ROAD REPAIR AND ACCOUNTABILITY ACT OF 2017
PROJECT BASELINE AGREEMENT
State Route 46 Gap Closure Segment 4C

Resolution TCEP-P-2021-07B
(will be completed by CTC)

1. FUNDING PROGRAM

- ☐ Active Transportation Program
- ☐ Local Partnership Program (Competitive)
- ☐ Solutions for Congested Corridors Program
- ☐ State Highway Operation and Protection Program
- ☒ Trade Corridor Enhancement Program

2. PARTIES AND DATE

2.1 This Project Baseline Agreement (Agreement) for the *State Route 46 Gap Closure Segment 4C*, effective on, June 23, 2021 (will be completed by CTC), is made by and between the California Transportation Commission (Commission), the California Department of Transportation (Caltrans), the Project Applicant, *Kern Council of Governments*, and the Implementing Agency, *Department of Transportation (Caltrans)*, sometimes collectively referred to as the "Parties".

3. RECITAL

3.2 Whereas at its December 3, 2020 meeting the Commission approved the Trade Corridor Enhancement Program, and included in this program of projects the *State Route 46 Gap Closure Segment 4C*, the parties are entering into this Project Baseline Agreement to document the project cost, schedule, scope and benefits, as detailed on the Project Programming Request Form attached hereto as Exhibit A and the Project Report attached hereto as Exhibit B, as the baseline for project monitoring by the Commission.

3.3 The undersigned Project Applicant certifies that the funding sources cited are committed and expected to be available; the estimated costs represent full project funding; and the scope and description of benefits is the best estimate possible.

4. GENERAL PROVISIONS

The Project Applicant, Implementing Agency, and Caltrans agree to abide by the following provisions:

4.1 To meet the requirements of the Road Repair and Accountability Act of 2017 (Senate Bill [SB] 1, Chapter 5, Statutes of 2017) which provides the first significant, stable, and on-going increase in state transportation funding in more than two decades.

4.2 To adhere, as applicable, to the provisions of the Commission:

- ☐ Resolution *Insert Number* , "Adoption of Program of Projects for the Active Transportation Program", dated
- ☐ Resolution *Insert Number* , "Adoption of Program of Projects for the Local Partnership Program", dated
- ☐ Resolution *Insert Number* , "Adoption of Program of Projects for the Solutions for Congested Corridors Program", dated
- ☐ Resolution *Insert Number* , "Adoption of Program of Projects for the State Highway Operation and Protection Program", dated
- ☒ Resolution G-20-77, "Adoption of Program of Projects for the Trade Corridor Enhancement Program", dated December 3, 2020

4.3 All signatories agree to adhere to the Commission's Trade Corridor Enhancement Program, Guidelines. Any conflict between the programs will be resolved at the discretion of the Commission.

4.4 All signatories agree to adhere to the Commission's SB 1 Accountability and Transparency Guidelines and policies, and program and project amendment processes.

4.5 The Kern Council of Governments agrees to secure funds for any additional costs of the project.

4.6 The Caltrans, District 6 agrees to report to Caltrans on a quarterly basis; after July 2019, reports will be on a semi-annual basis on the progress made toward the implementation of the project, including scope, cost, schedule, outcomes, and anticipated benefits.

4.7 Caltrans agrees to prepare program progress reports on a quarterly basis; after July 2019, reports will be on a semi-annual basis and include information appropriate to assess the current state of the overall program and the current status of each project identified in the program report.

4.8 The Kern Council of Governments agrees to submit a timely Completion Report and Final Delivery Report as specified in the Commission's SB 1 Accountability and Transparency Guidelines.

4.9 All signatories agree to maintain and make available to the Commission and/or its designated representative, all work related documents, including without limitation engineering, financial and other data, and methodologies and assumptions used in the determination of project benefits during the course of the project, and retain those records for four years from the date of the final closeout of the project. Financial records will be maintained in accordance with Generally Accepted Accounting Principles.

4.10 The Transportation Inspector General of the Independent Office of Audits and Investigations has the right to audit the project records, including technical and financial data, of the Department of Transportation, the Project Applicant, the Implementing Agency, and any consultant or sub-consultants at any time during the course of the project and for four years from the date of the final closeout of the project, therefore all project records shall be maintained and made available at the time of request. Audits will be conducted in accordance with Generally Accepted Government Auditing Standards.

5. SPECIFIC PROVISIONS AND CONDITIONS

5.1 Project Schedule and Cost
See Project Programming Request Form, attached as Exhibit A.

5.2 Project Scope
See Project Report or equivalent, attached as Exhibit B. At a minimum, the attachment shall include the cover page, evidence of approval, executive summary, and a link to or electronic copy of the full document.

5.3 Other Project Specific Provisions and Conditions
In the event of a cost overrun the state will cover a share proportionate to the state contribution of the TCEP funding identified in the Project Programming Request (PPR) attached to this baseline agreement.

Attachments:

Exhibit A: Project Programming Request Form
Exhibit B: Project Report

SIGNATURE PAGE
TO
PROJECT BASELINE AGREEMENT

State Route 46 Gap Closure Segment 4C

Resolution TCEP-P-2021-07B

Digitally signed by Ahron Hakimi
Date: 2021.04.30 13:44:36 -07'00'

Ahron Hakimi, Director — Date

Kern Council of Goverments

Project Applicant

Diana Gomez
Digitally signed by Diana Gomez
Date: 2021.05.03 08:23:35 -07'00'

Diana Gomez — May 3, 2021 — Date

Caltrans District 6 Director

Implementing Agency

Diana Gomez
Digitally signed by Diana Gomez
Date: 2021.05.03 08:24:01 -07'00'

Diana Gomez — May 3, 2021 — Date

District Director

California Department of Transportation

6.3.21

Toks Omishakin — Date

Director

California Department of Transportation

07/16/21

Mitchell Weiss — Date

Executive Director

California Transportation Commission

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-D06-2020-0001 v7

Amendment (Existing Project) ☒ YES ☐ NO				Date	05/03/2021 13:31:30
Programs ☐ LPP-C ☐ LPP-F ☐ SCCP ☒ TCEP ☐ STIP ☐ Other					
District	EA	Project ID	PPNO	Nominating Agency	
06	44256	0620000053	3386E	Caltrans HQ	
County	Route	PM Back	PM Ahead	Co-Nominating Agency	
Kern	46	26.400	30.000	Kern Council of Governments	
				MPO	Element
				KCOG	Capital Outlay
Project Manager/Contact			Phone	Email Address	
Gilberto Baca			559-779-6618	gilberto.baca@dot.ca.gov	

Project Title

Route 46 Expressway Segment 4C

Location (Project Limits), Description (Scope of Work)

In and near Lost Hills, from 1 mile west of Browns Material Road to California Aquaduct. Convert from a 2-lane conventional highway to a 4-lane expressway.

Component	Implementing Agency
PA&ED	Caltrans District 6
PS&E	Caltrans District 6
Right of Way	Caltrans District 6
Construction	Caltrans District 6

Legislative Districts					
Assembly:	32	Senate:	14	Congressional:	21

Project Milestone	Existing	Proposed
Project Study Report Approved		
Begin Environmental (PA&ED) Phase		06/14/2005
Circulate Draft Environmental Document Document Type		
Draft Project Report		06/14/0020
End Environmental Phase (PA&ED Milestone)		05/03/2021
Begin Design (PS&E) Phase	07/01/2020	07/01/2020
End Design Phase (Ready to List for Advertisement Milestone)	03/01/2022	07/01/2022
Begin Right of Way Phase		07/01/2020
End Right of Way Phase (Right of Way Certification Milestone)	02/01/2022	07/01/2022
Begin Construction Phase (Contract Award Milestone)	10/01/2022	12/05/2022
End Construction Phase (Construction Contract Acceptance Milestone)	07/15/2024	07/15/2024
Begin Closeout Phase	07/15/2024	07/15/2024
End Closeout Phase (Closeout Report)	05/15/2025	05/15/2025

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-D06-2020-0001 v7

Date 05/03/2021 13:31:30

Purpose and Need

The purpose of the project is to improve traffic operations, improve traffic safety, and convert this section of roadway from a 2-lane conventional highway to a four-lane expressway.

The Project will increase the efficiency of goods movement by reducing accidents caused by the lack of safe passing opportunities. Companies moving freight through California use this corridor to access the Ports of Long Beach, Los Angeles, and Oakland to the north and south of the central coast and central valley. Destinations and origins within Kern County include logistic centers, agriculture packing facilities. By 2042 Kern Council of Governments' models show a 30% increase in truck movement along the corridor.

NHS Improvements ☒ YES ☐ NO	Roadway Class 2	Reversible Lane Analysis ☐ YES ☒ NO

Inc. Sustainable Communities Strategy Goals ☒ YES ☐ NO Reduce Greenhouse Gas Emissions ☒ YES ☐ NO

Project Outputs

Category	Outputs	Unit	Total
Pavement (lane-miles)	Roadway lane miles	Miles	6.8
Bridge / Tunnel	New bridges/tunnels	SQFT	4,000
Operational Improvement	Intersection / Signal improvements	EA	2

Additional Information

Kern Council of Governments is a co-applicant with Caltrans for this TCEP application.

The Project closes the final 3.4-mile two-lane gap on SR 46, completing this Interregional Trade Corridor project between U.S. 101 and Interstate 5. The Benefits-Cost Analysis (BCA) conducted by Caltrans District Six shows the following results in millions of dollars: Accident Cost Savings to Passenger Vehicles $28.6 and Freight $15.9; Travel Time Savings to Passenger Vehicles $28.6 and Freight $15.9; Emissions Reductions over 20 years will avert 74 tons of Carbon Monoxide, 17,892 tons of Carbon Dioxide, 52 tons of Oxides of Nitrogen and 6 tons of Volatile Organic Compounds. The Project has a cost ratio of 4.2 with a 20.6% rate of return on investment, demonstrating increased reliability of the National and State Highway System.

The Environmental Department completed the Revalidation Document for Route 46 Segment 4C on February 18, 2021.

Approval for the correction on the following milestone was received on December 31, 2020.

End Design (PS&E) Phase 07/01/2022
End Right of Way Phase (Right of Way Certification Milestone) 07/01/2022
Begin Construction Phase (Contract Award Milestone) 12/05/2022

The proposed funding plan was revised in February 2021. The Utility Relocation strategy was revised, and the cost was capture in the Supplemental Project Report. The additional cost will be covered by the $2 million of DEMO funds moved from SR 46 Segment 4B (PPNO 3386D) into Segment 4C.

ADA is checked
Bike/Ped is checked

Performance Indicators and Measures						
Measure	**Required For**	**Indicator/Measure**	**Unit**	**Build**	**Future No Build**	**Change**
Congestion Reduction	TCEP	Daily Vehicle Hours of Travel Time Reduction	Hours	1,606	4,016	-2,410
	TCEP	Daily Truck Trips	# of Trips	6,157	6,157	0
	TCEP	Daily Truck Miles Traveled	Miles	20,934	20,934	0
Throughput	TCEP	Change in Truck Volume That Can Be Accommodated	# of Trucks	36,500	13,036	23,464
	TCEP	Change in Rail Volume That Can Be Accommodated	# of Trailers	10,429	3,724	6,705
			# of Containers	10,429	3,724	6,705
	TCEP	Change in Cargo Volume That Can Be Accommodated	# of Tons	208,571	74,490	134,081
			# of Containers	10,429	3,724	6,705
System Reliability	TCEP	Truck Travel Time Reliability Index	Index	1	1.88	-0.88
	TCEP	Daily Vehicle Hours of Travel Time Reduction	Hours	1,606	2,532	-926
Velocity	TCEP	Travel Time or Total Cargo Transport Time	Hours	131,885	237,838	-105,953
	Optional	Average Peak Period Weekday Speed for Road Facility	Miles per Hour	55	22.6	32.4
Air Quality & GHG	LPPF, LPPC, SCCP, TCEP	Particulate Matter	PM 2.5 Tons	0	0	0
			PM 10 Tons	0	0	0
	LPPF, LPPC, SCCP, TCEP	Carbon Dioxide (CO2)	Tons	17,875	0	17,875
	LPPF, LPPC, SCCP, TCEP	Volatile Organic Compounds (VOC)	Tons	6	0	6
	LPPF, LPPC, SCCP, TCEP	Sulphur Dioxides (SOx)	Tons	0	0	0
	LPPF, LPPC, SCCP, TCEP	Carbon Monoxide (CO)	Tons	74	0	74
	LPPF, LPPC, SCCP, TCEP	Nitrogen Oxides (NOx)	Tons	52	0	52
Safety	LPPF, LPPC, SCCP, TCEP	Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries	Number	0	1	-1
	LPPF, LPPC, SCCP, TCEP	Number of Fatalities	Number	0	6	-6
	LPPF, LPPC, SCCP, TCEP	Fatalities per 100 Million VMT	Number	0.016	0.046	-0.03
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries	Number	0	3	-3
	LPPF, LPPC, SCCP, TCEP	Number of Serious Injuries per 100 Million VMT	Number	0.03	0.07	-0.04
	Optional	Accident Cost Savings	Dollars	104,900,000	0	104,900,000
Economic Development	LPPF, LPPC, SCCP, TCEP	Jobs Created (Direct and Indirect)	Number	407	0	407

Performance Indicators and Measures						
Measure	**Required For**	**Indicator/Measure**	**Unit**	**Build**	**Future No Build**	**Change**
Cost Effectiveness	LPPF, LPPC, SCCP, TCEP	Cost Benefit Ratio	Ratio	4.2	0	4.2

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-D06-2020-0001 v7

District	County	Route	EA	Project ID	PPNO
06	Kern	46	44256	0620000053	3386E

Project Title

Route 46 Expressway Segment 4C

Existing Total Project Cost ($1,000s)								
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Implementing Agency
E&P (PA&ED)									Caltrans District 6
PS&E	500							500	Caltrans District 6
R/W SUP (CT)	100							100	Caltrans District 6
CON SUP (CT)			5,400					5,400	Caltrans District 6
R/W	100							100	Caltrans District 6
CON			30,900					30,900	Caltrans District 6
TOTAL	700		36,300					37,000	
Proposed Total Project Cost ($1,000s)									Notes
E&P (PA&ED)									
PS&E	500							500	
R/W SUP (CT)	100	300						400	
CON SUP (CT)			5,400					5,400	
R/W	100	1,700						1,800	
CON			30,900					30,900	
TOTAL	700	2,000	36,300					39,000	

Fund #1:	RIP - State Cash (Committed)								Program Code
Existing Funding ($1,000s)									20.XX.075.600
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									Kern Council of Governments
PS&E	500							500	
R/W SUP (CT)	100							100	
CON SUP (CT)			5,400					5,400	
R/W	100							100	
CON			20,900					20,900	
TOTAL	700		26,300					27,000	
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									
PS&E	500							500	
R/W SUP (CT)	100							100	
CON SUP (CT)			5,400					5,400	
R/W	100							100	
CON			20,900					20,900	
TOTAL	700		26,300					27,000	

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-D06-2020-0001 v7

Fund #2:	State SB1 TCEP - Trade Corridors Enhancement Account (Committed)								Program Code
	Existing Funding ($1,000s)								20.XX.723.200
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									Kern Council of Governments
PS&E									Regional TCEP
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			6,000					6,000	
TOTAL			6,000					6,000	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			6,000					6,000	
TOTAL			6,000					6,000	

Fund #3:	State SB1 TCEP - Trade Corridors Enhancement Account (Committed)								Program Code
	Existing Funding ($1,000s)								20.XX.723.100
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									Caltrans HQ
PS&E									State TCEP
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			4,000					4,000	
TOTAL			4,000					4,000	
	Proposed Funding ($1,000s)								Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			4,000					4,000	
TOTAL			4,000					4,000	

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-D06-2020-0001 v7

Fund #4:	Demo - Demonstration - TEA21 (Committed)								Program Code
Existing Funding ($1,000s)									
Component	Prior	21-22	22-23	23-24	24-25	25-26	26-27+	Total	Funding Agency
E&P (PA&ED)									Kern Council of Governments
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									
Proposed Funding ($1,000s)									Notes
E&P (PA&ED)									
PS&E									
R/W SUP (CT)		300						300	
CON SUP (CT)									
R/W		1,700						1,700	
CON									
TOTAL		2,000						2,000	

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST (PPR)

PRG-0010 (REV 08/2020)

PPR ID
ePPR-D06-2020-0001 v7

Complete this page for amendments only Date 05/03/2021 13:31:30

District	County	Route	EA	Project ID	PPNO
06	Kern	46	44256	0620000053	3386E

SECTION 1 - All Projects

Project Background

Print ePPR for baseline agreement.

Programming Change Requested

Print ePPR for baseline agreement.

Reason for Proposed Change

Print ePPR for baseline agreement.

If proposed change will delay one or more components, clearly explain 1) reason for the delay, 2) cost increase related to the delay, and 3) how cost increase will be funded

Print ePPR for baseline agreement.

Other Significant Information

Print ePPR for baseline agreement.

SECTION 2 - For SB1 Project Only

Project Amendment Request (Please follow the individual SB1 program guidelines for specific criteria)

Print ePPR for baseline agreement.

Approvals

I hereby certify that the above information is complete and accurate and all approvals have been obtained for the processing of this amendment request.

Name (Print or Type)	Signature	Title	Date

SECTION 3 - All Projects

Attachments
1) Concurrence from Implementing Agency and/or Regional Transportation Planning Agency
2) Project Location Map

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

M e m o r a n d u m

Making Conservation a California Way of Life!

To: JAMES R. ANDERSON
HQ Division Chief
Transportation Programming

Date: April 26, 2021

File: 06-Ker-46-26.4/29.9
06-44256_
0620000053

From: ANTON KISMETIAN, PE
Senior Design Manager
Central Region-Project Development
Design IV, Branch B

Subject: **Supplemental Project Report**

Executive Summary

The purpose of this Supplemental Project Report (SPR) is to authorize the modified design, from previous approved SPRs (2015 and 2017) and original Project Report (2005), within Segment 4C (Expenditure Authorization (EA 06-44256_) of the original Segment 4 on State Route (SR) 46 west of the unincorporated community of Lost Hills in Kern County. The modified design includes the following:

- Updated project traffic accident data,
- Nonstandard design features including but not limited to reduced median width (12 feet) with transitions at west end (62 feet) and east end (22 feet),
- Updated access control fencing limits and updated driveway locations,
- Longitudinal utility encroachment policy exceptions in conjunction with updated utility impacts/relocations,
- Updated drainage basin location and trunk line design for a portion of the limits,
- Updated right-of-way (ROW) acquisition and utility relocations per modified design ROW requirements.

This SPR is supplemental to the second prior SPR (approved on September 17, 2017 under EA 06-44254_) for approving additional phasing and limits modifications of Segment 4 (see Attachment G); first prior SPR (approved on May 11, 2015 under EA 06-44254_) for approving phasing of the limits into Segments 1, 3 and 4 (see Attachment H); and original Project Report (approved on June 14, 2005 under EA 06-44250_) for the overall Project Approval and Environmental Document (PA&ED) of the Kern 46 Project, which included discussion about the 3 segments phasing (see Attachment I).

The original Project Report proposed to convert the SR 46 2-lane undivided conventional highway to a 4-lane divided access-controlled highway/expressway from Kecks Road

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

intersection to 0.3 mile west of the California Aqueduct, Post Mile (PM) 7.3 to 29.7, and a 4-lane conventional highway from the California Aqueduct to 0.3 mile east of Interstate 5(I-5), PM 29.7 to PM 33.5. The Project report identified phasing into 3 segments. Subsequent phasing per the approved SPRs was identified including sections of Segment 4 into Segment 4A (EA 06-44254_), Segment 4B (EA 06-44255_) and Segment 4C (EA 06-44256_) in order to be programmed and funded in the State Transportation Improvement Program (STIP), Regional Improvement Program (RIP), Interregional Improvement Program (IIP) and the Trade Corridor Relief Program (TCRP). Segment 4A (PM 31.5/33.5) was constructed and Segment 4B (PM 29.7/31.9) is currently in construction. This SPR is for Segment 4C (PM 26.4/29.9) with slight overlap for connection reconstruction to the existing 2-lane to 4-lane transitions at each end of the segment section. The following information explain various project changes regarding Segment 4C (see Attachments A, B and C).

1. PROJECT LIMITS

The parent EA 44250_ originally was identified to have 3 segments per the Project Report in 2005 and the following Segments per the subsequent SPR in 2015 which identified respective EAs:
[Segments below are presented by chronology of being constructed (Segment 3 and 1) and segment remaining to be completed (Segment 4)]

- EA 44252_ - PM 6.8/19.8 (Segment 3)
  - From 0.5 mile west of Keck's Road to 0.7 mile west of SR 46/ SR 33 intersection.

- EA 44251_ - PM 19.3/27.5 (Segment 1)
  - From 1.2 miles, 0.5 mile overlap with Segment 3, west of SR 46/ SR 33 intersection to 1.0 mile west of Brown Material Road/Holloway Road (BMR-HR) intersection.

- EA 44253_ - PM 27.5/33.5 (Segment 4)
  - From 1.0 mile west of BMR-HR intersection to 0.8 mile east of the I-5/SR 46 interchange.

The subsequent SPR in 2017 approved additional sub-segments within Segment 4 and approved a 0.3 mile reduction in the easternmost PM limit for Segment 4A as follows:

- EA 44254_ - PM 31.5/33.2 (Segment 4A)
  - From 1.2 miles west of the I-5/SR 46 interchange to 0.5 mile east of I-5/SR 46 interchange.

- EA 44255_ - PM 29.7/31.9 (Segment 4B)
  - From 0.3 mile west of the California Aqueduct to 1.9 miles east of the California Aqueduct.

- EA 44256_ - PM 26.4/29.9 (Segment 4C)
  - From 1.0 mile west of BMR-HR intersection to 0.1 mile west of the California Aqueduct.

This current SPR (2021) validates the PM limit for Segment 4C from PM 26.4, including overlap section with Segment 1, to PM 29.9, including overlap section with Segment 4B.

2. PROJECT UPDATES

Traffic Accident Data

Mainline SR 46
The collision rates for the project segment for the most recent three-year study period (between 04-01-2017 and 03-31-2020) is the number of collisions per million-vehicle-miles (MVM) and are shown in the following table. The data indicates that the actual *Fatal (F)*, *Fatal plus Injury (F+I)* and *Total* collision rates are all lower than the statewide averages for similar highways.

Highway Segment	Actual (MVM)			State Average (MVM)		
	Fatal	F+I	Total	Fatal	F+I	Total
SR 46 (PM 26.4/29.9)	0.000	0.18	0.44	0.028	0.44	0.98

A total of 17 collisions (0-Fatal, 7-Injury, 10-Property Damage Only) were recorded within the project segment in the three-year period. The types of collisions and their primary collision factor are listed in the following table:

Primary Collision Factor	Type of Collision					
	SIDE SWIPE	REAR END	BROAD-SIDE	HIT OBJECT	OVER-TURN	AUTO-PEDESTRIAN
INFLUENCE OF ALCOHOL		1				
FAILURE TO YIELD			3			1
IMPROPER TURN	1			2	1	
SPEEDING		4	1			
OTHER VIOLATION	1		1			
OTHER THAN DRIVER				1		
Total	2	5	5	3	1	1

The prevalent types of collisions were “rear-end” and “broadside”. The primary collision factor was “speeding” for most “rear-end” collisions, and “failure to yield” for most “broadside” collisions. Three hit-object collisions were recorded in the study period and the objects struck are listed in the following table:

OBJECT STRUCK	HIT OBJECT
Traffic sign/signpost	1
Fence	1
Unknown object struck	1
TOTAL	3

SR 46 Intersections

The collision history for the most recent three-year study period (between 04-01-2017 and 03-31-2020) for the following two SR 46 intersections indicate that the *Actual Fatal, Fatal plus Injury*, and *Total* collision rates are all lower than the Statewide Average for similar intersections. Therefore, no further analyses are required. The collision rates in collision per million-vehicles (MV) are listed in the following table:

Intersections	Actual (MV)			State Average (MV)		
	Fatal	F+I	Total	Fatal	F+I	Total
SR 46 at Browns Material Road (PM 27.37)	0.000	0.11	0.21	0.006	0.12	0.25
SR 46 at Holloway Road (PM 27.48)	0.000	0.00	0.09	0.003	0.08	0.19

Project Features

This project will construct a four-lane divided expressway connecting to the 4-lane expressway to the west (Segment 1) and 4-lane conventional highway to the east (Segment 4B). The design speed for SR 46 in Segment 4C is 70 mph. Due to the constrained ROW, the SR 46 cross-section width within these project limits will consist of a 12-feet median width, 12-feet-wide lanes, 8-feet to 10-feet varying outside shoulders, and short-length 2:1 side slopes beyond back of dike or edge of pavement (See Attachment B and C).

Nonstandard Design Features

A Design Standard Decision Document (DSDD) was approved on April 26, 2021 by the delegated authority Design Office Chief. The DSDD includes the following nonstandard features of the Highway Design Manual (HDM):

BOLDFACE Nonstandard Features:
- HDM 104.1 and 701.2(1) no access control fence or other barrier at ROW
- HDM 302.1 less than 10 feet outside shoulders east of BMR-HR intersection
- HDM 305.1 less than 22 feet median width

UNDERLINED Nonstandard Features:
- HDM 104.5, 205.1(1), and 405.5(2) less than 300 feet spacing distance between adjacent access openings
- HDM 303.3, HDM 304.1, and HDM 309.1(2) proposed dike not constructed per HDM Figure 303.3, no standard hinge point and nonstandard embankment slope provided, with embankment slope steeper than 4 (horizontal) to 1 (vertical) side slopes) and less than 30 feet clear recovery zone (CRZ) distance due to proposed steeper embankment side slopes
- HDM 205.1(1) less than 0.5-mile spacing distance between either a public road or other access opening and another access opening as well as HDM 405.5(2) less than 1,600 feet spacing distance between access openings
- HDM 309.1(2)(a) less than 30 feet CRZ distance for existing utility poles/fixed objects from nearest edge of traveled way (ETW)
- HDM 309.1(2)(b) less than 52 feet CRZ distance for proposed relocated poles from nearest ETW

ROW Access Control and Driveway Locations

ROW access control fencing will be installed to the west of the realigned BMR-HR intersection (PM 26.4/27.0). No fencing will be installed at and east of the intersection through the adjacent Chevron USA and Aera Energy oil fields as well as the east end that transitions to a conventional highway segment. Of the existing 4 permitted and 18 non-permitted driveways, a total of 12 proposed driveways will serve the oil fields properties as well as the rural ag and commercial properties at the east end of the project limits. All driveways will have all movements allowed as well as left turn lanes in the median will be provided along SR 46.

Longitudinal Utility Encroachment Policy Exceptions with Updated Utility Impacts and Relocations

The updated Segment 4C project proposes exceptions to the longitudinal utility encroachments policy. Below is a summary of existing and proposed relocated utilities and information for either exceptions not being required or being required:
- (PM 26.4/26.7) There are no proposed utility relocation or utility exceptions required for the westernmost portion where the existing utilities are located outside of State ROW access control limits.
- (PM 26.7/27.4) The proposed utility relocations west of the BMR-HR intersection for Pacific Gas and Electric Company (PG&E) electrical facilities and Frontier telecommunication facilities do not require any utility exceptions since they will be

relocated outside of existing State ROW access control limits within proposed utility easements.

- (PM 27.4/27.5) The BMR-HR intersection area will require utility encroachment exceptions for existing and relocated PG&E and Frontier utility facilities within State ROW access control limits.
- (PM 27.5/28.5) The existing PG&E overhead electrical facility on the north side of SR 46 and the Frontier underground telecommunication facilities on the south side of SR 46, both within the constrained available existing ROW width portion of the project, are proposed to remain in place within access control limits.
- (PM 28.5/29.0) There are no proposed utility exceptions required for the proposed relocation of PG&E electrical line and Frontier telecommunication line to be relocated within a proposed utility easement along the south side of existing ROW outside of access control limits.
- (PM 29.0/29.5) The proposed PG&E utility relocation from the north side to the south side and Frontier relocation onto the proposed PG&E relocated power poles will both require utility encroachment exceptions as they will be located within State ROW access control limits.
- (PM 29.5/29.9) Utility exceptions are required for the proposed PG&E utility relocations on the north side (PM 29.5/29.7) and south side (PM 29.7/29.8) of SR 46 as well as existing relocation of a portion (PM 29.8/29.9) per Segment 4B, Frontier utility to remain on the south side of SR 46 and Lost Hills Utility District (LHUD) existing relocation of a portion (PM 29.5/29.8) per Segment 4B.

The justification of the longitudinal utility encroachment exceptions is based on infeasibility to acquire additional utility easements due to funding constraints, impacts to project schedule, potential risks of the adjacent land that may contain hazardous material from oil production or naturally occurring materials in the area and also potential impacts including but not limited to abandonment to existing oil production wells due to their proximity to standard utility relocations. The project would bear the cost to re-abandon the old oil wells to current standards and the cost to relocate all pipelines that the utility easements would impact. Therefore, the Caltrans Executive Management team along with Kern Council of Governments (Kern COG) was made aware of the above challenges and supports for the Project Development Team (PDT) to forego purchasing additional utility easements. On February 8, 2021, conceptual approval was obtained from Headquarters Division of Design team, for longitudinal utility encroachments proposed within the project limits. Once coordination and final relocation plans are finalized with the respective utility owner, a longitudinal encroachment exception will be prepared for the above-mentioned utilities that will remain longitudinally in the State Right of Way.

There are numerous types of underground utilities crossing SR 46 and all of which will be positively located per policy. The types of utilities are oil, gas, water and telecommunications. Positive locations will be completed by the end of April. Only

Frontier telecommunication lines (PM 28.5/29.5) are anticipated to be in conflict and are proposed to be relocated with Segment 4C. LHUD water line (PM 29.5/29.9) has been determined to be in conflict and will be relocated with Segment 4B.

Updated Drainage Design

The project also requires a closed drainage system from 0.2 mile east (PM 27.7) of realigned BMR-HR intersection eastward (PM 29.5), through the portion of SR 46 adjacent to the oil fields and constrained ROW section, to convey water from the roadway to a basin that will be constructed as part of the project. The non-contiguous drainage basin will be located on the south side of SR 46 near the east end of the project limit with the acquisition of ROW. Drainage longitudinal ditches that are vegetated will be constructed where the width of the ROW is wider, which areas are west of and adjacent to the realigned intersection as well as along the east end of the project limits.

Right of Way (ROW)

An updated ROW Data Sheet has been prepared for this project phase (see Attachment F). The Data Sheet was approved on February 26, 2021. The ROW capital cost increased significantly due to the addition of utility relocations and easements.

Environmental

Environmental clearance was obtained through the preparation of the NEPA/CEQA Re-Validation, pursuant to regulations of the FHWA National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The NEPA/CEQA Re-Validation Form was approved on February 10, 2021 (see Attachment E). Prior Re-Validations, with prior SPRs, were approved on December 19, 2014 and March 30, 2017, as well as the original approved Final Environmental Document was approved on May 12, 2005.

Project Estimate (Current and Escalated)

The following costs are for Segment 4C (see Attachment D) in current 20/21 fiscal year (FY) and escalated 2022/23 FY dollars:

Cost Item	Current (20/21 FY)	Escalated (22/23 FY)
Roadway	$28.9 Million	$29.4 Million
Structure	$0	$0
ROW	$3.3 Million	$3.5 Million
Total	$32.2 Million	$32.9 Million

The majority of the construction capital cost is associated with removing and replacing the pavement structural section. The majority of the ROW cost is for various utility relocation costs. Both capital costs are within the programmed amounts.

Programming

EA 06-44256 of the Kern 46 project was programmed in the 2020 STIP Cycle for PS&E, ROW and Construction phases as shown in the following existing funding table.

Project Cost Component	**Existing Funding Table (CTIP)** Fiscal Years and Costs (x $1,000)						Total
	PRIOR	20/21	21/22	22/23	23/24	24/25	
PS&E		500					500
ROW Support		100					100
Const. Support				5,400			5,400
ROW Capital		100					100
Const. Capital				30,900			30,900
Total		700		36,300			37,000

Project Cost Component	**Funding Sources Table for Existing Funding** Fiscal Years and Costs (x $1,000)						Total
	PRIOR	20/21	21/22	22/23	23/24	24/25	
RIP		700		26,300			27,000
TCEP				10,000			10,000
Total		700		36,300			37,000

The proposed funding table shows the funding need of $1,900,000 over the existing programmed amount. The additional support cost identified in the table below is due to the redesign of Segment 4C. The DEMO funds of $2 million will be transferred out of Segment 4B (06-44255_) into this Segment 4C project. Out of the DEMO funds, $1.7 million will pay for utility relocation costs. The remaining DEMO funds of $300,000 go into the ROW support costs and the remaining difference of $1.9 million will be debited from future RIP shares. At the same time, there is a savings in construction capital costs of #1.5 million in the FY 22/23, realized by reducing the roadway footprint. The savings in construction capital and construction support costs will be captured at time of allocation. The proposed funding tables show the overall project cost shortfalls between the proposed funding amount of $40.9 million and proposed funding sources table amount of $39.0 million.

Project Cost Component	**Proposed Funding Table (CTIP)** Fiscal Years and Costs (x $1,000)						Total
	PRIOR	20/21	21/22	22/23	23/24	24/25	
PS&E		2,000					2,00
ROW Support		500	300				800
Const. Support				5,400			5,400
ROW Capital Acquisition *	1,800						
ROW Capital		100	1,700				1,800
Const. Capital				30,900			30,900
Total		2,600	2,000	36,300			40,900

* Note: ROW Acquisition will be conducted by County of Kern per Agreement No. 06-1667/A1.

Project Cost Component	**Funding Sources Table for Proposed Funding** Fiscal Years and Costs (x $1,000)						Total
	PRIOR	20/21	21/22	22/23	23/24	24/25	
RIP		700		26,300			27,000
TCEP				10,000			10,000
DEMO		2,000					2,000
Total		2,700		36,300			39,000 **

** Note: The additional $1.9 million in Support cost will be debited from future RIP shares.

Project Schedule

The following is the proposed updated schedule for Segment 4C:

District PS&E to OE (M377)	January 27, 2022
Right of Way Certification (M410)	March 4, 2022
Ready to List (M460)	July 1, 2022
Advertise (M480)	September 9, 2022
Approve Contract (M500)	January 16, 2023
Contract Acceptance (M600)	December 4, 2024

3. PROJECT REVIEWS

Kern COG management has reviewed and is in agreement with the information presented in this SPR for Segment 4C.

4. PROJECT PERSONNEL

Gilberto Baca	Project Manager	(559) 243-8425
Haisam Soliman	Project Engineer	(559) 243-3896
Richard Derby, Jr.	Design Engineer	(559) 824-7757
Anton Kismetian	Design Manager	(559) 832-0676
Amrit Brar	Construction Manager	(661) 332-0538
Trais Norris	Environmental Manager	(209) 601-3521
Nick Dumas	ROW Manger	(559) 445-6195
Rosa Rubalcaba	ROW-Utility Manager	(559) 445-6207
Koko Widyatmoko	Traffic Investigations	(559) 445-5588
Albert Lee	Traffic Operations	(559) 488-4111
Sam Wong	Hydraulics Manager	(559) 243-3507

5. ATTACHMENTS

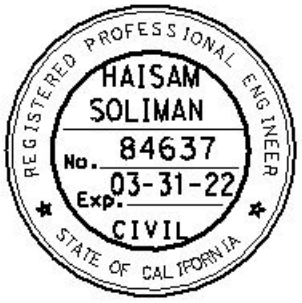
A. Title Sheet (Segment 4C)
B. Typical Cross Sections (Segment 4C)
C. Layout Sheets (Segment 4C)
D. Updated Cost Estimate (Segment 4C)
E. Environmental Re-Validation (Segment 4C)
F. Updated Right of Way Data Sheets (Segment 4C)
G. SPR (2017 - Segment 4 Phasing Sections)
H. SPR (2015 - Phasing)
I. Project Report (2005 – Parent Project)
J. Risk Register

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

This Supplemental Project Report has been prepared under the direction of the following Registered Civil Engineer. The Registered Civil Engineer attests to the technical information contained herein and engineering data upon which recommendation, conclusions, and decisions are based.

REGISTERED CIVIL ENGINEER

04/26/2021
Date



Recommended For Approval:

GILBERTO BACA
Project Manager

4/26/2021
Date

(559) 243-8425
Telephone

Concurrence For Right of Way:

HUMBERTO ALMAGUER
Acting Chief,
Central Region Right of Way

4/27/2021
Date

(559) 243-3842
Telephone

Approved:

DIANA GOMEZ
District 6 Director

04/30/2021
Date

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
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STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

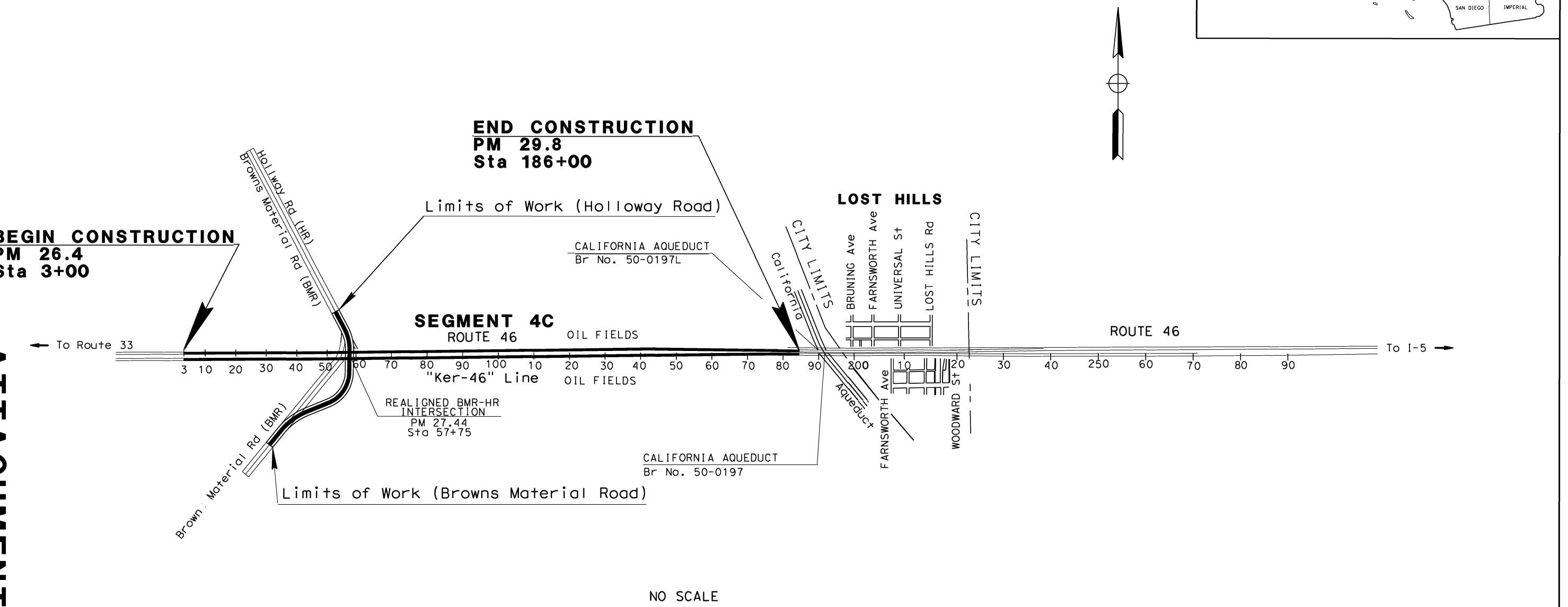
PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN KERN COUNTY
NEAR LOST HILLS
FROM 1.0 MILE WEST OF BROWN MATERIAL ROAD
TO 0.1 MILE WEST OF CALIFORNIA AQUEDUCT



LOCATION MAP



NO SCALE

ATTACHMENT A

DESIGN ENGINEER	ANTON KISMETIAN
PROJECT MANAGER	GILBERTO BACA

EA	06-442561
PROJECT ID	0620000053

LAST REVISION 04-16-21

UNIT 1436 | PROJECT NUMBER & PHASE 06200000531

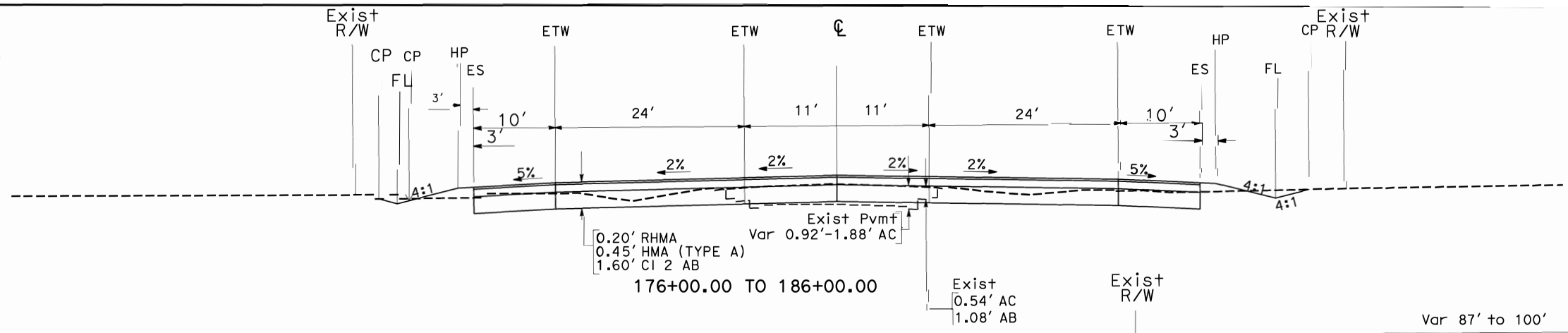
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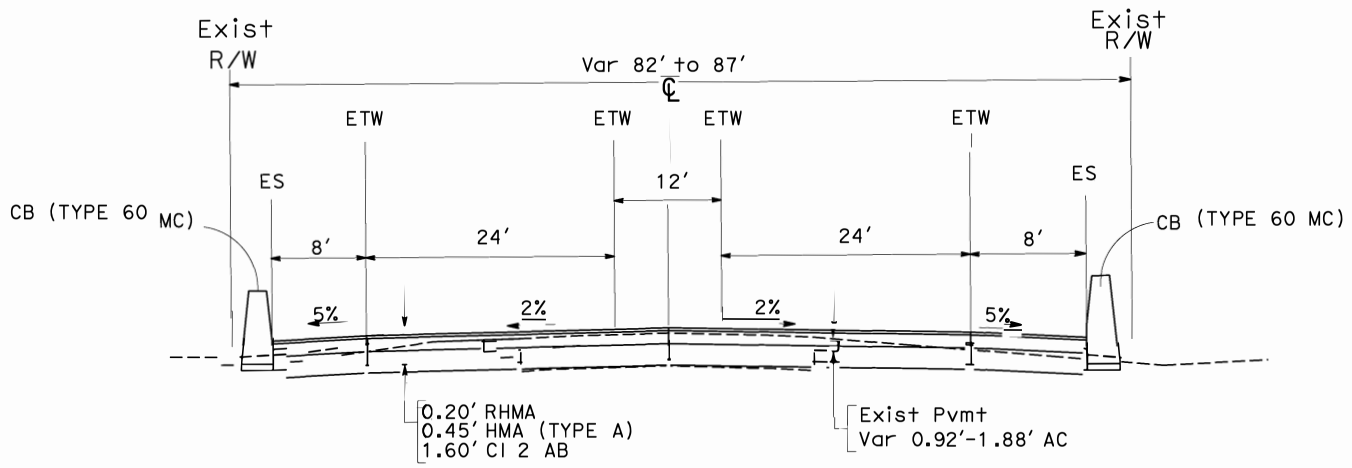
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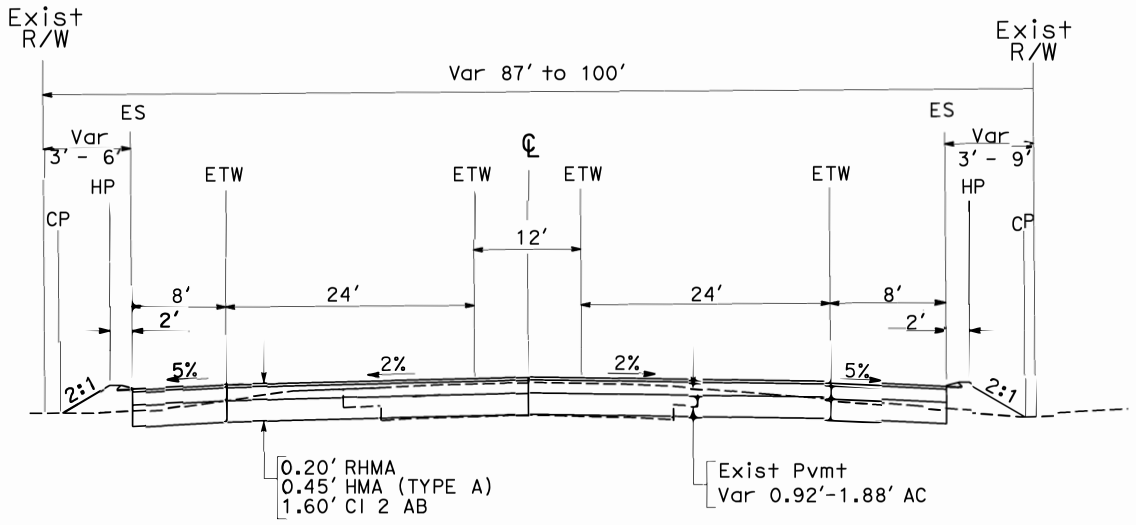
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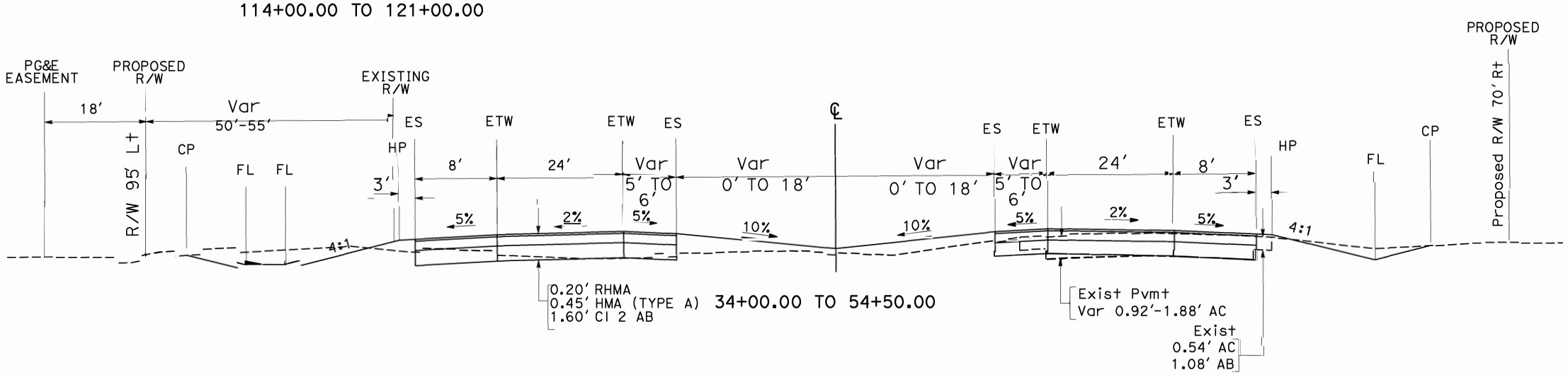
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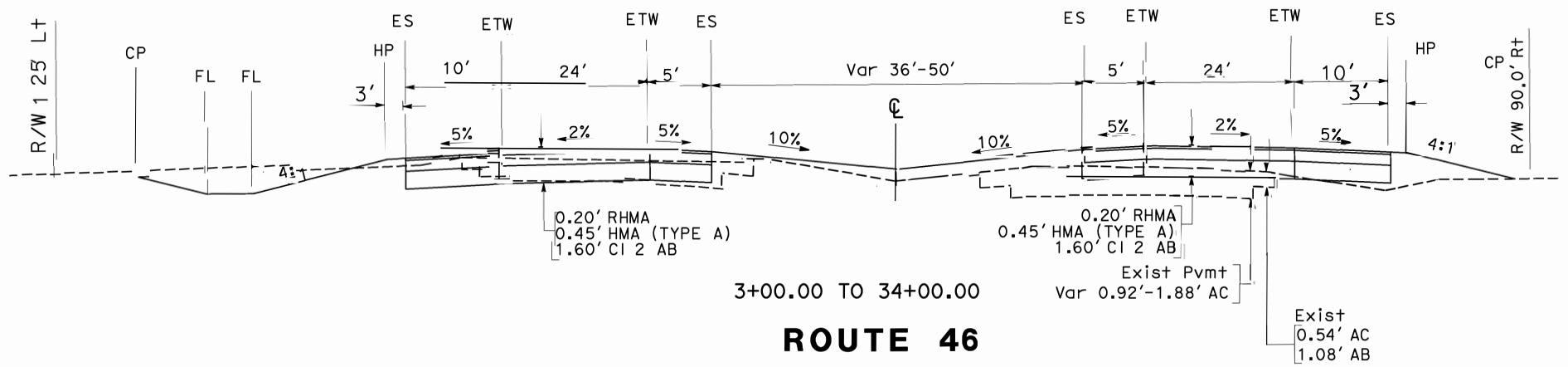
114+00.00 TO 121+00.00



60+00.00 TO 114+00.00
121+00.00 TO 176+00.00



34+00.00 TO 54+50.00



3+00.00 TO 34+00.00

ROUTE 46

TYPICAL CROSS SECTIONS

NO SCALE

X-1

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TIME PLOTTED => 15:53

LAST REVISION 11-17-20

ATTACHMENT B

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN

FUNCTIONAL SUPERVISOR: MARISSA NISHIKAWA
CALCULATED-DESIGNED BY: RICHARD DERY
CHECKED BY:

DATE REVISED	REVISED BY

BORDER LAST REVISED 7/2/2010

USERNAME =>
DGN FILE => 0612000176ca001.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1436

PROJECT NUMBER & PHASE 06200000531

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	46	26.4/29.8		???

