	alue : (line 4 + li : [(line 31 *	ne 5 + line 12	- line 11) + line 29	
28. 29. 30. 31. 32. 33. 34. 35. 36.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):	Default vi Equation: line 10  Equation: line 19]  33.  13 35.	alue : (line 4 + li : [(line 31 * 10.3	ne 5 + line 12	- line 11) + line 29	
28. 29. 30. 31. 32. 33. 34. 35. 36.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):	Default vi Equation: line 10   Equation: line 19]   33.   13   35.   13   37.   38.	alue : (line 4 + li : [(line 31 * 10.3 7.7	ne 5 + line 12	- line 11) + line 29	
28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):	Default vi Equation: line 10   33.   13   35.   13   37.   38.   39.	alue : (line 4 + li : [(line 31 *  10.3  7.7  14.2  1.17  16.6	ne 5 + line 12	- line 11) + line 29	
28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):	Default vi Equation: line 10   33.   13   35.   13   37.   38.   39.	alue : (line 4 + li : [(line 31 *  10.3  7.7  14.2  1.17  16.6	ne 5 + line 12 3600) / (line 3	- line 11) + line 29	
28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):	Default vi Equation: line 10  Equation: line 19  33.  13  35.  13  37.  38.  39.	alue : (line 4 + li : [(line 31 *  10.3  7.7  14.2  1.17  16.6	ne 5 + line 12 3600) / (line 3	- line 11) + line 29	
28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. SEC 41.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):	Default vi Equation: line 10   Equation: line 19]  33.	alue : (line 4 + li : [(line 31 *  10.3  7.7  14.2  1.17  16.6	ne 5 + line 12 3600) / (line 3	- line 11) + line 29	
28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. SEC 41. 42.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet): 29. 64  Travel speed of left-turning truck (S <sub>LTT</sub> , mph): 30. 10  Distance required to clear left-turning truck from travel lanes on track clearance approach (feet): 31. 238  Additional time required to clear left-turning truck from travel lanes on track clearance approach (seconds): 10.3  Worst-case Left Turning Truck time (seconds): 10.3  Worst-case Left Turning Truck time (seconds): 32. 10.3  Queue start-up distance, L (feet): add lines 1 through 3 34. 11  Time required for design vehicle to start moving (seconds): calculate as 2+(L+20) 50. 11  Design vehicle clearance distance, DVCD (feet): add lines 2, 3 and 10. 36. 11  Time for design vehicle to accelerate through the DVCD (seconds), level terrain 51  Factor to account for slower acceleration on uphill grade 52  Time for design vehicle to accelerate through DVCD (seconds), adjusted for grade: multiply lines 37 and 38 52  Queue clearance time (seconds): add lines 33, 35 and 39 52  TION 4: MAXIMUM PREEMPTION TIME CALCULATION  Right-of-way transfer time (seconds): line 27 41. 55  Queue clearance time (seconds): line 27 41. 55  Queue clearance time (seconds): line 27 42. 34	Default vi Equation: line 10  Equation: line 19  33.  13  35.  13  37.  38.  39.	alue : (line 4 + line	ne 5 + line 12 3600) / (line 3	- line 11) + line 29	
28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. SEC 41. 42. 43.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet): 29. 64  Travel speed of left-turning truck (S <sub>LTT</sub> , mph): 30. 10  Distance required to clear left-turning truck from travel lanes on track clearance approach (feet): 31. 238  Additional time required to clear left-turning truck from travel lanes on track clearance approach (seconds): 10.3  Worst-case Left Turning Truck time (seconds): 10.3  Worst-case Left Turning Truck time (seconds): 34. 11  Time required for design vehicle to start moving (seconds): calculate as 2+(L+20) 11  Design vehicle clearance distance, DVCD (feet): add lines 2, 3 and 10. 36. 11  Time for design vehicle to accelerate through the DVCD (seconds), level terrain 11  Factor to account for slower acceleration on uphill grade 11  Time for design vehicle to accelerate through DVCD (seconds), adjusted for grade: multiply lines 37 and 38 11  Queue clearance time (seconds): add lines 33, 35 and 39 11  TION 4: MAXIMUM PREEMPTION TIME CALCULATION  Right-of-way transfer time (seconds): line 27 41. 55  Queue clearance time (seconds): line 27 41. 55  Queue clearance time (seconds): line 40 42. 34	Default vi Equation: line 10  Equation: line 19  33.  13  35.  13  37.  38.  39.	alue : (line 4 + line 31 *  10.3  7.7  14.2  1.17  16.6	3600) / (line :	- line 11) + line 29	

SEC	TION 5: SUFFICIENT WARNING TIME CHECK	<u>Remarks</u>
45.	Required minimum time, MT (seconds): per regulations	
46.	Clearance time, CT (seconds): (line 2 -35) / 10 (rounded up to nearest second)	
47.	Total minimum warning time, MWT, needed (seconds): add lines 45 and 46 (excludes buffer time and equipment response time)	47. 20
48.	Required advance preemption time (APT) from railroad (seconds): subtract line 47 from line 44, round up to nearest full second, enter 0 if less than 0	48. 23
49.	APT currently provided by railroad (seconds): Enter "0" if new crossing or signal	49. 0
the r (line	e required advance preemption time (line 48) is greater than the amount of advance preempt ailroad (line 49), additional warning time must be requested from the railroad. Alternatively, 48) may be decreased after performing an engineering study to investigate the possibility o 7, 21, 22 and 43.	the maximum preemption time
Rem	Left turns towards the tracks is included in the Queue Clearance Time Calculation. Pedestria right-of-way transfer is not included in the Right Of Way Transfer Time Calculations. Either le pedestrian clearance time will be served when railroad preemption is initiated, as they are not also the pedestrian clearance time will be served when railroad preemption is initiated, as they are not also the pedestrian clearance time will be served when railroad preemption is initiated.	eft turns towards the tracks or
SEC	TION 6: TRACK CLEARANCE GREEN TIME CALCULATION (IF NO GATE DOWN CIRCUIT PR	OVIDED)
	mpt Trap Check	<u>Remarks</u>
50.	Warning Time Variability (Select One)  ☐ Consistent Warning Times  ☐ Low Warning Time Variability ☐ Hig	h Warning Time Variability
51.	APT required or provided (seconds): maximum of Line 48 or Line 49 51. 23	See Instructions for details.
	Multiplier for maximum APT due to train handling	
53.	Maximum APT (Seconds): multiply line 51 and 52	
54.	Minimum duration for the track clearance green interval (seconds)	58 43 8
	Track Clearance Green Time to avoid Preempt Trap (seconds): add lines 53 and 54	56. 43.8
	ring of Clear Storage Distance Time waiting on left-turn truck (seconds): line 33	10.3
		7.7
	Design vehicle clearance distance (DVCD, feet): line 36	· · ·
	If CSD ≤ DVL, you must clear the design vehicle through the entire CSD during the traffic clearar DVL, you should consider providing enough time to clear the design vehicle from the crossing.	nce phase; however, if CSD >
	Is the clear storage distance (CSD) less than or equal to the design vehicle length (DVL)?	Gate Down Circuit
	YES. The design vehicle MUST clear through the entire CSD. (CSD will be entered in Line	<sup>59).</sup> will be provided.
	NO. The design vehicle may clear through a portion of the SD.	Section is not
	Do you want to clear the design vehicle through the entire CSD?  ✓ YES. Clear the entire CSD. (CSD will be entered in Line 59).  NO. Clear the crossing ONLY. (DVL will be entered in Line 59).	applicable
59.	Portion of CSD to clear during track clearance phase (feet) 59. 75	
60.	Design vehicle relocation distance (DVRD, feet): add lines 58 and 59 60.	
61.		18.7
62. 63.	Time required to accelerate design vehicle through DVRD (seconds), adjusted for	1.18
64. 65.	Time to clear portion of clear storage distance (seconds): add lines 56, 57 and 63	
	mum Duration of Track Clearance Green after gates are down (in absence of a gate down ci	
67.	Total time before gates are down (seconds): subtract 5 seconds from line 44	67. 37.4
	(per AREMA Manual)	
68.	Maximum Duration of Track Clearance Green after gates are down (seconds): Line 66 - Line	ne 67 68. 13