REGISTERED CIVIL ENGINEER DATE

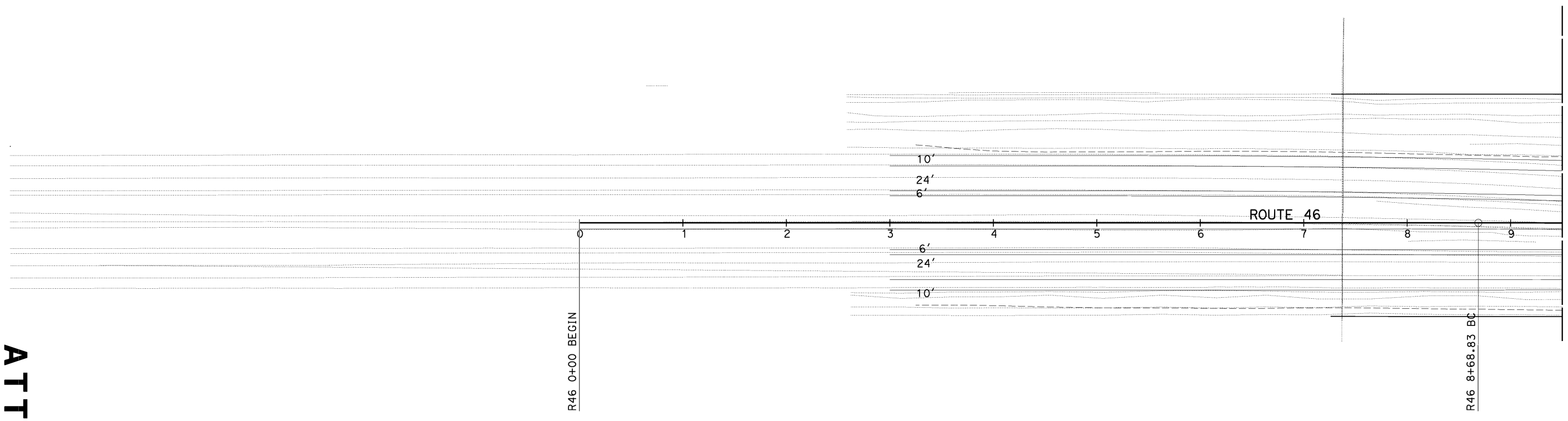
PLANS APPROVAL DATE

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ATTACHMENT C

LAYOUT

L-1

SCALE: 1" =50'

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Caltrans® DESIGN	RICHARD DERBY	DATE REVISED	
FUNCTIONAL SUPERVISOR: MARISSA NISHIKAWA	CALCULATED-DESIGNED BY	CHECKED BY	

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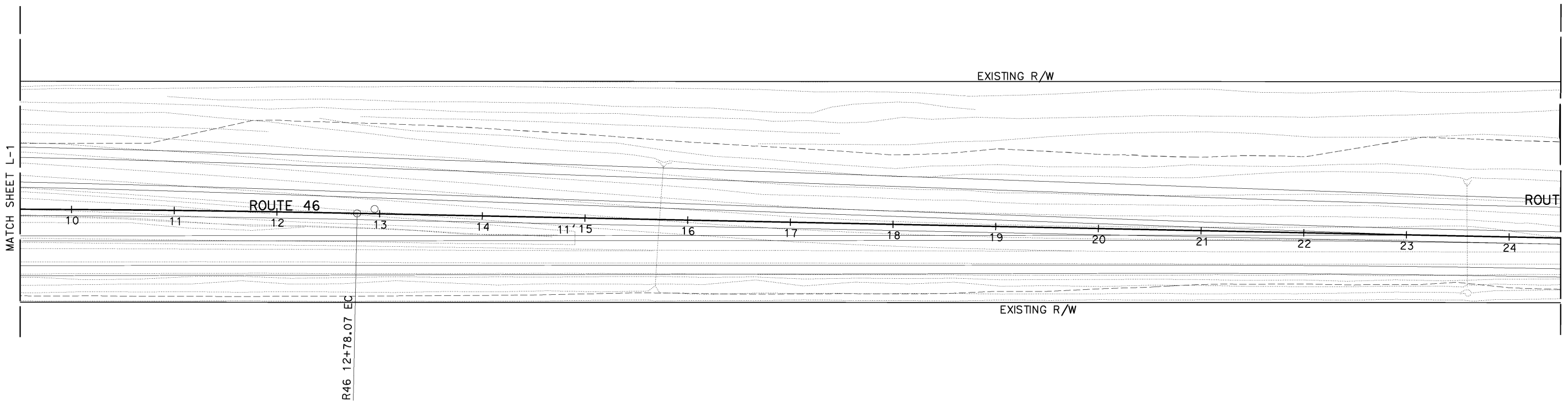
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L- 2

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FUNCTIONAL SUPERVISOR: MARISSA NISHIKAWA

CALCULATED-DESIGNED BY: HAISAM SOLIMAN

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UNIT 1436

PROJECT NUMBER & PHASE 06200000531

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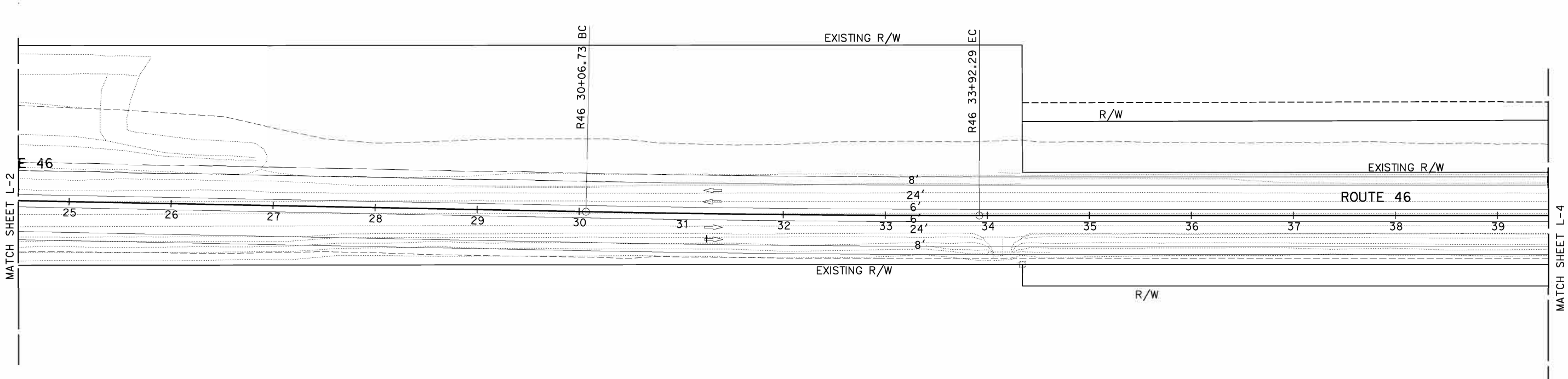
PLANS APPROVAL DATE

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L-3

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FUNCTIONAL SUPERVISOR: MARISSA NISHIKAWA
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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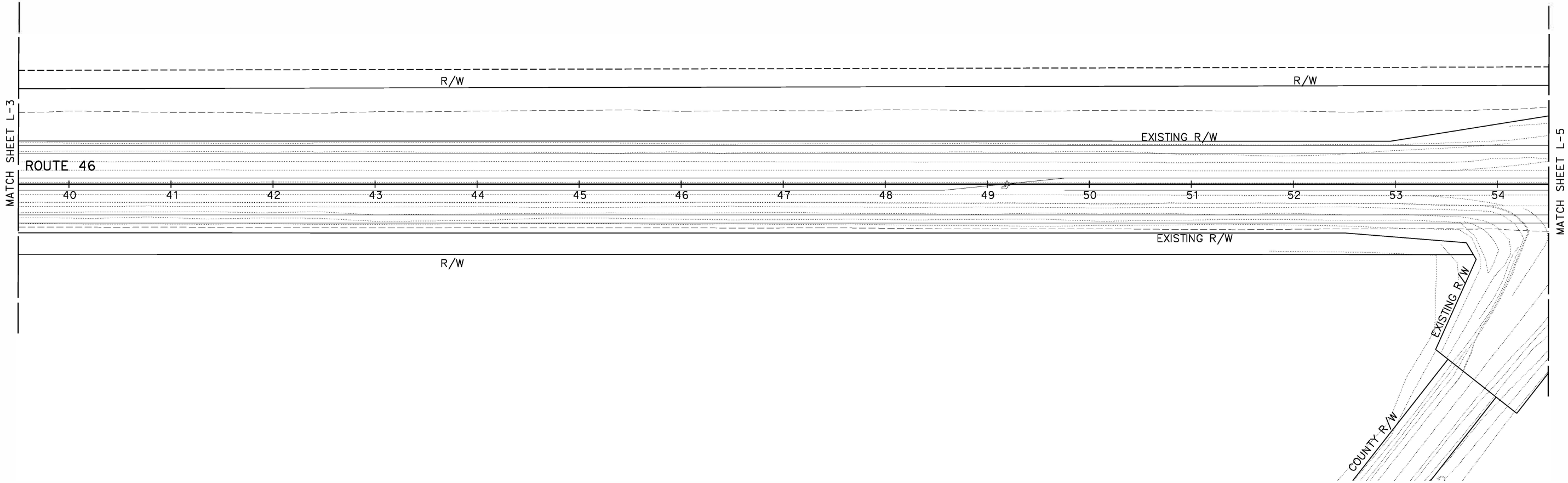
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No.
Exp.
CIVIL
STATE OF CALIFORNIA

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L-4

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FUNCTIONAL SUPERVISOR	MARISSA NISHIKAWA		
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN		

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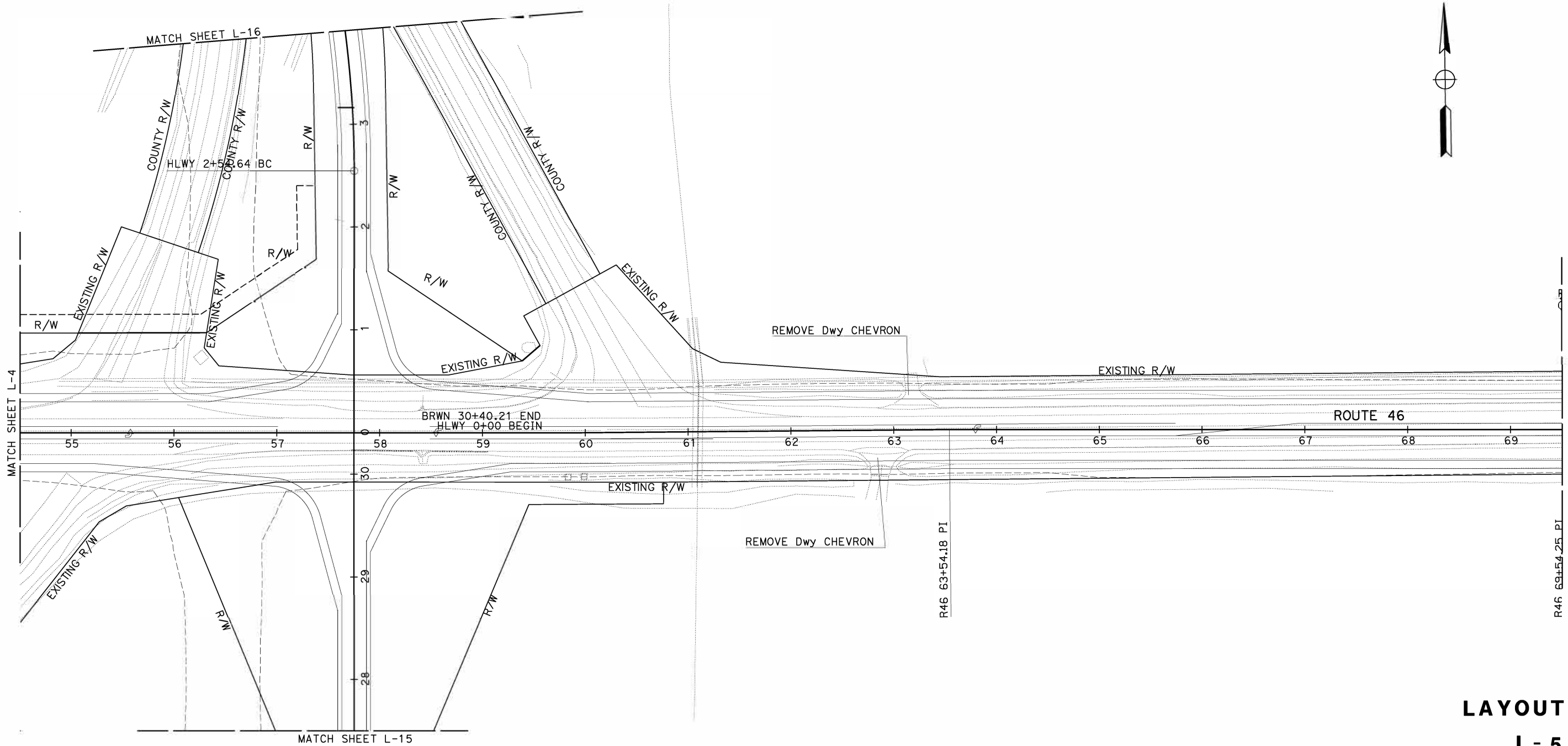
PLANS APPROVAL DATE

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LAYOUT

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FUNCTIONAL SUPERVISOR: MARISSA NISHIKAWA

CALCULATED-DESIGNED BY: HAISAM SOLIMAN

CHECKED BY: RICHARD DERBY

REVISED BY	DATE REVISED

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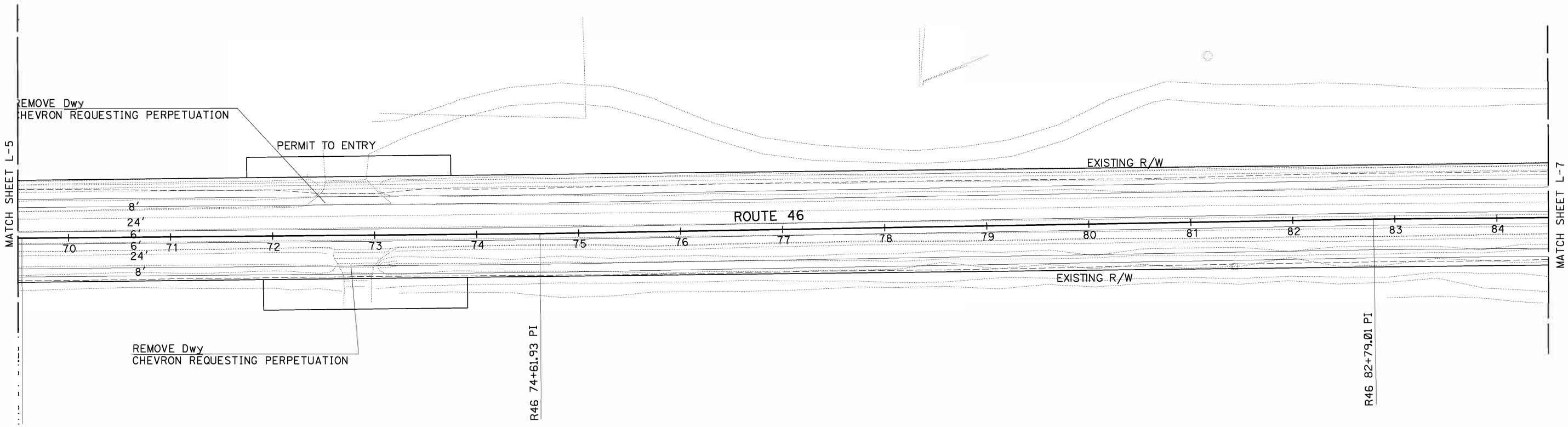
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LAYOUT

L - 6

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REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY: HAISAM SOLIMAN

CHECKED BY: RICHARD DERBY

FUNCTIONAL SUPERVISOR: MARISSA NISHIKAWA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1436

PROJECT NUMBER & PHASE 06200000531

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	46	26.4/29.8		???

REGISTERED CIVIL ENGINEER DATE

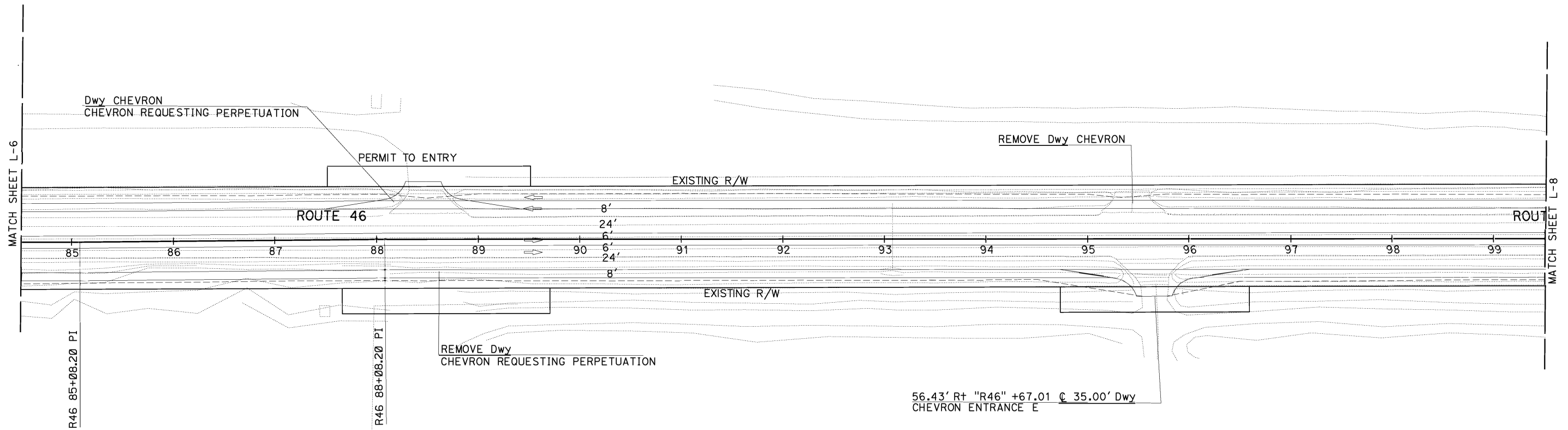
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



LAYOUT

L-7

SCALE: 1" =50'

CALCULATED-DESIGNED BY	REVISED BY	HAISAM SOLIMAN
CHECKED BY	DATE REVISED	RICHARD DERBY

FUNCTIONAL SUPERVISOR: MARISSA NISHIKAWA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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AST REVISION DATE PLOTTED => 16-FEB-2021
11-17-20 TIME PLOTTED => 15:42

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USERNAME =>
DGN FILE => 0612000176ea007.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1436

PROJECT NUMBER & PHASE 06200000531

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	46	26.4/29.8		???

REGISTERED CIVIL ENGINEER DATE

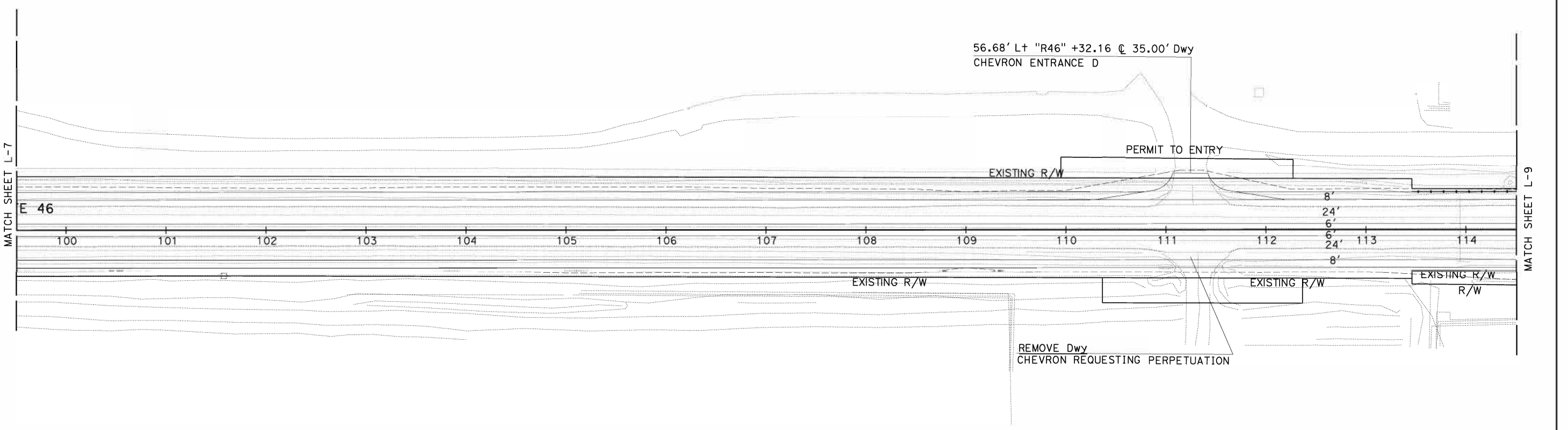
PLANS APPROVAL DATE

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LAYOUT

L - 8

SCALE: 1" =50'

CALCULATED-DESIGNED BY

CHECKED BY

HAISAM SOLIMAN

RICHARD DERBY

REVISED BY

DATE REVISED

FUNCTIONAL SUPERVISOR

MARISSA NISHIKAWA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1436

PROJECT NUMBER & PHASE 06200000531

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	46	26.4/29.8		???

REGISTERED CIVIL ENGINEER DATE

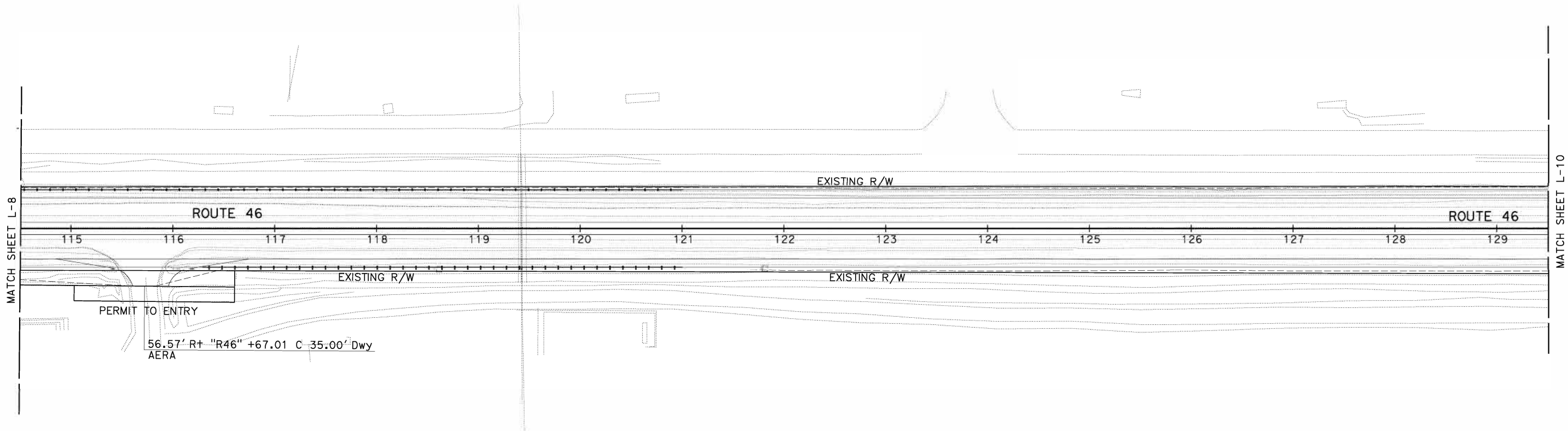
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LAYOUT

L - 9

SCALE: 1" =50'

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	FUNCTIONAL SUPERVISOR: MARISSA NISHIKAWA	CALCULATED-DESIGNED BY: HAISAM SOLIMAN
Caltrans®		CHECKED BY: RICHARD DERBY	REVISED BY / DATE REVISED

LAST REVISION: 11-17-20
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	46	26.4/29.8		???

REGISTERED CIVIL ENGINEER DATE

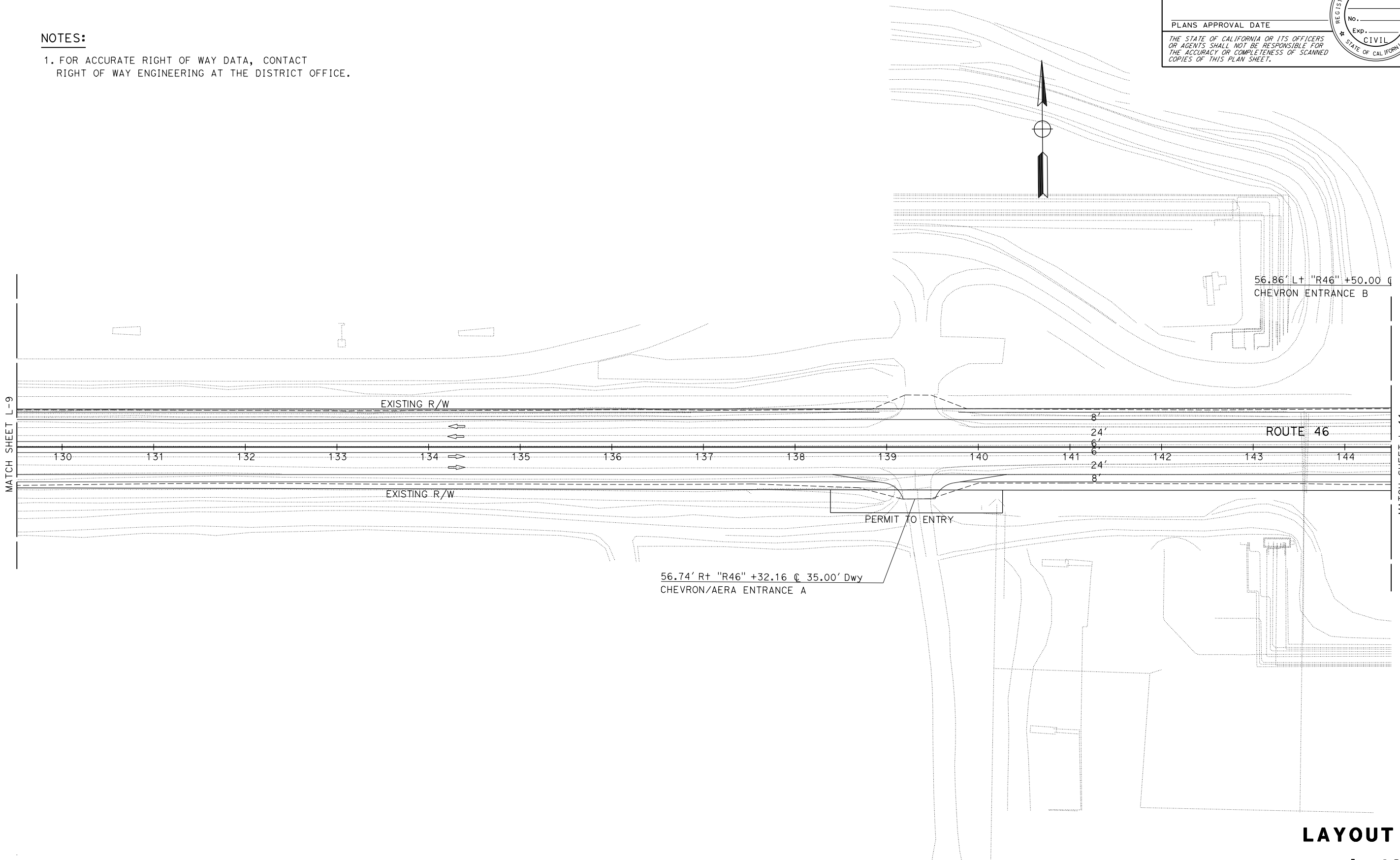
PLANS APPROVAL DATE

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NOTES:

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LAYOUT

L-10

SCALE: 1" =50'

CALCULATED-DESIGNED BY	HAISAM SOLIMAN	
CHECKED BY	RICHARD DERBY	
FUNCTIONAL SUPERVISOR	MARISSA NISHIKAWA	
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN	

REVISED BY	DATE REVISED

LAST REVISION 11-17-20

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DGN FILE => 0612000176ea010.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1436

PROJECT NUMBER & PHASE 06200000531

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	46	26.4/29.8		???

REGISTERED CIVIL ENGINEER DATE

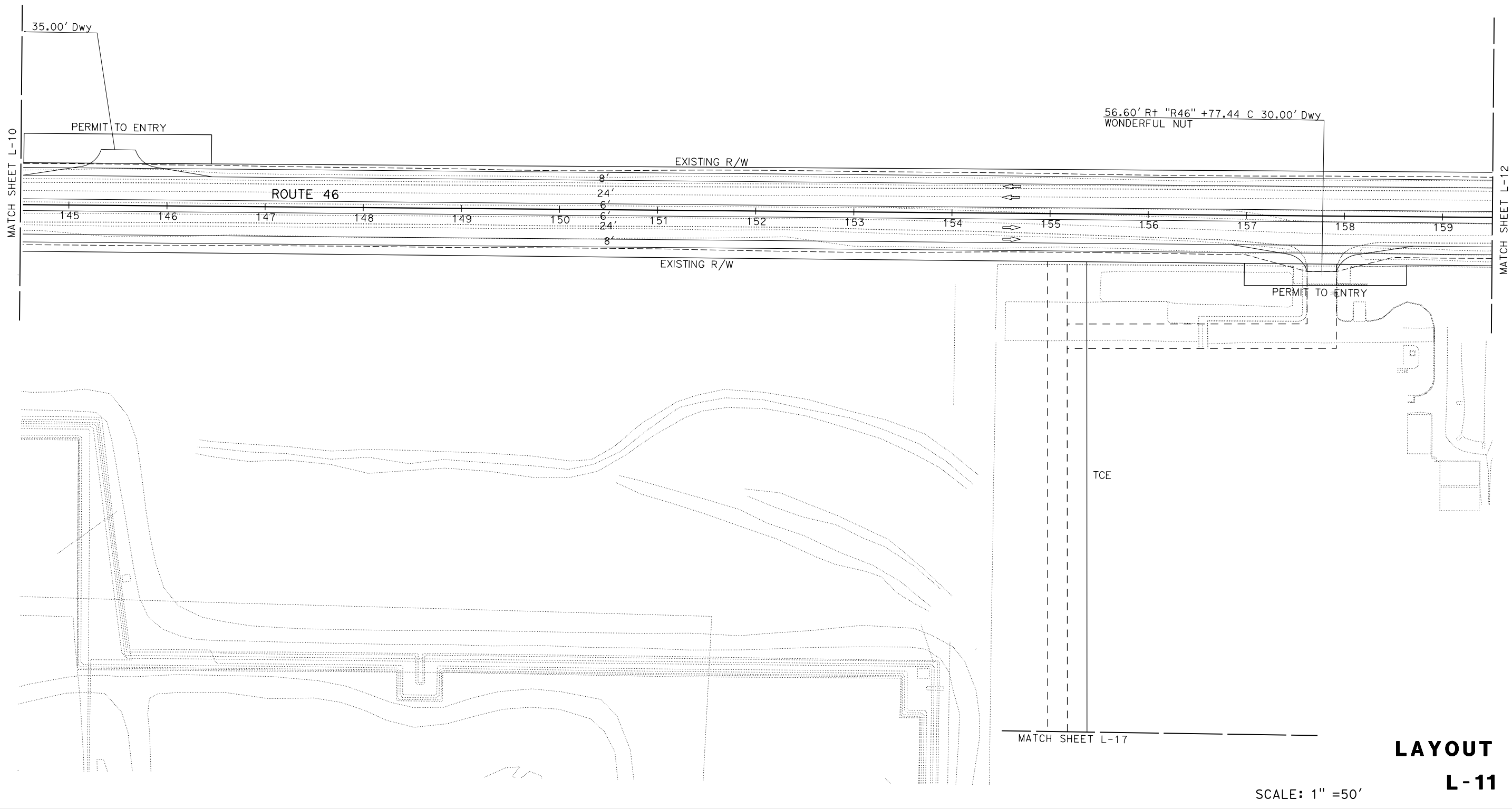
PLANS APPROVAL DATE

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LAYOUT
L-11

SCALE: 1" =50'

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CALCULATED-DESIGNED BY	HAISAM SOLIMAN
CHECKED BY	RICHARD DERBY

FUNCTIONAL SUPERVISOR	MARISSA NISHIKAWA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	46	26.4/29.8		???

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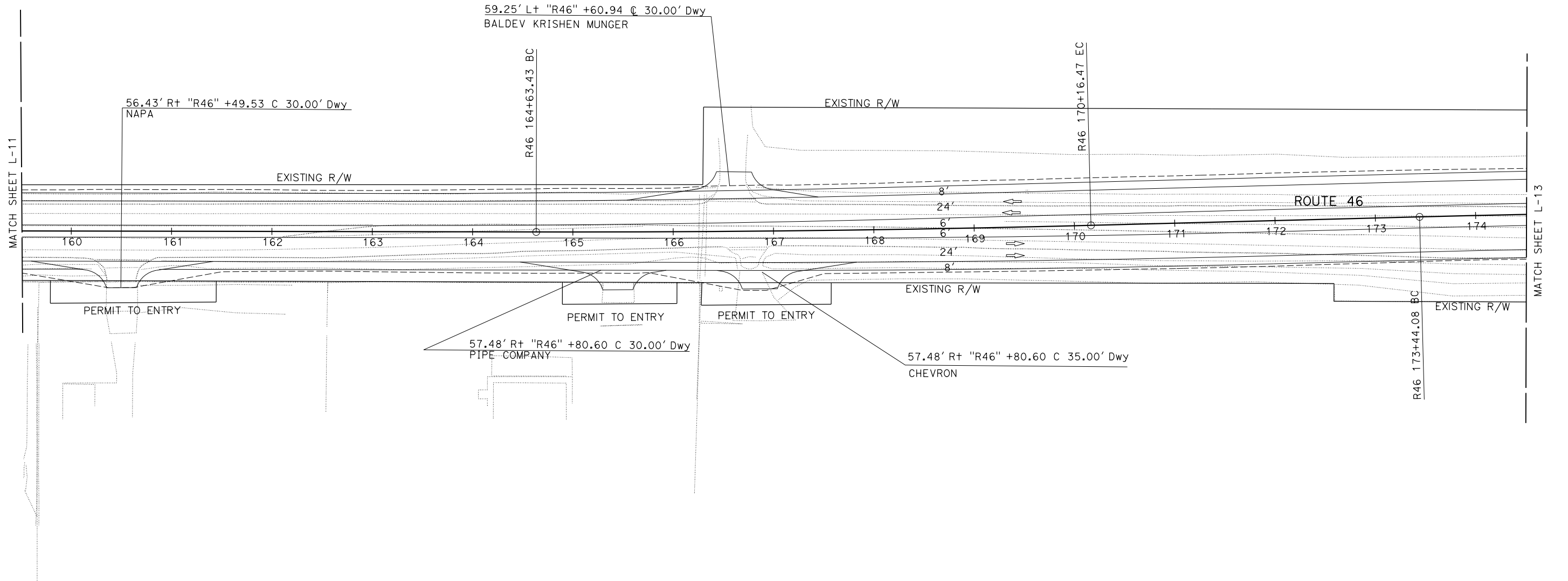
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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SCALE: 1" =50'

LAYOUT
L-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans® DESIGN	MARISSA NISHIKAWA	HAISAM SOLIMAN	RICHARD DERBY		

LAST REVISION 11-17-20 | DATE PLOTTED => 16-FEB-2021 TIME PLOTTED => 15:42

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
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REGISTERED CIVIL ENGINEER DATE

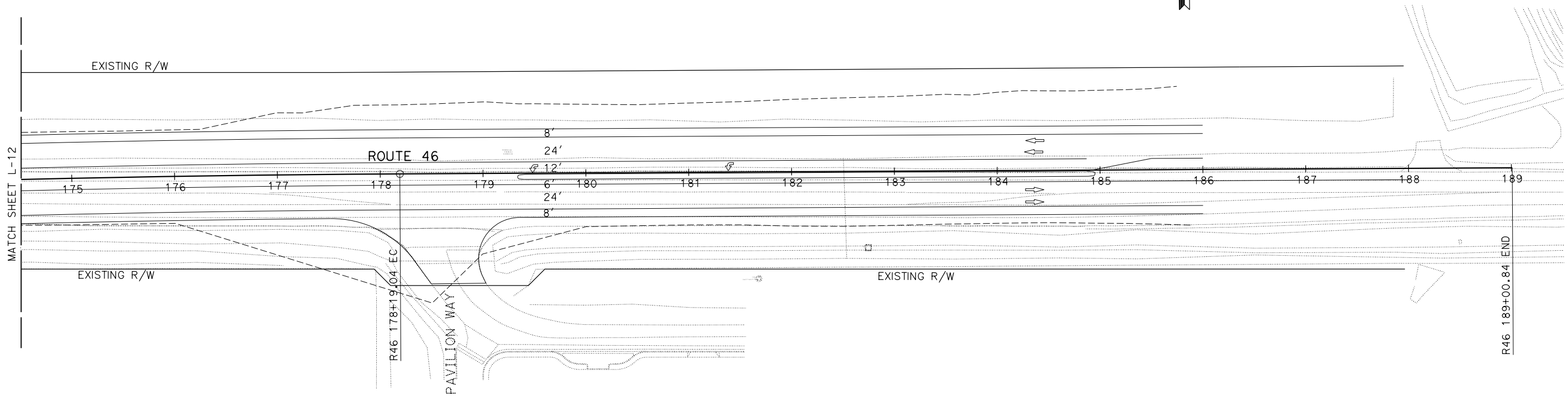
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA

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SCALE: 1" =50'

LAYOUT

L-13

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11-17-20	TIME PLOTTED => 15:42

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Caltrans® DESIGN	CHECKED BY	RICHARD DERBY	DATE REVISED
	FUNCTIONAL SUPERVISOR	MARISSA NISHIKAWA	

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	46	26.4/29.8		???

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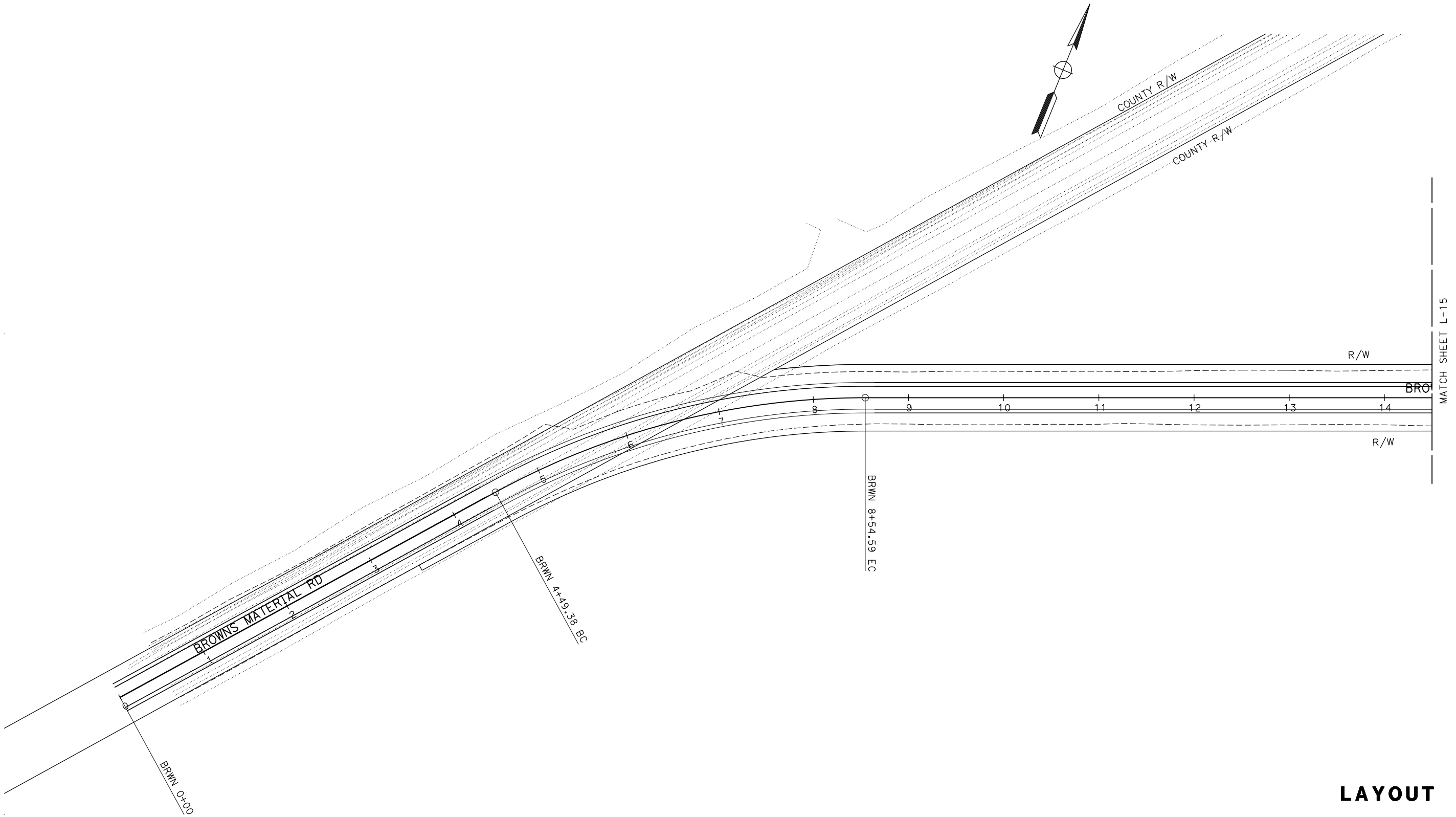
PLANS APPROVAL DATE

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NOTES:

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LAYOUT

L-14

SCALE: 1" =50'

CALCULATED-DESIGNED BY		REVISED BY	
CHECKED BY	**RICHARD DERBY**	DATE REVISED	

FUNCTIONAL SUPERVISOR: **MARISSA NISHIKAWA**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

LAST REVISION 11-17-20

DATE PLOTTED => 16-FEB-2021
TIME PLOTTED => 15:42

BORDER LAST REVISED 7/2/2010

USERNAME =>
DGN FILE => 0612000176ea014.dgn

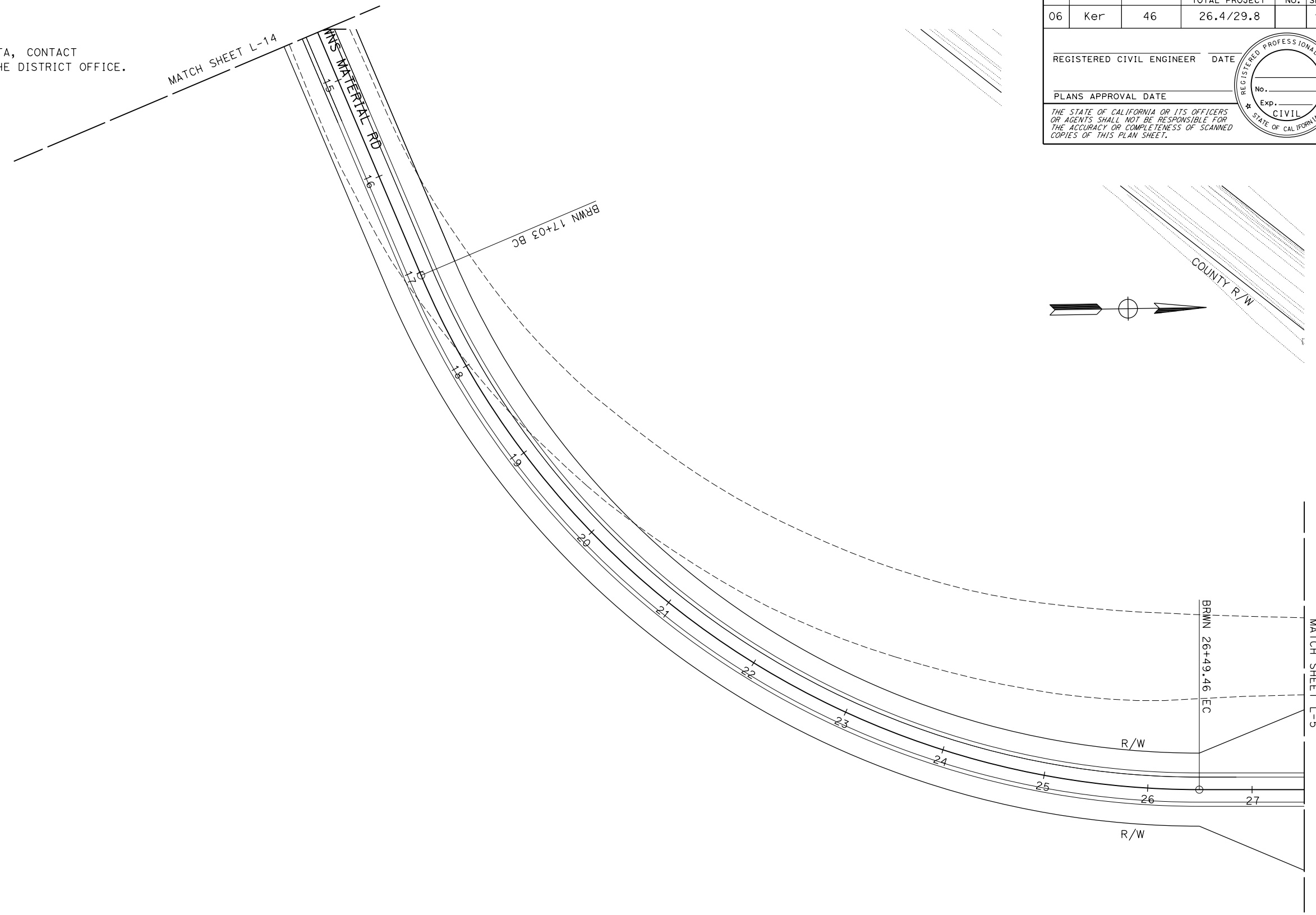
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1436

PROJECT NUMBER & PHASE 06200000531

NOTES:

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	46	26.4/29.8		???