SEC	TION 7: SUMMARY OF CONTROLLER PREEMPTION SETTINGS			Remarks
69.	Duration Time (seconds)	69. <b></b>	0	Default Value
70.	Preempt Delay Time (seconds)	70.	0	From Line 13
	Right of Way Transfer Phase			<u>Remarks</u>
71.	Minimum Green Interval (seconds)	71.	0	From Line 16
72.	Pedestrian Walk Interval (seconds)	72.	0	From Line 21
73.	Pedestrian Clearance Interval (Flashing "DON'T WALK", seconds)	73.	0	From Line 22
74.	Yellow Change Interval (seconds)	74.	5.5	From Line 18
75.	All Red Vehicle Clearance (seconds)	75.	0.4	From Line 19
77.	Track Clearance Phase Green Interval (seconds) (in the absence of gate down circuit)		44 35	Remarks From Line 65 From Line 40
	Yellow Change Interval (seconds)		5.5	From Line 18
79.	All Red Vehicle Clearance (seconds)	79. L	0.4	From Line 19
80.	Exit Phase  Dwell/Cycle Minimum Green Time (seconds)  Yellow Change Interval (seconds)		0 5.5	Remarks Default Value
80. 81.		81.	0 5.5 0.4	
80. 81. 82.	Dwell/Cycle Minimum Green Time (seconds)	81.	5.5	Default Value From Line 18

Version 07/12/2017

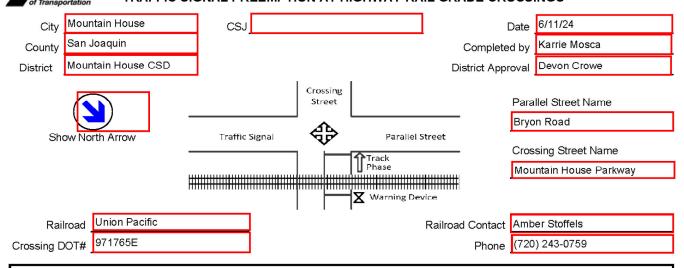


Form 2304 (Rev. 7/17)

# Texas

### Texas Department of Transportation

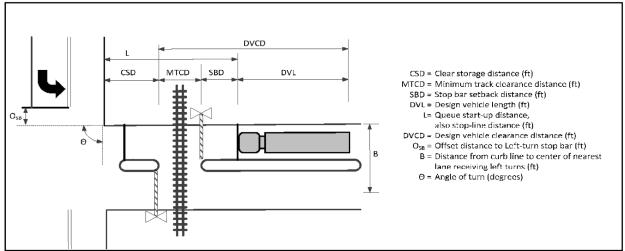
## GUIDE FOR DETERMINING TIME REQUIREMENTS FOR TRAFFIC SIGNAL PREEMPTION AT HIGHWAY-RAIL GRADE CROSSINGS



NOTE: After approval by the District, a copy of this form, along with the traffic signal design sheets and the phasing diagrams for normal and preempted operation, shall be placed in the traffic signal cabinet. See Section 7 for traffic signal timings.

#### SECTION 1: GEOMETRY DATA & DEFAULTS

11. Centerline turning radius of design vehicle (R, feet)............. 11.



GEOMETRIC DATA FOR CROSSING			<u>Remarks</u>
1. Clear storage distance (CSD, feet)	1.	75	
2. Minimum track clearance distance (MTCD, feet)	2.	24	
3. Stop bar setback distance (SBD, feet)	3.	14	Enter "0" if no stop bar is present
4. Width of receiving approach (B, feet)	4.	76	
5. Offset distance of left turn stop bar (O <sub>SB</sub> , feet)	5.	45	
6. Approach grade. % ( 0 if approach is on downgrade)	6.	2.5	
7. Angle of turn at Intersection (Θ, degrees)	7.	90	
DESIGN VEHICLE DATA			
8. Select Design Vehicle			
School Bus Intermediate Truck		✓ Intersta	ate Semi-Truck Other
9. Default design vehicle length (feet)	9.	75	Based on selected Design Vehicle
a. Additional vehicle length, if needed (feet)	<b>9</b> a.	0	Use only if "Other" selected as Design Vehicle
10. Total design vehicle length (DVL, feet)	10.	75	Sum of line 9 and 9a

41

19

Based on selected Design Vehicle

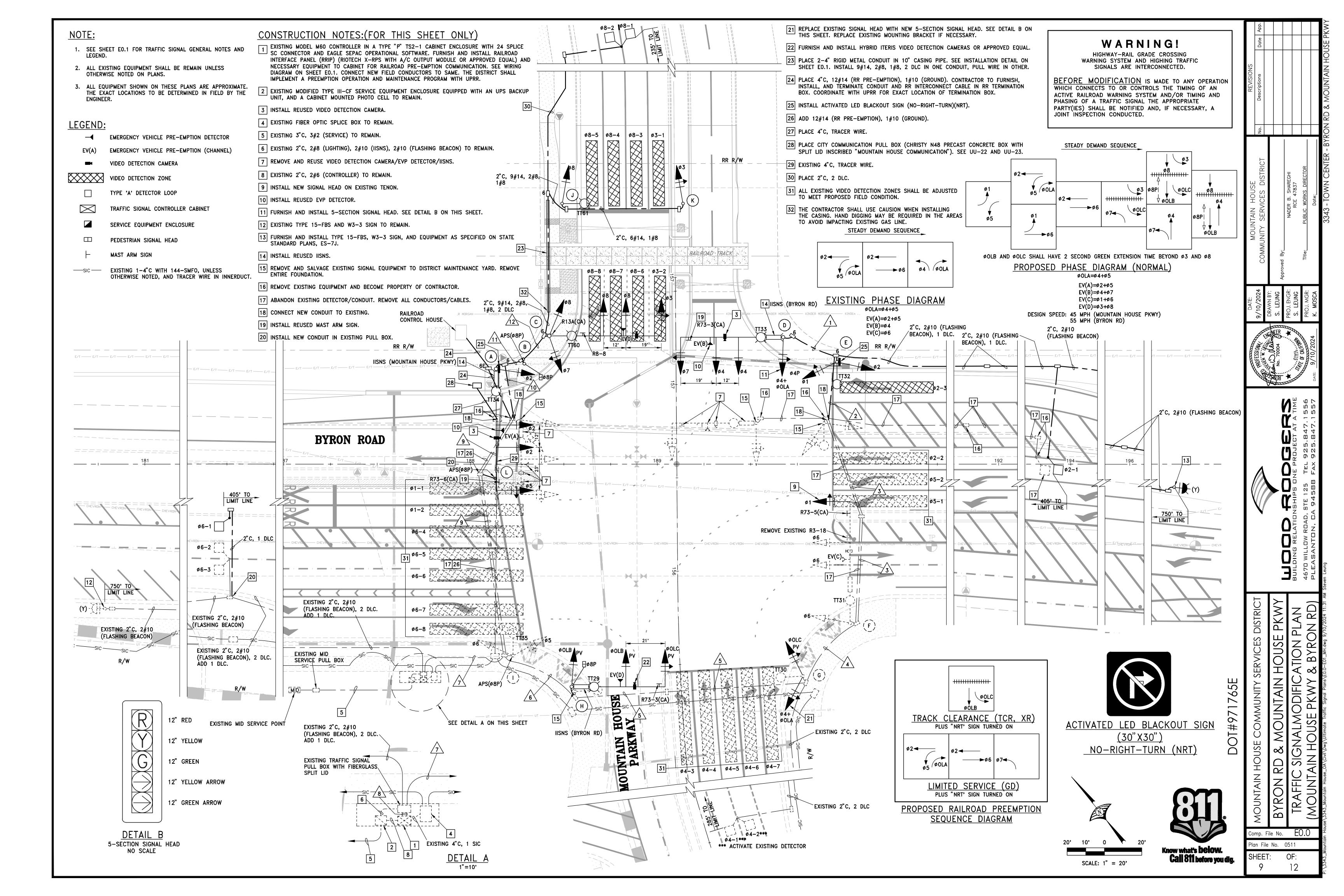
Default value

### SECTION 2: RIGHT-OF-WAY TRANSFER TIME CALCULATION

	mpt verification and response time			<u>Remarks</u>
	Preempt delay time (seconds)	_	0	
14.	Controller response time to preempt (seconds)	14.	0.0	Manufacturer: Eagle
				Firmware Version: SEPAC
15.	Preempt verification and response time (seconds): add lines 13 and	14		<b>15.</b> 0.0
				<u>Remarks</u>
Wor	st-case conflicting vehicle time			Value may be adjusted to meet local
	Minimum green time during right-of-way transfer (seconds)	16.	0	conditions
17.	Other green time during right-of-way transfer (seconds)	17.	0	
18.	Yellow change time (seconds)	18.	5.5	
19.	Red clearance time (seconds)	19.	0.4	
-00	Mont on a girting which the control of the control			5.9
20.	Worst-case conflicting vehicle time (seconds): add lines 16 through	19	20.	
Mor	nt acce conflicting nedectrion time			Remarks
	st-case conflicting pedestrian time  Minimum walk time during right-of-way transfer (seconds)	21	0	Value may be adjusted to meet local conditions
				Refer to instructions for pedestrian
22.	Pedestrian clearance time during right-of-way transfer (seconds)	22.	14	truncation guidance
	Vehicle yellow change time, if not included on line 22 (seconds) $\ldots\ldots$		0.0	
24.	Vehicle red clearance time, if not included on line 22 (seconds)	24.	0.0	
25.	Worst-case conflicting pedestrian time (seconds): add lines 21 through	igh 24	25.	14.0
147	de la companya de la			
	st-case conflicting vehicle or conflicting pedestrian time  Worst-case conflicting vehicle or conflicting pedestrian time (second	le).		
26.	maximum of lines 20 and 25			<b>26.</b> 14.0
27.	Right-of-way transfer time (seconds): add lines 15 and 26			27. 14.0
	TION OF OUT OF TABLE OF THE ON OUR ATTOM			
SEC	TION 3: QUEUE CLEARANCE TIME CALCULATION			<u>Remarks</u>
SEC	TION 3: QUEUE CLEARANCE TIME CALCULATION  Are there left-turns towards the tracks?	No		<u>Remarks</u>
SEC 28. 29.	Are there left-turns towards the tracks? Yes  Distance traveled by truck during left-turn (LTL, feet):	No 0	LTL = ∏R	
SEC 28. 29.	Are there left-turns towards the tracks? Yes  Distance traveled by truck during left-turn (LTL, feet):		Default va	80/180 alue
SEC 28. 29.	Are there left-turns towards the tracks? Yes  Distance traveled by truck during left-turn (LTL, feet):	0	Default va Equation: line 10	30/180 alue : (line 4 + line 5 + line 12 - line 11 ) + line 29 +
SEC 28. 29. 30.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):	0 10	Default va Equation: line 10	80/180 alue
SEC 28. 29. 30. 31.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):  Travel speed of left-turning truck (S <sub>LTT</sub> , mph):  Distance required to clear left-turning truck from travel lanes on track clearance approach (feet):  Additional time required to clear left-turning truck from travel lanes on track clearance approach (seconds):  Worst-case Left Turning Truck time (seconds):	0 10 0 0.0	Default va Equation: line 10 Equation: line 19]	30/180 alue : (line 4 + line 5 + line 12 - line 11 ) + line 29 +
SEC 28. 29. 30. 31. 32.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):  Travel speed of left-turning truck (S <sub>LTT</sub> , mph):  Distance required to clear left-turning truck from travel lanes on track clearance approach (feet):  Additional time required to clear left-turning truck from travel lanes on track clearance approach (seconds):  Weret page Left Turning Truck time (seconds):	0 10 0 0.0	Default vs Equation: line 10 Equation: line 19]	alue : (line 4 + line 5 + line 12 - line 11) + line 29 + : [(line 31 * 3600) / (line 30 * 5280) - line 18 -
SEC 28. 29. 30. 31. 32. 33.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):  Travel speed of left-turning truck (S <sub>LTT</sub> , mph):  Distance required to clear left-turning truck from travel lanes on track clearance approach (feet):  Additional time required to clear left-turning truck from travel lanes on track clearance approach (seconds):  Worst-case Left Turning Truck time (seconds):  if Line 28 = 'Yes', use line 32; otherwise Use 0  Queue start-up distance, L (feet): add lines 1 through 3	0 10 0 0.0	Default va Equation: line 10 Equation: line 19]	alue t (line 4 + line 5 + line 12 - line 11) + line 29 + t [(line 31 * 3600) / (line 30 * 5280) - line 18 -
SEC 28. 29. 30. 31. 32. 33.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):  Travel speed of left-turning truck (S <sub>LTT</sub> , mph):  Distance required to clear left-turning truck from travel lanes on track clearance approach (feet):  Additional time required to clear left-turning truck from travel lanes on track clearance approach (seconds):  Worst-case Left Turning Truck time (seconds):  if Line 28 = 'Yes', use line 32; otherwise Use 0  Queue start-up distance, L (feet): add lines 1 through 3  Time required for design vehicle to start moving (seconds): calculate	0 10 0 0.0 34.	Default va Equation: line 10 Equation: line 19]	alue : (line 4 + line 5 + line 12 - line 11) + line 29 + : [(line 31 * 3600) / (line 30 * 5280) - line 18 -
SEC 28. 29. 30. 31. 32. 33. 34. 35. 36.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):  Travel speed of left-turning truck (S <sub>LTT</sub> , mph):  Distance required to clear left-turning truck from travel lanes on track clearance approach (feet):  Additional time required to clear left-turning truck from travel lanes on track clearance approach (seconds):  Worst-case Left Turning Truck time (seconds):  if Line 28 = 'Yes', use line 32; otherwise Use 0  Queue start-up distance, L (feet): add lines 1 through 3  Time required for design vehicle to start moving (seconds): calculate Design vehicle clearance distance, DVCD (feet): add lines 2, 3 and 3	0 10 0 0.0 34. e as 2+(L+20) .	Default va Equation: line 10 Equation: line 19]  33.	alue (line 4 + line 5 + line 12 - line 11) + line 29 +  [(line 31 * 3600) / (line 30 * 5280) - line 18 -
SEC 28. 29. 30. 31. 32. 33. 34. 35. 36. 37.	Are there left-turns towards the tracks?	0 10 0 0.0 34. e as 2+(L+20) . 10 36. level terrain	Default vo. Equation: line 10  Equation: line 19]  33.  113	369/180  alue  (line 4 + line 5 + line 12 - line 11) + line 29 +  (line 31 * 3600) / (line 30 * 5280) - line 18 -
SEC 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38.	Are there left-turns towards the tracks?	0 10 0 0.0 34. e as 2+(L+20) . 10 36. level terrain	Default vo. Equation: line 10  Equation: line 19]  33.  113	alue (line 4 + line 5 + line 12 - line 11) + line 29 +  (line 31 * 3600) / (line 30 * 5280) - line 18 -  0.0  7.7
SEC 28. 29. 30. 31. 32. 33. 34. 35. 36. 37.	Are there left-turns towards the tracks?	0 10 0 0.0 34. e as 2+(L+20) . 10 36. level terrain	Default va Equation: line 10 Equation: line 19]  33.  113	369/180  alue  (line 4 + line 5 + line 12 - line 11) + line 29 +  (line 31 * 3600) / (line 30 * 5280) - line 18 -
SEC 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39.	Are there left-turns towards the tracks?	0 10 0 0.0 34. e as 2+(L+20) . 10 36. level terrain	Default vs Equation: line 10  Equation: line 19]  33.  113	alue (line 4 + line 5 + line 12 - line 11) + line 29 +  (line 31 * 3600) / (line 30 * 5280) - line 18 -  0.0  7.7  14.2  1.17  16.6
SEC 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):  Travel speed of left-turning truck (S <sub>LTT</sub> , mph):  Distance required to clear left-turning truck from travel lanes on track clearance approach (feet):  Additional time required to clear left-turning truck from travel lanes on track clearance approach (seconds):  Worst-case Left Turning Truck time (seconds):  If Line 28 = 'Yes', use line 32; otherwise Use 0  Queue start-up distance, L (feet): add lines 1 through 3  Time required for design vehicle to start moving (seconds): calculate Design vehicle clearance distance, DVCD (feet): add lines 2, 3 and Time for design vehicle to accelerate through the DVCD (seconds), Factor to account for slower acceleration on uphill grade  Time for design vehicle to accelerate through DVCD (seconds), adjumultiply lines 37 and 38	0 10 0 0.0 34. e as 2+(L+20) . 10 36. level terrain	Default vs Equation: line 10  Equation: line 19]  33.  113	alue (line 4 + line 5 + line 12 - line 11) + line 29 +  (line 31 * 3600) / (line 30 * 5280) - line 18 -  0.0  7.7  14.2  1.17  16.6
SEC 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. SEC 41.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):	0 10 0 0.0 34. e as 2+(L+20) . 10 36. level terrain sted for grade:	Default vo. Equation: line 10  Equation: line 19]  33.  113	alue (line 4 + line 5 + line 12 - line 11) + line 29 +  (line 31 * 3600) / (line 30 * 5280) - line 18 -  0.0  7.7  14.2  1.17  16.6  40. 24.2
SEC 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. SEC 41. 42.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):	0 10 0 0.0 34. e as 2+(L+20) . 10 36. level terrain sted for grade:	Default vs. Equation: line 10  Equation: line 19]  33.  113  35.  113  37.  38.  39.	369/180  alue  1 (line 4 + line 5 + line 12 - line 11) + line 29 +  1 (line 31 * 3600) / (line 30 * 5280) - line 18 -  0.0  7.7  14.2  1.17  16.6  40. 24.2  Remarks
SEC 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. SEC 41. 42.	Are there left-turns towards the tracks?  Distance traveled by truck during left-turn (LTL, feet):	0 10 0 0.0 34. e as 2+(L+20) . 10 36. level terrain sted for grade:	Default vo. Equation: line 10  Equation: line 19]  33.  113	alue (line 4 + line 5 + line 12 - line 11) + line 29 +  (line 31 * 3600) / (line 30 * 5280) - line 18 -  0.0  7.7  14.2  1.17  16.6  40. 24.2