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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CALCULATED-DESIGNED BY: HAISAM SOLIMAN

CHECKED BY: RICHARD DERBY

REVISED BY | DATE REVISED

FUNCTIONAL SUPERVISOR: MARISSA NISHIKAWA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® DESIGN

LAYOUT

L-15

SCALE: 1" =50'

LAST REVISION 11-17-20

DATE PLOTTED => 16-FEB-2021
TIME PLOTTED => 15:43

BORDER LAST REVISED 7/2/2010

USERNAME =>
DGN FILE => 0612000176ea015.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1436

PROJECT NUMBER & PHASE 06200000531

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	46	26.4/29.8		???

REGISTERED CIVIL ENGINEER DATE

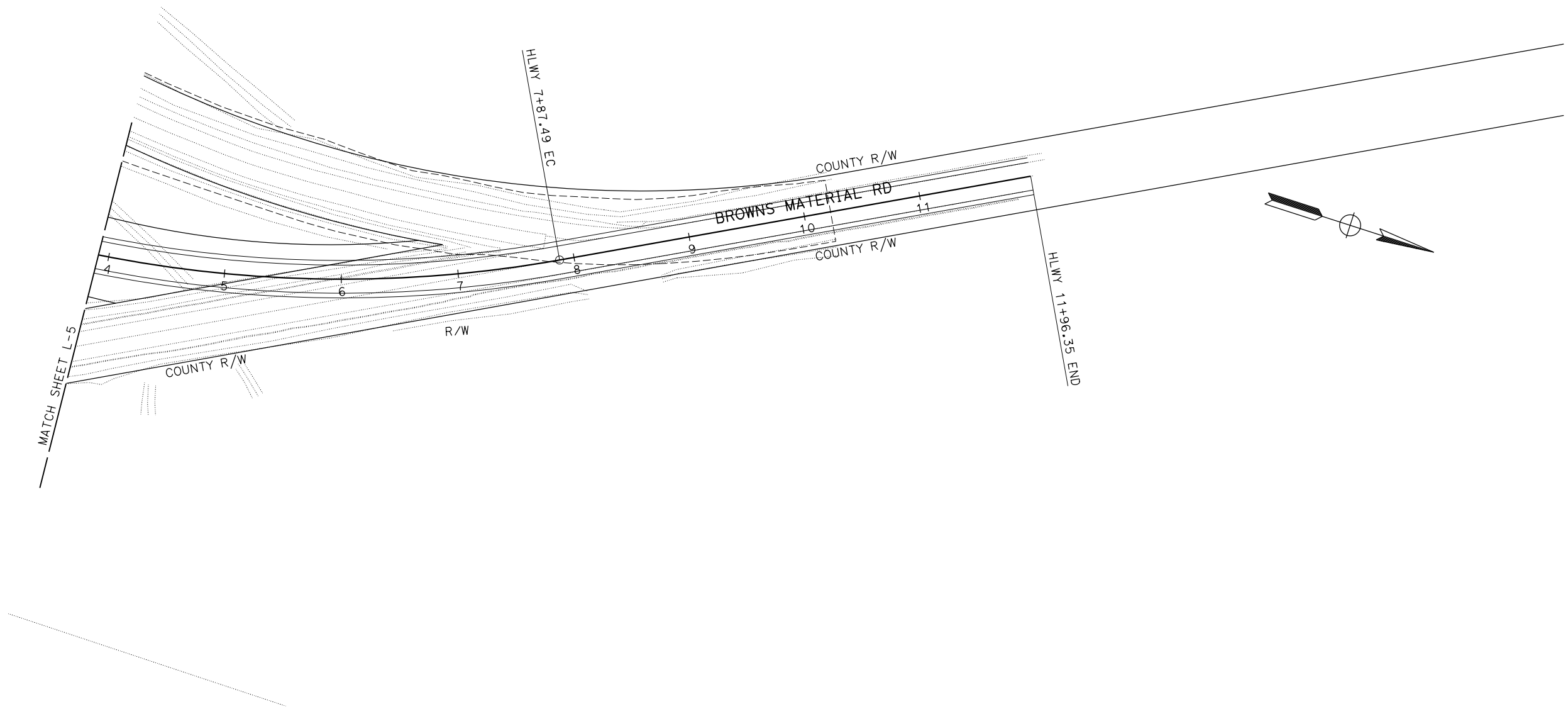
PLANS APPROVAL DATE

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SCALE: 1" =50'

LAYOUT

L-16

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY	CHECKED BY
HAISAM SOLIMAN	RICHARD DERBY

FUNCTIONAL SUPERVISOR: MARISSA NISHIKAWA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

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LAST REVISION: DATE PLOTTED => 16-FEB-2021; TIME PLOTTED => 15:43

BORDER LAST REVISED 7/2/2010	USERNAME => DGN FILE => 0612000176ea016.dgn	RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3	UNIT 1436	PROJECT NUMBER & PHASE	06200000531

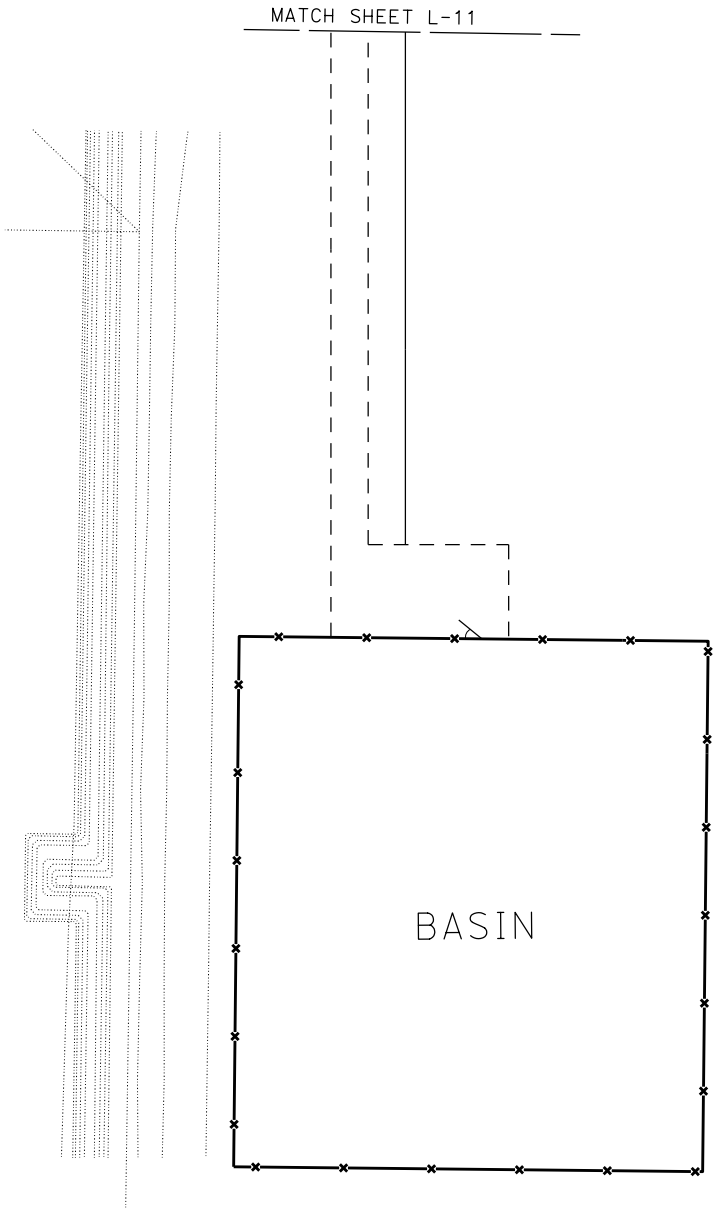
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REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA

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CALCULATED-DESIGNED BY	HAISAM SOLIMAN	REVISED BY	
CHECKED BY	RICHARD DERBY	DATE REVISED	

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FUNCTIONAL SUPERVISOR
MARISSA NISHIKAWA

SCALE: 1" =50'

LAYOUT
L-17

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PROJECT

PS&E COST ESTIMATE

EA: 06-442561 *EA: 06-442561 PS&E: 062000053* *Segment4C*

PS&E: 062000053 **District-County-Route:** 06-KER-46

PM: 26.5-29.9

Type of Estimate : SUMMARY OF PROJECT COST ESTIMATE

Program Code : 201.31

Project Limits :

Project Description:

Scope : Convert 2-lane Conv Hwy to 4-Lane Expressway

Alternative : 1

SUMMARY OF PROJECT COST ESTIMATE

	Current Year Cost	Escalated Cost
TOTAL ROADWAY COST	$ 28,080,700	$ 29,400,000
TOTAL STRUCTURES COST	$ -	$ -
SUBTOTAL CONSTRUCTION COST	$ 28,080,700	$ 29,400,000
TOTAL RIGHT OF WAY COST	$ 3,332,803	$ 3,500,000
TOTAL CAPITAL OUTLAY COSTS	$ 31,414,000	$ 32,900,000
PR/ED SUPPORT	$ -	$ -
PS&E SUPPORT	$ -	$ -
RIGHT OF WAY SUPPORT	$ -	$ -
CONSTRUCTION SUPPORT	$ -	$ -
TOTAL SUPPORT COST	$ -	$ -
TOTAL PROJECT COST	$ 31,450,000	$ 32,900,000

If Project has been programmed enter Programmed Amount

	Month	/ Year
Date of Estimate (Month/Year)	April	/ 2021
Estimated Construction Start (Month/Year)	April	/ 2023
Number of Working Days =	300	
Estimated Mid-Point of Construction (Month/Year)	June	/ 2024
Estimated Construction End (Month/Year)	December	/ 2024
Number of Plant Establishment Days		

Estimated Project Schedule

PID Approval	xx/xx/xxxx
PA/ED Approval	June 14, 2005
PS&E	January 27, 2022
RTL	July/01/2022
Begin Construction	April/2023/2023

Reviewed by District O.E. or Cost Estimate Certifier	Anton Kismetian	**4/12/2021**	(559) 832-0676
	Design Manager	**Date**	**Phone**
Approved by Project Manager	Gilberto Baca	**4/12/2021**	(559) 243-8425
	Project Manager	**Date**	**Phone**

I. ROADWAY ITEMS SUMMARY

	Section		Cost
1	**Earthwork**	$	1,841,000
2	**Pavement Structural Section**	$	12,877,500
3	**Drainage**	$	2,013,600
4	**Specialty Items**	$	233,000
5	**Environmental**	$	418,700
6	**Traffic Items**	$	2,552,000
7	**Detours**	$	-
8	**Minor Items**	$	498,400
9	**Roadway Mobilization**	$	2,043,500
10	**Supplemental Work**	$	1,580,800
11	**State Furnished**	$	594,400.00
12	**Time-Related Overhead**	$	875,000.00
13	**Roadway Contingency**	$	2,552,800.00
	TOTAL ROADWAY ITEMS	**$**	**28,080,700**

Estimate Prepared By :	Haisam Soliman	1/9/2021	559-243-3896
	Name and Title	Date	Phone
Estimate Reviewed By :	Richard Derby	1/7/2021	559-230-3114
	Name and Title	Date	Phone

By signing this estimate you are attesting that you have discussed your project with all functional units and have incorporated all their comments or have discussed with them why they will not be incorporated.

SECTION 1: EARTHWORK

Item code		Unit	Quantity		Unit Price ($)			Cost
190101	**Roadway Excavation**	**CY**	**90,800**	**x**	***20.00***	**=**	***$***	***1,816,000***
19010X	Roadway Excavation (Type X) ADL	CY		x		=	$	-
194001	Ditch Excavation	CY		x		=	$	-
19801X	**Imported Borrow**	**CY/TON**	**0**	**x**	**15.00**	**=**	**$**	**-**
192037	Structure Excavation (Retaining Wall)	CY		x		=	$	-
193013	Structure Backfill (Retaining Wall)	CY		x		=	$	-
193031	Pervious Backfill Material (Retaining Wall)	CY		x		=	$	-
16010X	**Clearing & Grubbing**	**LS/ACRE**	**1**	**x**	***25,000.00***	**=**	***$***	***25,000***
170101	Develop Water Supply	LS	0	x		=	$	-
19801X	Imported Borrow	CY/TON		x		=	$	-
210130	Duff	ACRE		x		=	$	-
XXXXXX	Some Item	Unit						

TOTAL EARTHWORK SECTION ITEMS	**$**	**1,841,000**

SECTION 2: PAVEMENT STRUCTURAL SECTION

Item code		Unit	Quantity		Unit Price ($)			Cost
401050	Jointed Plain Concrete Pavement	**CY**		**x**		**=**	**$**	**-**
400050	Continuously Reinforced Concrete Pavement	CY		x		=	$	-
404092	Seal Pavement Joint	LF		x		=	$	-
404093	Seal Isolation Joint	LF		x		=	$	-
413117	Seal Concrete Pavement Joint (Silicone)	LF		x		=	$	-
413118	Seal Pavement Joint (Asphalt Rubber)	LF		x		=	$	-
280010	Rapid Strength Concrete Base	CY		x		=	$	-
410095	Dowel Bar (Drill and Bond)	EA		x		=	$	-
390132	**Hot Mix Asphalt (Type A)**	**TON**	**49,930**	**x**	***90.00***	**=**	***$***	***4,493,700***
390137	**Rubberized Hot Mix Asphalt (Gap Graded)**	**TON**	**22,280**	**x**	**110.00**	**=**	**$**	**2,450,800**
39300X	Geosynthetic Pavement Interlayer (Type X)	SQYD		x		=	$	-
26020X	**Class 2 Aggregate Base**	**CY**	**87,166**	**x**	***55.00***	**=**	***$***	***4,794,130***
290201	Asphalt Treated Permeable Base	CY		x		=	$	-
250401	Class 4 Aggregate Subbase	CY		x		=	$	-
374002	Asphaltic Emulsion (Fog Seal Coat)	TON		x		=	$	-
397005	**Tack Coat**	**TON**	**140**	**x**	**150.00**	**=**	**$**	**21,000**
377501	Slurry Seal	TON		x		=	$	-
3750XX	Screenings (Type XX)	TON		x		=	$	-
374492	Asphaltic Emulsion (Polymer Modified)	TON		x		=	$	-
370001	Sand Cover (Seal)	TON		x		=	$	-
731530	Minor Concrete (Textured Paving)	CY		x		=	$	-
731502	Minor Concrete (Miscellaneous Construction)	**CY**	0	**x**	500.00	**=**	**$**	**-**
394076	Place Hot Mix Asphalt Dike (Type E)	LF	20,000	x	2.00	=	$	40,000
150771	Remove Asphalt Concrete Dike	LF		x		=	$	-
420201	Grind Existing Concrete Pavement	SQYD		x		=	$	-
150860	Remove Base and Surfacing	CY		x		=	$	-
390095	Replace Asphalt Concrete Surfacing	CY		x		=	$	-
15312X	Remove Concrete	LF/CY/LS		x		=	$	-
394090	**Place Hot Mix Asphalt (Miscellaneous Area)**	**SQYD**	**1,000**	**x**	**27.00**	**=**	**$**	**27,000**
153103	Cold Plane Asphalt Concrete Pavement	SQYD		x		=	$	-
846046	Shoulder Rumble Strip (HMA, X-In Indentations)	STA	300	x	35.00	=	$	10,500
413113	Repair Spalled Joints, Polyester Grout	SQYD		x		=	$	-
420102	Groove Existing Concrete Pavement	SQYD		x		=	$	-
390136	Minor Hot Mix Asphalt	TON	0	x		=	$	-
394095	Roadside Paving (Miscellaneous Areas)	SQYD		x		=	$	-
XXXXXX	SEG - Geogrid	SQYD	52,018	x	20.00	=	$	1,040,360

TOTAL PAVEMENT STRUCTURAL SECTION ITEMS	**$**	**12,877,500**

SECTION 3: DRAINAGE

Item code		Unit	Quantity		Unit Price ($)			Cost
15080X	Remove Culvert	LF	630	x	55.00	=	$	34,650
150668	Remove Flared End Section	EA	28	x	825.00	=	$	23,100
150820	Remove Inet	CY	0	x	1,000.00	=	$	-
15020X	Abandon Culvert	EA/LF		x		=	$	-
152430	Adjust Inlet	LF		x		=	$	-
155003	Cap Inlet	EA		x		=	$	-
510501	Minor Concrete	CY		x		=	$	-
510094	Structural concrete (Drainage Inlet)	CY	74	x	2,500.00	=	$	185,000
5105XX	Minor Concrete (Type XX)	CY		x		=	$	-
610121	36" Alternative Pipe Culvert (Type X)	LF	9,500	x	150.00	=	$	1,425,000
620100	18" Alternative Pipe culvert	LF	1,530	x	150.00	=	$	229,500
65XXXX	XX" Reinforced Concrete Pipe (Type X)	LF		x		=	$	-
6650XX	XX" Corrugated Steel Pipe (0.XXX" Thick)	LF		x		=	$	-
68XXXX	XX" Plastic Pipe (Edge Drain)	LF		x		=	$	-
69011X	XX" Corrugated Steel Pipe Downdrain (0.XXX" Thi	LF		x		=	$	-
70321X	XX" Corrugated Steel Pipe Inlet (0.XXX" Thick)	LF		x		=	$	-
70XXXX	XX" Corrugated Steel Pipe Riser (0.XXX" Thick)	LF		x		=	$	-
705315	24" Alternative Flared End Section	EA	0	x	900.00	=	$	-
705311	18" Alternative Flared End Section	EA	0	x	930.00	=	$	-
703233	Grated Line Drain	LF		x		=	$	-
72XXXX	Rock Slope Protection (Type and Method)	CY/TON	0	x	150.00	=	$	-
72901X	Rock Slope Protection Fabric (Class X)	SQYD	0	x	6.00	=	$	-
721420	Concrete (Ditch Lining)	CY		x		=	$	-
721430	Concrete (Channel Lining)	CY		x		=	$	-
750001	Miscellaneous Iron and Steel	LB	8,126	x	2.00	=	$	16,252
MISC	**Additional Drainage**	**LS**	**100,000**	**x**	**1.00**	**=**	**$**	**100,000**

TOTAL DRAINAGE ITEMS	**$**	**2,013,600**

SECTION 4: SPECIALTY ITEMS

Item code		Unit	Quantity		Unit Price ($)			Cost
080050	**Progress Schedule (Critical Path Method)**	LS	1	x	5,000.00	=	$	5,000
582001	Sound Wall (Masonry Block)	**SQFT**		**x**		**=**	**$**	**-**
510530	Minor Concrete (Wall)	CY		x		=	$	-
15325X	Remove Sound Wall	**LF**		**x**		**=**	**$**	**-**
070030	**Lead Compliance Plan**	**LS**	**1**	**x**	**2,000.00**	**=**	**$**	**2,000**
141120	Treated Wood Waste	LB		x		=	$	-
153221	Remove Concrete Barrier	LF		x		=	$	-
150662	Remove Metal Beam Guard Railing	LF		x		=	$	-
803030	Remove Fence	LF	10,560	x	2.50	=	$	26,400
800051	Fence (Type BW,METAL POST)	LF	15,840	x	2.50	=	$	39,600
80XXXX	XX" Chain Link Gate (Type CL-6)	EA		x		=	$	-
832001	Metal Beam Guard Railing	LF		x		=	$	-
839301	Single Thrie Beam Barrier	LF		x		=	$	-
839310	Double Thrie Beam Barrier	LF		x		=	$	-
839521	Cable Railing	LF		x		=	$	-
8395XX	Terminal System (Type CAT)	EA		x		=	$	-
839585	Alternative Flared Terminal System	EA		x		=	$	-
839584	Alternative In-line Terminal System	EA	0	x	3,300.00	=	$	-
4906XX	CIDH Concrete Piling (16" Diameter)	**LF**		x	45.00	**=**	**$**	**-**
839XXX	**Crash Cushion (Insert Type)**	**EA**	**4**	**x**	**40,000.00**	**=**	**$**	**160,000**
839701	**Concrete Barrier (Type 60)**	**LF**	**0**	**x**	**60.00**	**=**	**$**	**-**
520103	Bar Reinforced Steel (Retaining Wall)	LB	0	x	2.00	=	$	-
510060	Structural Concrete, Retaining Wall	CY	0	x	800.00	=	$	-
513553	Retaining Wall (Masonry Wall)	SQFT		x		=	$	-
839725	**Concrete Barrier (Type 60MC)**	**LF**	**0**	**x**	**90.00**	**=**	**$**	**-**
598001	Anti-Graffiti Coating	SQFT		x		=	$	-
203070	Rock Stain	SQFT		x		=	$	-
5136XX	Reinforced Concrete Crib Wall (Type X)	SQFT		x		=	$	-
83954X	Transition Railing (Type X)	EA		x		=	$	-
597601	Prepare and Stain Concrete	SQFT		x		=	$	-
839561	Rail Tensioning Assembly	EA		x		=	$	-
83958X	End Anchor Assembly (Type X)	EA		x		=	$	-
XXXXXX	Some Item	Unit		x		=	$	-

TOTAL SPECIALTY ITEMS	**$**	**233,000**

SECTION 5: ENVIRONMENTAL

5A - ENVIRONMENTAL MITIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost		
	Biological Mitigation	LS		x		=	$	-		
130670	Temporary Reinforced Silt Fence	LF		x		=	$	-		
141000	Temporary Fence (Type ESA)	LF		x		=	$	-		
								Subtotal Environmental Mitigation	*$*	-

5B - LANDSCAPE AND IRRIGATION

Item code		Unit	Quantity		Unit Price ($)			Cost		
20XXXX	Highway Planting	LS	0	x	14,500.00	=	$	-		
20XXXX	Irrigation System	LS		x		=	$	-		
204099	Plant Establishment Work	LS		x		=	$	-		
204101	Replacement Planting	LS	0	x	45,000.00	=	$	-		
20XXXX	Follow-up Landscape Project	LS		x		=	$	-		
150685	Remove Irrigation Facility	LS		x		=	$	-		
20XXXX	Maintain Existing (Irrigation or Planted Areas)	LS		x		=	$	-		
206400	Check and Test Existing Irrigation Facilities	LS		x		=	$	-		
21011X	Imported Topsoil (X)	CY/TON		x		=	$	-		
20XXXX	Rock Blanket, Rock Mulch, DG, Gravel Mulch	SQFT/SQYD		x		=	$	-		
200122	Weed Germination	SQYD		x		=	$	-		
208304	Water Meter	EA		x		=	$	-		
2087XX	XX" Conduit (Use for Irrigation x-overs)	LF		x		=	$	-		
20890X	Extend X" Conduit (Use for Extension of Irrigation x-overs)	LF		x		=	$	-		
								Subtotal Landscape and Irrigation	*$*	-

5C - EROSION CONTROL

Item code		Unit	Quantity		Unit Price ($)			Cost		
210010	Move In/Move Out (Erosion Control)	EA		x		=	$	-		
210350	Fiber Rolls	LF		x		=	$	-		
210360	Compost Sock	LF		x		=	$	-		
2102XX	Erosion Control	SQFT	0	x	0.5	=	$	-		
21025X	Bonded Fiber Matrix	SQFT/ACRE		x		=	$	-		
210300	Hydromulch	SQFT		x		=	$	-		
210420	Straw	SQFT		x		=	$	-		
210430	**Hydroseed**	**SQFT**	***773,700***	**x**	**0.05**	**=**	**$**	**38,685**		
210600	Compost	SQFT		x		=	$	-		
210630	Incorporate Materials	SQFT		x		=	$	-		
								Subtotal Erosion Control	*$*	*38,685*

5D - NPDES

Item code		Unit	Quantity		Unit Price ($)			Cost		
130300	**Prepare SWPPP**	**LS**	**1**	**x**	**10,000.00**	**=**	**$**	**10,000**		
130200	Prepare WPCP	LS		x		=	$	-		
130100	**Job Site Management**	**LS**	**1**	**x**	**40,000.00**	**=**	**$**	**40,000**		
130330	**Storm Water Annual Report**	**EA**	**4**	**x**	**2,000.00**	**=**	**$**	**8,000**		
130310	Rain Event Action Plan (REAP)	EA		x		=	$	-		
130320	Storm Water Sampling and Analysis Day	EA		x		=	$	-		
130520	Temporary Hydraulic Mulch	SQYD		x		=	$	200,000		
130550	Temporary Hydroseed	SQYD		x		=	$	-		
130505	Move-In/Move-Out (Temporary Erosion Control)	EA		x		=	$	-		
130640	Temporary Fiber Roll	LF		x		=	$	-		
130900	**Temporary Concrete Washout**	**LS**	**1**	**x**	**30,000.00**	**=**	**$**	**30,000**		
130710	**Temporary Construction Entrance**	**EA**	**4**	**x**	**2,500.00**	**=**	**$**	**10,000**		
130610	Temporary Check Dam	LF		x		=	$	-		
130620	**Temporary Drainage Inlet Protection**	**EA**	**28**	**x**	**250.00**	**=**	**$**	**7,000**		
130730	**Street Sweeping**	**LS**	**1**	**x**	**75,000.00**	**=**	**$**	**75,000**		
								Subtotal NPDES	*$*	*380,000*

								TOTAL ENVIRONMENTAL	**$**	**418,700**

Supplemental Work for NPDES

066595	**Water Pollution Control Maintenance Sharing***	**LS**	**1**	**x**	**1,500.00**	**=**	**$**	**1,500**		
066596	**Additional Water Pollution Control****	**LS**	**1**	**x**	**2,000.00**	**=**	**$**	**2,000**		
066597	Storm Water Sampling and Analysis***	LS	1	x	5,000.00	=	$	5,000		
MISC	**Lead Compliance Plan**	**LS**	**1**	**x**	**2,500.00**	**=**	**$**	**2,500**		
								Subtotal Supplemental Work for NDPS	*$*	*11,000*

*Applies to all SWPPPs and those WPCPs with sediment control or soil stabilization BMPs.

**Applies to both SWPPPs and WPCP projects.

*** Applies only to project with SWPPPs.

SECTION 6: TRAFFIC ITEMS

6A - Traffic Electrical

Item code		Unit	Quantity		Unit Price ($)			Cost
039436	**Traffic Count Station System**	**LS**	**1**	**x**	**60,000.00**	**=**	**$**	**60,000**
870700	**Flashing Beacon System**	**LS**	**0**	**x**	**60,000.00**	**=**	**$**	**-**
870200	Lighting System	LS	1	x	80,000.00	=	$	80,000
120200	Temporary Flashing Beacon	LS	1	x	40,000.00	=	$	40,000
86070X	Interconnection Conduit and Cable	LF/LS		x		=	$	-
5602XX	Furnish Sign Structure (Type X)	LB		x		=	$	-
5602XX	Install Sign Structure CMS	LS	0	x	0.00	=	$	-
498040	XX" CIDHC Pile (Sign Foundation)	LF		x		=	$	-
86080X	Inductive Loop Detectors	EA/LS		x		=	$	-
8609XX	Traffic Monitoring Station (Type X)	LS		x		=	$	-
15075X	Remove Sign Structure	EA/LS		x		=	$	-
151581	Reconstruct Sign Structure	EA		x		=	$	-
152641	Modify Sign Structure	EA		x		=	$	-
860090	Maintain Existing Traffic Management System Elements During Const	LS		x		=	$	-
86XXXX	Fiber Optic Conduit System	LS		x		=	$	-
XXXXX	Some Item	LS		x		=	$	-

Subtotal Traffic Electrical $ *180,000*

6B - Traffic Signing and Striping

Item code		Unit	Quantity		Unit Price ($)			Cost
566011	**Roadside Sign - One Post**	**EA**	**140**	**x**	**250.00**	**=**	**$**	**35,000**
566012	**Roadside Sign - Two Post**	**EA**	**60**	**x**	**300.00**	**=**	**$**	**18,000**
5602XX	**Furnish Sign**	**SQFT**	**2,600**	**x**	**28.00**	**=**	**$**	**72,800**
820860	**Install Sign (Saddle Bracket Method)**	**EA**	**20**	**x**	**250.00**	**=**	**$**	**5,000**
846030	**Remove Thermoplastic Traffic Stripe**	**LF**	**240,000**	**x**	**0.50**	**=**	**$**	**120,000**
810120	**Remove Pavement Marker**	**LF**	**6,400**	**x**	**1.00**	**=**	**$**	**6,400**
141103	**Remove Yellow ThermoPlastic Traffic Stripe (Hazardous Waste)**	**LF**	**110,000**	**x**	**0.50**	**=**	**$**	**55,000**
846035	**Remove Thermo-Plastic Painted Pavement Marking**	**SQFT**	**3,600**	**x**	**5.00**	**=**	**$**	**18,000**
150742	**Remove Roadside Sign**	**EA**	**51**	**x**	**110.00**	**=**	**$**	**5,610**
152320	**Reset Roadside Sign**	**EA**	**28**	**x**	**200.00**	**=**	**$**	**5,600**
152390	Relocate Roadside Sign	EA		x		=	$	-
82010X	**Delineator (Class 1)**	**EA**	**180**	**x**	**100.00**	**=**	**$**	**18,000**
840502	**Thermoplastic Traffic Stripe (Enhanced Wet Night Visibility)**	**LF**	**235,000**	**x**	**0.90**	**=**	**$**	**211,500**
846012	**Thermoplastic Crosswalk and Pavement Marking (Enhanced Wet**	**SQFT**	**5,000**	**x**	**5.00**	**=**	**$**	**25,000**
120090	**Treated Wood Waste**	**LBS**	**11,000**	**x**	**2.00**	**=**	**$**	**22,000**
820110	**Milepost Marker**	**EA**	**14**	**x**	**120.00**	**=**	**$**	**1,680**
820130	**Object Marker**	**EA**	**30**	**x**	**80.00**	**=**	**$**	**2,400**
120090	**Construction Area Signs**	**LS**	**14**	**x**	**500.00**	**=**	**$**	**7,000**
84XXXX	Permanent Pavement Delineation	LS	0	x	50,000.00	=	$	-

Subtotal Traffic Signing and Striping $ *628,990*

6C - Traffic Management Plan

Item code		Unit	Quantity		Unit Price ($)			Cost
12865X	**Portable Changeable Message Signs**	**EA**	**1**	**x**	**$ 60,000**	**=**	**$**	**60,000**

Subtotal Traffic Management Plan $ *60,000*

6C - Stage Construction and Traffic Handling

Item code		Unit	Quantity		Unit Price ($)			Cost
	Portable Vehicle Speed Sign system Stationary System	LS	1	x	60,000.00	=	$	60,000
	Portable Vehicle Speed Sign system Portable System	**LS**	**1**	**x**	**50,000.00**	**=**	**$**	**50,000**
120120	**Type III Barricade**	**EA**	**90**	**x**	**275.00**	**=**	**$**	**24,750**
129100	**Temporary Crash Cushion Module**	**EA**	**210**	**x**	**300.00**	**=**	**$**	**63,000**
120100	**Traffic Control System**	**LS**	**1**	**x**	**150,000.00**	**=**	**$**	**150,000**
129110	Temporary Crash Cushion	EA		x		=	$	-
129000	**Temporary Railing (Type K)**	**LF**	**70,000**	**x**	**15.00**	**=**	**$**	**1,050,000**
120152	**Temporary Pavement Marking (Tape)**	**SQFT**	**2,500**	**x**	**5.00**	**=**	**$**	**12,500**
120300	**Temporary Pavement Marker**	**EA**	**3,500**	**x**	**6.50**	**=**	**$**	**22,750**
120151	**Temporary Traffic Stripe (Tape)**	**LF**	**150,000**	**x**	**1.00**	**=**	**$**	**150,000**
82010X	Delineator (Class X)	EA		x		=	$	-
XXXXXX	Construction Area Sign	LS	1	x	100,000.00	=	$	100,000

Subtotal Stage Construction and Traffic Handling $ *1,683,000*

TOTAL TRAFFIC ITEMS **$ 2,552,000**

SECTION 7: DETOURS

Includes constructing, maintaining, and removal

Item code		Unit	Quantity		Unit Price ($)			Cost
190101	Roadway Excavation	CY	0	x		=	$	-
19801X	Imported Borrow	CY/TON	0	x		=	$	-
390132	Hot Mix Asphalt (Type A)	TON	0	x	90.00	=	$	-
26020X	Class 2 Aggregate Base	TON/CY	0	x		=	$	-
250401	Class 4 Aggregate Subbase	CY		x		=	$	-
130620	Temporary Drainage Inlet Protection	EA	0	x	500.00	=	$	-
129000	Temporary Railing (Type K)	LF	0	x		=	$	-
128601	Temporary Signal System	LS		x		=	$	-
120149	Temporary Pavement Marking (Paint)	SQFT	0	x		=	$	-
80010X	Temporary Fence (Type X)	LF		x		=	$	-
XXXXXX	Some Item	Unit		x		=	$	-

TOTAL DETOURS	**$**	**-**

SUBTOTAL SECTIONS 1 through 7	$	19,935,800

SECTION 8: MINOR ITEMS

8A - Americans with Disabilities Act Items						
	ADA Items		0.0%	$	-	
8B - Bike Path Items						
	Bike Path Items		0.0%	$	-	
8C - Other Minor Items						
	Other Minor Items		2.5%	$	498,395	
	Total of Section 1-7	$ 19,935,800	x 2.5%	= $	498,395	

TOTAL MINOR ITEMS	**$**	**498,400**

SECTIONS 9: MOBILIZATION

Item code							
999990	Total Section 1-8	$ 20,434,200	x	10%	= $	2,043,420	

TOTAL MOBILIZATION	**$**	**2,043,500**

SECTION 10: SUPPLEMENTAL WORK

Item code		Unit	Quantity		Unit Price ($)			Cost
066670	**Payment Adjustments For Price Index Fluctuations**	**LS**	**1**	**x**	**408,000.00**	**=**	**$**	**408,000**
066094	Value Analysis	LS		x		=	$	-
066070	Maintain Traffic	LS		x		=	$	-
066919	**Dispute Resolution Board**	**LS**	**1**	**x**	**15,000.00**	**=**	**$**	**15,000**
066921	Dispute Resolution Advisor	LS		x		=	$	-
066015	Federal Trainee Program	LS		x		=	$	-
066610	**Partnering**	**LS**	**1**	**x**	**30,000.00**	**=**	**$**	**30,000**
066204	Remove Rock and Debris	LS		x		=	$	-
066393	**HMA Smoothness Insentives**	**LS**	**1**	**x**	**95,000.00**	**=**	**$**	**95,000**
XXXXXX	Some Item	Unit		x		=	$	-
	*Cost of **NPDES** Supplemental Work specified in Section 5D*					=	$	11,000
	Total Section 1-8	$ 20,434,200			5%	=	$	1,021,710

TOTAL SUPPLEMENTAL WORK	**$**	**1,580,800**

SECTION 11: STATE FURNISHED MATERIALS AND EXPENSES

Item code		Unit	Quantity		Unit Price ($)		Cost
066105	**Resident Engineers Office**	**LS**	**1**	**x**	**280,000.00**	**=**	**$280,000**
066063	**Traffic Management Plan - Public Information**	**LS**	**1**	**x**	**10,000.00**	**=**	**$10,000**
066901	Water Expenses	LS		x		=	$0
8609XX	Traffic Monitoring Station (X)	LS		x		=	$0
066841	Traffic Controller Assembly	LS		x		=	$0
066840	Traffic Signal Controller Assembly	LS		x		=	$0
066062	**COZEEP Contract**	**LS**	**1**	**x**	**100,000.00**	**=**	**$100,000**
066838	Reflective Numbers and Edge Sealer	LS		x		=	$0
066065	Tow Truck Service Patrol	LS		x		=	$0
066916	Annual Construction General Permit Fee	LS		x		=	$0
XXXXXX	Some Item	Unit		x		=	$0

Total Section 1-8 $ 20,434,200 1% = $ 204,342

TOTAL STATE FURNISHED **$594,400**

SECTION 12: TIME-RELATED OVERHEAD

Total of Roadway and Structures Contract Items excluding Mobilization $20,434,200 (used to calculate TRO)

Total Construction Cost (excluding TRO and Contingency) $24,652,900 **(used to check if project is greater than $5 million excluding contingency)**

Estiamted Time-Releated Overhead (TRO) Percentage (0% to 10%) = **10%**

Item code		Unit	Quantity		Unit Price ($)		Cost
070018	**Time-Related Overhead**	**WD**	**300**	**X**	**$2,000**	**=**	**$2,043,500**

TOTAL TIME-RELATED OVERHEAD **$875,000**

Note: If the building portion of the project is greater than 50% of the total project cost, then TRO is not included.

SECTION 13: ROADWAY CONTINGENCY

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Total Section 1-12 $ 25,527,900 x **10%** = $2,552,790

TOTAL CONTINGENCY **$2,552,800**

II. STRUCTURE ITEMS

	Bridge 1		Bridge 2		
DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Bridge Name	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Bridge Number	50-197		50-19x		57-XXX
Structure Type	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	50 LF		0 LF		0 LF
Total Bridge Length (Feet)	211 LF		190 LF		40 LF
Total Area (Square Feet)	10570 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	9 LF		6 LF		0 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$0		$655		$750
COST OF EACH	**$0**		**$0**		**$0**

DATE OF ESTIMATE	00/00/00		00/00/00		00/00/00
Name	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Bridge Number	57-XXX		57-XXX		57-XXX
Structure Type	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Width (Feet) [out to out]	0 LF		0 LF		0 LF
Total Length (Feet)	0 LF		0 LF		0 LF
Total Area (Square Feet)	0 SQFT		0 SQFT		0 SQFT
Structure Depth (Feet)	0 LF		0 LF		0 LF
Footing Type (pile or spread)	xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx		xxxxxxxxxxxxxxxxxx
Cost Per Square Foot	$100		$0		$0
COST OF EACH	**$0**		**$0**		**$0**

TOTAL COST OF BRIDGES	**$0**
TOTAL COST OF BUILDINGS	**$0**

Structures Mobilization Percentage 0% **$0**

Recommended Contingency: (Pre-PSR 30%-50%, PSR 25%, Draft PR 20%, PR 15%, after PR approval 10%, Final PS&E 5%)

Structures Contingency Percentage 0% **$0**

TOTAL COST OF STRUCTURES $0

Estimate Prepared By: _____ _____

XXXXXXXXXXXXXXXX ------ Division of Structures Date

EA: 06-442561 PS&E: 062000053

III. RIGHT OF WAY

Fill in all of the available information from the Right of Way data sheet.

A)	A1)	Acquisition, including Excess Land Purchases, Damages & Goodwill, Fees	$	1,738,784
	A2)	SB-1210	$	0
B)		Acquisition of Offsite Mitigation	$	0
C)	C1)	Utility Relocation (State Share)	$	1,564,600
	C2)	Potholing (Design Phase)	$	0
D)		Railroad Acquisition	$	0
E)		Clearance / Demolition	$	0
F)		Relocation Assistance (RAP and/or Last Resort Housing Costs)	$	0
G)		Title and Escrow	$	29,419
H)		Environmental Review	$	0
I)		Condemnation Settlements 0%	$	0
J)		Design Appreciation Factor 0%	$	0
K)		Utility Relocation (Construction Cost)	$	0

L)	**TOTAL RIGHT OF WAY ESTIMATE**	**$3,332,803**
M)	**TOTAL R/W ESTIMATE: Escalated (2020)**	**$3,500,000**
N)	**RIGHT OF WAY SUPPORT**	**$141,000**

Support Cost Estimate Prepared By		Project Coordinator[1]	Phone
Utility Estimate Prepared By		Utiliy Coordinator[2]	Phone
R/W Acquistion Estimate Prepared By	Javier Nunez	Right of Way Estimator[3]	209-948-7852 Phone

Note: Items G & H applied to items A + B

[1] When estimate has Support Costs only [2] When estimate has Utility Relocation [3] When R/W Acquisition is required

NEPA/CEQA RE-VALIDATION FORM

DIST-CO-RTE: 06 - KER - 046
PM/PM: 26.400/29.900
EA or Fed-Aid Project No.: 06-44256_ / 0620000053
Other Project No.(specify):
Project Title: SR 46 GAP CLOSURE SEGMENT 4C
Environmental Approval Type: Routine EA / IS
Date Approved: 2/8/2021
Reason for Consultation (23 CFR 771.129): ☐ Project proceeding to next major federal approval ☒ Change in scope, setting, effects, mitigation measures, requirements ☐ 3-year timeline (EIS only) ☐ N/A (Re-Validation for CEQA only)
Description of Changed Conditions: This reevaluation is for Kern 46 Segment 4C project PM 26.4/29.8. The change in scope requires the addition of a drainage basin at Parcel #87981 (former APN 069-111-25) This parcel was included with the previous ROW requirements; however, the area and location of

NEPA CONCLUSION - VALIDITY

Based on an examination of the changed conditions and supporting information: (*Check ONE of the three statements below, regarding the validity of the original document/determination (23 CFR 771.129). If document is no longer valid, indicate whether additional public review is warranted and whether the type of environmental document will be elevated.)*

☐ **The original environmental document or CE remains valid. No further documentation will be prepared.**

☒ **The original environmental document or CE is in need of updating; further documentation has been prepared and ☒ is included on the continuation sheet(s) or ☐ is attached. With additional documentation, the original ED or CE remains valid.**

Additional public review is warranted (23 CFR 771.111(h)(3)) ☐ **Yes** ☒ **No**

☐ **The original document or CE is no longer valid.**

Additional public review is warranted (23 CFR 771.111(h)(3)) ☐ **Yes** ☐ **No**

Supplemental environmental document is needed ☐ **Yes** ☐ **No**

New environmental document is needed ☐ **Yes** ☐ **No** **(If "Yes," specify type:___)**

CONCURRENCE WITH NEPA CONCLUSION

I concur with the NEPA conclusion above.

J William "Trais" Norris, AAA — 2/10/2021

Signature: Environmental Branch Chief — Date

Millanto Baca — 2/10/2021

Signature: Project Manager/DLAE — Date

ATTACHMENT E

NEPA/CEQA RE-VALIDATION FORM

CEQA CONCLUSION (Only mandated for projects on the State Highway System)
Based on an examination of the changed conditions and supporting information, the following conclusion has been reached regarding appropriate CEQA documentation: *(Check ONE of the five statements below, indicating whether any additional documentation will be prepared, and if so, what kind. If additional documentation is prepared, attach a copy of this signed form and any continuation sheets.)*

☐ **Original document remains valid. No further documentation is necessary.**

☒ **Only minor technical changes or additions to the previous document are necessary.**
☐ **An addendum has been or will be prepared and is** ☒ **included in the continuation sheets or** ☐ **will be attached. It need not be circulated for public review.** ***(CEQA Guidelines, §15164)***

☐ **Changes are substantial, but only minor additions or changes are necessary to make the previous document adequate. A Supplemental environmental document will be prepared, and it will be circulated for public review.** ***(CEQA Guidelines, §15163)***

☐ **Changes are substantial, and major revisions to the current document are necessary. A Subsequent environmental document will be prepared, and it will be circulated for public review.** ***(CEQA Guidelines, §15162)***
(Specify type of subsequent document, e.g., Subsequent FEIR):

☐ **The CE is no longer valid. New CE is needed:** ☐ **Yes** ☐ **No**

CONCURRENCE WITH CEQA CONCLUSION
I concur with the CEQA conclusion above.

J William "Trais" Norris, III — 2/10/2021
Signature: Environmental Branch Chief — Date

Millanto Baca — 2/10/2021
Signature: Project Manager/DLAE — Date

NEPA/CEQA RE-VALIDATION FORM

CONTINUATION SHEET

Address only changes or new information since approval of the original document and only those areas that are applicable. Use the list below as section headings as they apply to the project change(s). Use as much or as little space as needed to adequately address the project change(s) and the associated impacts, minimization, avoidance and/or mitigation measures, if any.

Changes in project design, e.g., scope change; new alternative; change in project alignment.

This revalidation is for Kern 46 Segment 4C project post mile 26.4/29.8. The change in scope requires the addition of a drainage basin at Parcel #87981 (former APN 069-111-25) This parcel was included with the previous R/W requirements; however, the area and location of acquisition on the parcel changed.

The new location for the basin is located at

Change in environmental setting, e.g., new development affecting traffic or air quality.

Change in environmental circumstances, e.g., new law or regulation; change in the status of a listed species.

Change in environmental impacts of the project, e.g., new type of impact, or a change in the magnitude of an existing impact.

Change to avoidance, minimization, and/or mitigation measures since the environmental document was approved.

Change to environmental commitments since the environmental document was approved, e.g., the addition of new conditions in permits or approvals. When this applies, append a revised Environmental Commitments Record (ECR) as one of the Continuation Sheets.

Other Information

Biology: Based on previous surveys and studies, it is anticipated that change in scope to the project will not result in an increase impact to any special status species or their habitat. No U.S. Army Corp of Engineers (USACE) , Regional Water Quality Control Board (RWQCB) or California Department of Fish and Wildlife (CDFW) jurisdictional waterways will be affected by the project.

No additional compensatory mitigation is proposed. Biology Memo 1/6/2021

Cultural: Has determined a Finding of No Historic Properties Affected is appropriate for this undertaking because there is no historic properties within the revised APE. Supplemental HSPR 2/8/2021.

Hazardous Waste: Excess soils maybe generated from this project, therefore, a soil study maybe required if soil generated by the project cannot be reused within the project limits. Approximately 150,000cubic yards of soil will be excavated, but no excess soil is anticipated. A

lead compliance plan (LCP) is required for this project. The estimated cost of the LCP is $3,000. Hazardous Waste Memo 1/14/2021

Paleontology: The project area and proposed basin are underlain by Recent-age sediments of low paleontological potential. Excavation of the basin will impact the resource; however, due to the low potential, scientifically significant fossils are unlikely to be encountered; therefore, no Standard Special Provisions (SSPs) are required. Paleontological Identification Report-Environmental Reevaluation 1/13/2021

STATE OF CALIFORNIA CALIFORNIA STATE TRANSPORTATION AGENCY

Memorandum

To: Gilberto Baca
Fresno

Attn: Haisam Soliman
Fresno
Marissa Nishikawa
Fresno

From: **Department of Transportation**
Division of Right of Way Central Region

Date: 4/8/2021

File: **CD** 06 **EA** 442560 **Alt** Rev1
Co KER **RTE** 46

DESCRIPTION:
Convert the 2-lane conventional highway to a 4-lane expressway.

Subject: RIGHT OF WAY DATA SHEET

We have completed an estimate of the right of way costs for the above-referenced project based on the Right of Way Data Sheet Request Form dated 4/6/2021

The following assumptions and limiting conditions were identified:

Parcels

Values are based on appraisals previously completed as well as previous estimates. Values were applied to the areas shown on the current appraisal maps. No cost has been associated with the Permits to Enter and Construct in that these are proposed to perpetuate several existing driveway road approaches, and if the property owner is not willing to provide the permission, the road approaches will not be constructed. Condemnation will not be pursued for the PTE&C sub-parcels. Included in the total acquisition cost is an additional estimated $1,000,000 for “out of pocket expense” to be paid to Chevron for costs incurred over the life of the project and agreed to by a former project manager. The $1,000,000 has been added as a part of damages and has not been adjusted with a contingency or escalation factor.

Utility

Project engineer states that potholing and utility relocation will be necessary. PG&E has electric distribution poles installed via easement from STA 34 to STA 53 which would be 100% State Liability and an easement running north/south to the east of Browns Material Road for PGE electric Transmission poles which would be 100% State Liability. From Station 55 to 60 and from Station 139+88 to 182 +52, these PG&E distribution poles will be relocated within State Right of Way and the assumed liability is 50 State liability/50 Owner liability as they may be installed via unrecorded easement, or franchise right via Freeway master agreement. PG&E distribution poles from STA 113+46 to 139+88 will be relocated into an easement purchased on Aera property, outside of State Right of way. The assumed liability for these poles is 50/50 as they may be installed via unrecorded easement or franchise via Freeway Master Contract. Frontier is assumed to be currently installed via State Permit and the cost of their relocation is assumed to be 100% Owner liability as there is no existing Master Contract between Caltrans and Frontier. From PM 28.5 to 29.0 and PM 29.0/29.5 the proposed Frontier relocation will require to go from existing underground facilities to aerial via joint poles with PG&E.

Right of Way Lead Time will require a minimum 18 months after we receive Certified Appraisal Maps and/or Utility Conflict Plans, obtained necessary environmental clearance and applicable freeway agreements have been approved.

ATTACHMENT F

David Sherman

Recommended for approval by:

DAVID SHERMAN
Senior Right of Way Agent
(559)445-6225

EA: 06-442560 ALT: Rev1

General Description of R/W and Excess Lands Required (zoning, use, major improvements, critical or sensitive parcels, etc.):

The project has eleven parcels (further divided into multiple sub-parcels) that are identified on the Appraisal Maps. Access control exists on the westerly parcels, and as a part of this project, existing access control will move from the existing right of way line to the proposed right of way line. The westerly parcels are undeveloped ag land, the central parcels are part of developed oil fields, and the easterly parcels are commercially developed parcels at the outskirts of the community of Lost Hills. Only one minor fee acquisition is required from the oil field properties, the remaining acquisitions being Permits to Enter and Construct from Chevron and Aera Energy for perpetuation of driveway road approaches.

General Description of Utility Involvement:

This project is located on Route 46 in Lost Hills, CA from PM 26.4 to 29.8. The project proposes to construct from a 2 lane conventional highway to a 4 lane expressway from the intersection of Browns Material Road to Farnsworth Avenue. Utility involvement will require relocating existing PG&E power poles into an easement outside of State Right of Way and also into areas within existing State Right of Way. Additionally, Frontier's existing underground line in certain areas will require go to joint overhead with PG&E poles.

General Description of Railroad Involvement:

No railroad facilities will be affected.

Right Of Way Cost Estimate	Current Year 2021	Contingency Rate 25%	Escalation Rate 5%	Escalated Year 2022
Acquisition:	$1,738,784	25%	5%	**$1,825,723**
Mitigation:	$0	25%	5%	**$0**
State Share of Utilities:	$1,564,600	25%	5%	**$1,642,830**
Expert Witness:	$0	25%	5%	**$0**
Relocation Assistance:	$0	25%	5%	**$0**
Demolition and Clearance:	$0	25%	5%	**$0**
Title and Escrow:	$29,419	25%	5%	**$30,890**
Ad Signs:	$0	25%	5%	**$0**
Total Current Value:	$3,332,803			**$3,499,443**

If RW Cost Est fields are blank, Costs = $0

NOTE: above estimate includes railroad engineering in the amount of: $0.00

Estimated Construction Contract Work (CCW): 0 R/W LEAD TIME/Mo. 18

Estimated Pothole Date: 4/7/2021

Cost Break Down	
Pot Hole	243,680
# Pot Holes	80
Mitigation	
Land	0
Bank	0
Permit Fees	0

Parcel Area

Total R/W Required:	14.03
Total Excess Area:	

Parcel Data

# of Parcel Type X:	0	
# of Parcel Type A: less than $10,000 non-complex	5	
# of Parcel Type B: more than $10,000 non-complex	3	
# of Parcel Type C: complex, special valuation	3	
# of Parcel Type D: most complex/time consuming	0	# of Duals Needed: 0
Totals:	11	**Totals:** 0

# of Excess Parcels: 0

Misc R/W Work

# of RAP Displacements:	0
# of Clearance/Demos:	0
# of Const Permits:	0
# of Condemnations:	0

RR Involvement

Railroad Facilities or Right of Way Affected?	NA
Const/Maint Agreement:	NA
Service Contract Count:	0
Right of Entry:	NA
Clauses:	NA
Estimated Lead-time:	None

Utilities

8 Companies to be potholed

10 Companies for Verification

3 Companies for Utility Relocations

JUA/CCUAs are not needed

Is there a significant effect on assessed valuation: No

Were any previously unidentified sites with hazardous waste or material found: No

Are RAP displacements required: No

# of single family: 0 # of muliti-family: 0 # of business/nonprofit: 0 # of farms: 0

Sufficient replacement housing will be available without last resort housing:

Are material borrow or disposal sites required: No

Are there potential relinquishments or abandonments: No

Are there any existing or potential airspace sites: No

Are environmental mitigation parcels required: No

Data for evaluation provided by:

Estimator:	Nick Dumas	4/6/2021
Railroad Liaison Agent:	Sandra Sifuentes	4/6/2021
Utility Relocation Coordinator:	Anthony Agsaulio	4/7/2021

I have personally reviewed this Right of Way Sheet and all supporting information. I find this Data Sheet complete and current, subject to the limiting conditions set forth.



NICHOLAS G. DUMAS
Office Chief, Central Region Right of Way

Date
ENTERED PMCS 4/7/2021
BY: Erika Graham

Mitigation and Compliance Cost Estimate (MCCE)

PART 1 - PROJECT INFORMATION

DIST-CO-RTE: 06 - KER - 046 **PM/PM:** 26.400/29.800
EA/Project Number: 06-44256_ / 0620000053
Project Name: SR 46 GAP CLOSURE SEGMENT 4C
Form Completed by: Trais Norris
Project Manager: BACA, GILBERTO **Phone:**
Date: 2/8/2021
MCCE Phase prepared for: PS&E

PART 2 - ENVIRONMENTAL COMMITMENTS FOR PERMANENT IMPACTS

Environmental Commitments for Alternative:

Commitment	Design $	FY	Ac/Crd	ROW $ Planned	FY	ROW $ Actual	Pd	Construction $	FY
Biological									
Pre-Construction Monitoring	$111,574	22/23					☐		
Construction Monitoring	$186,483	22/23					☐		
WEAT Training	$24,000	22/23					☐		

PART 3 - PERMITS AND AGREEMENTS

Permit/Agreement		ROW $ Planned	FY	ROW $ Actual	Pd	Construction $	FY
TOTAL	$322,057	$0.00					

Approved by:

Trais Norris	J William "Trais" Norris, AIA	2/8/2021
Environmental Branch Chief (Print Name)	Signature	Date

If Right of Way Capital is needed:

Sara Blum	Sara Blum	2/8/21
Right-of-Way Office Chief (Print Name)	Signature	Date

If cultural and biology mitigation totals more than $500,000:

Environmental Office Chief (Print Name)	Signature	Date

Submitted to PM on:_____ Initial___

Comments (explanation and risk management plan attached)

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

Serious drought.
Help save water!

To: BRUCE DE TERRA
Division Chief
Transportation Planning

Date: September 13, 2017

File: 06-Ker-46-31.5/33.2
EA 06-442541
20.xx.710.870
EFIS: 0612000175

From: SHAHIN MANSOUR
Design Senior
Central Region Design IV
Project Development

Subject: **SUPPLEMENTAL PROJECT REPORT**

This memorandum serves as a supplement to the approved supplemental PR for the above referenced project, originally signed on May 11, 2015 (Attachment A). This project proposes to widen the existing 2-lane conventional highway to 4 lanes and modify the ROUTE 5/46 interchange. The original project concept has not changed.

Due to potential delays for the condemnation process for two separate parcels, the project limits were reduced to eliminate the need for these parcels at this time. The time line for requesting funds for this project was critical as the majority of construction capital is from the TCRP program. With the passage of SB-1, the TCRP program was set to expire at the end of the 2016/17 FY. The last opportunity to request TCRP funding was at the June 2017 CTC meeting,

The project limits were reduced from PM 30.5/33.5 to PM 31.5/33.2. The one mile segment to the west will be added to the Segment 4B project (EA 06-44255) which is scheduled to begin the design phase in approximately one year. The 0.3 mile segment to the east is not critical at this time and can be included in a future widening project.

The capital construction cost for this project was estimated to be $27,490,000 and $8,992,000 for right of way. This project is funded using STIP, DEMO and TCRP funds in the 2016/17 FY.

The project was RTL on June 5, 2017 and is scheduled to Advertise in September 2017.

The purpose of this Supplemental PR is to document the change in the project limits and update the cost and schedule of the project.

ATTACHMENT G

Environmental Document

Environmental clearance was obtained through the preparation of the NEPA/CEQA Re-Validation Form, pursuant to regulations of the FHWA National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The NEPA/CEQA Re-Validation form was approved on March 30, 2017.

The Current Project Schedule:

Milestone	Month/Year
PA&ED	06/14/2005
District PS&E	06/03/2016
R/W Certification	06/01/2017
Ready to List	06/05/2017
Award	12/04/2017
CCA	08/15/2020

District Contacts:

Neil Bretz	Project Manager	(559) 243-3465
Shahin Mansour	Design Senior	(559) 230-3114
Pete Petrakis	Project Engineer	(559) 230-3117
Haisam Soliman	Design Engineer	(559) 243-8025

This Supplemental PR has been prepared under the direction of the following Registered Civil Engineer. The registered civil engineer attests to the technical information contained herein and engineering data upon which recommendation, conclusions, and decisions are based.

Pete Petrakis
REGISTERED CIVIL ENGINEER

9-13-2017
DATE



06-Ker-46-31.5/33.2
06-442541

Recommended for Approval by:

NEIL BRETZ
Project Manager

9/14/17
Date

Approved by:

SHARRI BENDER EHLERT
District 06 Director

9/22/2017
Date

List of Attachments:

A. Approved Supplemental Project Report
B. Title Sheet
C. Engineer's Estimate BEES

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

Serious drought.
Help save water!

To: SHERRI BENDER EHLERT
District Director
District 6-Central Region

Date: April 8, 2015

File: 06-Ker-46-30.5/33.5
06-442541
0612000175

From: DEPARTMENT OF TRANSPORTATION
Central region-Project Development
Design IV-Branch B

Subject: **Supplemental Project Report**

This memorandum serves as a supplement to the approved Project Report for the Kern 46 project EA 442500 approved on June 14, 2005. The original Project Report proposed to convert the 2-lane conventional highway to a 4-lane expressway from PM 7.30 to 29.70 and a 4-lane conventional highway from PM 29.70 to PM 33.50. Ultimately, this project ended being split into three separate projects in order to be programmed and funded in the STIP, RIP, IIP, and TCRP programs.

1. PROJECT LIMITS

The parent EA 442500 was divided into the following segments and EA:

EA 442521-PM 6.8/19.8

From 0.5 miles west of Keck's Road to 0.7 miles west of Route 46/33intersection.

EA 442531 –PM 19.3/27.5

From 1.2 miles west of the Route 46/33 intersection to Browns Material Road.

EA 442511-PM 27.5/33.5

From Browns Material Road to 0.8 miles east of the I-5/Route 46 interchange.

ATTACHMENT A

The first and second segments listed above have been constructed. Due to the high cost of the right-of-way for EA 442511, the PDT has recommended that the third segment limits be reduced. Therefore, the segment would be split into EA 442541 and 442551with the former beginning east of the town of Lost Hills at PM 30.5 and ending east of the I-5/Route 46 interchange at PM 33.5. The limits of the remaining segment (EA 442551) would be between PM 27.5 and 30.5.

2. PROJECT DESCRIPTION

The project proposes to widen the 2-lane conventional highway to a 4-lane conventional highway between PM 30.5 to 33.5 of State Route 46 in Kern County. The median between the eastbound and westbound lanes will vary between 22 feet and 32 feet. Within the business district at the I-5 interchange, two new county road connections will be constructed and then relinquished to the county. Also, two loop ramps are being added to the I-5/Route 46 interchange to improve traffic operations and increase safety.

3. PROJECT UPDATES

Traffic

The accident history for the most recent available three-year study period for the mainline (April 1, 2008 to March 31, 2011) is provided below. As indicated in the table, the Fatal and Fatal +Injury rates were lower than the statewide average. However, the Total Accident Rate was higher than the statewide average for similar roadways with comparable traffic volumes.

Table 1 Accident History for Mainline Kern-46

COLLISION DATA (APRIL 1, 2008 TO MARCH 31, 2011)									
Post Miles	Total Number of Accidents	Number Persons Killed	Number Persons Injured	**Actual Accident Rate (MVM)**			**Average Accident Rate (MVM)**		
				F	F+I	Total	F	F+I	Total
30.5 TO 33.5	51	0	7	0.00	0.21	1.55	0.028	0.41	0.92

The accident history for the both westbound and eastbound on/off-ramps at I-5 for the most recent available three-year study period April 1, 2009 to March 21, 2012 is provided below.

Table 2 Accident History for Ker-46/I-5 Interchange Ramps

Ramps (April 1, 2009 to March 21, 2012)									
RAMPS	Total Number of Accidents	Number Persons Killed	Number Persons Injured	Actual (MVM)			Average(MVM)		
				Fatal	F+I	Total	Fatal	F+I	Total
NB On-Ramp	4	0	0	0.00	0.00	1.03	0.002	0.09	0.33
NB Off-Ramp	10	0	3	0.00	0.41	1.36	0.005	0.19	0.73
SB On-Ramp	0	0	0	0.00	0.00	0.00	0.002	0.09	0.33
SB Off- Ramp	6	0	3	0.00	0.45	0.89	0.005	0.19	0.73

Levels of Service (LOS)

The Route 46/I-5 interchange is currently a spread diamond with Route 46 having one lane in each direction. The intersections with both the northbound and southbound off-ramps are signalized. The LOS were calculated based on 2019 and 2039 projected volumes. Three alternatives are analyzed and discussed as follows:

No Build

As shown in the following table, the SR 46/I-5 ramp intersections would perform at LOS D or better in the construction year of 2019, and deteriorate to LOS E by the year 2039.

Diamond Interchange:

The SR 46/I-5 ramp intersections would perform at LOS D or better in 2039. Due to high percentage of trucks, dual left turn lanes are recommended for movements from northbound to westbound, eastbound to northbound, and westbound to southbound

Partial Cloverleaf interchange:

Constructing eastbound and westbound loop ramps would eliminate left turn movements on SR46 within the I-5 interchange. A partial cloverleaf interchange would provide the best level of service (LOS C) for the design year.

Table 3 I-5 Mainline Analysis by Alternative

Segment	2019			2039		
	No Build AM/PM	Diamond AM/PM	Cloverleaf AM/PM	No Build AM/PM	Diamond AM/PM	Cloverleaf AM/PM
I-5 SB north of Rte 46	A / A	A / A	A / A	A / B	A / B	A / B
I-5 NB north of Rte 46	A / B	A / B	A / B	A / C	A / C	A / C
I-5 NB south of Rte 46	A / B	A / B	A / B	A / C	A / C	A / C
I-5 SB south of Rte 46	A / B	A / B	A / B	A / C	A / C	A / C

Roadside Design

The Traffic Department has recommended that the Aloma Street/Route 46 intersection exclude left turning movements out of Aloma St. This will necessitate constructing new county road connections between Aloma Street and Warren Drive to circulate the local traffic to the signalized Warren Avenue intersection. The new road connections would then be relinquished to Kern County.

This project will create a Type L-9, partial cloverleaf interchange with a new northbound loop on-ramp in the southeast quadrant and a southbound loop on-ramp in the northwest quadrant of the interchange (see Attachment C.) This interchange will connect to existing Route 46. The southbound and northbound off-ramps will be realigned around the new loops. A traffic signal will be installed at both northbound and southbound off-ramp intersections. The building of loop ramps will reduce the size and cost of the I-5 structure by eliminating the left turns.

Right of Way

An updated Right of Way Data Sheet has been prepared for this project phase. The Data Sheet was approved on February 13, 2015.

Environmental

Environmental clearance was obtained through the preparation of the NEPA/CEQA Revalidation Form, pursuant to regulations of the FHWA National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The NEPA/CEQA Re-Validation Form was approved on December 19, 2014.

Project Estimate (Escalated)

Roadway Costs	$16,895,600
Structure Costs	$ 7,107,000
Right of Way Costs	$ 9,126,400
Total	$33,129,000

PROGRAMMING

EA 44254 of the Kern 46 project was programmed in the 2012 STIP Cycle for PS&E, R/W and Construction phase as shown in the existing funding table. The proposed funding table shows the funding need of $11,733,000 over the existing programmed amount. The $11,733,000 will be funded from the available DEMO and TCRP funds for the Kern 46 Corridor.

Existing Funding (CTIP)

Project Cost Component	Fiscal Years						Total
	PRIOR	13/14	14/15	15/16	16/17	17/18	
PA&ED							
PS&E	4,030			400			4,430
R/W Support	1,500						1,500
Const.Support				3,350			3,350
R/W Capital	4,500						4,500
Const. Capital				17,500			17,500
Total	10,030			21,250			31,280

Funding Source

Project Cost Component	Fiscal Years						Total
	PRIOR	13/14	14/15	15/16	16/17	17/18	
RIP	2,180			4,100			6,280
IIP				400			400
DEMO	7,850			16,750			24,600
							31,280

Proposed Funding (CTIP)

Project Cost Component	Fiscal Years						Total
	PRIOR	13/14	14/15	15/16	16/17	17/18	
PA&ED							
PS&E	4,030			400			4,430
R/W Support	1,500						1,500
Const.Support					3,950		3,950
R/W Capital	4,500			4,630			9,130
Const. Capital					24,003		24,003
Total	10,030			5,030	27,953		43,013

Funding Source

Project Cost Component	Fiscal Years						Total
	PRIOR	13/14	14/15	15/16	16/17	17/18	
RIP	2,180				4,100		6,280
IIP				400			400
DEMO	7,850			4,492	22,362		34,704
TCRP				138	1,491		1629
	10,030			5,030	27,953		43,013

Project Schedule

Bridge Site Data Submittal	November 15, 2012
District PS&E to OE	January 15, 2016
Right of Way Certification	December 8, 2016
Ready to List	December 22, 2016
Advertise	April 15, 2017
Approve Contract	September 1, 2017
Contract Acceptance	August 15, 2020

4. FHWA COORDINATION

This project is considered to be an Assigned Project in accordance with the current Federal Highway Administration (FHWA) and Department of Transportation (Caltrans) Joint Stewardship and Oversight Agreement.

5. PROJECT REVIEWS

Michael Janzen, HQ Design Reviewer has reviewed this project and concurs with the scope.

6. RECOMMENDATION

It is recommended that the length of the last segment of the Kern 46 project be reduced and a separate project be initiated to complete the remaining portion of the segment. Also, it is recommended the project proceed to the design of EA 442541 and include the design elements discussed above.

7. PROJECT PERSONNEL

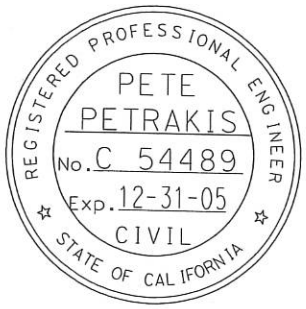
Pete Petrakis	Project Engineer	559-230-3117
Shahin Mansour	Design Engineer	559-230-3114
Mehran Akhavan	Project Manager	559-243-3442

06-Ker-46-30.5/33.5
06-442541
0612000175

This Supplemental PR has been prepared under the direction of the following Registered Civil Engineer. The Registered Civil Engineer attests to the technical information contained herein and engineering data upon which recommendation, conclusions, and decisions are based.

REGISTERED CIVIL ENGINEER

4-24-15
DATE



8. ATTACHMENTS

A. Title Sheet
B. Typical Cross Sections
C. Layout Sheets
D. Updated Cost Estimate
E. Updated Environmental Document
F. Updated Right of Way Data Sheet

06-Ker-46-30.5/33.5
06-442541
0612000175

Submitted by: SHAHIN MANSOUR, Design Engineer — 4/24/15 (Date) — 559-230-3114 (Telephone)

Recommended For Approval: MEHRAN AKHAVAN, Project Manager — 4/24/15 (Date) — 559-243-3442 (Telephone)

Concurrence For Right of Way: JAMIE LUPO, Acting Chief, Central Region Right of Way — 5.7.15 (Date) — 559-445-6109 (Telephone)

Approved: SHARRI BENDER EHLERT, District 6 Director — 5/11/2015 (Date)

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-8	TYPICAL CROSS SECTIONS
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37-48	CONSTRUCTION DETAILS
49-52	CONTOUR GRADING PLANS
53-86	DRAINAGE PLANS, PROFILES, DETAILS AND QUANTITIES
87-91	SANITARY SEWER PLANS, PROFILES, DETAILS AND QUANTITIES
92-103	UTILITY PLANS
104	CONSTRUCTION AREA SIGNS
105-112	STAGE CONSTRUCTION PLANS
113-140	TRAFFIC HANDLING PLANS AND QUANTITIES
141-153	PAVEMENT DELINEATION PLANS, DETAILS AND QUANTITIES
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179-183	SUMMARY OF QUANTITIES
184	RETAINING WALL PLANS
185-198	EROSION CONTROL PLANS
199-257	ELECTRICAL PLANS
XX-XX	SPECIAL ELECTRICAL STRUCTURES
XX-XX	REVISED STANDARD PLANS

STRUCTURE PLANS

XX-XXX	Rte 46/5 SEPARATION, Br No. 50-0316
XXX-XXX	MAIN FLOOD CANAL BRIDGE, Br No. 50-0523

THE STANDARD PLANS LIST APPLICABLE TO THIS CONTRACT IS INCLUDED IN THE NOTICE TO BIDDERS AND SPECIAL PROVISIONS BOOK.

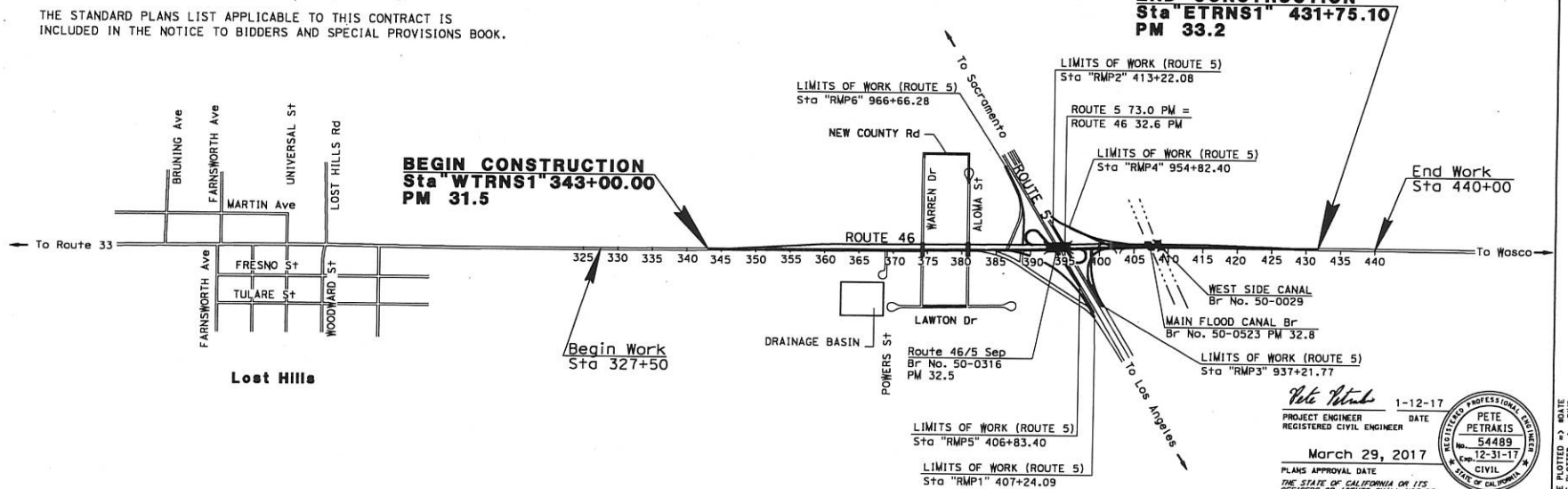
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY
IN KERN COUNTY NEAR LOST HILLS
FROM 1.0 MILE EAST OF LOST HILLS ROAD TO 0.7 MILE EAST OF ROUTE 46/5 SEPARATION

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2015

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
06	Ker	46	31.5/33.2	1	???





NO SCALE

Pete Petrakis 1-12-17
PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

March 29, 2017
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER PETE PETRAKIS No. 54489 Exp. 12-31-17 CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

DESIGN ENGINEER: SHAHIN MANSOUR
PROJECT MANAGER: NEIL BRETZ

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

ATTACHMENT B

CONTRACT No.	06-442544
PROJECT ID	0612000175
UNIT 1436	PROJECT NUMBER & PHASE 06120001751

DATE PLOTTED => #DATE
TIME PLOTTED => #TIME
LAST REVISION 1-12-17

BORDER LAST REVISED 9/30/2012 | CALTRANS WEB SITE IS: HTTP://WWW.DOT.CA.GOV/

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
PRELIMINARY ESTIMATE OF COST

EXPENDITURE AUTHORIZATION
06-113-442541
DIST-CO-RTE-PM
06-KER-46-30.5/33.5

ON STATE ROUTE 46, FROM THE INTERSECTION OF LOST HILLS ROAD TO 0.9 MILES EAST OF THE INTERSTATE 5 INTERCHANGE

SOURCE OF FUNDS
HE13

FEDERAL AID NUMBER
NONE

2-LN CONVENTIONAL HIGHWAY TO 4-LN CONVENTIONAL HIGHWAY
RTE 46 CONVENTIONAL SEGMENT 4A

PROJECT: 06-113-442541

COMBINED ESTIMATE

ITEM NUM	ITEM CODE	ITEM DESCRIPTION	UNIT (ALT)	QUANTITY	PRICE	AMOUNT
1	070030	LEAD COMPLIANCE PLAN	LS	LUMP SUM	2,000.00	2,000.00
2	080050	PROGRESS SCHEDULE (CRITICAL PATH METHOD)	LS	LUMP SUM	5,000.00	5,000.00
3	090100	TIME-RELATED OVERHEAD (WDAY)	WDAY	485	1,750.00	848,750.00
4	120090	CONSTRUCTION AREA SIGNS	LS	LUMP SUM	29,000.00	29,000.00
5	120100	TRAFFIC CONTROL SYSTEM	LS	LUMP SUM	272,000.00	272,000.00
6	120120	TYPE III BARRICADE	EA	19	50.00	950.00
7	120152	TEMPORARY PAVEMENT MARKING (TAPE)	SQFT	490	5.00	2,450.00
8	120165	CHANNELIZER (SURFACE MOUNTED)	EA	680	35.00	23,800.00
9	120300	TEMPORARY PAVEMENT MARKER	EA	520	2.00	1,040.00
10	128652	PORTABLE CHANGEABLE MESSAGE SIGN (LS)	LS	LUMP SUM	24,000.00	24,000.00
11	129000	TEMPORARY RAILING (TYPE K)	LF	1,480	20.00	29,600.00
12	129100	TEMPORARY CRASH CUSHION MODULE	EA	70	350.00	24,500.00
13	130100	JOB SITE MANAGEMENT	LS	LUMP SUM	20,000.00	20,000.00
14	130300	PREPARE STORM WATER POLLUTION PREVENTION PLAN	LS	LUMP SUM	3,000.00	3,000.00

ATTACHMENT C

PROJECT: 06-113-442541 COMBINED ESTIMATE

ITEM NUM	ITEM CODE	ITEM DESCRIPTION	UNIT (ALT)	QUANTITY	PRICE	AMOUNT
15	130330	STORM WATER ANNUAL REPORT	EA	2	2,000.00	4,000.00
16	130505	MOVE-IN/MOVE-OUT (TEMPORARY EROSION CONTROL)	EA	2	750.00	1,500.00
17	130560	TEMPORARY SOIL BINDER	SQYD	140,000	0.18	25,200.00
18	130620	TEMPORARY DRAINAGE INLET PROTECTION	EA	3	300.00	900.00
19	130710	TEMPORARY CONSTRUCTION ENTRANCE	EA	4	3,500.00	14,000.00
20	130730	STREET SWEEPING	LS	LUMP SUM	20,000.00	20,000.00
21	130900	TEMPORARY CONCRETE WASHOUT	LS	LUMP SUM	15,000.00	15,000.00
22	141103	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)	LF	1,690	5.00	8,450.00
23	141120	TREATED WOOD WASTE	LB	34,100	0.10	3,410.00
24	160110	TEMPORARY HIGH-VISIBILITY FENCE	LF	940	1.59	1,494.60
25	170103	CLEARING AND GRUBBING (LS)	LS	LUMP SUM	30,000.00	30,000.00
26	180106	DUST PALLIATIVE	LS	LUMP SUM	210,000.00	210,000.00
27	190101	ROADWAY EXCAVATION	CY	173,000	13.50	2,335,500.00
28	192003 F B	STRUCTURE EXCAVATION (BRIDGE)	CY	575	80.00	46,000.00
29	192037	STRUCTURE EXCAVATION (RETAINING WALL)	CY	310	75.00	23,250.00
30	193003 F B	STRUCTURE BACKFILL (BRIDGE)	CY	311	140.00	43,540.00
31	193013	STRUCTURE BACKFILL (RETAINING WALL)	CY	330	100.00	33,000.00
32	198010	IMPORTED BORROW (CY)	CY	21,100	20.00	422,000.00
33	198209	SUBGRADE ENHANCEMENT GEOTEXTILE, CLASS B2	SQYD	290	9.00	2,610.00

PROJECT: 06-113-442541 COMBINED ESTIMATE

ITEM NUM	ITEM CODE	ITEM DESCRIPTION	UNIT (ALT)	QUANTITY	PRICE	AMOUNT
34	210010	MOVE-IN/MOVE-OUT (EROSION CONTROL)	EA	2	750.00	1,500.00
35	210300	HYDROMULCH	SQFT	2,220,000	0.02	44,400.00
36	210430	HYDROSEED	SQFT	2,220,000	0.05	111,000.00
37	250201	CLASS 2 AGGREGATE SUBBASE	CY	5,850	39.00	228,150.00
38	260203	CLASS 2 AGGREGATE BASE (CY)	CY	56,300	37.00	2,083,100.00
39	390132	HOT MIX ASPHALT (TYPE A)	TON	48,000	75.00	3,600,000.00
40	390161 B	HOT MIX ASPHALT (BRIDGE)	TON	9	400.00	3,600.00
41	394060	DATA CORE	LS	LUMP SUM	5,000.00	5,000.00
42	394073	PLACE HOT MIX ASPHALT DIKE (TYPE A)	LF	910	5.00	4,550.00
43	394074	PLACE HOT MIX ASPHALT DIKE (TYPE C)	LF	320	20.00	6,400.00
44	394076	PLACE HOT MIX ASPHALT DIKE (TYPE E)	LF	9,740	2.00	19,480.00
45	394077	PLACE HOT MIX ASPHALT DIKE (TYPE F)	LF	530	5.00	2,650.00
46	394090	PLACE HOT MIX ASPHALT (MISCELLANEOUS AREA)	SQYD	780	30.00	23,400.00
47	397005	TACK COAT	TON	57	800.00	45,600.00
48	400050	CONTINUOUSLY REINFORCED CONCRETE PAVEMENT	CY	7,450	268.00	1,996,600.00
49	490782 B	FURNISH PILING (CLASS 200) (ALTERNATIVE W)	LF	2,391	60.00	143,460.00
50	490783 B	DRIVE PILE (CLASS 200) (ALTERNATIVE W)	EA	48	2,500.00	120,000.00
51	495103 B	FURNISH 16" CAST-IN-STEEL SHELL CONCRETE PILING	LF	2,112	100.00	211,200.00

PROJECT: 06-113-442541 COMBINED ESTIMATE

ITEM NUM	ITEM CODE	ITEM DESCRIPTION	UNIT (ALT)	QUANTITY	PRICE	AMOUNT
52	495104 B	DRIVE 16" CAST-IN-STEEL SHELL CONCRETE PILE	EA	44	3,500.00	154,000.00
53	495115 B	FURNISH 24" CAST-IN-STEEL SHELL CONCRETE PILING	LF	2,004	155.00	310,620.00
54	495116 B	DRIVE 24" CAST-IN-STEEL SHELL CONCRETE PILE	EA	36	11,000.00	396,000.00
55	498048	48" CAST-IN-DRILLED-HOLE CONCRETE PILE (SIGN FOUNDATION)	LF	130	2,500.00	325,000.00
56	510051 F B	STRUCTURAL CONCRETE, BRIDGE FOOTING	CY	86	630.00	54,180.00
57	510053 F B	STRUCTURAL CONCRETE, BRIDGE	CY	665	1,200.00	798,000.00
58	510054 F B	STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER)	CY	1,317	1,100.00	1,448,700.00
59	510060 F	STRUCTURAL CONCRETE, RETAINING WALL	CY	137	1,000.00	137,000.00
60	510090	STRUCTURAL CONCRETE, BOX CULVERT	CY	340	800.00	272,000.00
61	510094	STRUCTURAL CONCRETE, DRAINAGE INLET	CY	120	1,250.00	150,000.00
62	511106 B	DRILL AND BOND DOWEL	LF	473	44.00	20,812.00
63	511107A B	PRESSURE GROUT ANCHOR ROD	LF	118	110.00	12,980.00
64	511118 B	CLEAN EXPANSION JOINT	LF	142	35.00	4,970.00
65	519081 B	JOINT SEAL (MR 1/2")	LF	56	80.00	4,480.00
66	519091 B	JOINT SEAL (MR 1 1/2")	LF	113	85.00	9,605.00

PROJECT: 06-113-442541 COMBINED ESTIMATE

ITEM NUM	ITEM CODE	ITEM DESCRIPTION	UNIT (ALT)	QUANTITY	PRICE	AMOUNT
67	520101 F	BAR REINFORCING STEEL	LB	77,756	1.00	77,756.00
68	520102 F B	BAR REINFORCING STEEL (BRIDGE)	LB	564,803	1.00	564,803.00
69	520103 F	BAR REINFORCING STEEL (RETAINING WALL)	LB	3,271	1.25	4,088.75
70	520120 F B	HEADED BAR REINFORCEMENT	EA	488	25.00	12,200.00
71	550203 F B	FURNISH STRUCTURAL STEEL (BRIDGE)	LB	436,489	1.80	785,680.20
72	550204 F B	ERECT STRUCTURAL STEEL (BRIDGE)	LB	436,489	1.75	763,855.75
73	560213 F	FURNISH SIGN STRUCTURE (LIGHTWEIGHT)	LB	44,200	5.00	221,000.00
74	560214 F	INSTALL SIGN STRUCTURE (LIGHTWEIGHT)	LB	44,200	1.00	44,200.00
75	568046	REMOVE SIGN STRUCTURE (EA)	EA	3	5,000.00	15,000.00
76	590115 B	CLEAN AND PAINT STRUCTURAL STEEL	LS	LUMP SUM	240,000.00	240,000.00
77	600010A B	CORE 1-1/4" AND PRESSURE GROUT THREADED ROD	LF	72	230.00	16,560.00
78	600097 B	BRIDGE REMOVAL	LS	LUMP SUM	98,000.00	98,000.00
79	600114 B	BRIDGE REMOVAL (PORTION)	LS	LUMP SUM	105,000.00	105,000.00
80	610108	18" ALTERNATIVE PIPE CULVERT	LF	700	85.00	59,500.00
81	610112	24" ALTERNATIVE PIPE CULVERT	LF	2,480	100.00	248,000.00

PROJECT: 06-113-442541 COMBINED ESTIMATE

ITEM NUM	ITEM CODE	ITEM DESCRIPTION	UNIT (ALT)	QUANTITY	PRICE	AMOUNT
82	610121	36" ALTERNATIVE PIPE CULVERT	LF	1,000	80.00	80,000.00
83	610300	CONCRETE BACKFILL (PIPE TRENCH)	CY	44	150.00	6,600.00
84	650022	30" REINFORCED CONCRETE PIPE	LF	7	125.00	875.00
85	705311	18" ALTERNATIVE FLARED END SECTION	EA	4	400.00	1,600.00
86	705315	24" ALTERNATIVE FLARED END SECTION	EA	20	500.00	10,000.00
87	705321	36" ALTERNATIVE FLARED END SECTION	EA	1	1,200.00	1,200.00
88	707225	48" PRECAST CONCRETE PIPE MANHOLE	LF	25	500.00	12,500.00
89	710120	REMOVE DRAINAGE FACILITY (EA)	EA	6	1,000.00	6,000.00
90	710132	REMOVE CULVERT (LF)	LF	24	40.00	960.00
91	710150	REMOVE INLET	EA	1	1,000.00	1,000.00
92	710167	REMOVE FLARED END SECTION (EA)	EA	4	400.00	1,600.00
93	710220	ADJUST UTILITY COVER TO GRADE	EA	9	300.00	2,700.00
94	710228	ADJUST SEWER MANHOLE	EA	4	2,300.00	9,200.00
95	710266	CAP MANHOLE	EA	1	2,000.00	2,000.00
96	721017 F	ROCK SLOPE PROTECTION (FACING, METHOD B) (CY)	CY	760	110.00	83,600.00
97	729011	ROCK SLOPE PROTECTION FABRIC (CLASS 8)	SQYD	1,600	6.00	9,600.00
98	730070	DETECTABLE WARNING SURFACE	SQFT	220	50.00	11,000.00
99	731502	MINOR CONCRETE (MISCELLANEOUS CONSTRUCTION)	CY	1,120	450.00	504,000.00
100	731519	MINOR CONCRETE (STAMPED CONCRETE)	SQFT	11,300	8.50	96,050.00
101	731710	REMOVE CONCRETE CURB (LF)	LF	290	8.00	2,320.00

PROJECT: 06-113-442541 COMBINED ESTIMATE

ITEM NUM	ITEM CODE	ITEM DESCRIPTION	UNIT (ALT)	QUANTITY	PRICE	AMOUNT
102	731780	REMOVE CONCRETE SIDEWALK (SQYD)	SQYD	1,770	25.00	44,250.00
103	731840	REMOVE CONCRETE (CURB AND GUTTER)	LF	2,190	10.00	21,900.00
104	750001 F	MISCELLANEOUS IRON AND STEEL	LB	10,169	2.00	20,338.00
105	750010	MANHOLE FRAME AND COVER	EA	3	1,200.00	3,600.00
106	800001	FENCE (TYPE BW, METAL POST)	LF	1,100	10.00	11,000.00
107	800360	CHAIN LINK FENCE (TYPE CL-6)	LF	1,980	12.50	24,750.00
108	802620	16' CHAIN LINK GATE (TYPE CL-6)	EA	1	2,000.00	2,000.00
109	803020	REMOVE FENCE	LF	1,090	6.50	7,085.00
110	810120	REMOVE PAVEMENT MARKER	EA	110	1.00	110.00
111	810170	DELINEATOR (CLASS 1)	EA	200	40.00	8,000.00
112	810230	PAVEMENT MARKER (RETROREFLECTIVE)	EA	1,700	1.00	1,700.00
113	820131	OBJECT MARKER (TYPE K)	EA	9	40.00	360.00
114	820250	REMOVE ROADSIDE SIGN	EA	56	150.00	8,400.00
115	820610	RELOCATE ROADSIDE SIGN	EA	7	200.00	1,400.00
116	820715A	FURNISH LAMINATED PANES SIGN (1"-TYPE A) FOR RETROREFLECTIVE SHEETING (TYPE XI)	SQFT	350	50.00	17,500.00
117	820750	FURNISH SINGLE SHEET ALUMINUM SIGN (0.063"-UNFRAMED)	SQFT	300	15.00	4,500.00
118	820755A	FURNISH SINGLE SHEET ALUMINUM SIGN (0.063" - UNFRAMED) FOR RETROREFLECTIVE SHEETING (TYPE XI)	SQFT	440	12.00	5,280.00
119	820760	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080"-UNFRAMED)	SQFT	88	17.00	1,496.00

PROJECT: 06-113-442541 COMBINED ESTIMATE

ITEM NUM	ITEM CODE	ITEM DESCRIPTION	UNIT (ALT)	QUANTITY	PRICE	AMOUNT
120	820765A	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080" - UNFRAMED) FOR RETROREFLECTIVE SHEETING (TYPE XI)	SQFT	340	14.00	4,760.00
121	820795A	FURNISH SINGLE SHEET ALUMINUM SIGN (0.080" - FRAMED) FOR RETROREFLECTIVE SHEETING (TYPE XI)	SQFT	110	25.00	2,750.00
122	820807A	RETROREFLECTIVE SHEETING (TYPE XI)	SQFT	1,620	10.00	16,200.00
123	820840	ROADSIDE SIGN - ONE POST	EA	89	290.00	25,810.00
124	820850	ROADSIDE SIGN - TWO POST	EA	3	500.00	1,500.00
125	820860	INSTALL SIGN (STRAP AND SADDLE BRACKET METHOD)	EA	13	300.00	3,900.00
126	832006	MIDWEST GUARDRAIL SYSTEM (STEEL POST)	LF	630	30.00	18,900.00
127	839312	DOUBLE THRIE BEAM BARRIER (STEEL POST)	LF	75	75.00	5,625.00
128	839521	CABLE RAILING	LF	63	80.00	5,040.00
129	839543	TRANSITION RAILING (TYPE WB-31)	EA	4	4,000.00	16,000.00
130	839581	END ANCHOR ASSEMBLY (TYPE SFT)	EA	4	750.00	3,000.00
131	839583A	SOFTSTOP TERMINAL SYSTEMS	EA	2	3,250.00	6,500.00
132	839585	ALTERNATIVE FLARED TERMINAL SYSTEM	EA	5	2,500.00	12,500.00
133	839586A	ALTERNATIVE CRASH CUSHION SYSTEM(TYPE A)	EA	3	6,000.00	18,000.00
134	839587A	ALTERNATIVE CRASH CUSHION SYSTEM(TYPE B)	EA	2	50,000.00	100,000.00
135	839701	CONCRETE BARRIER (TYPE 60)	LF	650	120.00	78,000.00
136	839713A	CONCRETE BARRIER (TYPE 60R)	LF	99	250.00	24,750.00
137	839725 F B	CONCRETE BARRIER (TYPE 736)	LF	631	110.00	69,410.00

PROJECT: 06-113-442541 COMBINED ESTIMATE

ITEM NUM	ITEM CODE	ITEM DESCRIPTION	UNIT (ALT)	QUANTITY	PRICE	AMOUNT
138	839726 F B	CONCRETE BARRIER (TYPE 736A)	LF	84	110.00	9,240.00
139	839727 F B	CONCRETE BARRIER (TYPE 736 MODIFIED)	LF	380	265.00	100,700.00
140	839734	CONCRETE BARRIER (TYPE 736SV)	LF	760	160.00	121,600.00
141	839752	REMOVE GUARDRAIL	LF	1,890	10.00	18,900.00
142	839758 B	SALVAGE METAL BRIDGE RAILING	LF	755	16.00	12,080.00
143	839761	SALVAGE GUARDRAIL	LF	150	30.00	4,500.00
144	839764	RECONSTRUCT DOUBLE THRIE BEAM BARRIER	LF	100	85.00	8,500.00
145	839774	REMOVE CONCRETE BARRIER	LF	100	50.00	5,000.00
146	839786	SALVAGE CRASH CUSHION	EA	1	1,000.00	1,000.00
147	840505	6" THERMOPLASTIC TRAFFIC STRIPE	LF	70,200	0.40	28,080.00
148	840506	8" THERMOPLASTIC TRAFFIC STRIPE	LF	12,900	1.00	12,900.00
149	840515	THERMOPLASTIC PAVEMENT MARKING	SQFT	5,420	5.00	27,100.00
150	840522	6" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 6-1)	LF	550	1.00	550.00
151	840528	6" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 12-3)	LF	140	1.00	140.00
152	840529	6" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 36-12)	LF	14,900	0.50	7,450.00
153	840530	6" THERMOPLASTIC TRAFFIC STRIPE (BROKEN 17-7)	LF	710	1.00	710.00
154	840655	PAINT TRAFFIC STRIPE (1-COAT)	LF	31,400	0.25	7,850.00

PROJECT: 06-113-442541 COMBINED ESTIMATE

ITEM NUM	ITEM CODE	ITEM DESCRIPTION	UNIT (ALT)	QUANTITY	PRICE	AMOUNT
155	846030	REMOVE THERMOPLASTIC TRAFFIC STRIPE	LF	7,460	1.00	7,460.00
156	870200	LIGHTING SYSTEM	LS	LUMP SUM	151,000.00	151,000.00
157	870300	SIGN ILLUMINATION SYSTEM	LS	LUMP SUM	14,700.00	14,700.00
158	870600	TRAFFIC MONITORING STATION SYSTEM	LS	LUMP SUM	183,000.00	183,000.00
159	871202A	HIGHWAY ADVISORY RADIO SYSTEM	LS	LUMP SUM	140,000.00	140,000.00
160	872130	MODIFYING EXISTING ELECTRICAL SYSTEM	LS	LUMP SUM	1,160,000.00	1,160,000.00
161	872140	REMOVING EXISTING ELECTRICAL SYSTEM	LS	LUMP SUM	7,500.00	7,500.00
162	999990	MOBILIZATION 05.0%	LS	LUMP SUM	1,263,000.00	1,263,000.00
				ITEM SUBTOTAL		25,262,104.30

PROJECT: 06-113-442541 COMBINED ESTIMATE

SUPPLEMENTAL WORK

ITEM NUM	ITEM CODE	ITEM DESCRIPTION	UNIT (ALT)	QUANTITY	PRICE	AMOUNT
	066015	FEDERAL TRAINEE PROGRAM	LS	LUMP SUM	12,000.00	12,000.00
	066070	MAINTAIN TRAFFIC	LS	LUMP SUM	50,000.00	50,000.00
	066094	VALUE ANALYSIS	LS	LUMP SUM	10,000.00	10,000.00
	066595	WATER POLLUTION CONTROL MAINTENANCE SHARING	LS	LUMP SUM	10,250.00	10,250.00
	066596	ADDITIONAL WATER POLLUTION CONTROL	LS	LUMP SUM	5,000.00	5,000.00
	066597	STORM WATER SAMPLING AND ANALYSIS	LS	LUMP SUM	1,500.00	1,500.00
	066610	PARTNERING	LS	LUMP SUM	70,000.00	70,000.00
	066670	PAYMENT ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS	LS	LUMP SUM	205,300.00	205,300.00
	066919	DISPUTE RESOLUTION BOARD	LS	LUMP SUM	22,500.00	22,500.00
			SW	SUBTOTAL		386,550.00

PROJECT: 06-113-442541 COMBINED ESTIMATE

STATE FURNISHED MATERIALS AND EXPENSES

ITEM NUM	ITEM CODE	ITEM DESCRIPTION	UNIT (ALT)	QUANTITY	PRICE	AMOUNT
	066062	COZEEP CONTRACT	LS	LUMP SUM	24,000.00	24,000.00
	066063	TRAFFIC MANAGEMENT PLAN - PUBLIC INFORMATION	LS	LUMP SUM	4,000.00	4,000.00
	066105	RESIDENT ENGINEERS OFFICE	LS	LUMP SUM	240,000.00	240,000.00
	066188A	ENVIRONMENTAL MONITORING -ARCHAEOLOGICAL	LS	LUMP SUM	95,000.00	95,000.00
	066189A	ENVIRONMENTAL MITIGATION - PALEONTOLOGY	LS	LUMP SUM	75,000.00	75,000.00
	066842A	MODEL 2070E CONTROLLER ASSEMBLIES	LS	LUMP SUM	21,000.00	21,000.00
	066844A	MODEL 2070E CONTROLLER UNITS	LS	LUMP SUM	4,000.00	4,000.00
	066848A	EXTINQUISHABLE MESSAGE SIGN CONTROLLER	LS	LUMP SUM	3,000.00	3,000.00
	066854A	COMPONENTS OF BATTERY BACKUP SYSTEM	LS	LUMP SUM	6,000.00	6,000.00
	066871	ELECTRICAL SERVICE CONNECTIONS	LS	LUMP SUM	38,000.00	38,000.00
	066915	BOE TREATED WOOD WASTE GENERATION FEE	LS	LUMP SUM	1,000.00	1,000.00
	066916	ANNUAL CONSTRUCTION GENERAL PERMIT FEE	LS	LUMP SUM	21,432.00	21,432.00
				SF SUBTOTAL		532,432.00
				PROJECT SUBTOTAL		26,181,086.30
				CONTINGENCIES 4.9%		1,308,913.70
				PROJECT TOTAL		27,490,000.00

LAST PAGE 12 OF 12

State of California
DEPARTMENT OF TRANSPORTATION

California State Transportation Agency

Memorandum

Serious drought.
Help save water!