SEC	TION 5: SUFFICIENT WARNING TIME CHECK	<u>Remarks</u>
45.	Required minimum time, MT (seconds): per regulations	
46.	Clearance time, CT (seconds): (line 2 -35) / 10 (rounded up to nearest second)	
47.	Total minimum warning time, MWT, needed (seconds): add lines 45 and 46 (excludes buffer time and equipment response time)	47. 20
48.	Required advance preemption time (APT) from railroad (seconds): subtract line 47 from line 44, round up to nearest full second, enter 0 if less than 0	48. 21
49.	APT currently provided by railroad (seconds): Enter "0" if new crossing or signal	<b>49.</b> 0
the ra (line	required advance preemption time (line 48) is greater than the amount of advance preempticaliroad (line 49), additional warning time must be requested from the railroad. Alternatively, the 48) may be decreased after performing an engineering study to investigate the possibility of 17, 21, 22 and 43.	ne maximum preemption time
<u>Rem</u>	Pedestrian clearance time is included in the APT. Left turns towards the tracks is not included Calculation. Either pedestrian clearance time or left turns towards the tracks will be served wh as they are not sequential movements.	in the Queue Clearance Time en railroad preemption is initiated,
SEC.	TION 6: TRACK CLEARANCE GREEN TIME CALCULATION (IF NO GATE DOWN CIRCUIT PRO	VIDED)
Proe	mpt Trap Check	<u>Remarks</u>
50.	Warning Time Variability (Select One)  ☐ Consistent Warning Times  ☐ Low Warning Time Variability ☐ High	Warning Time Variability
51.	APT required or provided (seconds): maximum of Line 48 or Line 49 51. 21	See Instructions for details.
	Multiplier for maximum APT due to train handling	
	Maximum APT (Seconds): multiply line 51 and 52	
	Minimum duration for the track clearance green interval (seconds) 54. 15	
55.	Track Clearance Green Time to avoid Preempt Trap (seconds): add lines 53 and 54	. 58. 41.3
	ring of Clear Storage Distance	
	Time waiting on left-turn truck (seconds): line 33	
	Design vehicle clearance distance (DVCD, feet): line 36	. 1
50.	If CSD ≤ DVL, you must clear the design vehicle through the entire CSD during the traffic clearance DVL, you should consider providing enough time to slear the design vehicle from the crossing.	ee phase; however, if CSD >
		0 ( 0 0; "
	Is the clear storage distance (CSD) less than or equal to the design vehicle length (DVL)?  YES. The design vehicle MUST clear through the entire CSD. (CSD will be entered in Line 5)	Gate Down Circuit
	NO. The design vehicle may clear through a portion of the SSD.	will be provided.
	Do you want to clear the design vehicle through the entire CSD?	Section is not
	✓ YES. Clear the entire CSD. (CSD will be entered in Line 59).  NO. Clear the crossing ONLY. (DVL will be entered in Line 59).	applicable
59	Portion of CSD to clear during track clearance phase (feet)  59. 75	
60.	Design vehicle relocation distance (DVRD, feet): add lines 58 and 59 60.	
61.	Time required to accelerate design vehicle through DVRD (seconds), level terrain: 61 18	3.7
62.	Factor to account for slower acceleration on uphill grade	18
63.	Time required to accelerate design vehicle through DVRD (seconds), adjusted for grade: multiply lines 61 and 62	N
	Time to clear portion of clear storage distance (seconds): add lines 56, 57 and 63	
Maxi	mum Duration of Track Clearance Green after gates are down (in absence of a gate down circ	cuit)
	Total time to complete track clearance green (seconds): line 27 + line 65	
67.	Total time before gates are down (seconds): subtract 5 seconds from line 44 (per AREMA Manual)	<b>67.</b> 35.2
68.	Maximum Duration of Track Clearance Green after gates are down (seconds): Line 66 - Line	67 68. 21

SEC	TION 7: SUMMARY OF CONTROLLER PREEMPTION SETTINGS			Remarks
69.	Duration Time (seconds)	69.	0	Default Value
	Preempt Delay Time (seconds)		0	From Line 13
	Right of Way Transfer Phase			<u>Remarks</u>
71.	Minimum Green Interval (seconds)	71.	0	From Line 16
72.	Pedestrian Walk Interval (seconds)	72.	0	From Line 21
73.	Pedestrian Clearance Interval (Flashing "DON'T WALK", seconds)	73.	14	From Line 22
74.	Yellow Change Interval (seconds)	74.	5.5	From Line 18
75.	All Red Vehicle Clearance (seconds)	75.	0.4	From Line 19
76	<u>Track Clearance Phase</u> Green Interval (seconds) (in the absence of gate down circuit)	76 [	42	<u>Remarks</u> From Line 65
	Green Interval (seconds) (in the absence of gate down circuit)  Green Interval (seconds) with gate down circuit		24	From Line 40
	Yellow Change Interval (seconds)		5.5	From Line 18
	All Red Vehicle Clearance (seconds)		0.4	From Line 19
	Exit Phase Dwell/Cycle Minimum Green Time (seconds)		0	Remarks Default Value
81.	Yellow Change Interval (seconds)	81.	5.5	From Line 18
82.	All Red Vehicle Clearance (seconds)	82.	0.4	From Line 19
<u>Rem</u>	arks:			



CONDUCTOR AND CONDUIT SCHEDULE														
							RU	IN NUM	BER					
AWG	CIRCUIT	1	2	3**	4	5	6	7	8	9	10	11	12	
	ø1		3	3+	3	3	3	3	3					
	ø2		3	3+	3	3	3	6	6	3	3			
	ø3						3	3	3	3+	3	3	3	
	ø <b>4</b>	3	3	3+	3	3	3	6	6	3				
	ø5									3	3			
	ø6				3	3	3	3	3					
	ø7	3	3	3+	3	3	3	6	6	3	3	3	3	
	ø8					3	3	6	6	3	3	3	3	
	Ø OLA	3	3	3+	3	3	3	3	3					
	ø OLB						3+	3+	3+					
	ø0LC						3+	3+	3+					
#14														
" · ·	ø4P				2	2	2	2	2					
	ø6P				2	2	2	2	2					
	ø8P						2	4	4	2	2	2		
	APS(ø4P)				2	2	2	2	2					
	APS(Ø6P)					2	2	2	2					
	APS(Ø8P)							2/2+	2/2+	•				
	SPARE	3	3	3+	3	3	3	3	3	3	3	3	3	
														R10-6(R) SIGN-
	TOTAL	12	22	22	27	32	43	59	59	25	20	14	12	
								<u> </u>						
#10	FLASHING BEACON		2	2+	2+	2+	2+	2+						
<i>,,</i> 1.5	IISNS	2	2	2+	2	2	2	2		2	2			
#8	STREET LIGHTING	2	2	2+	2	2	2	2		2	2	2	2	
·	NEUTRAL	1	1	1+	1	1	1	1		11	1	1	1	
#6	CONTROLLER POWER								2					
						N. 4.1		N4 4 1						
	ø2 VEHICLE		1	1+	X / 1+			X/1+						
	ø4 VEHICLE					2	2	2	2					FOUNDATIO
TYPE B DLC	ø6 VEHICLE								2	- 1	_	_		FOUNDATIO CALTRANS ES-
	ø8 VEHICLE (FUTURE)							2+	2+	2+	2	2	2	E3-
			<u> </u>		- 64.4.1	- 64 ( . 1	- 64.4.1	- 64 (.1	- 04 ( . 1	v/ / . l				
EV CABLE			1	1+	2/X/1 <sup>+</sup>	2/X/1 <sup>+</sup>	2/X/1 <sup>+</sup>	3/X/1 <sup>+</sup>	3/X/1+ 3/X/1+	X / 1 <sup>+</sup>	1	1	1	
VIDEO/POWER CABLE			1	1+	2/X/1 <sup>+</sup>	2/X/1 <sup>+</sup>	2/ X/ 1 <sup>-</sup>	3/X/1 <sup>-</sup>	3/X/1 <sup>T</sup>	X / 1 <sup>-</sup>	1	1	1	MARIEIER
RR INTERCONNEC	1 (12#14)							1	1					<u>MODIFIED</u>
	20/0121	4-			7.0	4.0				<b>-</b> .		0.4		
TOTAL CONDUCTOR		17	33	33	39	46	57	78	74	34	29	21	19	
EXISTING(E)/NEW(		N	N	E	E	E	E	E	E	E	N	N	N	
CONDUIT SIZE (IN	CHES)	4	4	4	4	4	4	4	2-4	4	4	4	4	
% FILLED		3	8	8	10	12	13	21	11	8	7	8	8	
EXISTING	CONDUCTOR/CABLES				ALL S	IGNAL C	CONDUIT	S, CON	DUCTOR	S/CABL	ES SHA	LL BE	NEW.	
<u>↓</u> 2/X/1 <sup>+</sup>	NSTALL NEW CONDUCTOR/CABLE	S IN EXIS	STING C	ONDUIT		** REI	MOVE A	LL EXIS	STING CO	ONDUCT	ORS/CA	BLES. I	NSTALL	NEW AS SHOWN.