To: SHERRI BENDER EHLERT
District Director
District 6-Central Region

Date: April 8, 2015

File: 06-Ker-46-30.5/33.5
06-442541
0612000175

From: DEPARTMENT OF TRANSPORTATION
Central region-Project Development
Design IV-Branch B

Subject: **Supplemental Project Report**

This memorandum serves as a supplement to the approved Project Report for the Kern 46 project EA 442500 approved on June 14, 2005. The original Project Report proposed to convert the 2-lane conventional highway to a 4-lane expressway from PM 7.30 to 29.70 and a 4-lane conventional highway from PM 29.70 to PM 33.50. Ultimately, this project ended being split into three separate projects in order to be programmed and funded in the STIP, RIP, IIP, and TCRP programs.

1. PROJECT LIMITS

The parent EA 442500 was divided into the following segments and EA:

EA 442521-PM 6.8/19.8

From 0.5 miles west of Keck's Road to 0.7 miles west of Route 46/33intersection.

EA 442531 –PM 19.3/27.5

From 1.2 miles west of the Route 46/33 intersection to Browns Material Road.

EA 442511-PM 27.5/33.5

From Browns Material Road to 0.8 miles east of the I-5/Route 46 interchange.

ATTACHMENT H

The first and second segments listed above have been constructed. Due to the high cost of the right-of-way for EA 442511, the PDT has recommended that the third segment limits be reduced. Therefore, the segment would be split into EA 442541 and 442551with the former beginning east of the town of Lost Hills at PM 30.5 and ending east of the I-5/Route 46 interchange at PM 33.5. The limits of the remaining segment (EA 442551) would be between PM 27.5 and 30.5.

2. PROJECT DESCRIPTION

The project proposes to widen the 2-lane conventional highway to a 4-lane conventional highway between PM 30.5 to 33.5 of State Route 46 in Kern County. The median between the eastbound and westbound lanes will vary between 22 feet and 32 feet. Within the business district at the I-5 interchange, two new county road connections will be constructed and then relinquished to the county. Also, two loop ramps are being added to the I-5/Route 46 interchange to improve traffic operations and increase safety.

3. PROJECT UPDATES

Traffic

The accident history for the most recent available three-year study period for the mainline (April 1, 2008 to March 31, 2011) is provided below. As indicated in the table, the Fatal and Fatal +Injury rates were lower than the statewide average. However, the Total Accident Rate was higher than the statewide average for similar roadways with comparable traffic volumes.

Table 1 Accident History for Mainline Kern-46

COLLISION DATA (APRIL 1, 2008 TO MARCH 31, 2011)									
Post Miles	Total Number of Accidents	Number Persons Killed	Number Persons Injured	**Actual Accident Rate (MVM)**			**Average Accident Rate (MVM)**		
				F	F+I	Total	F	F+I	Total
30.5 TO 33.5	51	0	7	0.00	0.21	1.55	0.028	0.41	0.92

The accident history for the both westbound and eastbound on/off-ramps at I-5 for the most recent available three-year study period April 1, 2009 to March 21, 2012 is provided below.

Table 2 Accident History for Ker-46/I-5 Interchange Ramps

Ramps (April 1, 2009 to March 21, 2012)									
RAMPS	Total Number of Accidents	Number Persons Killed	Number Persons Injured	Actual (MVM)			Average(MVM)		
				Fatal	F+I	Total	Fatal	F+I	Total
NB On-Ramp	4	0	0	0.00	0.00	1.03	0.002	0.09	0.33
NB Off-Ramp	10	0	3	0.00	0.41	1.36	0.005	0.19	0.73
SB On-Ramp	0	0	0	0.00	0.00	0.00	0.002	0.09	0.33
SB Off- Ramp	6	0	3	0.00	0.45	0.89	0.005	0.19	0.73

Levels of Service (LOS)

The Route 46/I-5 interchange is currently a spread diamond with Route 46 having one lane in each direction. The intersections with both the northbound and southbound off-ramps are signalized. The LOS were calculated based on 2019 and 2039 projected volumes. Three alternatives are analyzed and discussed as follows:

No Build

As shown in the following table, the SR 46/I-5 ramp intersections would perform at LOS D or better in the construction year of 2019, and deteriorate to LOS E by the year 2039.

Diamond Interchange:

The SR 46/I-5 ramp intersections would perform at LOS D or better in 2039. Due to high percentage of trucks, dual left turn lanes are recommended for movements from northbound to westbound, eastbound to northbound, and westbound to southbound

Partial Cloverleaf interchange:

Constructing eastbound and westbound loop ramps would eliminate left turn movements on SR46 within the I-5 interchange. A partial cloverleaf interchange would provide the best level of service (LOS C) for the design year.

Table 3 I-5 Mainline Analysis by Alternative

Segment	2019			2039		
	No Build AM/PM	Diamond AM/PM	Cloverleaf AM/PM	No Build AM/PM	Diamond AM/PM	Cloverleaf AM/PM
I-5 SB north of Rte 46	A / A	A / A	A / A	A / B	A / B	A / B
I-5 NB north of Rte 46	A / B	A / B	A / B	A / C	A / C	A / C
I-5 NB south of Rte 46	A / B	A / B	A / B	A / C	A / C	A / C
I-5 SB south of Rte 46	A / B	A / B	A / B	A / C	A / C	A / C

Roadside Design

The Traffic Department has recommended that the Aloma Street/Route 46 intersection exclude left turning movements out of Aloma St. This will necessitate constructing new county road connections between Aloma Street and Warren Drive to circulate the local traffic to the signalized Warren Avenue intersection. The new road connections would then be relinquished to Kern County.

This project will create a Type L-9, partial cloverleaf interchange with a new northbound loop on-ramp in the southeast quadrant and a southbound loop on-ramp in the northwest quadrant of the interchange (see Attachment C.) This interchange will connect to existing Route 46. The southbound and northbound off-ramps will be realigned around the new loops. A traffic signal will be installed at both northbound and southbound off-ramp intersections. The building of loop ramps will reduce the size and cost of the I-5 structure by eliminating the left turns.

Right of Way

An updated Right of Way Data Sheet has been prepared for this project phase. The Data Sheet was approved on February 13, 2015.

Environmental

Environmental clearance was obtained through the preparation of the NEPA/CEQA Revalidation Form, pursuant to regulations of the FHWA National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA). The NEPA/CEQA Re-Validation Form was approved on December 19, 2014.

Project Estimate (Escalated)

Roadway Costs	$16,895,600
Structure Costs	$ 7,107,000
Right of Way Costs	$ 9,126,400
Total	$33,129,000

PROGRAMMING

EA 44254 of the Kern 46 project was programmed in the 2012 STIP Cycle for PS&E, R/W and Construction phase as shown in the existing funding table. The proposed funding table shows the funding need of $11,733,000 over the existing programmed amount. The $11,733,000 will be funded from the available DEMO and TCRP funds for the Kern 46 Corridor.

Existing Funding (CTIP)

Project Cost Component	Fiscal Years						Total
	PRIOR	13/14	14/15	15/16	16/17	17/18	
PA&ED							
PS&E	4,030			400			4,430
R/W Support	1,500						1,500
Const.Support				3,350			3,350
R/W Capital	4,500						4,500
Const. Capital				17,500			17,500
Total	10,030			21,250			31,280

Funding Source

Project Cost Component	Fiscal Years						Total
	PRIOR	13/14	14/15	15/16	16/17	17/18	
RIP	2,180			4,100			6,280
IIP				400			400
DEMO	7,850			16,750			24,600
							31,280

Proposed Funding (CTIP)

Project Cost Component	Fiscal Years						Total
	PRIOR	13/14	14/15	15/16	16/17	17/18	
PA&ED							
PS&E	4,030			400			4,430
R/W Support	1,500						1,500
Const.Support					3,950		3,950
R/W Capital	4,500			4,630			9,130
Const. Capital					24,003		24,003
Total	10,030			5,030	27,953		43,013

Funding Source

Project Cost Component	Fiscal Years						Total
	PRIOR	13/14	14/15	15/16	16/17	17/18	
RIP	2,180				4,100		6,280
IIP				400			400
DEMO	7,850			4,492	22,362		34,704
TCRP				138	1,491		1629
	10,030			5,030	27,953		43,013

Project Schedule

Bridge Site Data Submittal	November 15, 2012
District PS&E to OE	January 15, 2016
Right of Way Certification	December 8, 2016
Ready to List	December 22, 2016
Advertise	April 15, 2017
Approve Contract	September 1, 2017
Contract Acceptance	August 15, 2020

4. FHWA COORDINATION

This project is considered to be an Assigned Project in accordance with the current Federal Highway Administration (FHWA) and Department of Transportation (Caltrans) Joint Stewardship and Oversight Agreement.

5. PROJECT REVIEWS

Michael Janzen, HQ Design Reviewer has reviewed this project and concurs with the scope.

6. RECOMMENDATION

It is recommended that the length of the last segment of the Kern 46 project be reduced and a separate project be initiated to complete the remaining portion of the segment. Also, it is recommended the project proceed to the design of EA 442541 and include the design elements discussed above.

7. PROJECT PERSONNEL

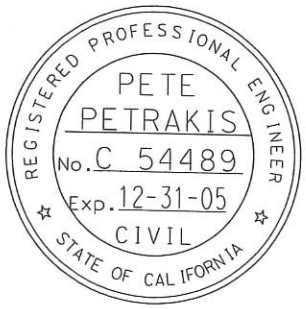
Pete Petrakis	Project Engineer	559-230-3117
Shahin Mansour	Design Engineer	559-230-3114
Mehran Akhavan	Project Manager	559-243-3442

06-Ker-46-30.5/33.5
06-442541
0612000175

This Supplemental PR has been prepared under the direction of the following Registered Civil Engineer. The Registered Civil Engineer attests to the technical information contained herein and engineering data upon which recommendation, conclusions, and decisions are based.

REGISTERED CIVIL ENGINEER

4-24-15
DATE



8. ATTACHMENTS

A. Title Sheet
B. Typical Cross Sections
C. Layout Sheets
D. Updated Cost Estimate
E. Updated Environmental Document
F. Updated Right of Way Data Sheet

06-Ker-46-30.5/33.5
06-442541
0612000175

Submitted by: 4/24/15 559-230-3114
SHAHIN MANSOUR Date Telephone
Design Engineer

Recommended
For Approval: 4/24/15 559-243-3442
MEHRAN AKHAVAN Date Telephone
Project Manager

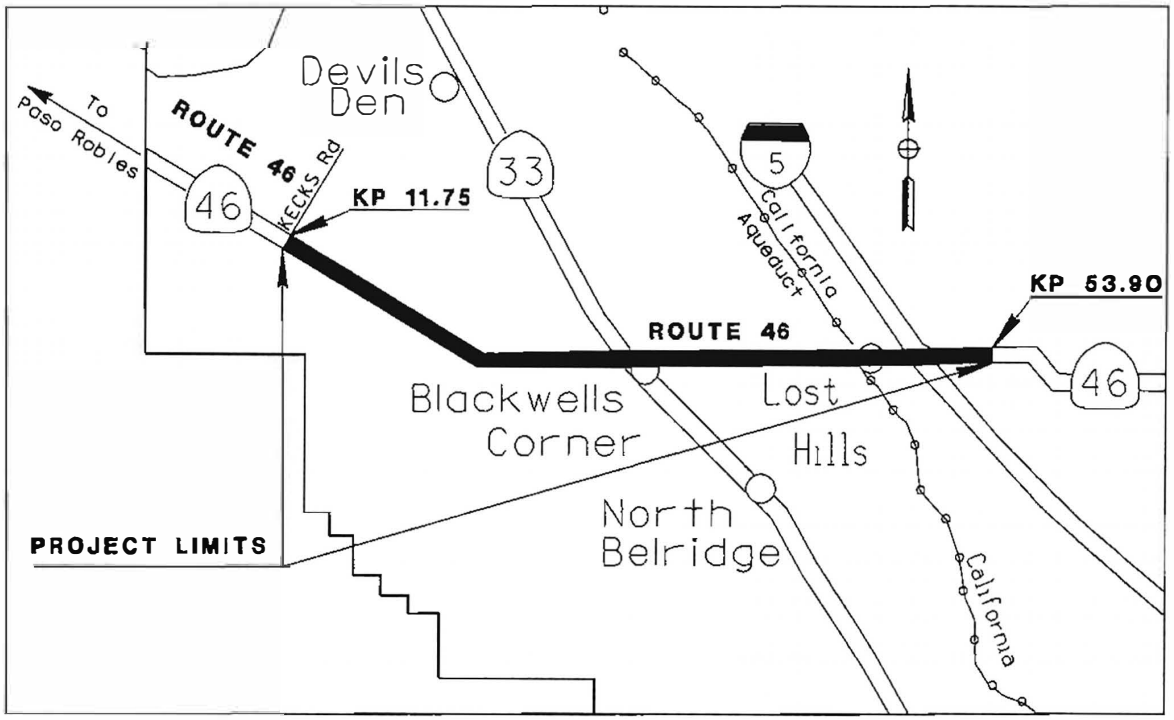
Concurrence
For Right of Way 5·7·15 559-445-6109
JAMIE LUPO Date Telephone
Acting Chief,
Central Region Right of Way

Approved: 5/11/2015
SHARRI BENDER EHLERT Date
District 6 Director

Caltrans Metric

06 - Ker - 46 – KP 11.7/53.9(PM 7.3/33.5)
06221-442500
RIP 075.600
IIP 025.700
TCRP 20.xx.710.000

PROJECT REPORT



On State Route 46, from the intersection of Keck's Road to 1.44 km east of the Interstate 5 interchange

I have reviewed the right of way information contained in this Project Report and the R/W Data Sheet attached hereto, and find the data to be complete, current, and accurate:

RANDEEN WALTER
CENTRAL REGION DIVISION CHIEF – RIGHT OF WAY

APPROVAL RECOMMENDED BY:

MEHRAN AKHAVAN
PROJECT MANAGER

APPROVED BY:

J. MIKE LEONARDO
DISTRICT DIRECTOR- DISTRICT 6

6/14/05
DATE

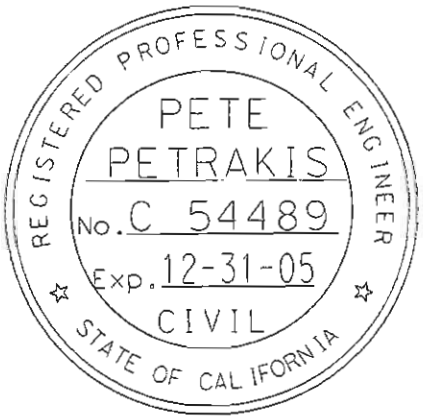
ATTACHMENT I

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

Pete Petrakis — 6-6-05

PETE PETRAKIS — DATE

REGISTERED CIVIL ENGINEER



PROJECT REPORT

**On Route 46 from the
intersection of Keck's Road
To 1.44 km east of the Interstate 5 interchange**

1. INTRODUCTION

This report proposes to convert the existing two-lane highway on State Route 46 to a four-lane divided expressway from KP 11.75 to KP 47.8 and a four-lane conventional highway from KP 47.8 to KP 53.9. Three "Build" alternatives including two viable alternatives have been studied.

The preferred alternative proposes to add two lanes to the north or south of Route 46 with an 18.6-meter depressed median width from KP 11.7 to KP 47.8. At the Chevron-Texaco oil field (KP 44.9 to KP 46.9), the widening will be symmetrical in order to minimize utility relocation. Within the City of Lost Hills, a four lane conventional highway with a paved median width of 5.4-meters is proposed.

Due to the length and cost of this project, it is proposed to divide the corridor, which encompasses two EA's into four segments. Segment II from the San Louis Obispo County line KP 0.0 to KP 11.75 is assigned to EA 353410, and a separate Project Report has been prepared for this EA. Segment II will not be covered in this document. The remaining segments for EA 442500 are as follows: Segment I from KP 31.2 to KP 43.3, Segment III from KP 11.75 to KP 31.2 and Segment IV from KP 43.3 to KP 53.9.

The total escalated cost for this project was estimated at $181,560,000, which includes $99,840,000 (escalated) for construction and $81,715,000 (escalated) for Right of Way and utility relocation (See Attachment D). The cost of roadway items went down by $7,430,000 from the draft project report due to design modifications and improved estimation techniques. An additional 50 foot buffer zone between the proposed right of way and Chevron-Texaco and Aera oil wells increased the right of way cost an additional $46,456,000 from the draft project report. The cost of the oil wells impacted by the proposed work would need to be reexamined during the design phase of Segment IV.

The proposal is to proceed to the design of Segment I. The total cost for this segment is estimated at $41,318,000 (escalated) including Right of Way of $6,088,000 and $35,230,000 for construction (See Attachment D-1). The estimated project capital support cost is $6,775,000. The project has been assigned Project Development Processing Category 1 because it requires substantial new right of way, increases traffic capacity, and requires a Controlled Access Highway Agreement. The proposed

funding for the project is from the 20.xx.025.700 Interregional Improvement Program (IIP), the 20.xx.075.600 Regional Improvement Program (RIP) and the 20.xx.710.870 Traffic Congestion Relief Plan (TCRP) in the 2009/2010 Fiscal Year.

2. RECOMMENDATION

It is recommended that the Project Report be approved for the preferred alternative (Alternative 2) and the project proceed to the design of Segment I. The affected local agencies have been consulted, their views have been considered and are in general accord with the preferred alternative.

A supplemental project report should be written for the other two segments before proceeding to the design phase.

3. BACKGROUND

A. Project History

Route 46 begins at the junction of Route 1 in San Luis Obispo County and continues for 118 miles through San Luis Obispo and Kern Counties. The Route terminates at its junction with State Route 99 in Kern County. The Kern County portion of the highway is 58 miles in length.

Route 46 was adopted into the California Highway System in 1915 and is part of the California Freeway and Expressway System. This highway crosses terrain that transitions from gently rolling rangeland to level agricultural land and small urban areas. On a year-around basis, Route 46 is a significant interregional route for agricultural products, and truck traffic accounts for 40 percent of the Average Annual Daily Traffic (AADT).

B. Community Interaction

A Public Information Meeting was held for this project on April 19, 2001, as well as a Public Hearing Meeting on May 7, 2003. The major concern of large agricultural operations in the area is access to Route 46 when the existing highway is converted to an expressway.

Public support for the project is very high in Kern County as well as the Central Valley where much of the weekend traffic is generated by travelers vacationing along the central coast. For these travelers, Route 46 offers the only practical corridor to the coast.

C. Existing Facility

The existing facility is a two-lane, 8.4 to 12.0 meter wide roadway passing through agricultural land, oil fields, the community of Lost Hills and several businesses at I-5. In the town of Lost Hills there is a flashing beacon for pedestrian crossings. The Lost Hills Elementary School is located 0.25 miles west of the California Aqueduct and south of the highway.

4. NEED AND PURPOSE

A. Problem, Deficiencies, Justification

The purpose of this project is to improve traffic operations, to improve traffic safety, and to correct any deficiencies in the existing roadway in order to meet all current design standards for a four-lane expressway.

The existing horizontal alignment throughout the project limits consists of long tangent segments (ranging from 1,500 m to 20,000 m) and a single 914-meter curve located at KP 23.8. The existing vertical and horizontal alignment does not meet the geometric standards for a design speed of 130 Km/h.

B. Regional and System Planning

Route 46 has been designated as a State Highway Terminal Access Route for larger trucks under the Federal Surface Transportation Act of 1982. State Route 46, from its junction with U.S. Route 101 to its junction with Interstate 5, is a State Highway Extra Legal Load (SHELL) Route and is included in the National Highway System. State Route 46 is also a High Emphasis Interregional Route. It is a designated route for explosives, hazardous materials (including rocket fuels), and trucks up to 32 meters in length.

The 20-year concept for State Route 46 is to build a divided four-lane expressway with a Level of Service (LOS) 'C'. The ultimate concept (20 years and beyond) for State Route 46 is to build a divided four-lane expressway with a minimum right of way width of 65.5 meters and a LOS 'C'.

This project, along with other projects to widen Route 46 to four lanes, is included in the Kern Council of Governments 20 year Regional Transportation Plan. Route 46 is one of several state highways considered a high priority for increased capacity.

This project will fulfill the requirements of the ultimate concept up to the town of Lost Hills (KP47.8). The 20-year concept of a four-lane conventional highway will be provided through Lost Hills and Interstate 5 to the project limits at KP 53.9.

C. Traffic

Current and Forecasted Traffic

Based on the Transportation Planning Design Designation the projected traffic along State Route 46 is listed below in three respective segments:

Design Designation Ker-46 KP 11.7/33.0:

Design Period	*Year 2007 (Construction Year)*	**Year 2017**	**Year 2027**
ADT	8,400	11,900	16,800
DHV	---	1,650	1,250
% of Peak Directional Volume	---	67%	67%
% of Truck DHV	---	40%	40%
Traffic Index (T.I.)	---	12.0	13.5

Trucks comprise 39.7% of the ADT.

Design Designation Ker-46 KP 33.9/53.3:

Design Period	*Year 2007 (Construction Year)*	**Year 2017**	**Year 2027**
ADT	7,400	10,300	14,300
DHV	---	1,150	1,550
% of Peak Directional Volume	---	67%	67%
% of Truck DHV	---	40%	40%
Traffic Index (T.I.)	---	12.0	13.5

Trucks comprise 39.7% of the ADT.

Design Designation Ker-46 KP 53.3/53.9:

Design Period	*Year 2007 (Construction Year)*	**Year 2017**	**Year 2027**
ADT	5,700	7,800	10,700
DHV	---	1,000	1,400
% of Peak Directional Volume	---	67%	67%
% of Truck DHV	---	40%	40%
Traffic Index (T.I.)	---	11.5	13.0

Trucks comprise 39.7% of the ADT.

The forecast volumes are based on the 1999 Traffic Volumes book and growth factors from the local traffic model received from Kern Council of Governments.

As indicated above, traffic is projected to increase along this segment of State Route 46. Currently, the level of service (LOS) is at or near the Route Concept LOS. As traffic increases, the LOS will decrease below the assigned LOS. The table below lists the current and projected LOS, as well as the projected LOS with the improvements as proposed by this report.

LOCATION	No-Build			LOS with
	Current LOS	2010 LOS	2020 LOS	4-lane Expressway (Proposed Facility)
Keck's Corner to SR 33 KP 11.7/33.0 (PM 7.3/20.5)	C	D	E	B
SR 33 to Interstate 5 KP 33.0/52.3 (PM 20.5/32.5)	B	C	D	A

Improving traffic safety is also an issue of importance. The accident rate for State Route 46 within the project limits for the three-year period from July 1, 2000 to June 30, 2003 is as follows:

- Accident Rates

No. of Accidents			Accident Rate (ACC/MVKm)					
			Actual			State Average		
Fatal	F+I	Total	Fatal	F+I	Total	Fatal	F+I	Total
1	23	76	0.004	0.12	0.50	0.022	0.39	0.81

Within the three-year study period, there were 76 accidents within the project limits. Forty-three (43) of the accidents involved multiple vehicles. Three (3) of these accidents occurred under wet pavement conditions, and 32 of the accidents occurred at night. There was one fatality and 22 people injured in 76 separate accidents. The actual total and fatality plus injury accident rates were less than the state average. In addition, the fatality accident rate was less than the state average. The types and causes of accidents are as follows:

TYPE OF COLLISION		PRIMARY COLLISION FACTORS	
Head On	3	Influence of Alcohol	3
Sideswipe	21	Failure to Yield	2
Rear End	10	Improper Turn	27
Broadside	3	Speeding	13
Hit Object	14	Other Violations	24
Overturn	21	Other Than Driver	4
Other	4	Fell Asleep	3
		Not Stated	0
TOTAL	76	TOTAL	76

As indicated above, there were three (3) head-on collisions within the three-year study period and one death resulted from all collisions. However, in the period from April 30,1999 to April 30,2002, there were eight head on collisions and three deaths associated with these collisions.

The proposed median and added lane in each direction will help eliminate vehicles passing in the opposing traveled lane and reduce head on collisions by separating the opposing traveled ways.

Overall, specific benefits that can be achieved by widening State Route 46 to four lanes with a median include: increasing capacity, reducing congestion, enhancing traffic safety, and improving the LOS.

5. ALTERNATIVES

A. Proposed Alternative

The proposed alternative was studied as Alternative 2 in the Draft Project Report. The new lanes for this alternative would shift north or south from the existing alignment in order to avoid a natural creek, canal, orchards and development along State Route 46.

This alternative proposes to widen State Route 46 to a four-lane expressway with a standard 18.6-meter median. The design speed within the expressway limits would be upgraded to 130 kilometer per hour and the existing roadbed would be rehabilitated to meet all current design standards. Within the community of Lost Hills (KP 48.1 to 49.6), a four-lane conventional highway is proposed with a 5.4 meter median. The median will act as a two way left turn lane. At I-5 and the business district, the 9.0-meter median will consist of a left turn lane in each direction separated by a curbed island. The posted speed limit and design speed through the City of Lost Hills and I-5 business district is 72 km/hr and 90 km/hr respectively.

From KP 11.75 to KP 17.5 and KP 32.2 to KP 53.9, the new lanes (westbound) will be constructed north of the existing lanes (eastbound). From KP 17.5 to 32.2, the new lanes (eastbound) will be constructed south of the existing lanes (westbound). The existing lanes will be overlaid and the crown will be corrected. Typical cross sections for this alternative are shown in Attachment B-1, 2, 3, 4, and 5.

State Route 33 will be realigned to provide a 90 degree approach to State Route 46 (Blackwell's Corner). Left-turn lanes within the median will be provided at all intersections with median openings. State Route 33 also will be constructed with exclusive right and left turn lanes, and storage for left turning movements. The intersections at Keck's Road, Bitterwater Valley Road, Browns Material Road and Halloway Road would also be upgraded with extended turn lanes for large trucks to move onto and off the highway. Where required, access openings will have acceleration lanes for trucks to merge with existing traffic. Median openings will be a maximum of 26.0 meters.

Existing intersections within the project limits would be upgraded to accommodate STAA trucks. The intersections that would be upgraded include Bitterwater Valley Road, Keck's Road, State Route 33, Browns Material Road, and Halloway Road. The following locations will be signalized: Route 46/33, Lost Hills Rd, Bruning Street, Warren Drive and SB off-ramp at I-5/Route 46.

All alternatives require the construction of five new bridges. The new bridges include the replacement of the existing Bitterwater Creek Bridge (#50-437), Main Flood Canal Bridge (#50-30), and the West Side Canal Bridge (#50-29). New structures constructed adjacent to and north of the existing bridges include California Aqueduct Bridge (#50-197) and Route 46/5 Separation Bridge (#50-316).

All longitudinal utilities will be relocated to easements outside the State Right of Way.

Project Features:

1. Nonstandard Design Features

   None.

2. Utility and Other Owner Involvement

   The Berenda Mesa Water District canal crosses State Route 46 at KP 16.6 and KP 18.5. The proposed alternatives would require lengthening the existing box culverts. Coordination with the Water District will be required during the design phase of this project.

   There are numerous overhead and underground facilities within the project limits such as pedestals, power, irrigation, oil, gas, telephone and fiber optic cable lines.

   All longitudinal utilities such as, Verizon and PG&E will be relocated outside of the R/W. Easements will be acquired for these utilities.

3. Railroad Involvement

   None.

4. Drainage Issues

   The District Hydraulics section conducted a Hydraulic Study in May 2000. The study identified and evaluated the base floodplain within the limits of the project. In addition, it addressed the flow of water as it affects the state highway, the base floodplain, and the surrounding area.

Small streams have caused flooding problems when they discharge runoff from steep canyons in the Temblor Range. These streams are confined and distinct in upland areas, but tend to spread out into a number of poorly defined drainage areas on the valley floor. Flow patterns have also been disrupted by cultivation in areas such as Blackwells corner. The major waterway in this area is the Kern River Channel, which connects into the West Side Canal after passing through the bridge on Route 46. Levees along the Kern River provide flood protection for the surrounding area.

According to maintenance personnel, overtopping of the Bitterwater Creek Bridge (#50-437) located at KP 25.56 (PM 15.88) is not a chronic problem. However, constriction of the channel at the face of the existing structure appears to be a factor in overtopping during larger storm events. In addition, a lengthening of the existing box structure to accommodate the highway widening will further compound any existing backwater problem. Therefore, the recommendation is to replace the existing bridge. Raising the roadway profile above the 100-year floodplain is also recommended in conjunction with placing 600-mm equalizing cross-culverts every 50 meters within 200 meters of Bitterwater Creek and every 100 meters within the floodplain thereafter.

The following major waterways and canals will be affected:

Franciscan Creek at KP 12.1 (PM 7.5),
Berenda Mesa Canal at KP 16.49 (PM 10.25),
Berenda Mesa Canal at KP 18.50 (PM 11.50),
Bitterwater Creek Canal at KP 25.56 (PM 15.88),
California Aqueduct at KP 48.44 (PM 30.05),
Main Flood Canal at KP 52.79 (PM 32.80),
West Side Canal at KP 52.87 (PM 32.85).

5. Highway Planting

None.

6. Erosion Control

Temporary and Permanent erosion control will be incorporated to meet all water quality discharge requirements and the cost is estimated to be $1,045,000.

Storm Water Treatment and Prevention will be incorporated into the project as per the Storm Water Data Report. Items included for Design Pollution Prevention Best Management Practices are as follows:

Downstream Effects Related to Potentially Increased Flow
Slope/Surface Protection Systems
Concentrated Flow Conveyance Systems
Preservation of Existing Vegetation
Biofiltration Swales/Strips
Infiltration Basins (Roadside Ditches)

The cost for the construction of these items is estimated to be $2,119,000. (See Attachment H for details)

7. Noise Barriers

The traffic analysis was prepared according to Caltrans Traffic Noise Analysis Protocol. Caltrans identified noise receptors (residential houses, churches, and schools) within the community of Lost Hills, but concluded that soundwalls would not be feasible because they would block access to driveways and local cross-streets. Creating breaks or gaps within a continuous soundwall would make the wall ineffective. Noise abatement is normally not considered reasonable for commercial areas. No further investigation was needed to proceed with the project.

8. Non Motorized and Pedestrian features, etc.

Traffic counts were conducted by the Traffic Engineering Branch during the morning and after school hours on August 29, 2001 to determine if a Pedestrian Overcrossing was required in the Lost Hills School area. Fewer than half the pedestrians who crossed at Bruning Street were students (twelve students crossed). Since most students are bused, a pedestrian overcrossing is not recommended because of low projected usage. Furthermore, long access ramps may require out of direction travel, which would discourage its use. However, the Lost Hills Elementary school is planning to halt the bussing operation, which may increase foot traffic in the future and there is a post office in the area that generates foot traffic as well. The Project Development Team has recommended a marked crosswalk with a pedestrian activated signal be placed at Bruning Street and a signal at Lost Hills Road/Woodward Street to allow pedestrians to cross safely. Currently, there is a minor project EA 06-0A060 in progress to install a signal at Lost Hills Road/Woodward Street. Curb, sidewalk, and raised medians will be placed to provide pedestrian refuge areas. However,

design of this project shall not preclude a pedestrian over crossing in the future.

9. Needed Roadway Rehabilitation and Upgrading

The preferred alternative will correct the crown of the existing lanes and correct all existing horizontal and vertical curves that do not meet the 130-km/hr design speed.

10. Cost Estimates(Non-Escalated)

See "Attachments D" (Six-Page Estimate) for the construction and Right of Way costs for this project. A summary of the costs is shown below:

	Current (2005)
Roadway	$84,059,000
Structures	$9,220,000
Right of Way	$70,487,987
Total Project	$163,766,987

11. Right of Way Data

See "Attachment E" (R/W Data Sheet) for the Right of Way cost estimates (including utilities relocation costs). A summary of the costs is shown below:

RIGHT OF WAY DATA SHEETS SUMMARY
Right of Way & Utilities

Right of Way	**Current(2005**	**Escalated(2010)**
Acquisition, including excess lands, damages to remainder(s), and Goodwill	$52,535,939	$60,903,552
Utility Relocation (State Share)	$14,068,860	$16,309,665
Other Misc. Cost	$986,931	$1,144,125
Mitigation	$2,896,257	$3,357,556
Total R/W Area in Hectare (Acre)	125.7 (310.64)	125.7 (310.64)

The data above includes the conversion of existing conventional right of way to controlled access. The high cost of Right of Way acquisition

is attributed to acquiring the Chevron-Texaco oil field properties in Segment IV. The cost of this property has been estimated at $43,000,000 by a consultant for Chevron-Texaco and has not been verified by the Caltrans R/W department. This amount has been added to the PMS cost screen.

B. Rejected Alternatives

Alternative 1

This alternative is in essence the same as Alternative 2 with the exception in the area of the oil fields where the widening is to the north of the existing highway. This alternative was not preferred due to additional utilities being impacted from the widening to one side.

Alternative 4

Alternative 4 proposed to construct a new four-lane expressway to the north of the existing conventional highway but with a nonstandard median of 6.6 meters to reduce the impact on the oil field. Outside of the oil field, the expressway would be constructed to Alternative 2 standards.

This alternative is no longer viable because the nonstandard median could not be justified. The concept may be revisited in the future, as more accurate right of way estimates become available.

Alternative 3 ("No Build" Alternative)

The no build alternative would keep the existing highway as it is. No measures would be taken to improve the safety or reduce the increasing congestion that State Route 46 motorists now endure.

If the "No Build" alternative were chosen, safety would not be addressed. The accident rate for State Route 46 within the project limits for a three-year period from January 1, 2000 to December 31, 2002 showed 78 separate accidents. (See the Accident table on page 8 for details)

Congestion would also continue to rise. The LOS would fall from current LOS "C" to LOS "E" at KP 11.7 to KP 33.0 and from LOS "B" to LOS "D" at KP 33.0 to KP 52.3 all by the year 2020. The increase traffic congestion would cause delays in travel and increase the accident rate.

The "No Build" alternative is incompatible with the transportation objectives of Caltrans and Kern County.

6. CONSIDERATIONS REQUIRING DISCUSSION

A. Hazardous Waste

The following sites have been identified as hazardous waste areas of environmental concern after an Initial Site Assessment:

Kecks Corner
Taylor Automated Fuel Station
Sonny's Deli Market/Service Station
Labor Camp
Chevron Crude Oil Pipeline
PG&E substation
Northeast Corner of Halloway Road

For the areas of concern, it was recommended that prior to purchasing or developing land near the sites listed above, that Caltrans conduct a phase II assessment of the subsurface soil and groundwater if required. Two of the locations listed above could not be cleared by a Certificate of Sufficiency and are within Segment I. Caltrans would conduct a phase II assessment before the purchase of these two parcels.

Caltrans As-Built plans and bridge reports indicate the use of lead-based paint and asbestos for the bridges within the project limits. These structures will require an inspection to determine that if any hazardous concentration of lead based paint is present in soil under the bridges due to sand blasting practices for bridge maintenance. Inspection for presence of lead based paint and asbestos will be completed during a Preliminary Site Investigation.

An aerial deposited lead investigation conducted in soil along the unpaved shoulders of State Route 46 indicated no significant potential for hazardous concentrations. Therefore, the soils excavated within the limits of the project can be used and managed onsite or offsite without restrictions.

B. Value Analysis

Value Management Strategies, Inc conducted the Value Analysis (VA) on October 15-19, 2001, in Fresno, California.
There were thirteen (13) alternatives the Value Analysis proposed. This project is in agreement with and will implement the VA alternative to symmetrically widen the roadway within the oilfields. Another alternative that was proposed by the VA and accepted by the Project Development Team was to add an eastbound to northbound loop ramp to the I-5 interchange to improve traffic safety. Also, based on recommendations by the traffic department a westbound to southbound loop ramp will be added and upgrade the interchange from a spread diamond to an L-9 partial cloverleaf configuration. The third alternative accepted was to reduce utility relocation wherever possible. On the other hand, ten (10) VA alternatives were analyzed and rejected by Project Development for various reasons.

C. Resource Conservation

Every effort will be made to utilize the existing lanes of travel.

D. Right of Way Issues

The preferred alternative will require approximately 125.70 hectares (310.64 acre) of new Right of Way to be purchased.

Parcels that are affected include agricultural, water district facilities, oil facilities, medical office building, and other businesses. The Right of Way Data Sheet (Attachment E) summarizes the right of way issues.

E. Environmental Document

The Negative Declaration/Finding of No Significant Impact (ND/FONSI) has been prepared in accordance with Caltrans' Environmental procedures, as well as State and Federal environmental regulations. The attached ND is the appropriate document for the proposal.

The proposed four lane divided highway will encroach on the 100-year flood plain for a number of streams that cross the proposed alignment. The effect of the widening would be a minor volume displacement as long as the existing flow patterns are maintained.

Impacts to threatened or endangered animal species, or riparian habitat would be mitigated by measures specified in the Biological Opinions rendered by the U.S. Fish and Wildlife Service and the California

Department of Fish and Game. Impacts to wetlands would be mitigated by measures specified by the U.S. Army Corps of Engineers. Impacts to "other waters of the U.S." would be mitigated under Nationwide Permit #14 issued by the Army Corps of Engineers.

The mitigation money will be utilized to purchase mitigation lands in one of three ways: 1.) The purchase of land in Caltrans title, from the land owner, in turn the land will be deeded or given to a third party (i.e. The Wildlife Society) for management purposes. 2.) The purchase of land in a third party name. 3.) The purchase of a conservation easement, in which the landowner maintains title of the land, but must maintain current land usage in perpetuity.

The money will buy mitigation for the project at a 3:1 ratio, three acres purchased for every acre impacted. The mitigation ratio is outlined in the Biological Opinion from the USFWS. Approved purchase areas are outlined in the Biological Opinion from the USFWS. Exact locations and prices are not yet determined. Prior to any project impacts, after PAED and before construction, the mitigation must be completed. An agreement will be required with a third party for management in perpetuity of the mitigation land. The type of agreement will be dependent upon the type of purchase. A conservation easement would require an agreement with the landowner and an out right purchase of the land would require an agreement or title transfer to a third party.

Air and water quality would not be affected, and noise levels would not increase near sensitive receptors. There would be no effects upon hazardous waste sites. Impacts to farmland would be considered less than significant.

F. Air Quality Conformity

The Kern County portion is located in a non-attainment area for ozone and PM_{10} (Particulate matter of 10 microns in diameter or smaller). A non-attainment area is a geographic region that the Environmental Protection Agency (EPA) has designated as not meeting the National Ambient Air Quality Standards (NAAQS).

The qualitative PM_{10} Hot Spot analysis conducted by Caltrans Environmental Engineering Branch determined that this portion of the project should not cause or contribute to violations of PM_{10} National Ambient Air Quality Standard based upon information provided by California Air Resources Board and Caltrans Traffic Engineering. Hot Spot analysis for CO (Carbon Monoxide) will not be done for this project.

C. Permits

The following Permits are required for this project:

A 1601 Streambed Alteration Agreement from the California Department of Fish and Game

Section 404, Nationwide Permit #14 from the U.S. Army Corps of Engineers

Section 401 certification from the Regional Water Quality Control Board and a Notice of Intent filed with the State Water Resources Control Board

Two Section 7 Biological Opinions from the U.S. Fish and Wildlife Service offices in Ventura and Sacramento, California

Encroachment Permit from Kern County Roads Department

D. Cooperative Agreements

A Cooperative Agreement with Kern County will not be required.

E. Other Agreements

None.

F. Transportation Management Plan (TMP) for Use During Construction

The TMP was prepared by District 6 Office of Traffic Operations on April 19, 2002. The following are recommended TMP elements and strategies for this project:

1. Public Information Campaign:
   The goals of this campaign include informing the public about the construction project, and to provide information on various routes commuters may take to avoid anticipated congestion. The Public Information Office (PIO) and the Transportation Management Center (TMC) will be responsible for identifying the target audience and

distributing information via brochures, mailers, press releases, paid advertising, public meetings, telephone hotlines, internet, California Trucking Association (CTA), and the Automobile Club of California (AAA). The estimated cost of this Public Information/Awareness Campaign is $12,000.

2. Motorist Information Strategies:

This component of this TMP will go into effect during the construction phase of this project. This element will provide information that will guide and assist the motorists. It will encourage voluntary diversion away from the impacted areas and guide motorists through the various alternate routes. The information is disseminated through Portable Changeable Message Signs (PCMS) and real-time highway condition information will be provided through Caltrans Highway Information Network (CHIN) accessible via telephone (1-800-427-ROAD).

3. Construction Strategies:

These TMP measures are implemented through plans and specifications, and performed by the contractor during construction. This will reduce construction time, minimize traffic disruptions and avoid potential safety problems during construction. The strategies that may be utilized are lane closure charts, reversible lanes, reduced speed zone, incentive/disincentive, construction contingency plans, and traffic contingency plans/emergency detour plan.

The cost of implementing this TMP including its preparation has been estimated to be $54,000.

G. Stage Construction

This project will be constructed in four stages. The first stage will construct the new lanes and structures. The second stage will construct temporary detours to shift traffic onto the new lanes. The third stage will overlay and correct the crown of the existing lanes. The fourth stage will involve striping to provide two lanes in each direction.

H. Accommodation of Oversize Loads

This project will not affect oversize loads.

Attachment G STRAIN Report
(Structure Replacement and Improvement Needs)

Attachment H Storm Water Data Report

Attachment I Traffic Management Plan (TMP) Data Sheet

Sam Wong	District Hydraulics	559-243-3498
Glenn Medina	Surveys	559-276-5959
Joel A. Aguilar	Traffic Investigations	559-488-4123

11. LIST OF ATTACHMENTS

Attachment A	Segment Key Map
Attachment A-1	Title Sheet-Segment 1
Attachment A-2	Title Sheet-Segment 3
Attachment A-3	Title Sheet-Segment 4
Attachment B-1	Typical Cross Section (Alternative # 2 - Widening to the North)
Attachment B-2	Typical Cross Section (Alternative # 2 - Widening to the South)
Attachment B-3	Typical Cross Section (Symmetrical Widening within the Oil Fields)
Attachment B-4	Typical Cross Section (Widening to the North 5.4-m Median Within the City of Lost Hills)
Attachment B-5	Typical Cross Section (Widening to the North 9.0-m Median at I-5)
Attachment C	Layout Sheets
Attachment C-1	Layout Sheet Through the Oil Fields
Attachment D	Six-page estimate (Alternative #2)
Attachment D-1	Six-page estimate (Segment 1)
Attachment E	Right of Way Data Sheet (Alternative #2)
Attachment E-1	Right of Way Data Sheet (Segment 1)
Attachment F	TASAS Table B (Accident Data)

Project Schedule

MILESTONES	DATE
PA&ED	06/15/05
District PS&E to HQ	03/01/09
R/W Certification	07/01/09
Ready To List (RTL)	07/01/09
Start Construction	02/01/10

9. REVIEWS

Michael Janzen HQ Design Reviewer, has reviewed this project and concurs with the scope.

10. PROJECT PERSONNEL

Contact	Job Title	Business Phone:
Mehran Akhavan	Project Manager	559-243-3442
Shahin Mansour	Project Development Unit Supervisor (Design Senior)	559-230-3114
~~Pete Petrakis~~	~~Project Development Unit Project Engineer~~	~~559-230-3117~~
Larry Steelman	Right of Way Agent	559-243-3806
Jules Gottschalk	Associate R/W Agent (Right of way Utilities)	559-276-5938
Ron Sekhon	Material Lab	559 445-6831
Mike Donahue	Environmental Branch Supervisor	559-243-8157
John Liu	Traffic Engineering	559-488-4331
Albert Lee	Traffic Operations	559-488-4111

A. PROGRAMMING (SEGMENT I)

More than $41 Million in future funds will be needed to fund segment I through construction. The schedule shown in this Project Report assumes funding construction support and capital will be available in 2009/2010 fiscal years. If funding is not available, the schedule for the project will have to be delayed and capital costs of the project would need to be adjusted to reflect the proper escalation.

Future (Unfunded Need)

Project Cost Component	Fiscal Year							Total
		2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	
R/W Capital								
Construction Capital							35,230	35,230
PA&ED								
PS&E								
R/W Support								
Construction Support							6,000	6000
Total							41,230	41,230

Note: (1) All costs X $1,000. Construction Capital is escalated at 3.4% per year and Support costs escalated 2.7% per year. Right of Way Capital costs escalated at 3% per year for Acquisition and 5% for Utilities. (2) Support Categories are the same as those identified by SB 45.

Future (Un-funded Need)

Project Cost Component	Fiscal Year							Total
	Prior	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	
R/W Capital					56,255			56,255
Construction Capital							84,590	84,590
PA&ED								
PS&E					2000			2000
R/W Support								
Construction Support							15,500	15,500
Total					58,255		100,090	158,345

COST BREAKDOWN: *(Capital Cost Estimate provided by Design and R/W* Functions. Support Cost Estimate from XPM.)

Capital and Support Cost Summary at Project Study Report (Project Development Support) Stage

Project Cost Component	Fiscal Year							Total
	2000/2001	2001/2002	2002/2003	2003/2004	2004/2005	2005/2006	2006/2007	
R/W Capital				35,000				35,000
Construction Capital							118,635	118,635
PA&ED	775		750					1,525
PS&E			3,930	450				4,380
R/W Support				2,395				2,395
Construction Support							15,460	15,460
Total	775		4,680	37,845			134,095	177,395

Note: (1) All costs X $1,000. Construction Capital is escalated at 3.4% per year and Support costs escalated 2.7% per year. Right of Way Capital costs escalated at 3% per year for Acquisition and 5% for Utilities. (2) Support Categories are the same as those identified by SB 45.

Existing Funding (CTIP)

Funding Components

Project Cost Component	Fiscal Year							Total
	Prior	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	
R/W Capital		9,035			16,425			25,460
Construction Capital						15,250		15,250
PA&ED	1,525							1,525
PS&E	3,930	225						4,155
R/W Support					2,395			2,395
Construction Support								
Total	5,455	9,260			18,820	15,250		48,785

Funding Source

	Fiscal Year							Total
	Prior	2004/2005	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010	
RTIP	5,455				5,400			10,855
ITIP		225			13,420			13,645
*TCRP		9,035				15,250		24,285
Total	5,445	9,260			18,820	15,250		48,785

*At this time TCRP funding is at risk.

I. Graffiti Control

This project is not located in a graffiti-prone area. However, in order to discourage graffiti, design features that could be incorporated into the design are:

- Limiting access to signs, bridges, and retaining walls,
- Textured surfaces on bridges and walls,
- Pre-treatment of surfaces on bridges and walls with a "clear-coat" material that allows graffiti paint to be washed off with pressurized water.

8. PROGRAMMING

More than $158 Million in future funds will be needed to fund this project through construction. The schedule shown in this Project Report is for Segment I and assumes funding for construction support and capital will be programmed in the 2006 STIP Cycle. If the project is not able to successfully compete for funding in the 2006 STIP Cycle, the schedule for the project will have to be delayed and capital costs of the project needs to be adjusted to reflect the proper escalation.