STOP
HERE ON
RED

1-B POLE

CALTRAINS STO PLANS
ES-7B

MODIFIED TYPE 1-B POLE DETAIL
NO SCALE

STANDARD VEH SIG MTG PED SIGNAL LUMINAIRE SPECIAL MAST **REQUIREMENTS** TYPE LMA POLE ø POLE No. ARROW FIXTURE ARM MAS INSTALL REUSED OPTICOM EVP DETECTOR, IISNS, HYBRID VIDEO DETECTION CAMERA, AND R73-6(CA) SIGN ON SMA. INSTALL REUSED 61-5-100 65' SV-2-TB MAS LUMINAIRE ARM AND FIXTURE. INSTALL ACTIVATED LED BLACKOUT NO-RIGHT-TURN SIGN (NRT) WITH 10' MINIMUM MOUNTING HEIGHT. MAS 1 - B(7')TP-1-T RIGHT MAS INSTALL R13A(CA) SIGN, OPTICOM EVP DETECTOR, AND HYBRID VIDEO 61-5-100 60' MAS SV-1-T DETECTION CAMERA ON SMA. MAS MAS INSTALL REUSED OPTICOM EVP DETECTOR, IISNS, HYBRID VIDEO 29-5-100 MAS SV-2-TB DETECTION CAMERA, AND R73-3(CA) SIGN ON SMA. INSTALL REUSED LUMINAIRE ARM AND FIXTURE. 4+0LA| MAS INSTALL REUSED LUMINAIRE ARM AND FIXTURE. INSTALL ACTIVATED LED **15TS** 2 SV-3-TB BLACKOUT NO-RIGHT-TURN SIGN (NRT) WITH 7' MINIMUM MOUNTING HEIGHT. NRT EXISTING INSTALL NEW SIGNAL HEAD ON EXISTING TENON. INSTALL NEW TT31 SV-1-T MAS R73-5(CA) SIGN ON SMA. 61 - 5 - 100MAS EXISTING REPLACE EXISTING SIGNAL HEAD WITH NEW 5-SECTION SIGNAL HEAD. 15TS 4+0LA INSTALL OPTICOM EVP DETECTOR, IISNS\*, HYBRID VIDEO DETECTION MAS SP-1-T 29-5-100 50' OLB SV-1-T CAMERA, AND R73-3(CA) SIGN ON SMA. INSTALL REUSED LUMINAIRE OLB MAS ARM AND FIXTURE. EXISTING RIGHT INSTALL APS ON STANDARD SV-2-TB TT35 15TS SV-1-T TT61 MODIFIED SEE DETAIL ON THIS SHEET. TV-1-T TYPE 2 POST BOTH ALL EQUIPMENT SHALL BE NEW AND CONTRACTOR FURNISHED UNLESS OTHERWISED NOTED. NOTE: ALL PUSH BUTTON ASSEMBLIES SHALL BE APS TYPE WITH RIO SERIES SIGNS.

STANDARD AND EQUIPMENT SCHEDULE

TRAFFIC SIGNAL GENERAL NOTES:

I. WORK SPECIFIC ON THESE PLANS SHALL CONFORM TO THE 2018 EDITION OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) STANDARD SPECIFICATIONS, STANDARD PLANS, SIGN SPECIFICATION SHEETS, CALIFORNIA MUTCD, SPECIAL PROVISIONS, AND THE MOUNTAIN HOUSE COMMUNITY SERVICES DISTRICT STANDARD SPECIFICATIONS AND DETAILS AND ANY REVISIONS.

2. LOCATIONS OF CONTROLLER, STANDARDS CONDUITS, PULL BOXES AND OTHER EQUIPMENT ARE APPROXIMATE AND SHALL BE LOCATED IN THE FIELD AS DIRECTED BY THE MHCSD ENGINEER.

3. ALL UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY OVERHEAD AND UNDERGROUND CLEARANCE WITH MID, PG&E, PACIFIC BELL, AND OTHER AFFECTED UTILITIES PRIOR TO THE START OF WORK.

4. THESE PLANS ARE ACCURATE FOR ELECTRICAL WORK ONLY.

5. ALL NEW PULL BOXES SHALL BE CALTRANS NO. 5 UNLESS OTHERWISE NOTED. PULL BOXES SHALL COMPLY WITH THE MHCSD SUPPLEMENTAL SPECIFICATIONS FOR TRAFFIC SIGNALS SECTION S86-7.03f. ALL NEW PULL BOXES SHALL HAVE VANDAL RESISTANT/LOCKING LIDS PER MHCSD REQUIREMENTS.

6. PULL BOXES SHALL BE INSTALLED AT A MAXIMUM OF 200' APART.

7. ALL NEW SIGNAL HEADS SHALL HAVE 12" INDICATIONS, WITH LOUVERED BACKPLATES AND TUNNEL VISORS.

8. ALL NEW VEHICLE SIGNAL INDICATIONS SHALL BE LED.

9. ALL PED SIGNALS SHALL BE GELCORE OR LEOTEK COUNTDOWN WITH AUDIBLE-TACTILE ACCESSIBLE PUSH BUTTONS STATIONS (PBS).

10. STREET LIGHT POLE NUMBERS SHALL BE VERTICALLY ATTACHED ON THE POLE WITH BOTTOM OF THE WRITING NO LOWER THAT 9" HIGH FROM THE TOP OF THE ADJACENT CURB. THE ALPHANUMERIC POLE NUMBER SHALL RED FROM TOP TO BOTTOM, AND SHALL BE ORIENTED ON THE SIDE OF THE POLE FACING THE STREET DIRECTLY BELOW THE LIGHT FIXTURE REFERENCED.

11. CONTRACTOR SHALL OBTAIN AN ENCROACHMENT PERMIT BEFORE WORK IS TO BEGIN.

12. CONTRACTOR SHALL KEEP A SET OF ALL PERMITS ON THE JOBSITE AT ALL TIMES.

13. CONTRACTOR SHALL KEEP A SET OF APPROVED PLANS ON THE JOBSITE AT ALL TIMES.

14. CONTRACTOR IS TO NOTIFY MHCSD A MINIMUM OF TWO WORKING DAYS PRIOR TO ANY CONSTRUCTION ACTIVITY.

15. ELECTRICAL SERVICE FOR THE TRAFFIC SIGNAL PROVIDED BY MID (MODESTO IRRIGATION DISTRICT).

16. VIDEO DETECTION ZONES SHALL BE LOCATED IN THE FIELD AS DIRECTED BY THE ENGINEER.

17. EMERGENCY PRE-EMPTION SYSTEM SHALL BE LOCATED ON THE SMA IN SUCH A POSITION TO ENSURE UNOBSTRUCTED OPERATION FROM TREE CANOPIES, AND SHALL BE TESTED AND PROGRAMMED IN THE FIELD WITH THE ENGINEER PRESENT TO OBSERVE THE OPERATION.

18. PER MHCSD DETAIL SG-07, IISNS SHALL BE SINGLE-SIDED AND MOUNTED BETWEEN THE SIGNAL POLE MAST ARM AND SIGNAL POLE SHAFT. MOUNTING BRACKETS SHALL BE APPROVED BEFORE INSTALLATION.

19. VIDEO DETECTION CABLE SHALL HAVE TERMINAL CONNECTORS AT BOTH ENDS PRE-INSTALLED BY THE MANUFACTURER AND SHALL HAVE NO SPLICES FROM THE VIDEO CAMERA CONNECTION TO THE TRAFFIC SIGNAL CABINET. CABLE SHALL BE TAGGED AS TO SIGNAL PHASE IT SERVES IN THE PULL BOXES AND WITHIN THE SIGNAL CONTROLLER CABINET.

20. ALL VIDEO DETECTION CAMERAS SHALL BE POSITIONED DIRECTLY ON SMA WITHOUT THE RISER AND SECURED OPPOSITE DETAIL 38 FOR LEFT TURN LANE.

21. POSITION TRAFFIC SIGNAL CONTROLLER CABINETS IN FIELD SO THAT OPERATOR SHALL COMMAND FULL VIEW OF THE INTERSECTION FRONTING THE CABINET WHEN DOOR IS OPEN.

22. ALL STREET LIGHTS AND IISNS SIGNS SHALL HAVE INDIVIDUAL SPLICED FUSED CONNECTORS LOCATED IN THE NEAREST PULL BOX TO THE POLES ON WHICH THEY ARE MOUNTED.

23. THE CONTRACTOR SHALL SUBMIT NAME OF MANUFACTURER, MODEL NUMBER, DETAILS AND WARRANTY COVERAGE FOR ALL EQUIPMENT.

24. PRIOR TO SIGNAL ACTIVATION ALL STOP SIGN AND RELATED PAVEMENT MARKINGS SHALL BE GROUND OUT BEFORE TRAFFIC SIGNAL IS TURNED ON. (COATING WITH BLACK PAINT IS NOT PERMITTED).

25. IF EXISTING EQUIPMENT IS TO BE REPLACED WITH NEW EQUIPMENT, MHCSD RESERVES THE RIGHT TO SALVAGEABLE EQUIPMENT.

26. CONTACT UPRR MANAGER OR PUBLIC PROJECTS PRIOR TO AN WORK WITHIN UPRR RIGHT-OF-WAY OR ANY WORK WITHIN 25' OF THE CROSSING AFFECTING GRADE CROSSING OPERATIONS.

27. PROVIDE AN INTERCONNECTED WARNING LABEL IN THE TRAFFIC SIGNAL CABINET TO WARN TRAFFIC SIGNAL TECHNICIANS THAT THE TRAFFIC SIGNAL IS INTERCONNECTED WITH THE RAILROAD AND PROVIDE BOTH HIGHWAY AND RAILROAD AGENCY CONTACT INFORMATION.

28. RECYCLABLE CONSTRUCTION WASTE, SUCH AS WOOD AND METAL, SHALL BE SEPARATED AND ARRANGEMENTS SHALL BE MADE WITHE WEST WALLET DISPOSAL SERVICE CO. FOR COLLECTION.

29. REFUSE, GARBAGE, AND OTHER SOLID WASTE MATERILA SHEE BE STRORED AND ARRANGEMENTS SHALL BE MADE WITH WEST VALLEY DISPOSAL SERVICE CO. FOR COLLECTION.

30. KEYS TO THE CONTROLLER CABINET SHALL BE TURNED OVER TO MHCSD AT FINAL ACCEPTANCE.

31. THE CONTRACTOR SHALL VERIFY THE LOCATION CONNECTION OF ALL EXISING CONDUITS AND PULL BOXES. THE INTERCONNECT CONDUIT AND PULL BOXES ARE BASED ON PLANS BY OTHER AND SHOWN TO THE BEST OF OUR KNOWLEDGE.

32. CONTRACTOR SHALL HAVE THE CONTROLLER MANUFACTURER AND VIDEO DETECITON MANUFACTURER ON SITE DURING ALL SIGNAL TURN ON. THIS WILL APPLY TO ALL NEW SIGNAL WORK AND SIGNAL MODIFICATIONS.

33. VENDER SHALL PROVIDE A TESTING CERTIFICATION THAT THEY MHAVE TESTED THE UNITS AND

34. BOTH ITERIS AND SIEMENS SHALL BE ON-SITE FOR ALL SIGNAL TURN ON.

ALL ARE FUNCTIONAL.

35. MHCSD AND POLARA PPB TECHNICIAN SHALL VERIFY THAT APS PPB'S HAVE BEEN INSTALLED PER CAMUTCD AND ARE PROGRAMMED CORRECTLY.

36. VERIFY THAT LUMINAIRES HAVE A WISCAPE CONTROL MODULE. INSTALL WISCAPE CONTROL MODULE ON LUMINAIRES THAT ARE MISSING THE WISCAOE CONTROL MODULE

\* IISNS SHALL BE SINGLE-SIDED MOUNTED ON THE SIGNAL POLE BETWEEN THE MAST ARM AND POLE. MOUNTING TYPE SHALL BE APPROVED BEFORE INSTALLATION PER MHCSD DETAIL SG-07.

BYRON RD

IISNS
FONT: BENGUANT BOLD, WHITE
BACKGROUND: COLOR: 3M SCOTCHAL 3630, ROYAL BLUE
PANTONE 274 CVC

NOTE: CONTRACTOR SHALL REFER TO THE 2014 OR LATER MHCSD STD. SPECIFICATIONS AND DETAILS FOR MOST CURRENT DETAILS.

IF THERE IS A CONFLICT BETWEEN DETAILS IN THESE PLANS AND THE MHCSD SPECIFICATIONS AND DETAILS, MHCSD STANDARD SPECIFICATIONS AND DETAILS WILL SUPERCEDE. IF THERE IS A CONFLICT, RESOLVE IN WRITING WITH MHCSD PUBLIC WORKS

REUSED EQUIPMENT

OPTION #4

ADVANCE PREEMPTION
SIMULTANEOUS PREEMPTION
GATE DOWN

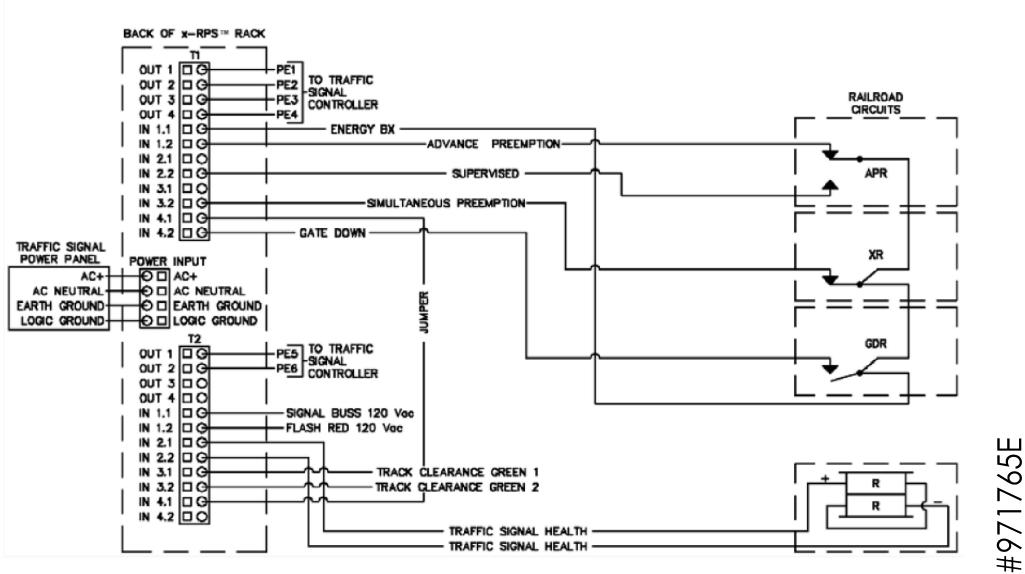
GATE DOWN SINGLE BREAK/SUPERVISED TRAFFIC SIGNAL HEALTH

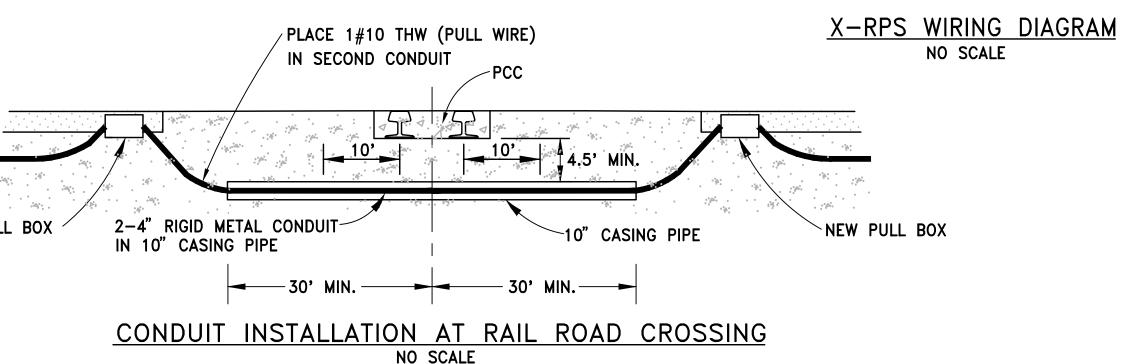
PE2 - SIMULTANEOUS PREEMPTION
PE3 - ADVANCE PREEMPTION
PE4 - DWELL OPERATION/LIMITED SERVICE