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
06	Ker	46	0.00/53.9		

REGISTERED CIVIL ENGINEER

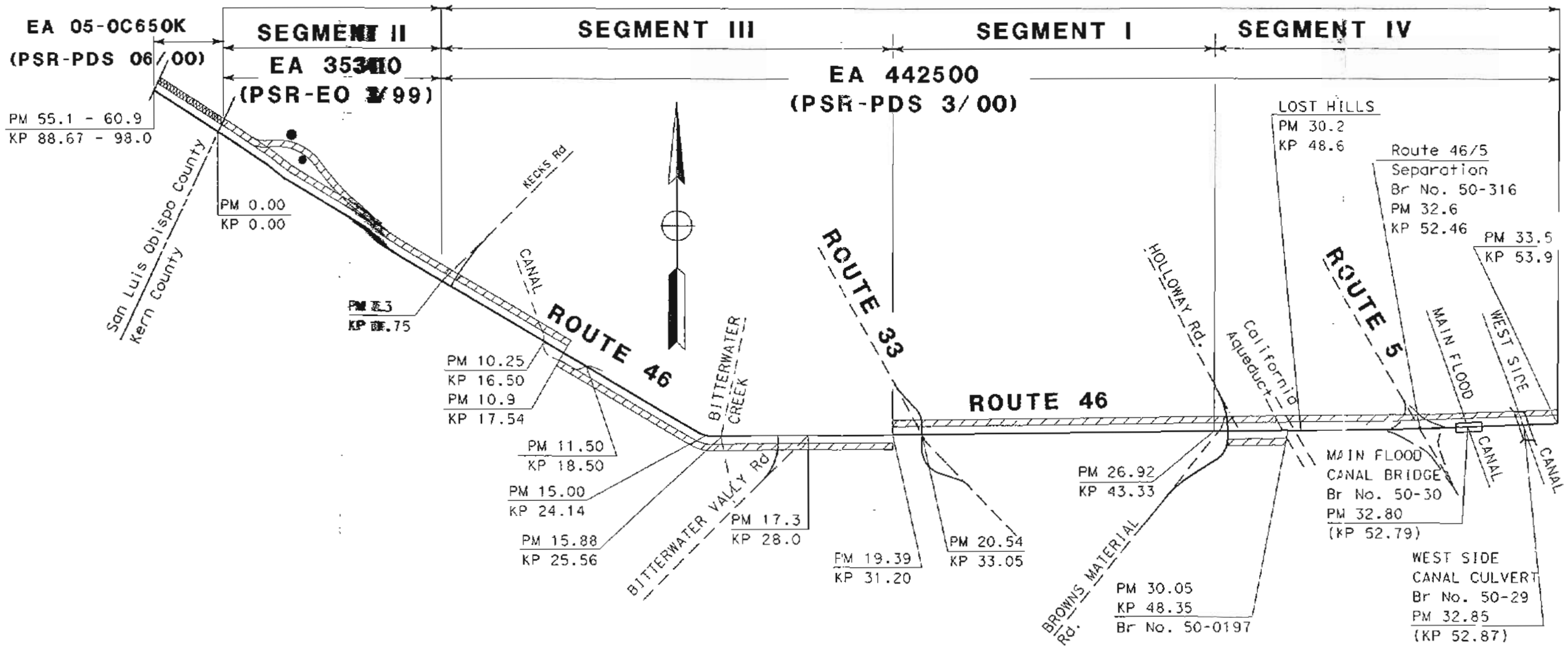
PLANS APPROVAL DATE

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Caltrans Metric

CONVERTING 2-LANE CONVENTIONAL HIGHWAY TO 4-LANE EXPRESSWAY



PROPOSED WIDENING

ATTACHMENT A

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT DEVELOPMENT
PROJECT ENGINEER: PETE PETRAKIS
CALCULATED/DESIGNED BY
CHECKED BY
DATE REVISED BY
DATE REVISED

LAST REVISION 07-22-03
DATE PLOTTED => %DATE
TIME PLOTTED => %TIME

RELATIVE BORDER SCALE 0 20 40 60 80
USERNAME => %USER

INDEX OF SHEETS

DIST	COUNTY	ROUTE	KILOMETER POST TO ALL PROJECT	SHEET No	TOTAL SHEETS
06	Ker	46	11.75/31.19		

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

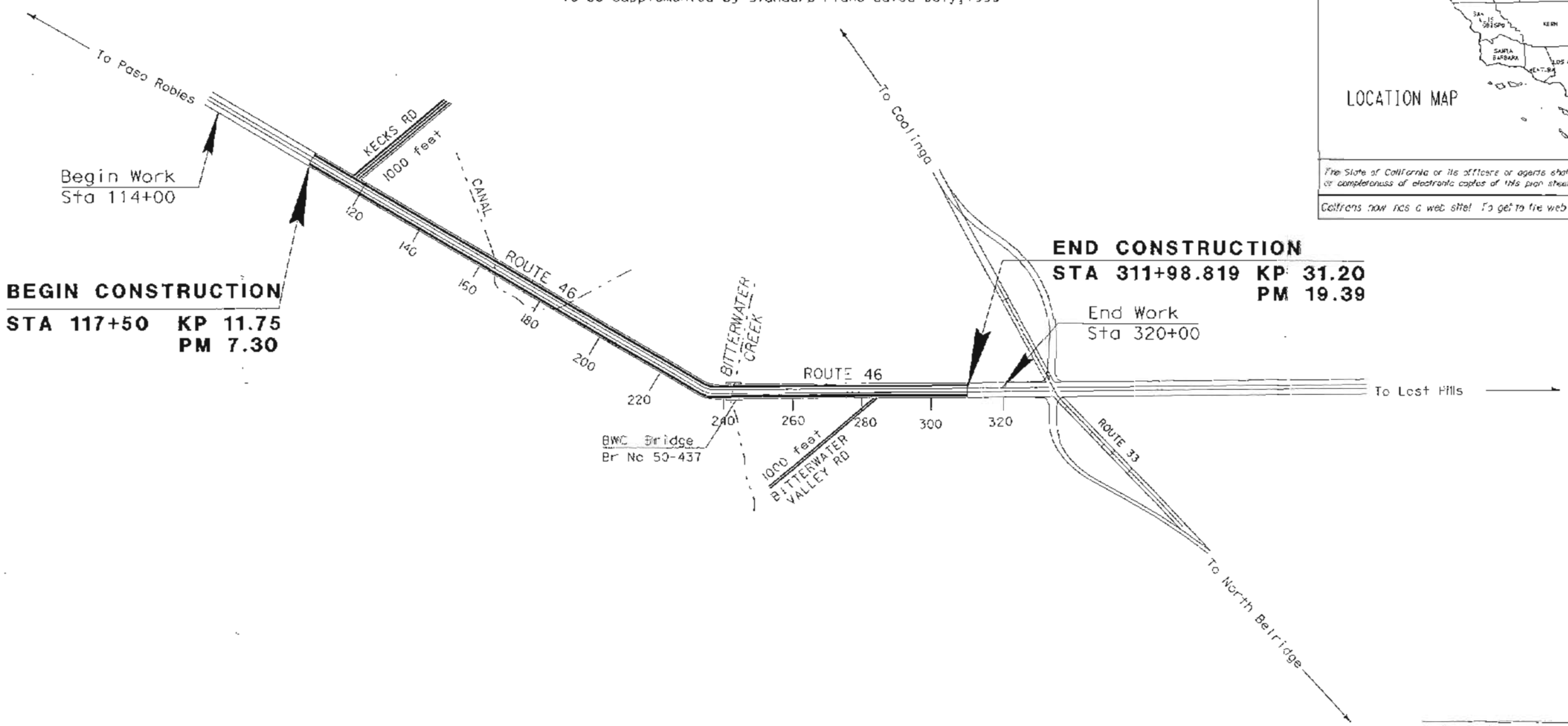
IN KERN COUNTY
FROM 0.20 km EAST OF KECKS ROAD
TO 1.2 km WEST OF ROUTE 46/33 INTERSECTION

To be supplemented by Standard Plans dated July, 1999



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BEGIN CONSTRUCTION
STA 117+50 KP 11.75
PM 7.30

Caltrans Metric

Project Engineer Date
Registered Civil Engineer

Plans Approval Date

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA

SEGMENT 3
ATTACHMENT A-1

The Contractor shall possess the Class (or Classes) of license as specified in the ''Notice to Contractors''.

PROJECT ENGINEER	DATE	PROJECT MANAGER	DATE

LAST REVISION 11-13-03 DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

Contract No.

FORM CC-OE-93-PF (REV. 3/98)

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => $USER
DGN FILE => $REQUEST

EU 06221

EA 442500

INDEX OF SHEETS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN KERN COUNTY
FROM 1.2 KM WEST OF HWY 33/46 INTERSECTION
TO 4.9 KM WEST OF THE CALIFORNIA AQUEDUCT

To be supplemented by Standard Plans dated July, 1999

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
06	Ker	46	31.19/43.32		



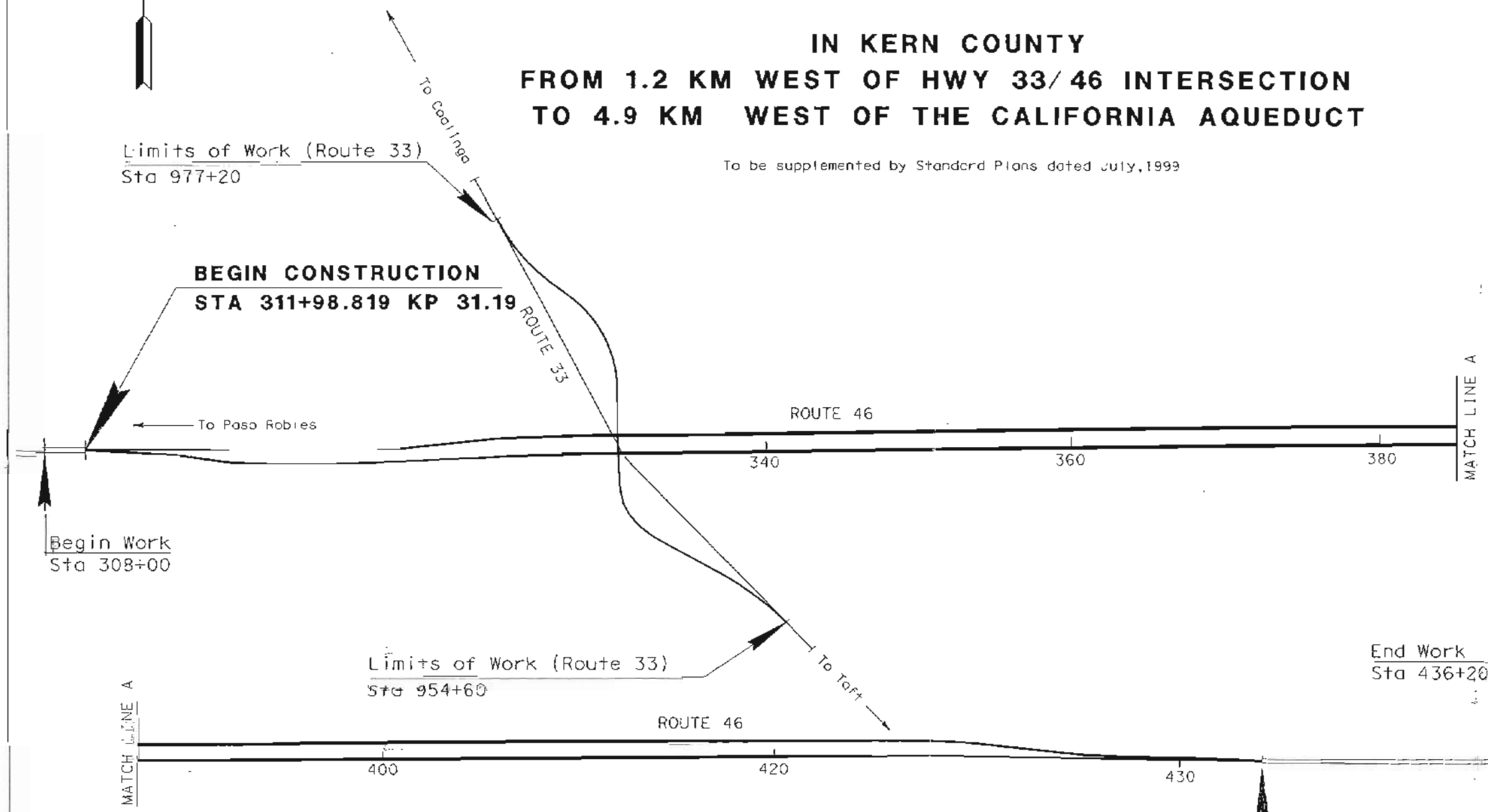
LOCATION MAP

Caltrans

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Caltrans Metric



Project Engineer Date
Registered Civil Engineer

REGISTERED PROFESSIONAL ENGINEER
No.
Exp.
CIVIL
STATE OF CALIFORNIA

Plans Approval Date

SEGMENT 1

ATTACHMENT A-2

The Contractor shall possess the Class (or Classes) of license as specified in the ''Notice to Contractors''.

Contract No.

LAST REVISION 00-00-00 DATE PLOTTED => 00ATE
TIME PLOTTED => 9TIME

PROJECT ENGINEER | DATE | PROJECT MANAGER | DATE

FORM DC-OE-93-2F (REV. 3/88)

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60 80

USERNAME => USER
DGN FILE => REQUEST

CU 06221 EA 442501

INDEX OF SHEETS

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
06	Ker	46	43.32/53.90		

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

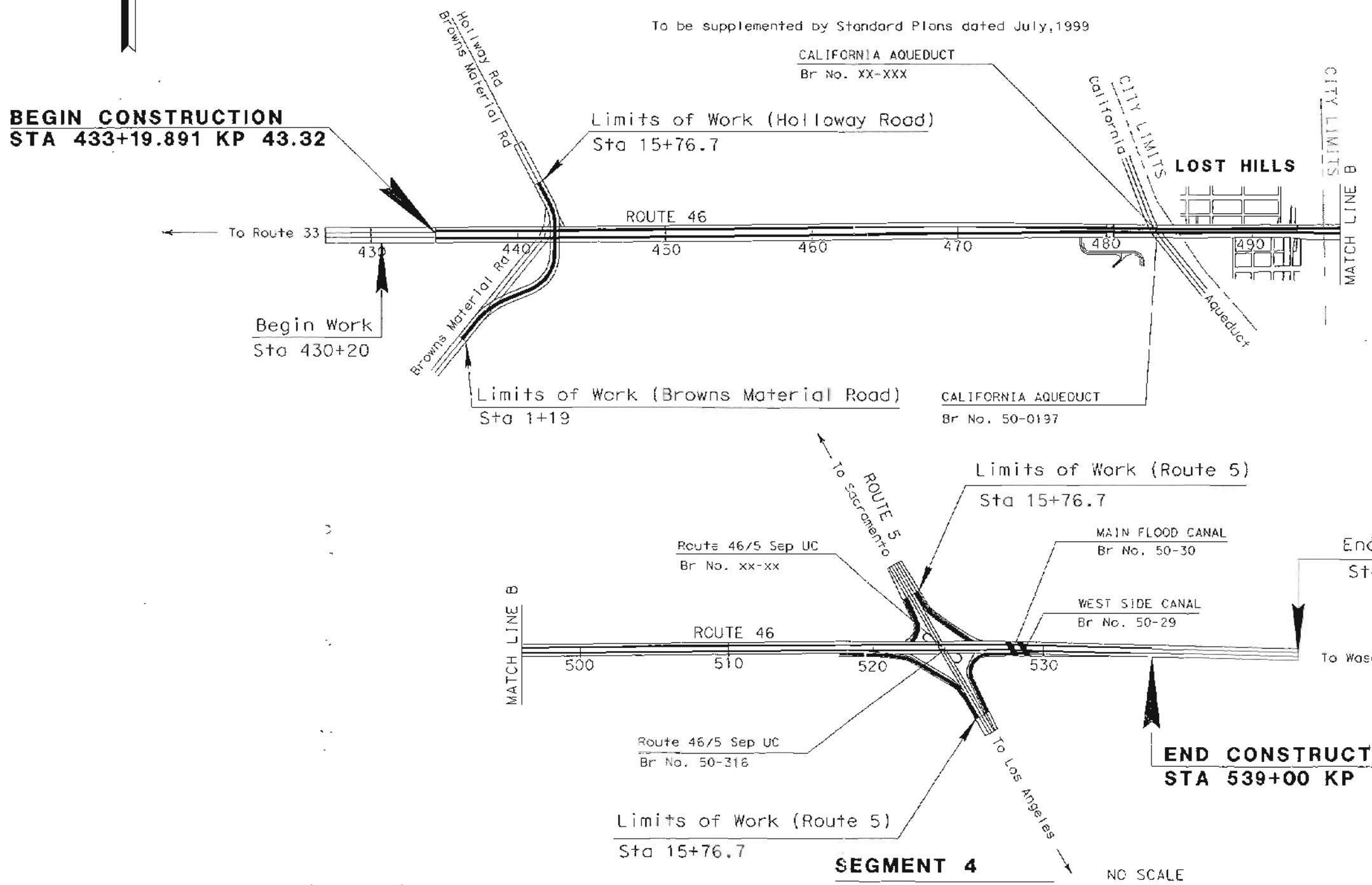
STATE HIGHWAY

IN KERN COUNTY

FROM 4.91 KM WEST OF THE CALIFORNIA AQUEDUCT

TO 1.28 KM EAST OF THE ROUTE 46/5 SEPARATION

To be supplemented by Standard Plans dated July,1999





LOCATION MAP

Caltrans

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Caltrans now has a web site! To get to the web site, go to: http://www.dot.ca.gov

Caltrans Metric

Project Engineer Date
Registered Civil Engineer

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

Plans Approval Date

The Contractor shall possess the Class (or Classes) of license as specified in the ''Notice to Contractors''.

SEGMENT 4

ATTACHMENT A-3

PROJECT ENGINEER	DATE	PROJECT MANAGER	DATE

LAST REVISION => $DATE
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

Contract No.

FORM DC-OE-93-9F (REV. 3/86)

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS 0 20 40 60

USERNAME => $USER
DGN FILE => $REQUEST

CU 06221

EA 442500

DESIGN DESIGNATION

DESIGN DESIGNATION		
ADT	2008	7,950
ADT	2028	12,700
DHV	2028	1,250
TI	2028	12,500
D	2028	67%
T	2028	5%
V	2028	130
ESAL	2028	11,770,000

NOTES:

1. SUPERELVATIONS AS SHOWN OR AS DIRECTED BY THE ENGINEER
2. DIMENSIONS OF STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES AS SPECIFED IN THE STANDARD SPECIFICATIONS

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
06	Ker	46	11.75/53.90		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — CIVIL — STATE OF CALIFORNIA

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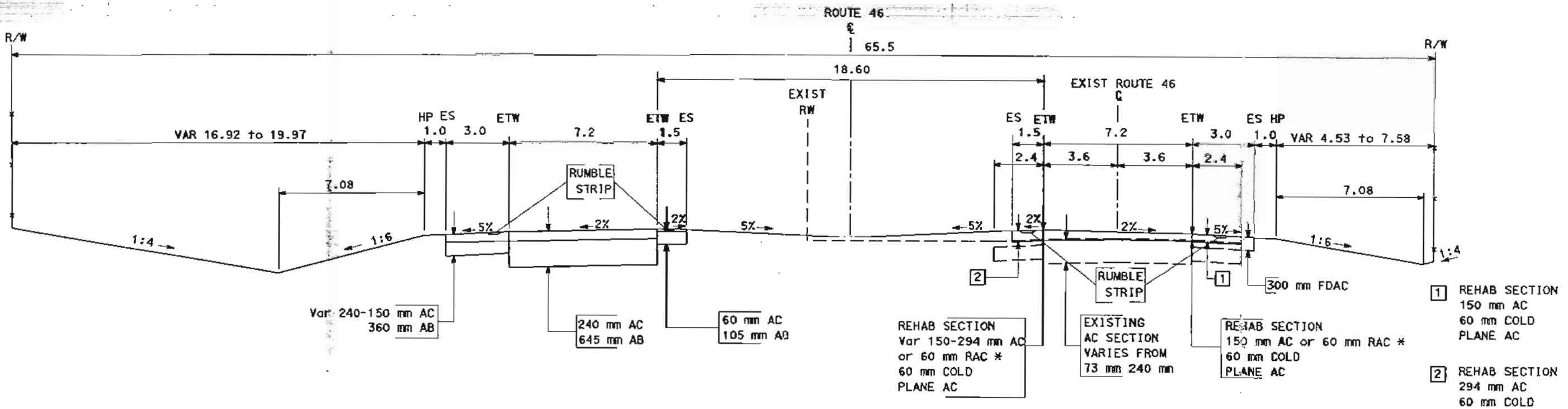
Caltrans now has a web site! To get to the web site, go to: http://www.dot.ca.gov

DATE REVISED | DATE REVISED

CALCULATED/ DESIGNED BY | CHECKED BY

PROJECT ENGINEER: PETE PETRAKIS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT DEVELOPMENT



ROUTE 46

STA 117+45 TO STA 175+38
* STA 318+58 TO STA 448+90

ALTERNATIVE 2

WIDENING TO THE NORTH

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ATTACHMENT B-1

TYPICAL CROSS SECTION

NO SCALE

LAST REVISION 01-29-04 | DATE PLOTTED => 24-FEB-2004 TIME PLOTTED => 08:44

DESIGN DESIGNATION		
ADT	2008	7,950
ADT	2028	12,700
DHV	2028	1,250
T1	2028	12,500
D	2028	67%
T	2028	5%
V	2028	130
ESAL	2028	11,770,000

NOTES:

1. SUPERELVATIONS AS SHOWN OR AS DIRECTED BY THE ENGINEER
2. DIMENSIONS OF STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES AS SPECIFIED IN THE STANDARD SPECACATIONS

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
06	Ker	46	11.75/53.90		

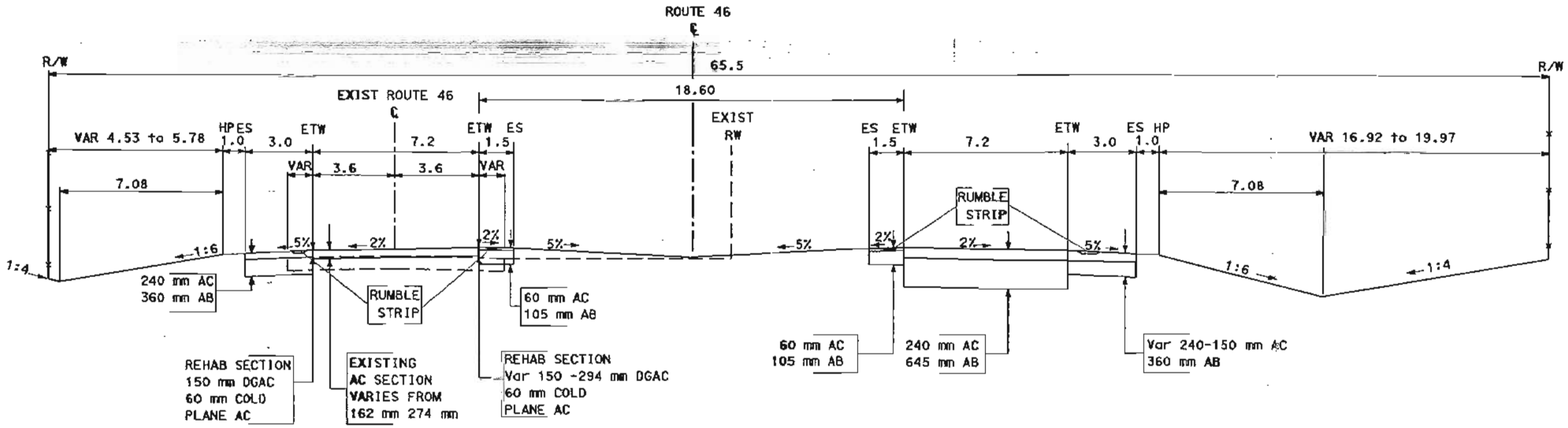
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — CIVIL — STATE OF CALIFORNIA

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ROUTE 46

STA 175+38 TO 318+58

WIDENING TO THE SOUTH

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ATTACHMENT B-2

TYPICAL CROSS SECTION

NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DATE	REVISED BY	DATE REVISED
Caltrans PROJECT DEVELOPMENT			
PROJECT ENGINEER PETE PETRAKIS	CALCULATED/ DESIGNED BY		
	CHECKED BY		

LAST REVISION 01-29-04 DATE PLOTTED => 24-FEB-2004 TIME PLOTTED => 08:44

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
06	Ker	46	11.75/53.90		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER — CIVIL — STATE OF CALIFORNIA — No. — Exp.

Caltrans now has a web site! To get to the web site, go to: http://www.dot.ca.gov

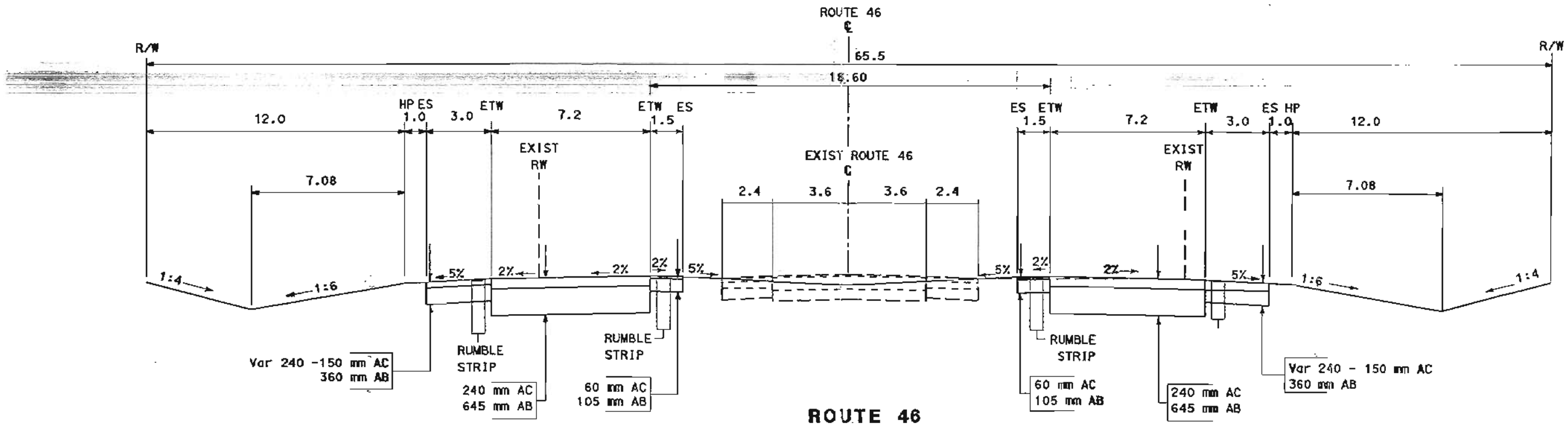
Caltrans Metric

DESIGN DESIGNATION

DESIGN DESIGNATION		
ADT	2008	7,950
ADT	2028	12,700
DHV	2028	1,250
TI	2028	12,500
D	2028	67%
T	2028	5%
V	2028	130
ESAL	2028	11,770,000

NOTES:

1. SUPERELVATIONS AS SHOWN OR AS DIRECTED BY THE ENGINEER
2. DIMENSIONS OF STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES AS SPECIFED IN THE STANDARD SPECIFICATIONS



ROUTE 46

STA 448+90 TO STA 469+83

ALTERNATIVE 2

SYMMETRICAL WIDENING WITHIN THE OIL FIELDS

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ATTACHMENT B-3

TYPICAL CROSS SECTION

NO SCALE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT DEVELOPMENT
PROJECT ENGINEER: PETE PETRAKIS
CALCULATED/DESIGNED BY
CHECKED BY
DATE REVISED BY
DATE REVISED

LAST REVISION 01-29-04
DATE PLOTTED => 24-FEB-2004
TIME PLOTTED => 08:45

DESIGN DESIGNATION		
ADT	2008	7,950
ADT	2028	12,700
DHV	2028	1,250
TI	2028	12,500
D	2028	67%
T	2028	5%
V	2028	72
ESAL	2028	11,770,000

NOTES:

1. SUPERELVATIONS AS SHOWN OR AS DIRECTED BY THE ENGINEER
2. DIMENSIONS OF STRUCTURAL SECTIONS ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATION

Caltrans Metric

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
06	Ker	46	11.75/53.90		

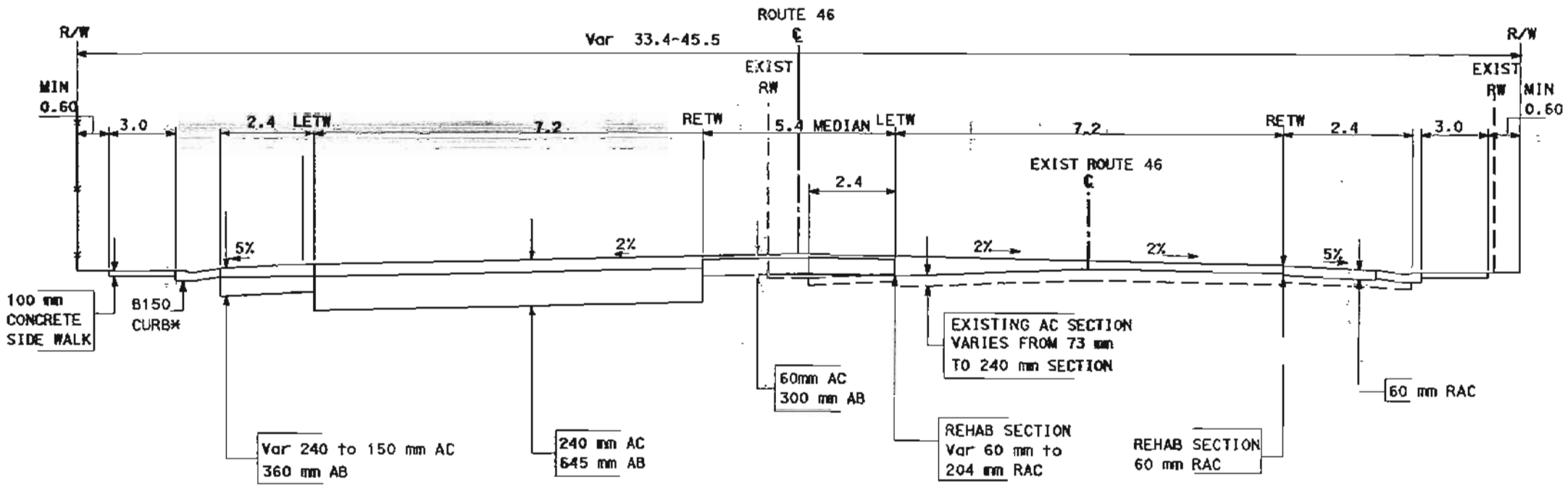
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — CIVIL — STATE OF CALIFORNIA

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ROUTE 46

STA 484+53 TO 518+00

WIDENING TO THE NORTH WITH 5.4-m MEDIAN WIDTH WITHIN THE CITY OF LOST HILLS

* Curb and Sidewalk not applicable east of Lost Hills

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ATTACHMENT B-4

TYPICAL CROSS SECTION

NO SCALE

DATE	REVISED BY	DATE REVISED

CALCULATED/DESIGNED BY

CHECKED BY

PROJECT ENGINEER: PETE PETRAKIS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans PROJECT DEVELOPMENT

LAST REVISION 01-29-04 DATE PLOTTED => 24-FEB-2004 TIME PLOTTED -> 08:45

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
06	Ker	46	11.75/53.90		

REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

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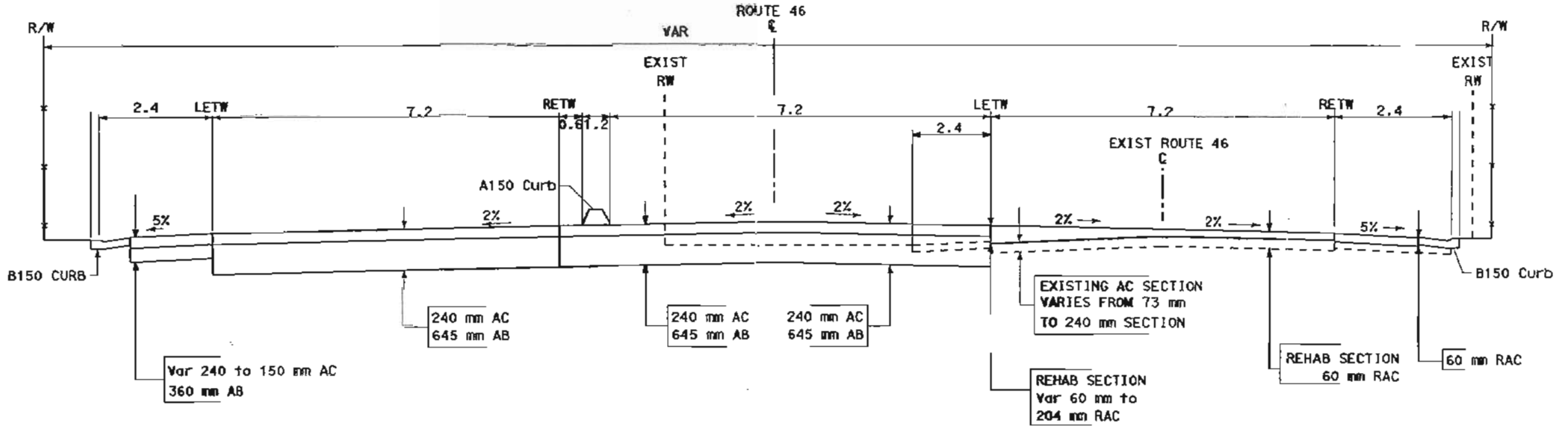
DATE	REVISED BY	DATE REVISED

CALCULATED/ DESIGNED BY:

CHECKED BY:

PROJECT ENGINEER: PETE PETRAKIS

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans PROJECT DEVELOPMENT



I-5 INTERCHANGE

ROUTE 46

Sta 518+00 To 522+60

Widening to the North 9.0-m Median at I-5

ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SHOWN

ATTACHMENT B-5

TYPICAL CROSS SECTION

NO SCALE

LAST REVISION 01-29-04 DATE PLOTTED => 24-FEB-2004 TIME PLOTTED => 08:44

TILITY EASEMENT

Metric

PROPOSED R/W

KECKS Rd

PROPOSED R/W

Rte 46 117+95
KECKS Rd 10+00

PROPOSED R/W

ES
ETW
ETW
ES
ES
ETW
ETW
ES

R/W

ROUTE 46

MATCH LINE

118 119 120 121

ASPH

R-REP-46

ACCESS DRIVEWAY

R/W

DIRT

PROPOSED R/W

MATCH LINE

ES
ETW
ETW
ES
ES
ETW
ETW
ES

R/W

ROUTE 46

MATCH SHEET 2

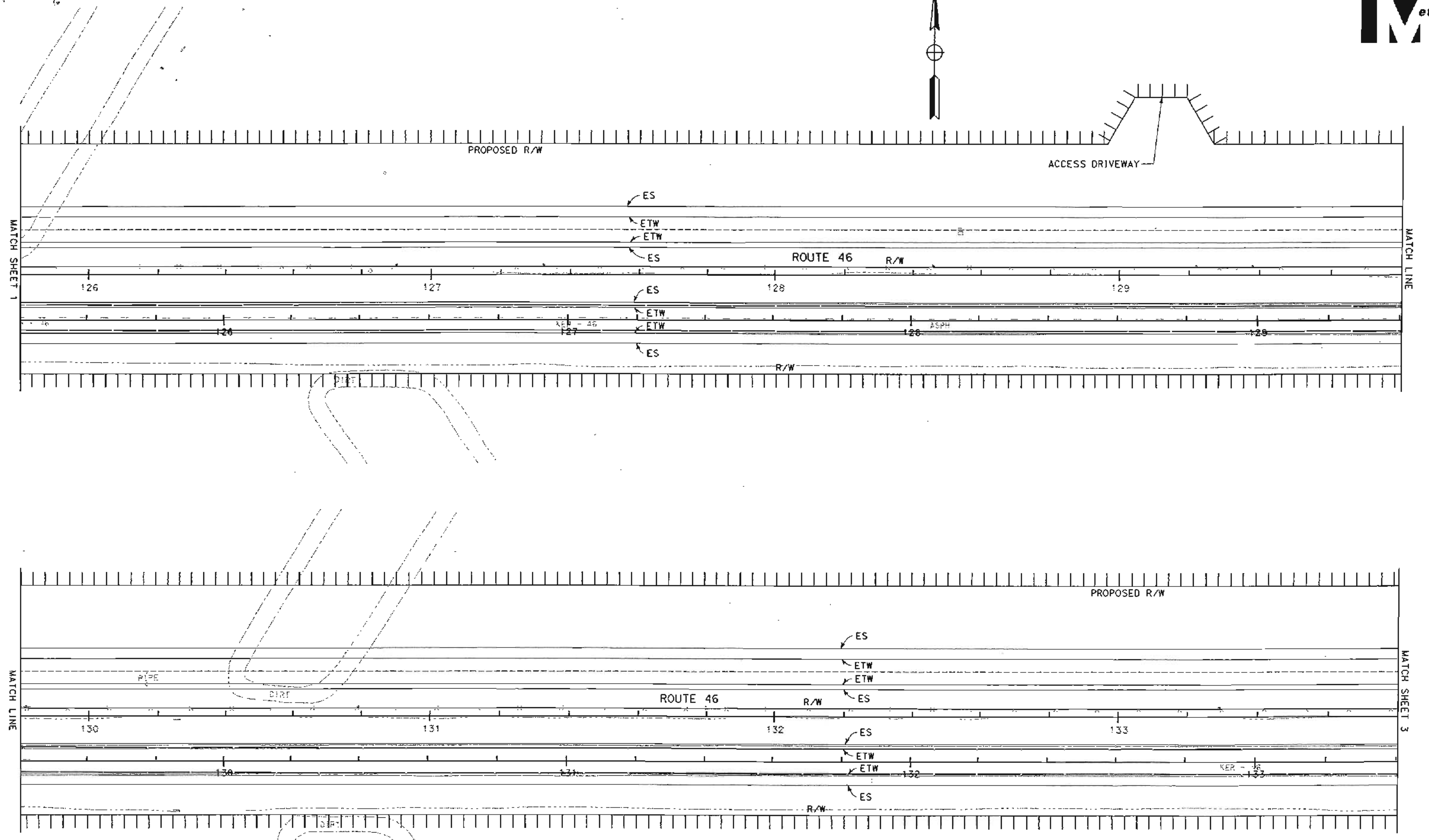
122 123 124 125

DIRT

ASPH

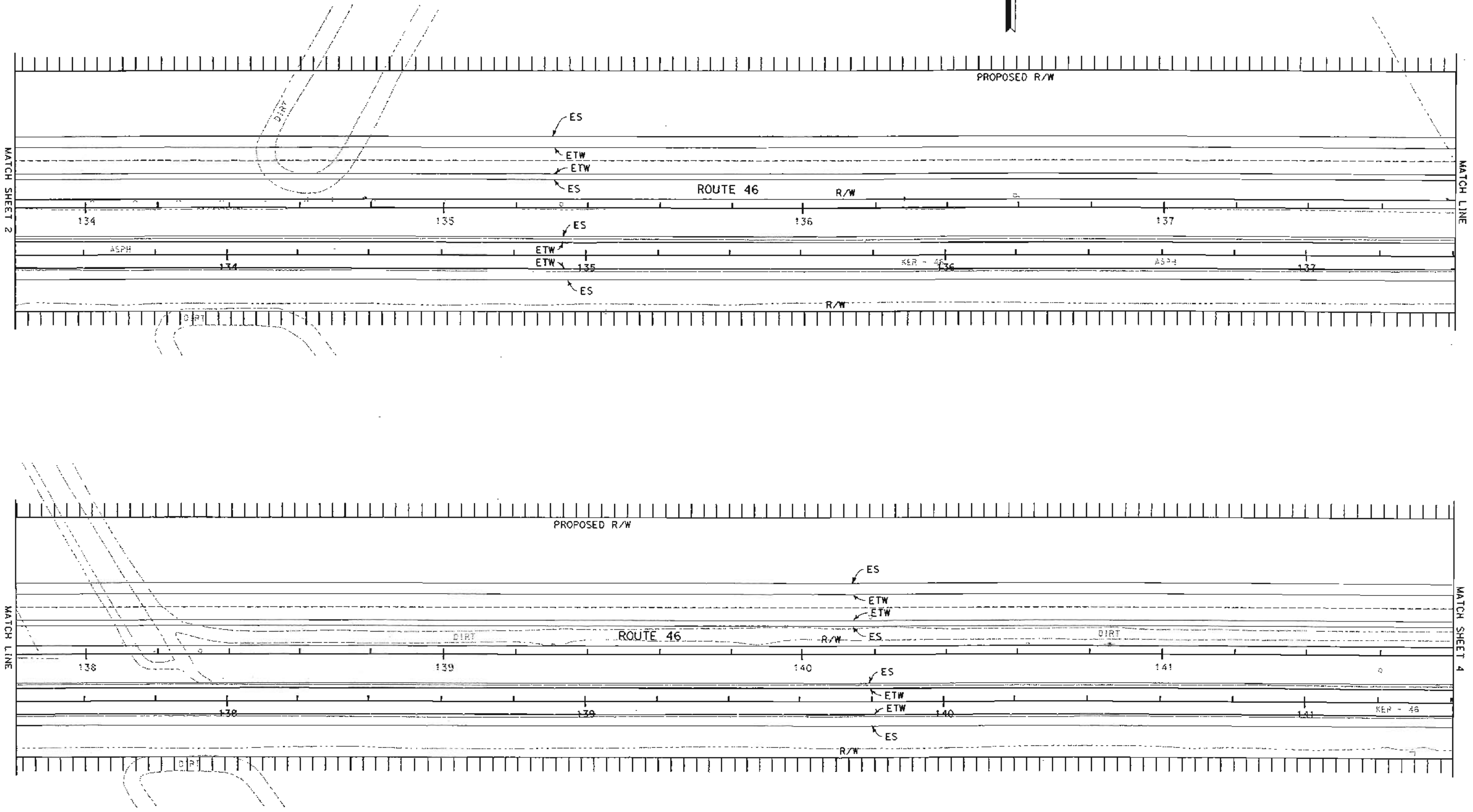
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ATTACHMENT C
SHEET 1 OF 67



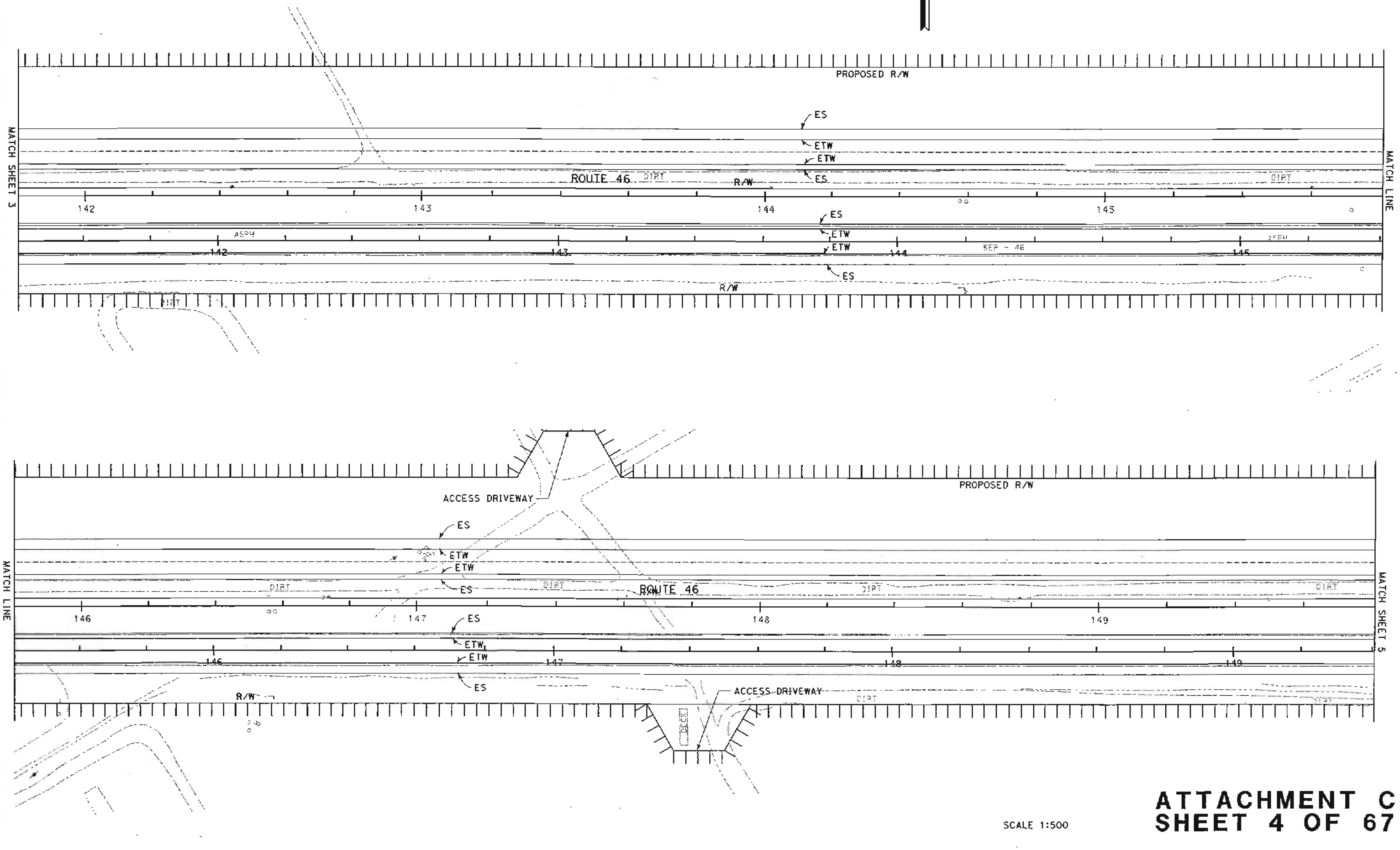
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ATTACHMENT C
SHEET 2 OF 67



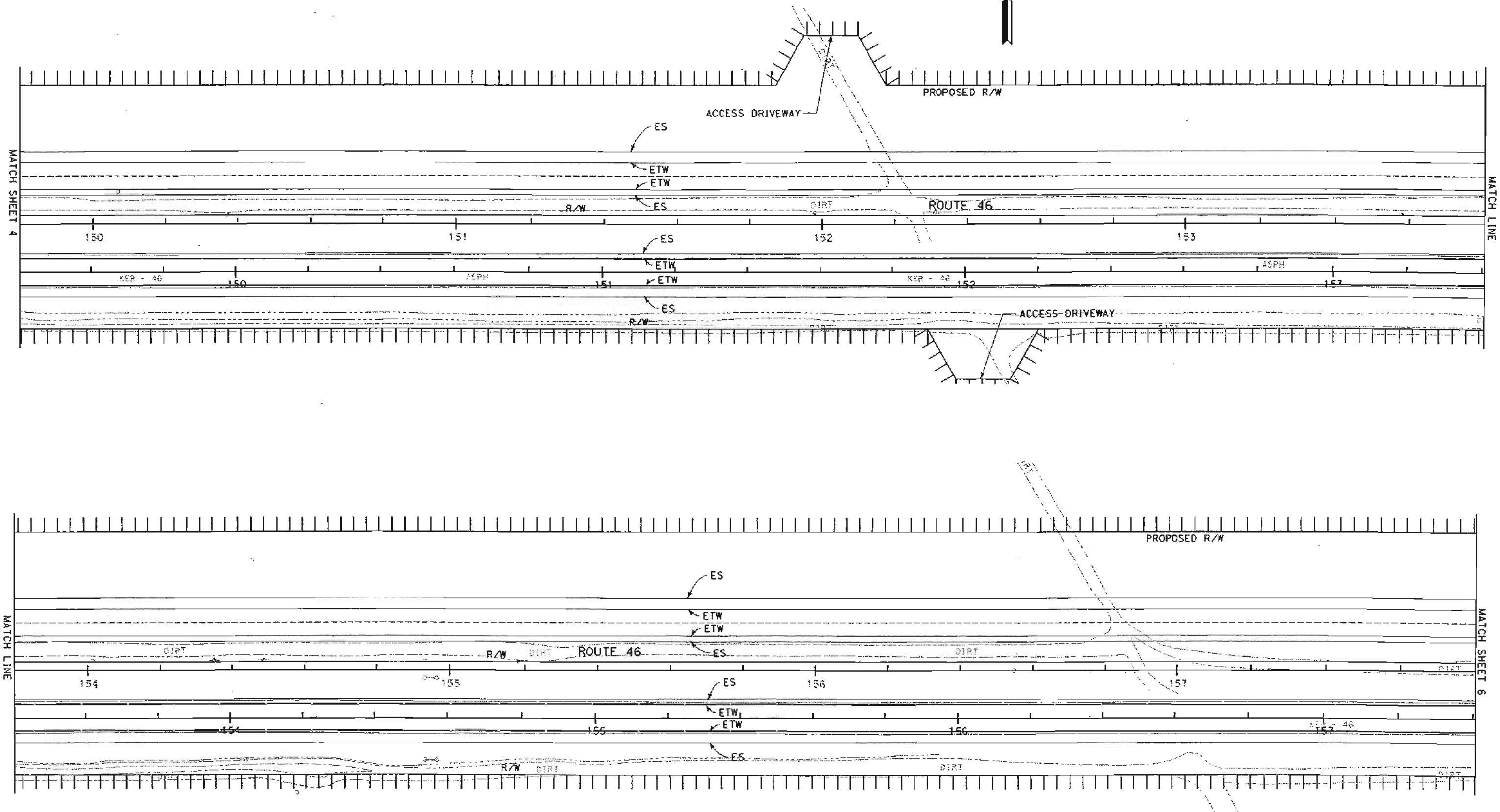
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SHEET 3 OF 67



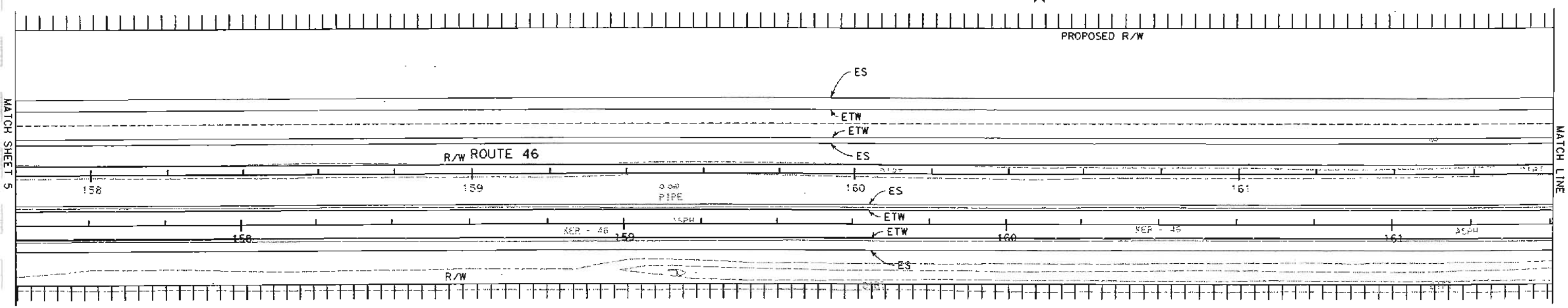
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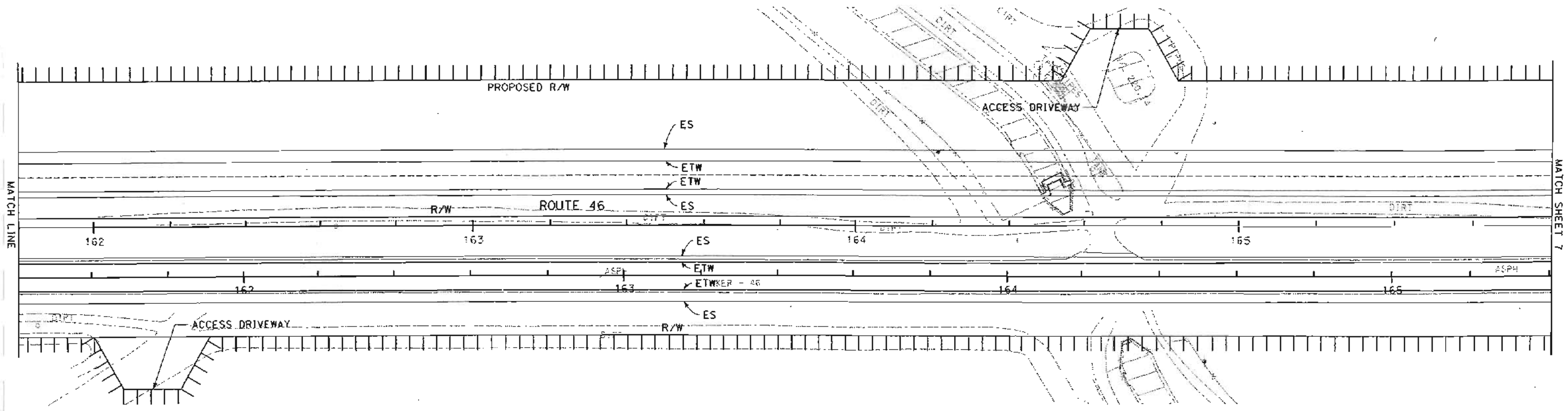
ATTACHMENT C
SHEET 4 OF 67



SCALE 1:500

ATTACHMENT C
SHEET 5 OF 67





SCALE 1:500

ATTACHMENT C
SHEET 6 OF 67

PROPOSED R/W

ES

ETW

ETW

ROUTE 46

ES R/W

MATCH SHEET 6

MATCH LINE

166 167 168 169

ES

ETW

ETW

166 167 168 169

ES

R/W

PROPOSED R/W

ES

ETW

ETW

ROUTE 46

ES R/W

MATCH LINE

MATCH SHEET 8

170 171 172 173

ES

ETW

ETW

170 171 172 173

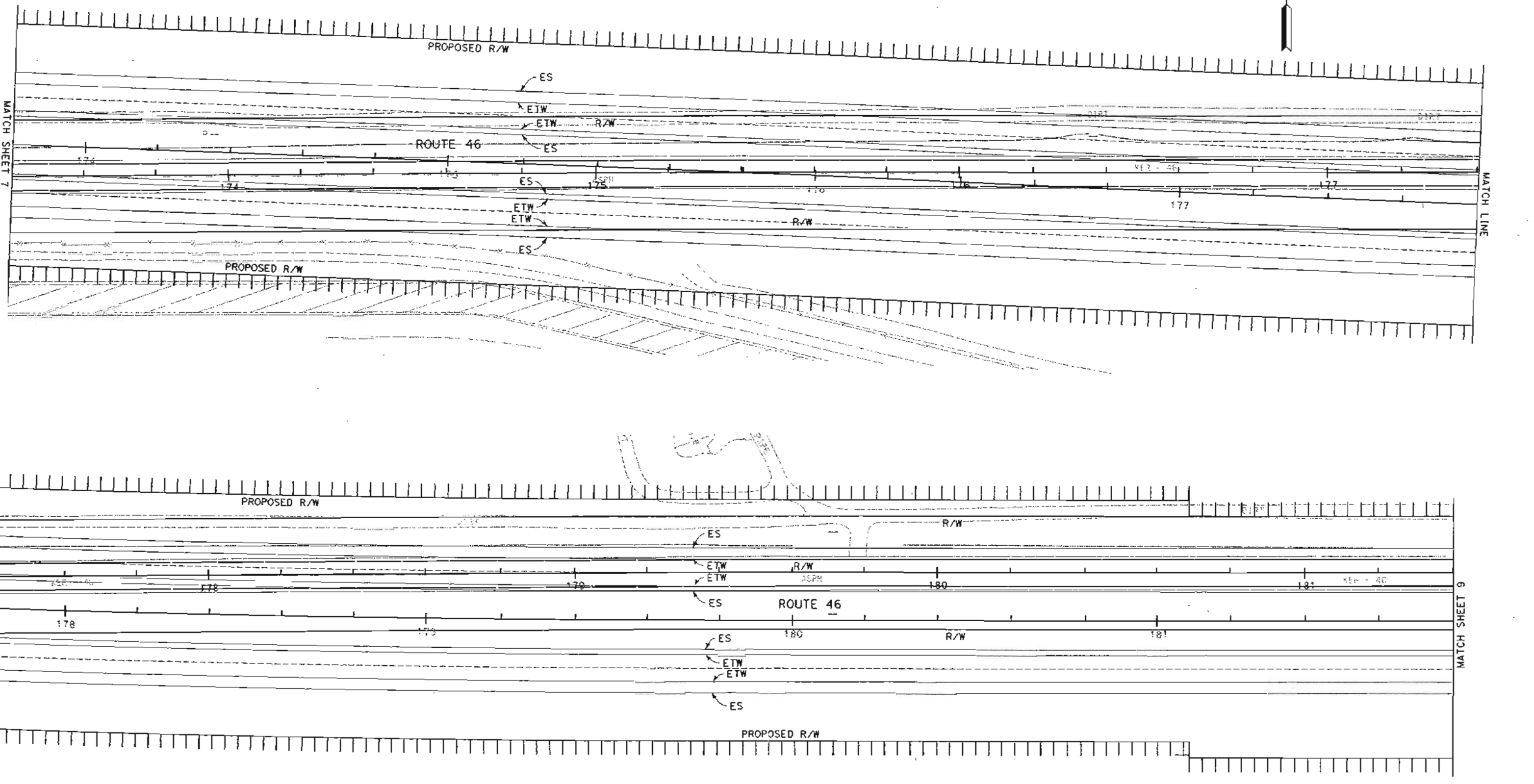
ES

R/W

PROPOSED R/W

SCALE 1:500

ATTACHMENT C
SHEET 7 OF 67



SCALE 1:500

ATTACHMENT C
SHEET 8 OF 67

MATCH SHEET 8

ROUTE 46

182 183 184 185

DIRT R/W

ES ETW ETW ES

ES ETW ETW ES

R/W

PROPOSED R/W

ASPH

DIRT

PIPES

TANK

ACCESS DRIVEWAY

MATCH LINE

ACCESS DRIVEWAY

R/W

ES ETW ETW ES

ES ETW ETW ES

ASPH

KER - 46

186 187 188 189

ROUTE 46

R/W

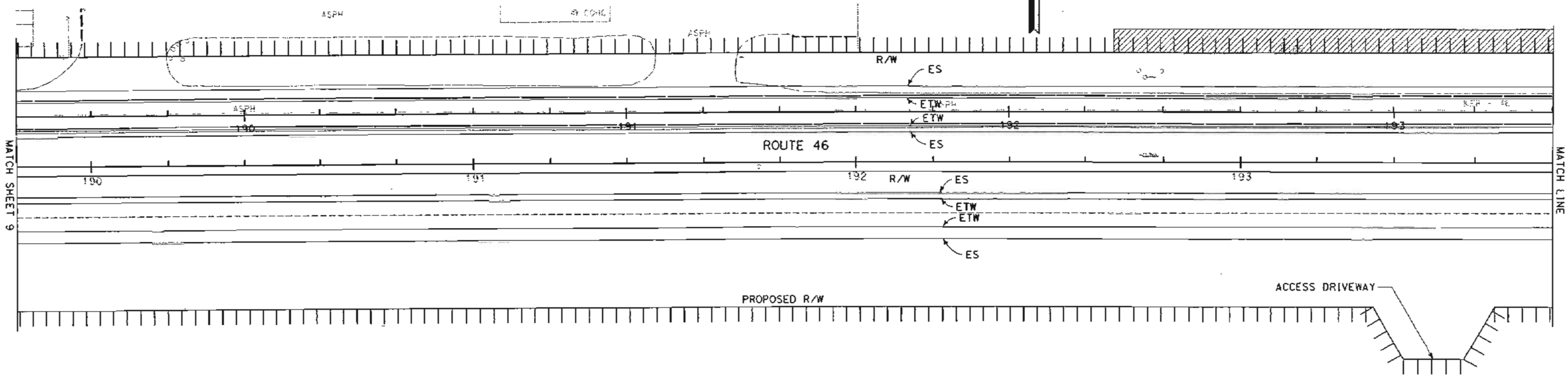
PROPOSED R/W

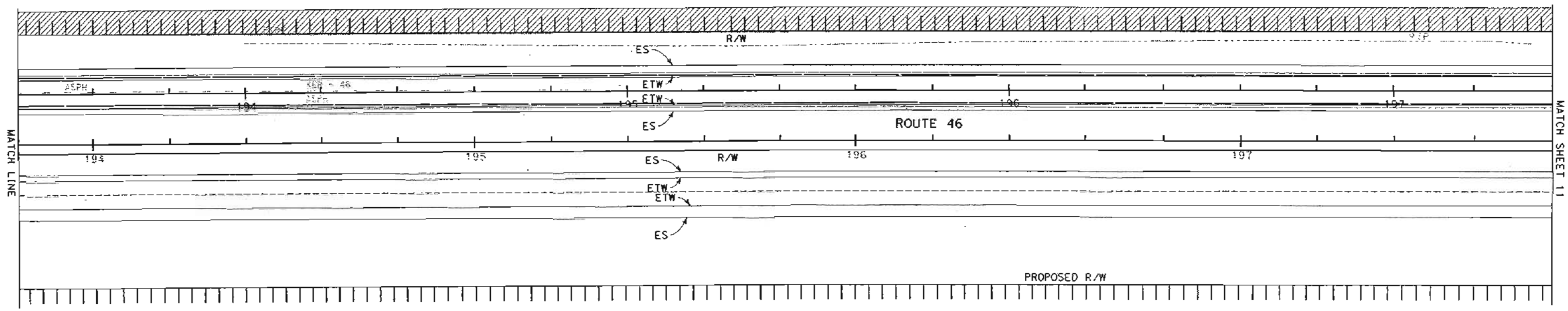
MATCH LINE

MATCH SHEET 10

SCALE 1:500

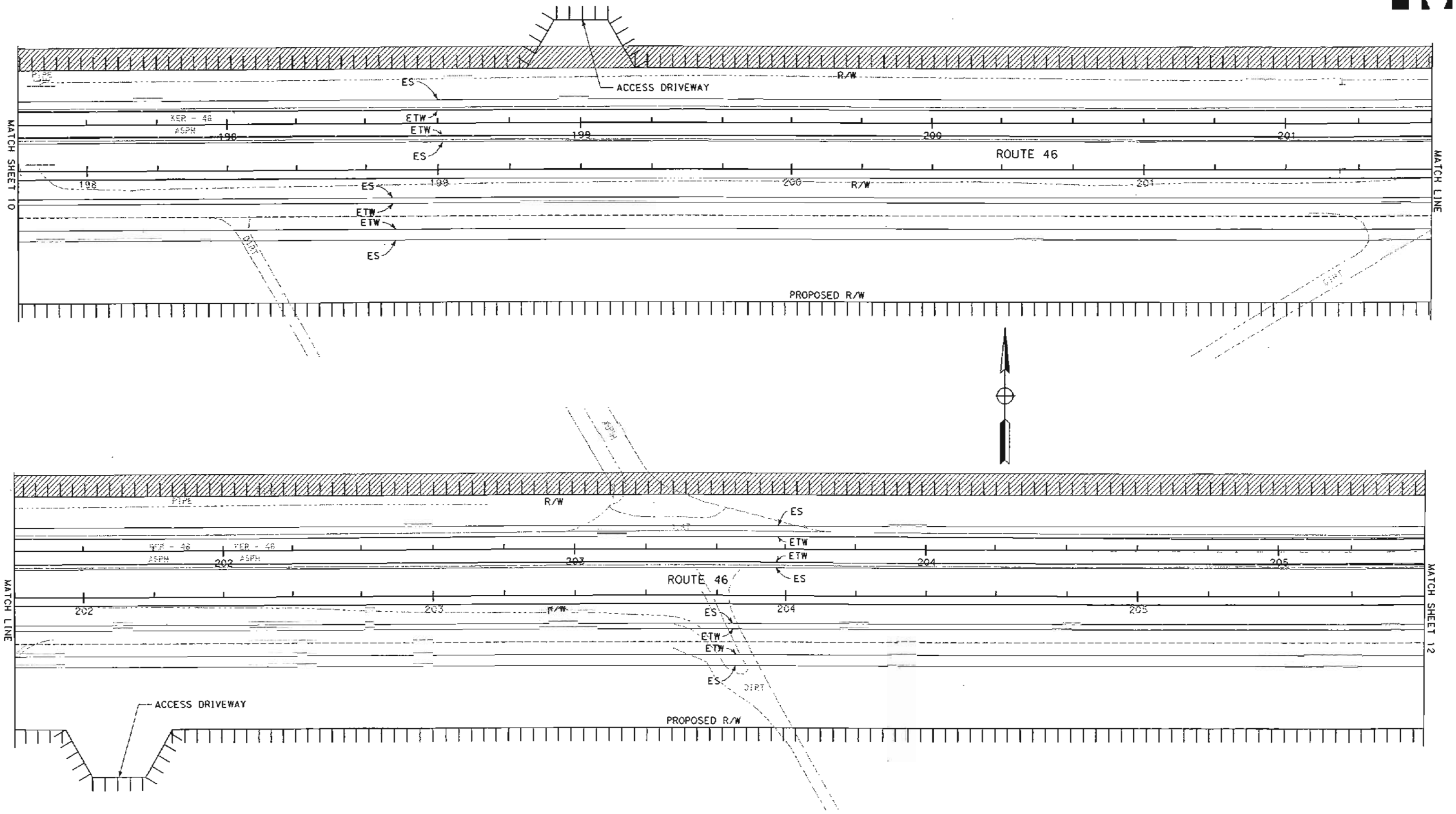
ATTACHMENT C
SHEET 9 OF 67





SCALE 1:500

ATTACHMENT C
SHEET 10 OF 67



SCALE 1:500

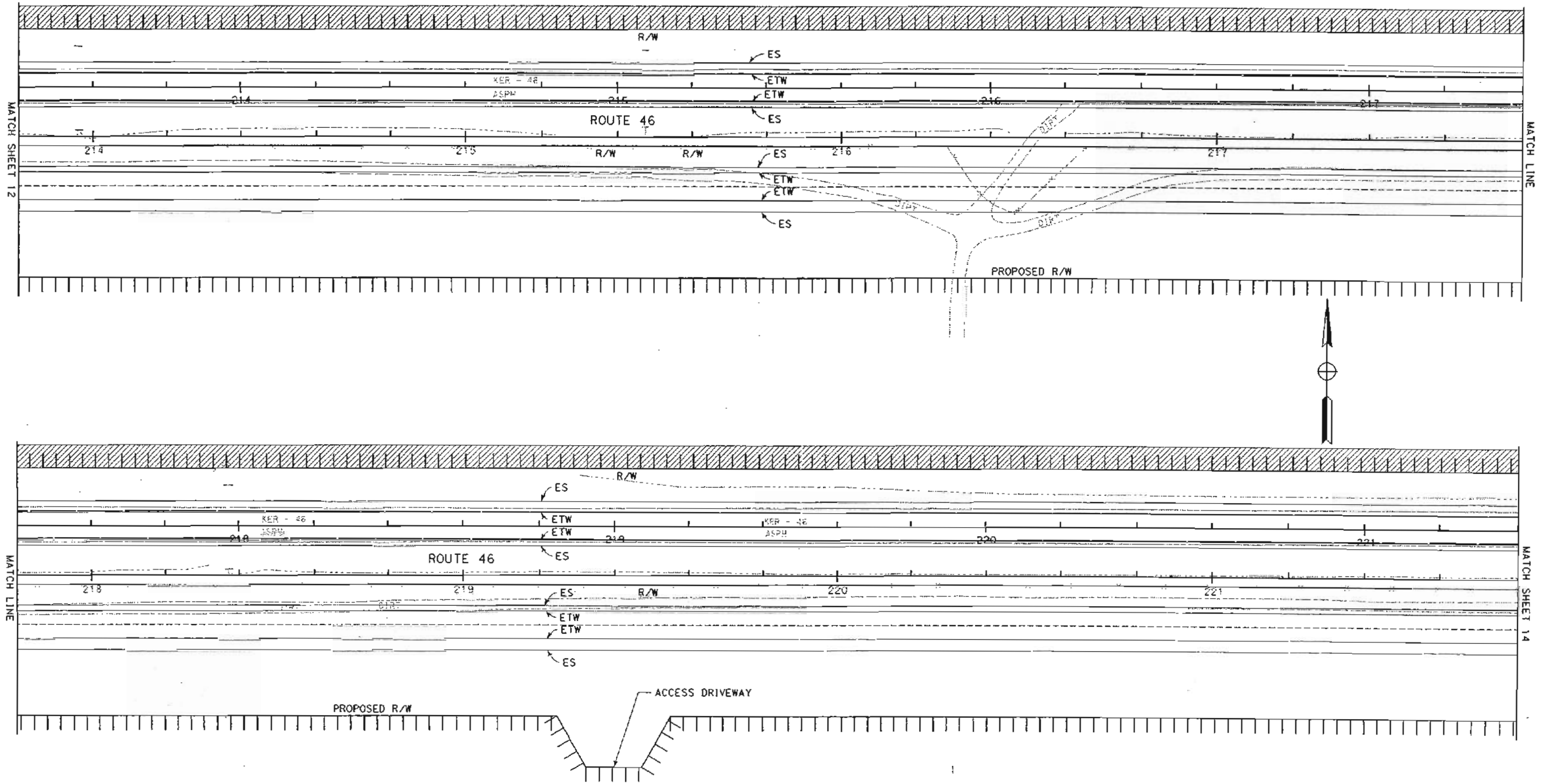
ATTACHMENT C
SHEET 11 OF 67

R/W
ES
DIRT
ETW
ETW
ES
206
207
208
209
ROUTE 46
MATCH SHEET 11
MATCH LINE
206
207
R/W
ES
208
209
ETW
ETW
ES
PROPOSED R/W

ACCESS DRIVEWAY
R/W
ES
ETW
ETW
ES
210
211
212
213
ROUTE 46
MATCH LINE
MATCH SHEET 13
210
211
212 R/W
213
DIRT
ES
ETW
ETW
ES
DIRT
ACCESS DRIVEWAY
PROPOSED R/W

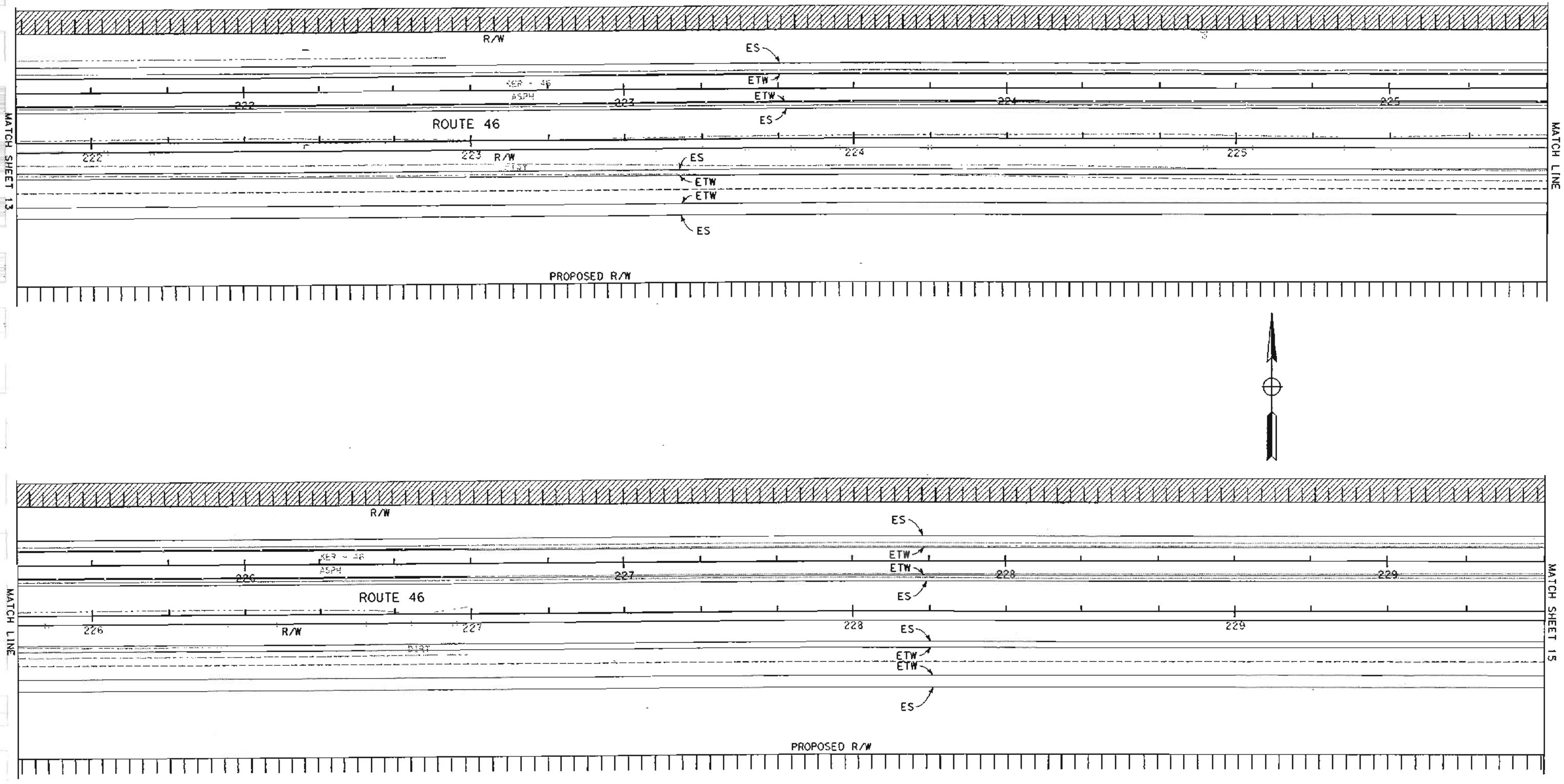
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ATTACHMENT C
SHEET 12 OF 67



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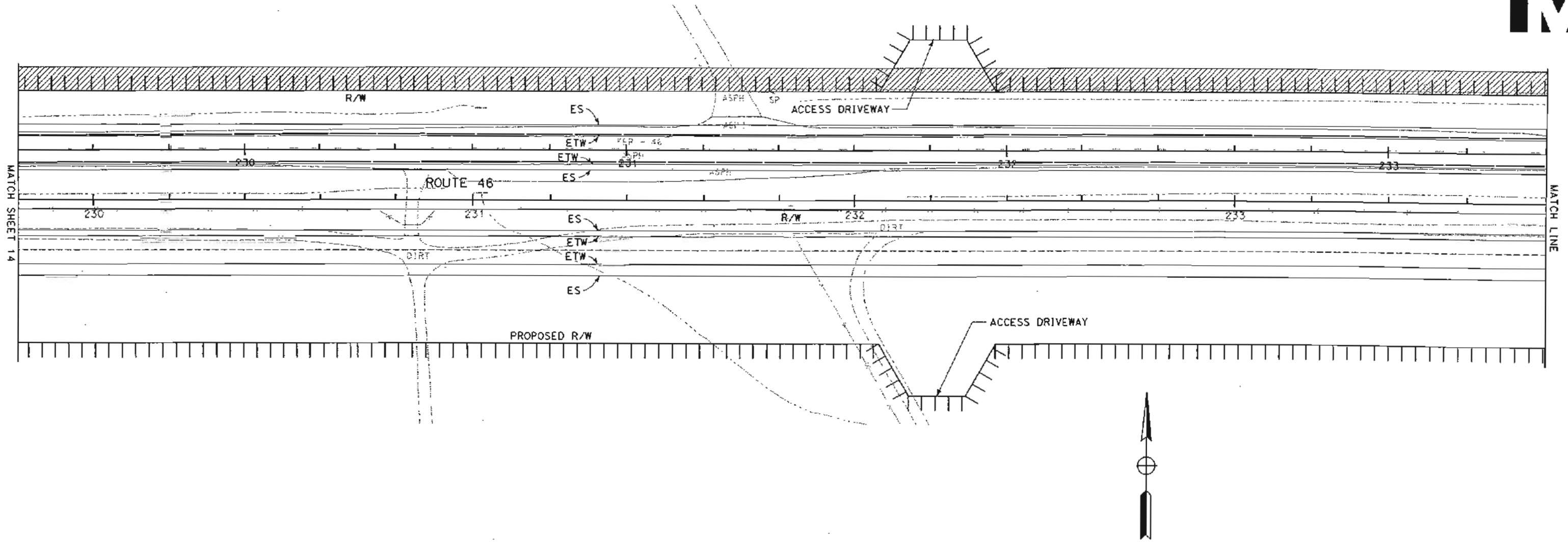
ATTACHMENT C
SHEET 13 OF 67

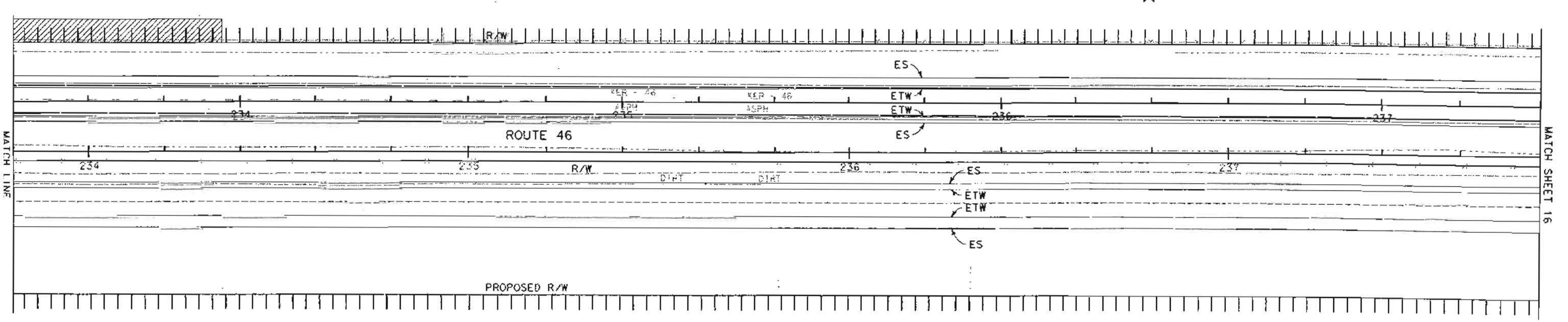


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ATTACHMENT C
SHEET 14 OF 67

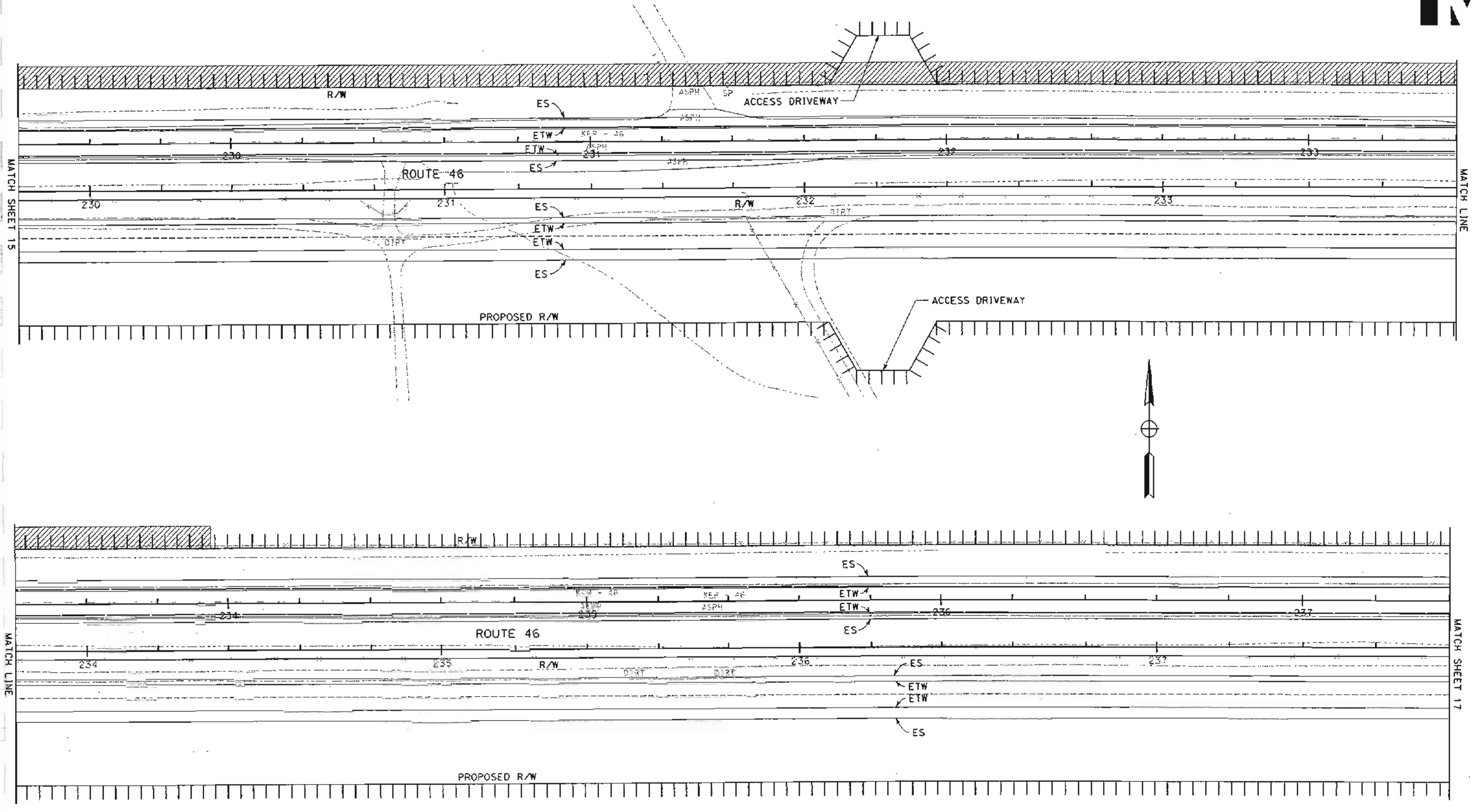
Caltrans Metric





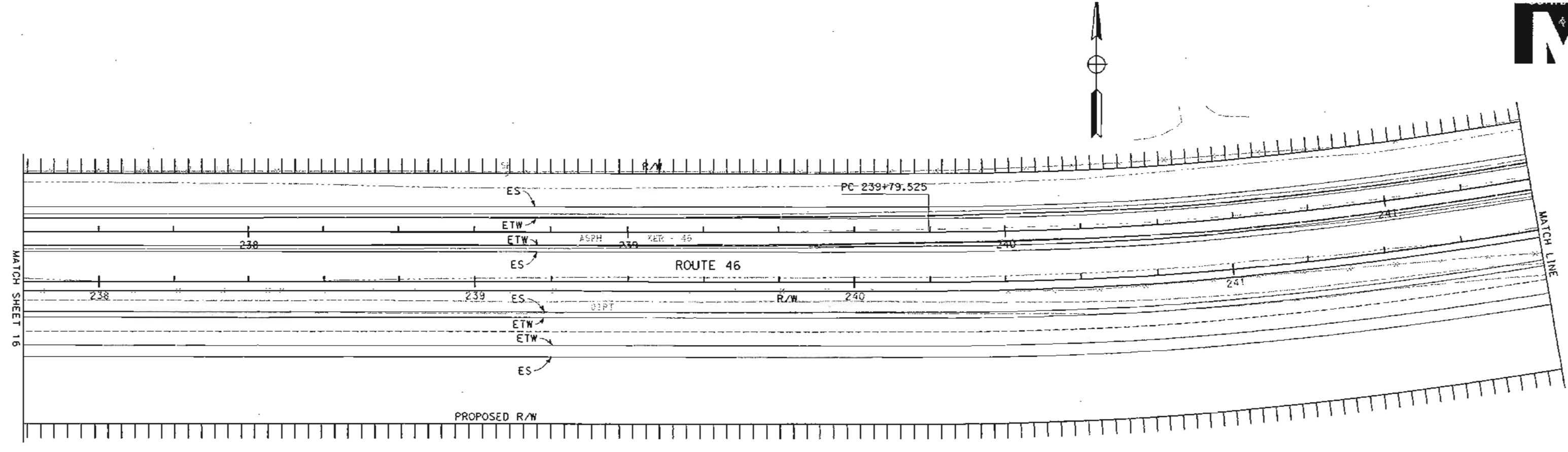
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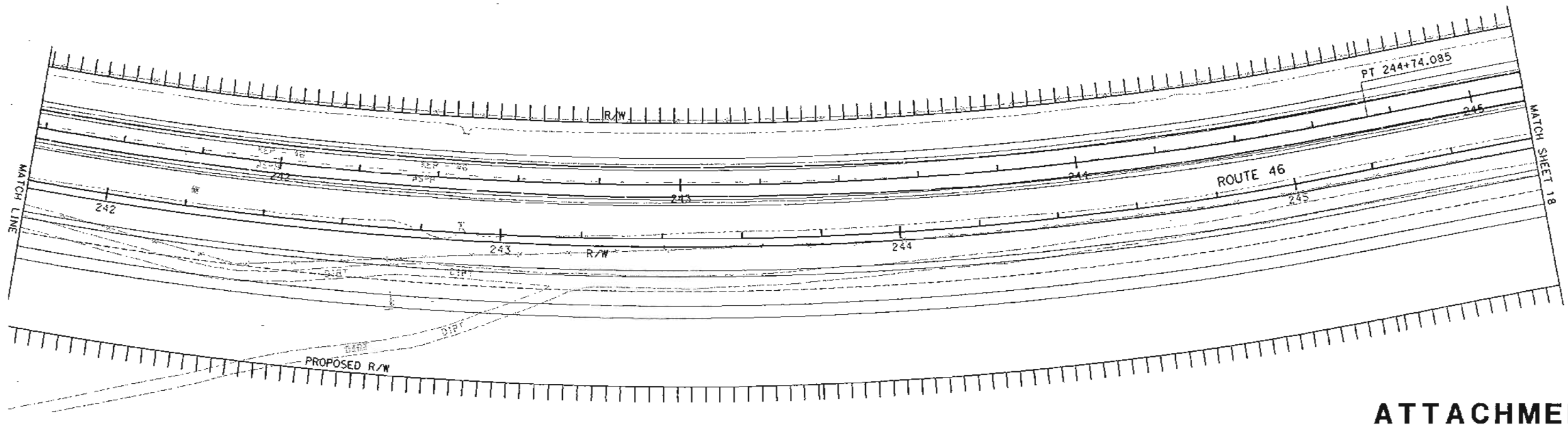
ATTACHMENT C
SHEET 15 OF 67



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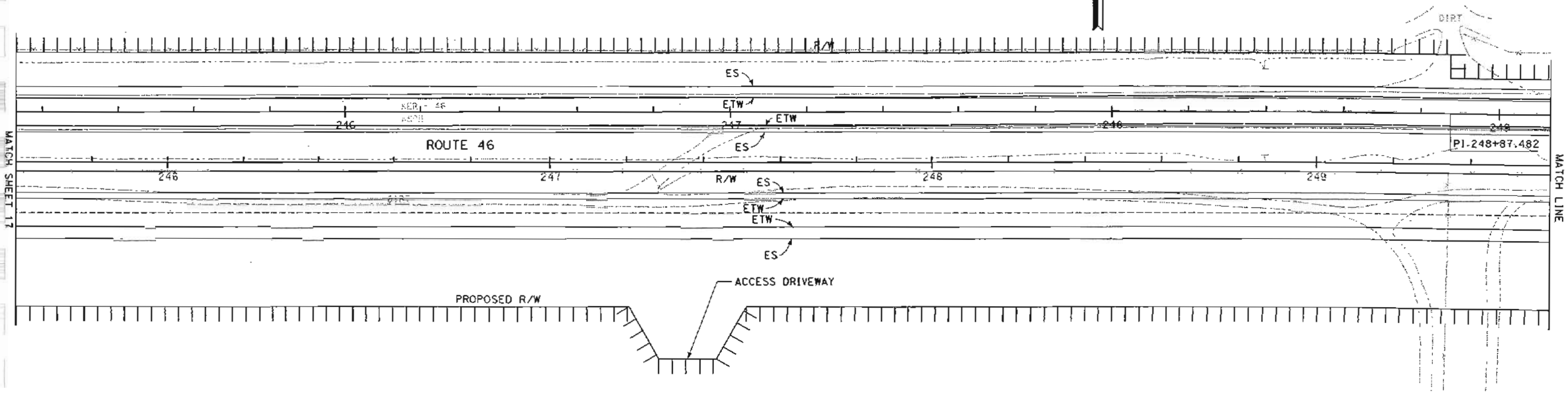
ATTACHMENT C
SHEET 16 OF 67

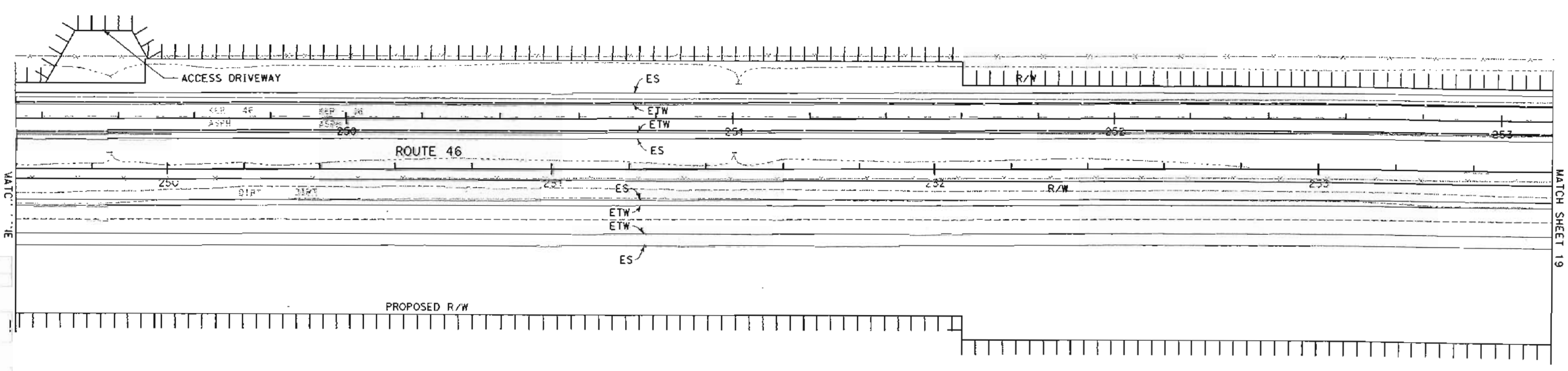




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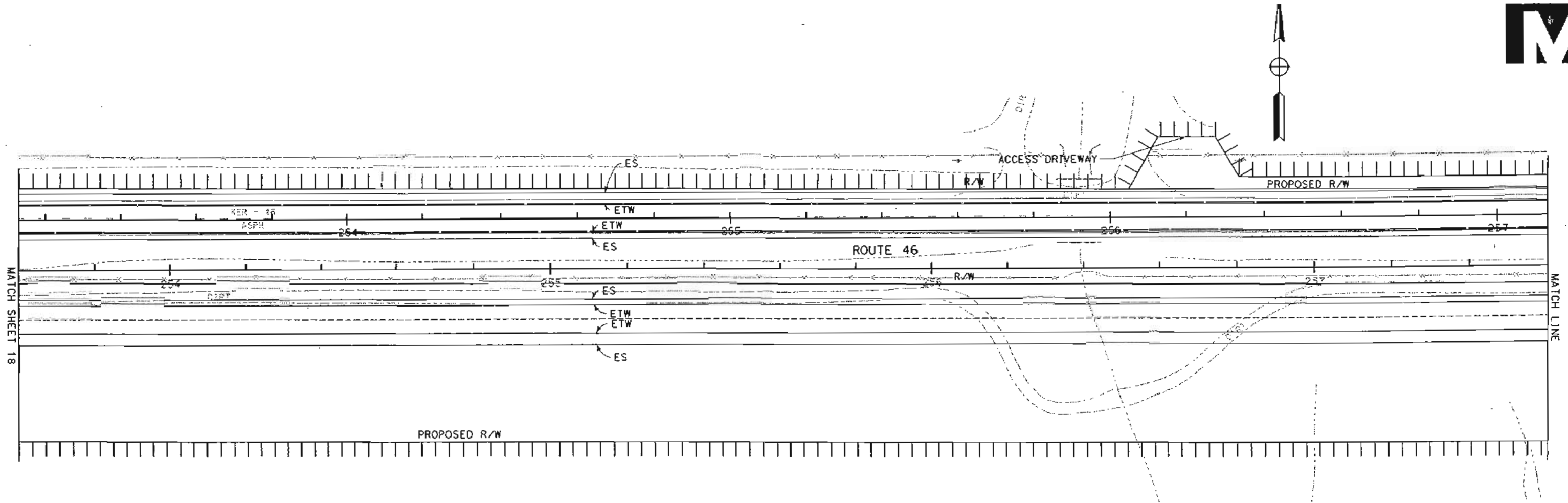
ATTACHMENT C
SHEET 17 OF 67

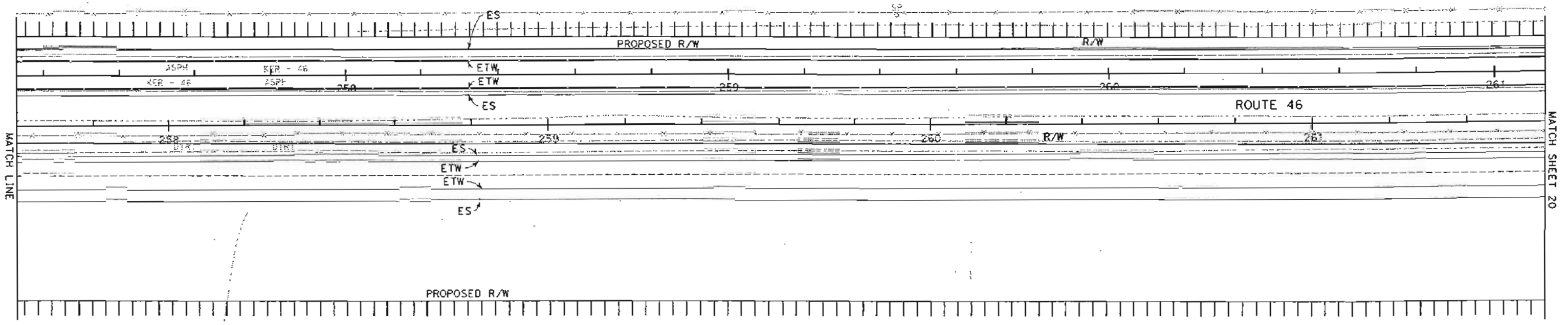




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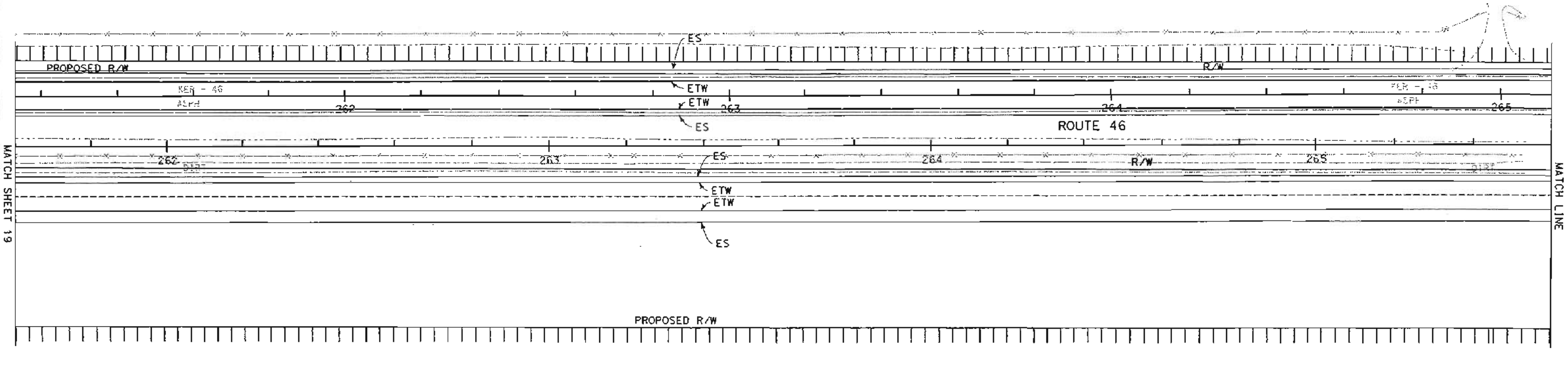
ATTACHMENT C
SHEET 18 OF 67