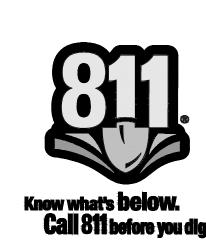
PREEMPTION OUTPUTS TO TRAFFIC SIGNAL CONTROLLER

PE5 — UNUSED PE6 — UNUSED

PE1 - ALL RED FLASH







DOT

WOUNTAIN HOUSE C

BYRON RD & M

TRAFFIC SIGNA

(MOUNTAIN HO

PKWY

HOUSE

DISTRI

 Comp. File No.
 E0.1

 Plan File No.
 0511

 SHEET:
 OF:

 10
 12

## **Exhibit G**

# Scoping Memo

### **Scoping Memo Information for Applications**

A	. Category (Check the category that is most appropriate)
	□ <b>Adjudicatory</b> – "Adjudicatory" proceedings are: (1) enforcement investigations into possible violations of any provision of statutory law or order or rule of the Commission; and (2) complaints against regulated entities, including those complaints that challenge the accuracy of a bill, but excluding those complaints that challenge the reasonableness of rates or charges, past, present, or future, such as <b>formal rough crossing complaints</b> (maximum 12 month process if hearings are required).
	■ Ratesetting – "Ratesetting" proceedings are proceedings in which the Commission sets or investigates rates for a specifically named utility (or utilities), or establishes a mechanism that in turn sets the rates for a specifically named utility (or utilities). "Ratesetting" proceedings include complaints that challenge the reasonableness of rates or charges, past, present, or future. Other proceedings may also be categorized as ratesetting when they do not clearly fit into one category, such as railroad crossing applications (maximum 18 month process if hearings are required).
	☐ <b>Quasi-legislative</b> – "Quasi-legislative" proceedings are proceedings that establish policy or rules (including generic ratemaking policy or rules) affecting a class of regulated entities, including those proceedings in which the Commission investigates rates or practices for an entire regulated industry or class of entities within the industry.
В	. Are hearings necessary? □ Yes ☒ No
	If yes, identify the material disputed factual issues on which hearings should be held, and the general nature of the evidence to be introduced. Railroad crossing applications which are not controversial usually do not require hearings.

Ale pu	DIIC WILLICS	s hearings necessary?	□ Yes	⊠ No
public involve	and any e s presenti	ntity that will not be a p	arty to the po ments to the	getting input from the genera roceeding. Such input usually presiding officer, not sworr cross-examination.
. Issues	- List her	e the specific issues that	need to be a	ddressed in the proceeding.
No iss	ues			
	•		,	hould the Commission decide for completing the proceeding
to hold within ratese	hearings, 12 months iting or qua	indicate here the propos (if categorized as adju si-legislative).	ed schedule dicatory) or	for completing the proceeding 18 months (if categorized as
to hold within ratese	hearings, 12 months iting or qua	indicate here the propos (if categorized as adju si-legislative).	ed schedule dicatory) or	for completing the proceeding
to hold within ratese	hearings, 12 months iting or qua	indicate here the propos (if categorized as adju si-legislative).	ed schedule dicatory) or tes for the fol	for completing the proceeding 18 months (if categorized as
to hold within ratese	hearings, 12 months iting or qua	indicate here the propos (if categorized as adju si-legislative). ould include proposed da	ed schedule dicatory) or tes for the fol	for completing the proceeding 18 months (if categorized as
to hold within ratese	hearings, 12 months iting or qua	indicate here the proposed (if categorized as adjustive).  Sould include proposed date	ed schedule dicatory) or tes for the fol	for completing the proceeding 18 months (if categorized as
to hold within ratese	hearings, 12 months iting or qua	indicate here the proposed (if categorized as adjustive).  Sould include proposed da  Prehearing conference  Hearings	ed schedule dicatory) or tes for the fol	for completing the proceeding 18 months (if categorized as
to hold within ratese	hearings, 12 months iting or qua	indicate here the proposed (if categorized as adjustive).  Sould include proposed da  Prehearing confered  Briefs due	ed schedule dicatory) or tes for the fol	for completing the proceeding 18 months (if categorized as llowing events as needed:

### **Exhibit H**

### Verification

I am the designated City Manager for the City of Mountain House, a political subdivision of the State of California, which is the Applicant herein. I make this verification for and on behalf of the City of Mountain House for the reason that it is a political subdivision of the state. I have read the foregoing Application, I know the contents thereof and the same is true of my own knowledge except for those matters which are stated therein upon information and belief, and as to those matters, I believe them to be true. I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed this	29th day of	April, 2025, in Mountain House, California.
		DocuSigned by:
		Steve Pinkerton
		— 4DAD8CU/5F124D8

Steve Pinkerton
City Manager
City of Mountain House

### **NOTICE OF AVAILABILITY**

#### FINAL ENVIRONMENTAL IMPACT REPORT

### TO ALL PARTIES TO THIS APPLICATION:

Pursuant to Rule 1.9(d) of the Public Utilities Commission's Rules of Practice and Procedures, the Applicant is issuing this Notice of Availability (NOA). The NOA is being served on all parties named in the official Service List for this Application, which is attached to the Certificate of Service for this document.

The Final EIR is available at the following URL and has been posted on the website since late 1994 in the CEQA Documents folder:

https://www.mountainhouseca.gov/departments/planning

### BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of the City of Mountain House for an Order Authorizing a Public Railroad Crossing of the Union Pacific Railroad Tracy Subdivision Track with Mountain House Parkway (MP 75.54) within the City of Mountain House, County of San Joaquin, State of California.

Application No.	
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### **CERTIFICATE OF SERVICE**

I, Patrick	Casey, Pl	E, of HDR	Engineering, Inc., on behalf of the City of Mountain House,
certify th	at I have o	on this day	mailed a copy of the attached Application and its Exhibits
by e-ma	il or hand	delivery to	o each party named in the following Service List, on this
<u>15</u>	day of	<u>April</u>	, 2025, at Walnut Creek, California.
By:	K Hu	trish &	acy

Patrick Casey, PE

Senior Rail Engineer/Project Manger

HDR Engineering, Inc.

### Service List

### Parties:

Steve Pinkerton

City Manager

City of Mountain House

251 E. Main Street

Mountain House, CA 95391

spinkerton@sjgov.org

**Service List Continued on Next Page** 

**Service List Information Only:** Amber L. Stoffels Clifford Cessna Union Pacific Railroad Public Project Manager/Associate Manager I Industry and Public Projects Benesch amber.stoffels@up.com ccessna@benesch.com E-Mail Only E-Mail Only State: Antranig Garabetian, PE **David Stewart Utilities Engineer** Program Manager Rail Crossings and Engineering Branch Rail Crossings and Engineering Branch California Public Utilities Commission California Public Utilities Commission 300 Capitol Mall, Suite 400 antranig.garabetian@cpuc.ca.gov Sacramento, CA 95814 E-Mail Only david.stewart@cpuc.ca.gov Chi Cheung To, PE Senior Utilities Engineer Specialist Rail Crossings and Engineering Branch California Public Utilities Commission ChiCheung.To@cpuc.ca.gov E-Mail Only