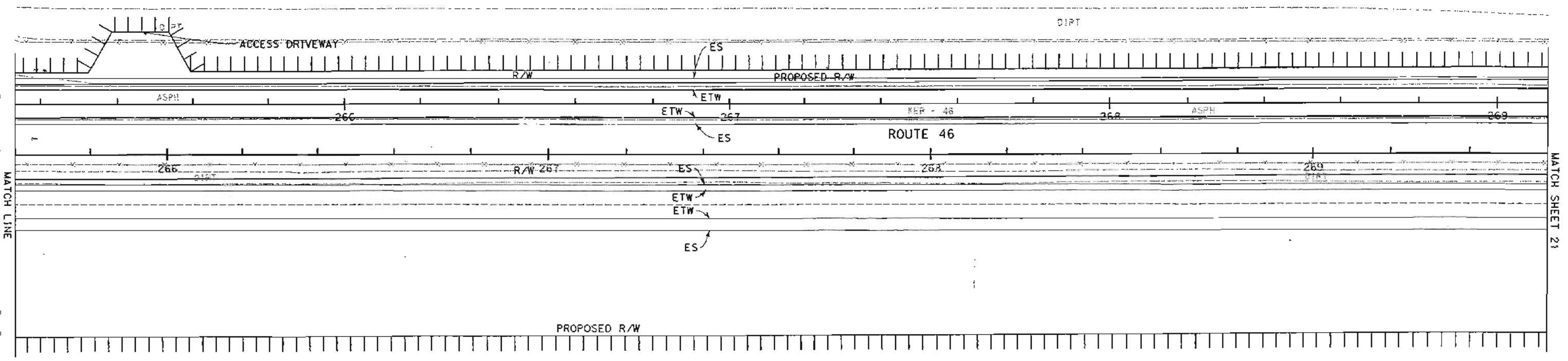




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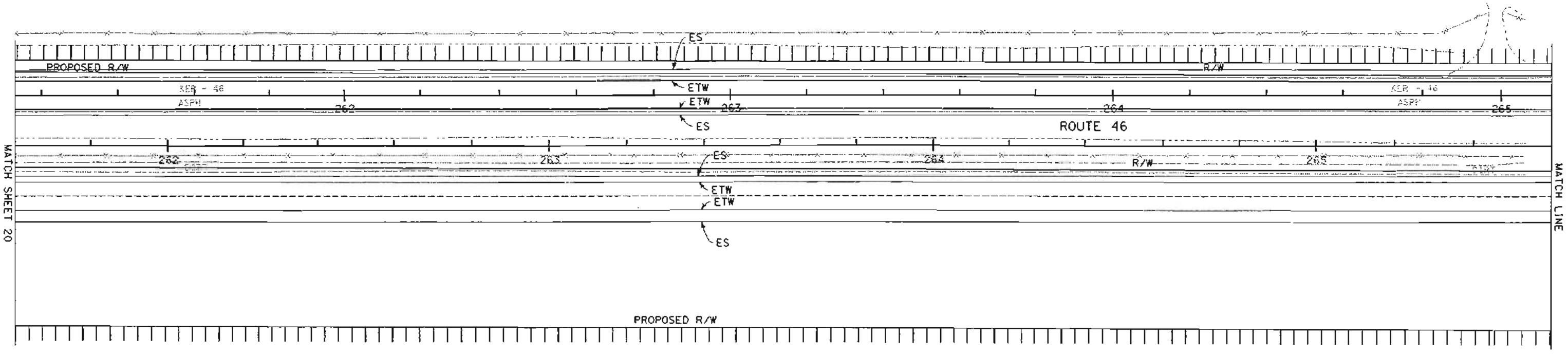
ATTACHMENT C
SHEET 19 OF 67

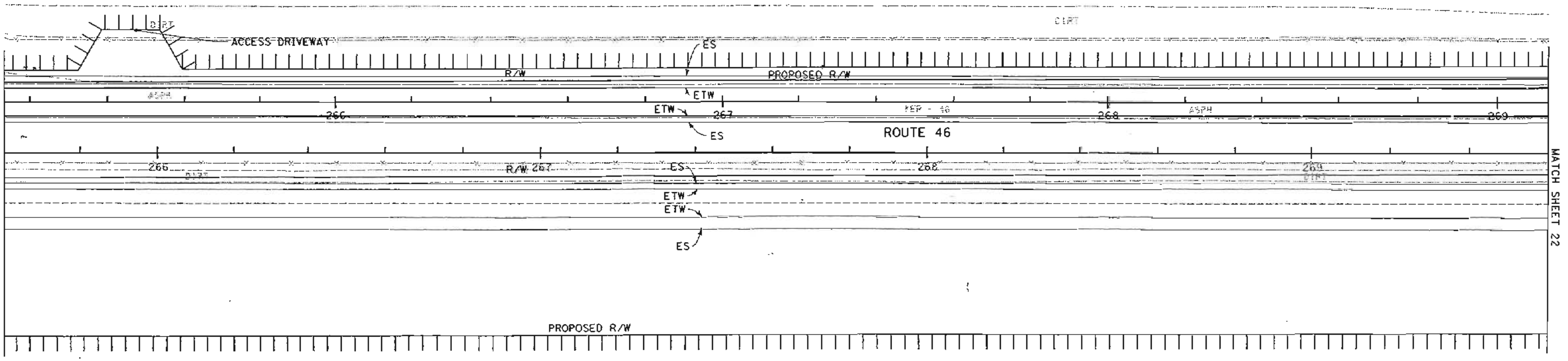




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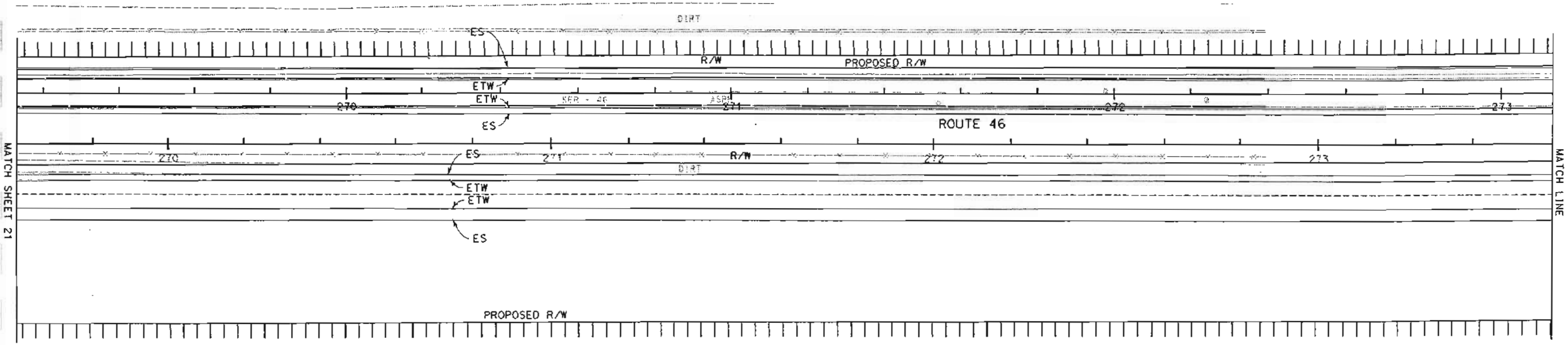
ATTACHMENT C
SHEET 20 OF 67

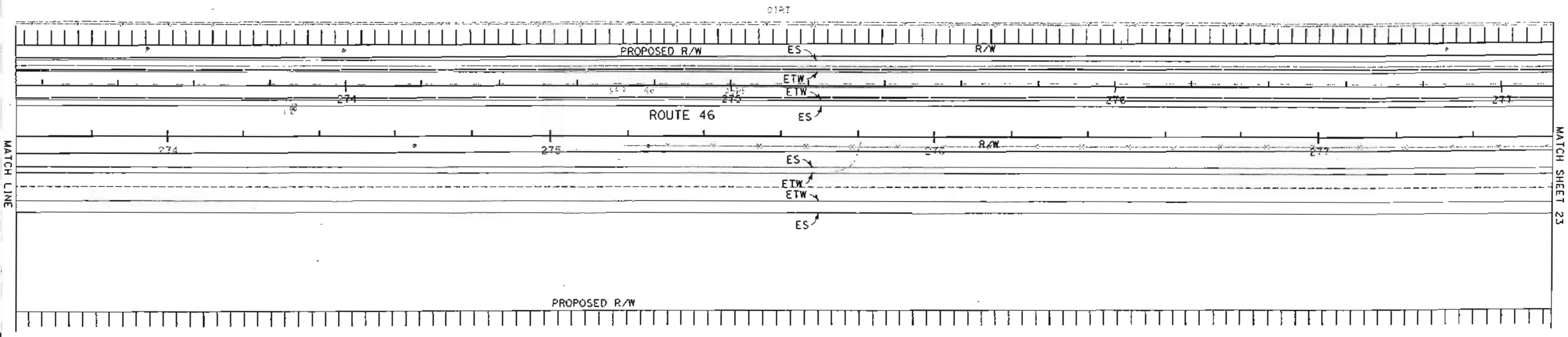




SCALE 1:500

ATTACHMENT C
SHEET 21 OF 67





SCALE 1:500

ATTACHMENT C
SHEET 22 OF 67

DIRT

ES

R/W

PROPOSED R/W

PI 281+09.074

ETW

ETW

ASPH

278

KER - 46

279

ASPH

280

ASPH

281

ROUTE 46

ES

278

279

R/W

280

281

MATCH SHEET 22

ES

ETW

ETW

ES

MATCH LINE

PROPOSED R/W

DIRT

ASPH

ACCESS DRIVEWAY

DIRT

R/W

ES

DIRT

ETW

ETW

282

KER - 46

283

ASPH

284

285

ES

ROUTE 46

282

283

R/W

284

285

MATCH LINE

ES

ETW

ETW

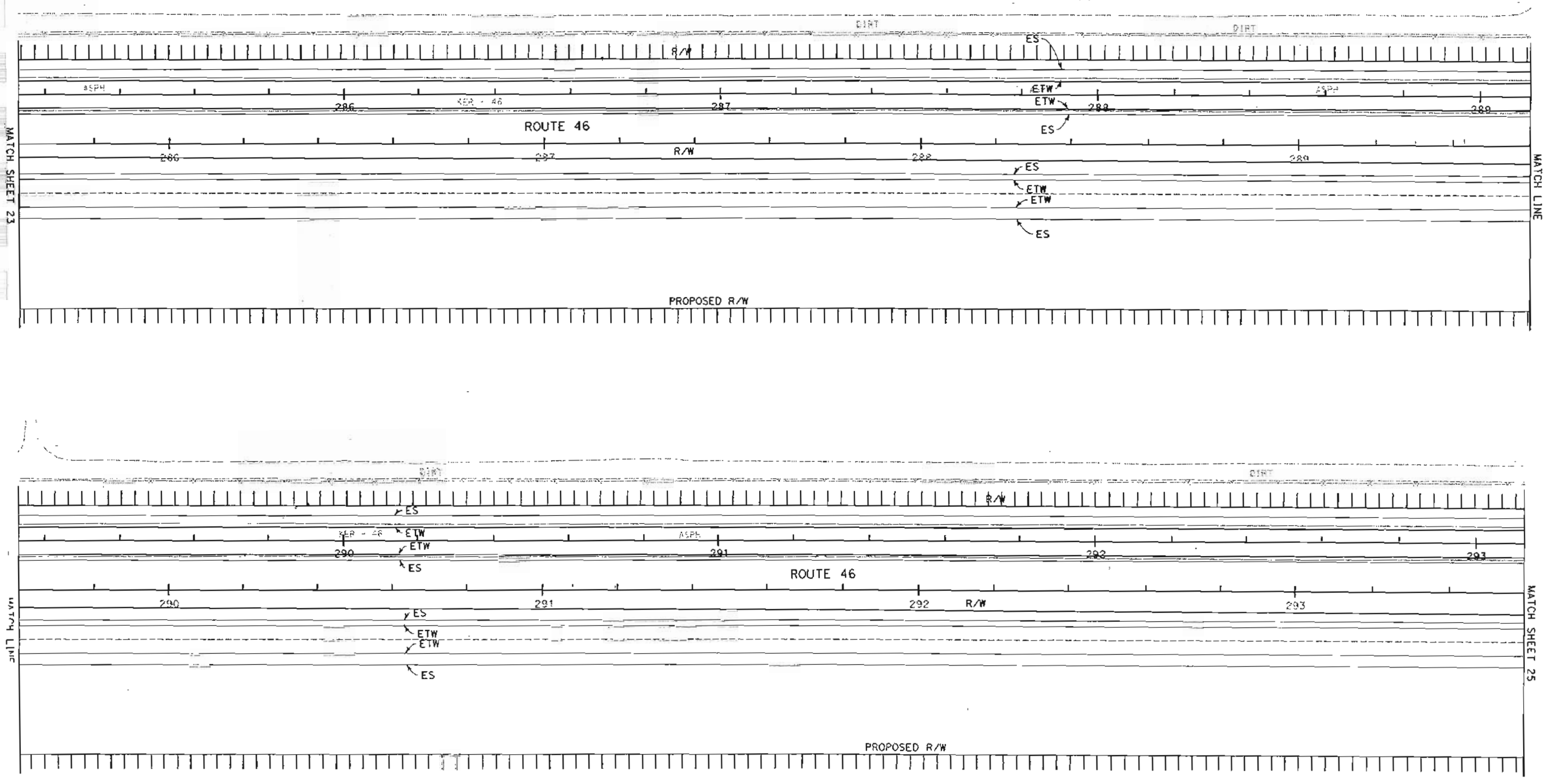
ES

MATCH SHEET 24

PROPOSED R/W

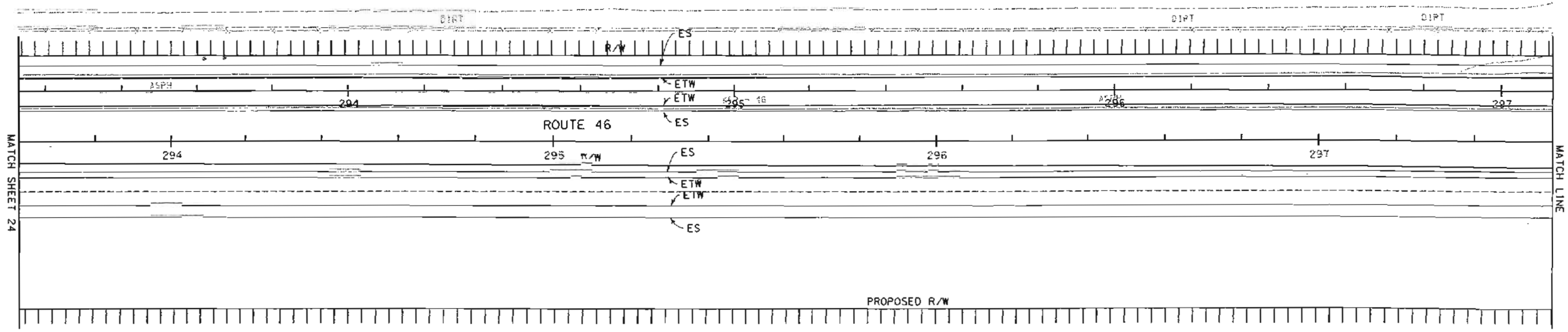
SCALE 1:500

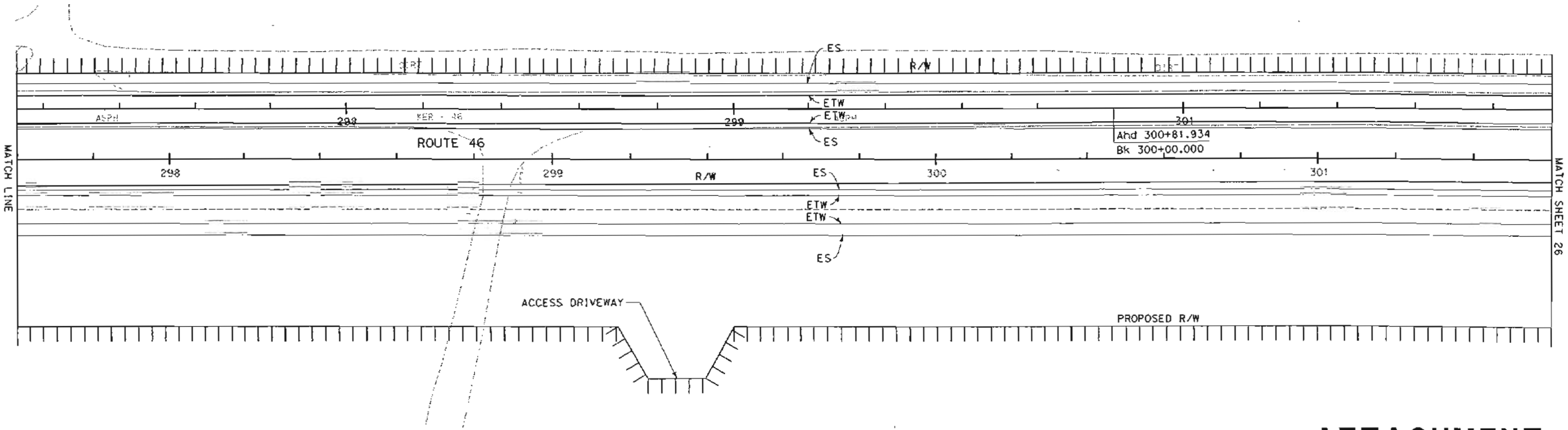
ATTACHMENT C
SHEET 23 OF 67



SCALE 1:500

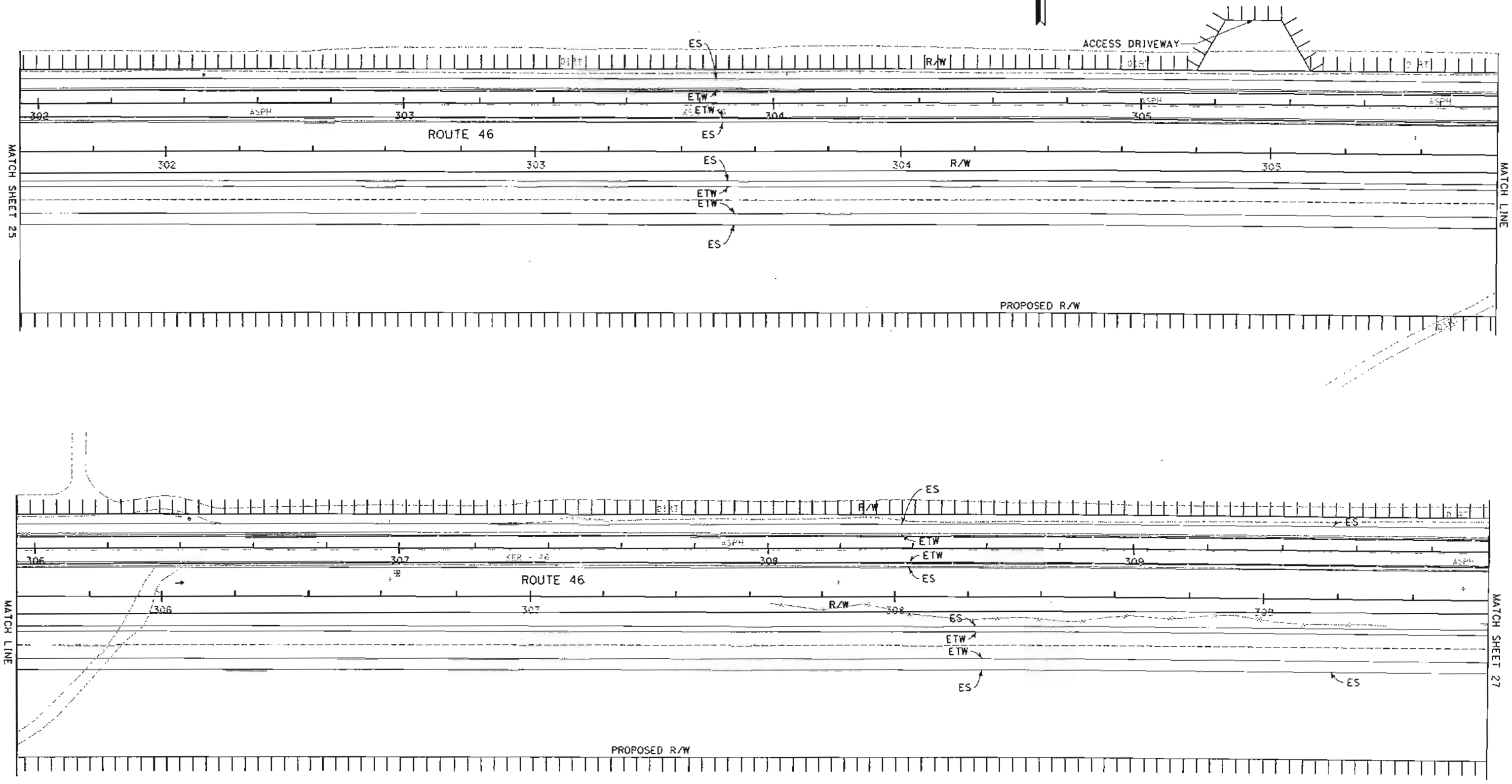
ATTACHMENT C
SHEET 24 OF 67





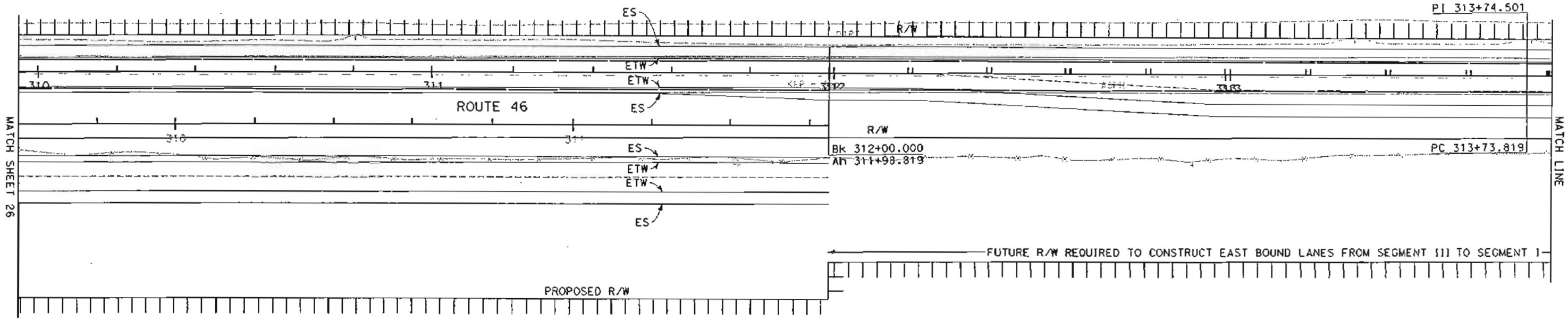
SCALE 1:500

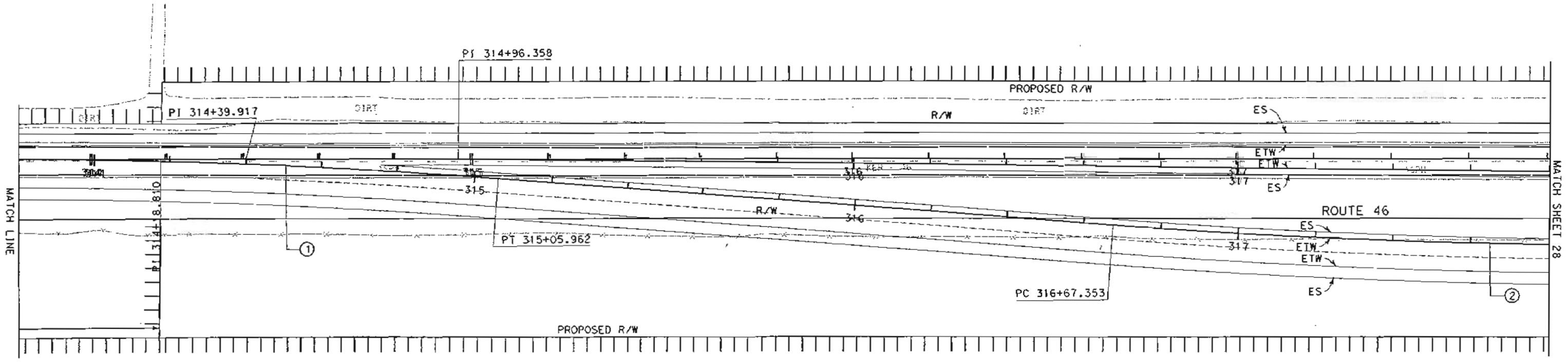
ATTACHMENT C
SHEET 25 OF 67



SCALE 1:500

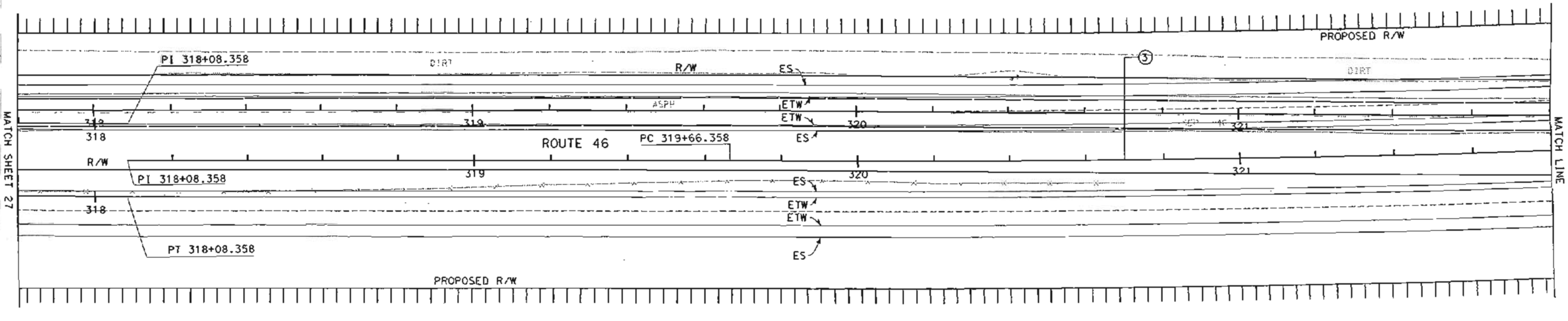
ATTACHMENT C
SHEET 26 OF 67

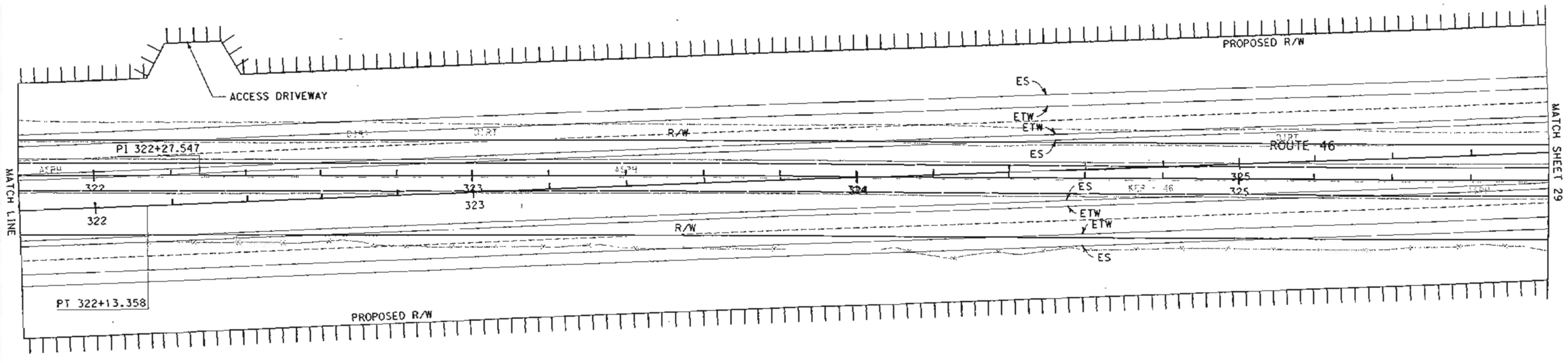




SCALE 1:500

ATTACHMENT C
SHEET 27 OF 67





SCALE 1:500

ATTACHMENT C
SHEET 28 OF 67

MATCH SHEET 28

PROPOSED R/W

ES
ETW
ETW
ES

ROUTE 46

PC 326+00.322

326 327 328 329

R/W

ES
ETW
ETW
ES

ASPH

PI 326+30.092

PT 328+44.502

R/W

PROPOSED R/W

MATCH LINE

MATCH SHEET 30

PROPOSED R/W

PI 966+77.183
PI 330+60.760

PI 330+36.389

967

968

330 331 332 333

ES
ETW
ETW
ES

ROUTE 46

PI 332+41.634

R/W

ES
ETW
ETW
ES

PI 332+41.707

R/W

CONC

PI 330+36.287

ASPH

PROPOSED R/W

PROPOSED R/W

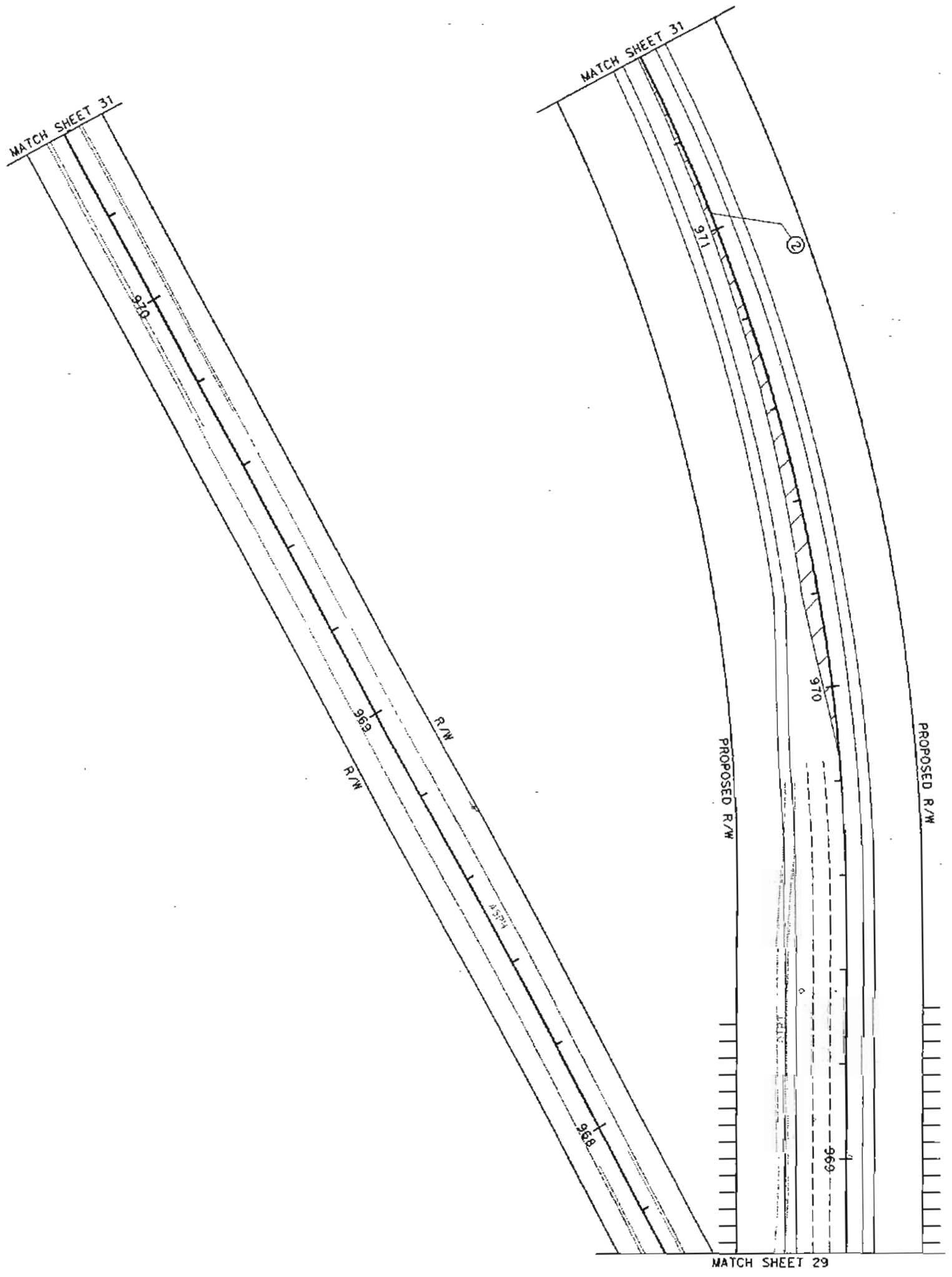
PI 966+12.266

MATCH SHEET 33

MATCH SHEET 27

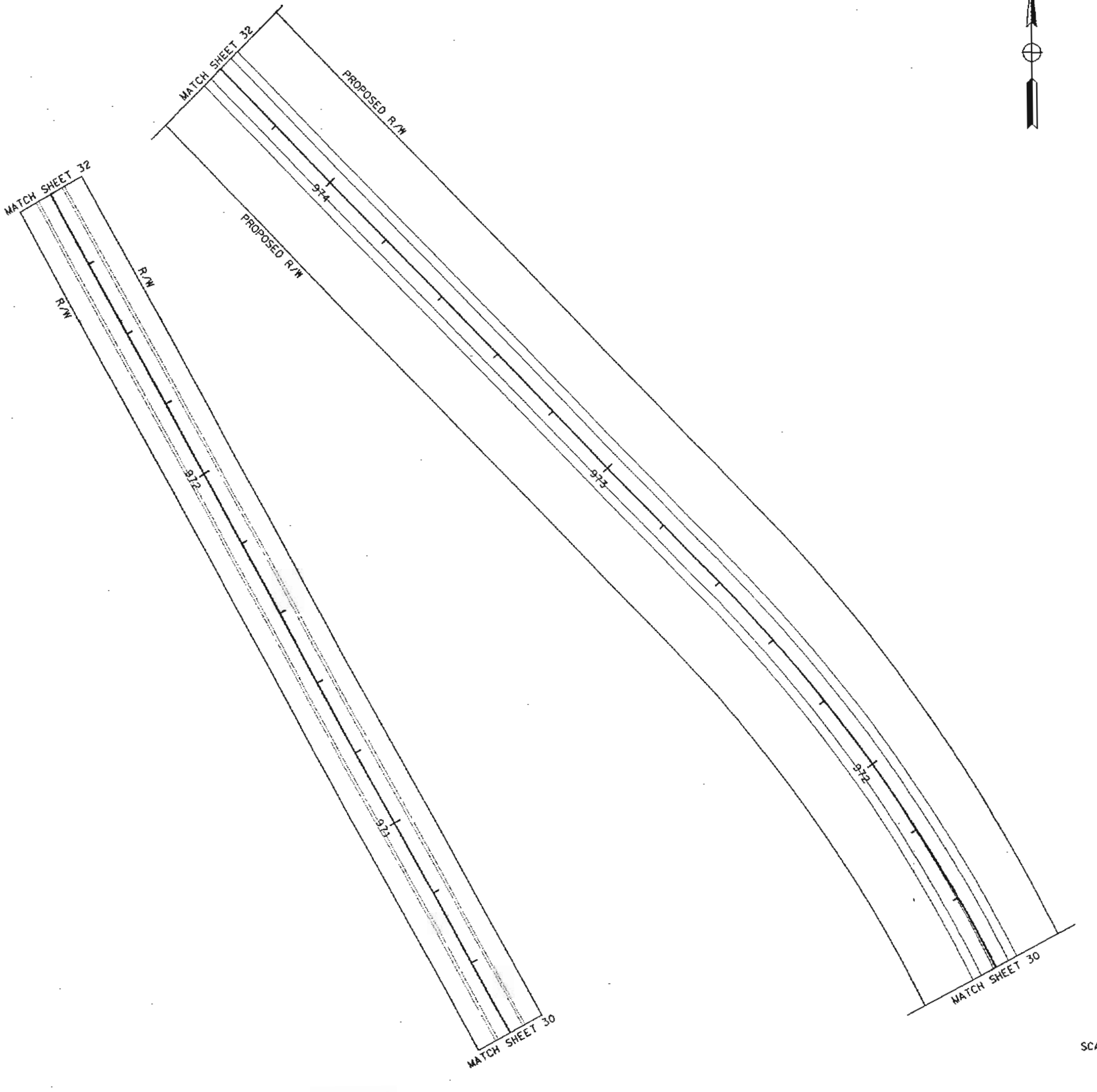
SCALE 1:500

ATTACHMENT C
SHEET 29 OF 67



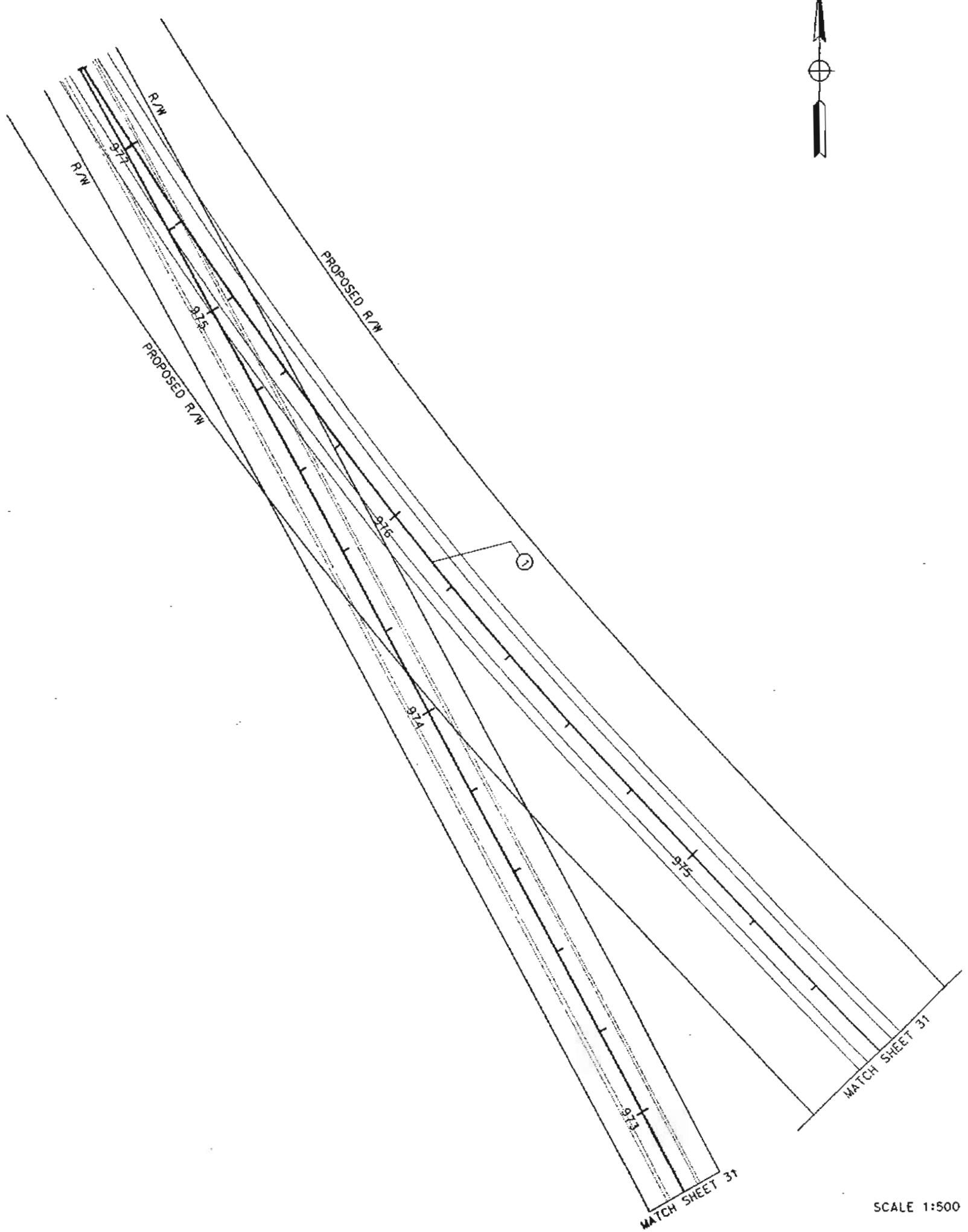
SCALE 1:500

ATTACHMENT C
SHEET 30 OF 67



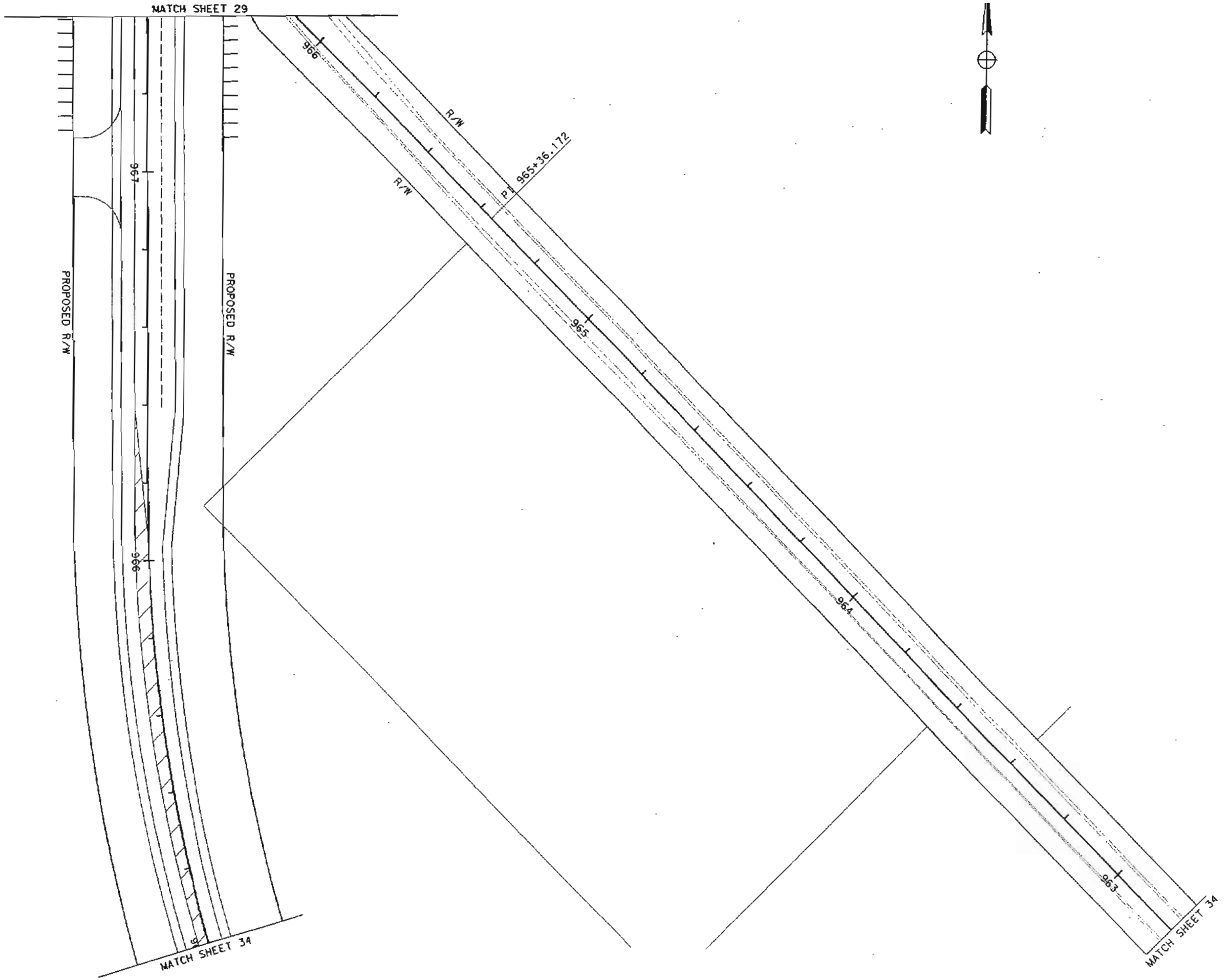
SCALE 1:500

ATTACHMENT C
SHEET 31 OF 67



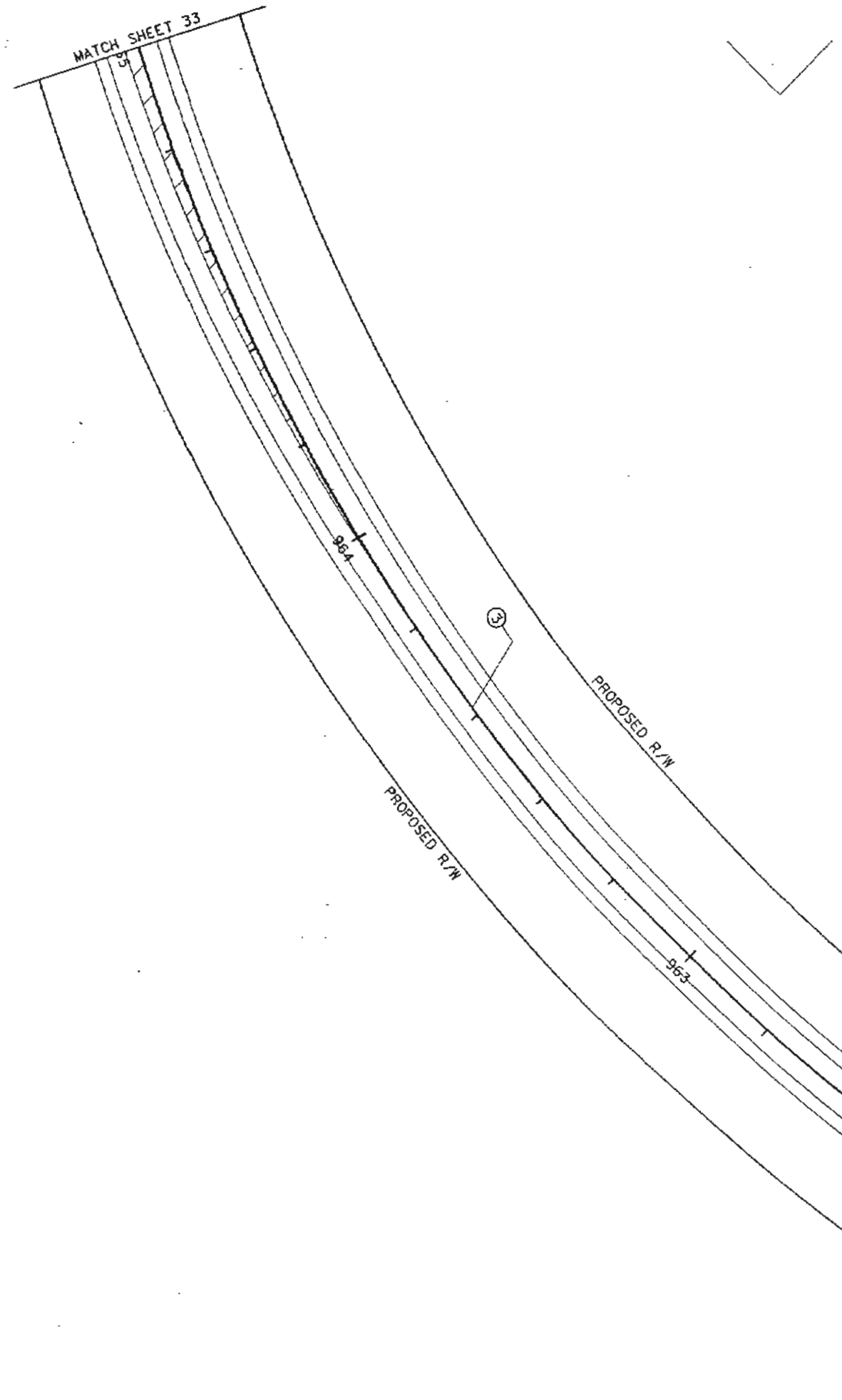
SCALE 1:500

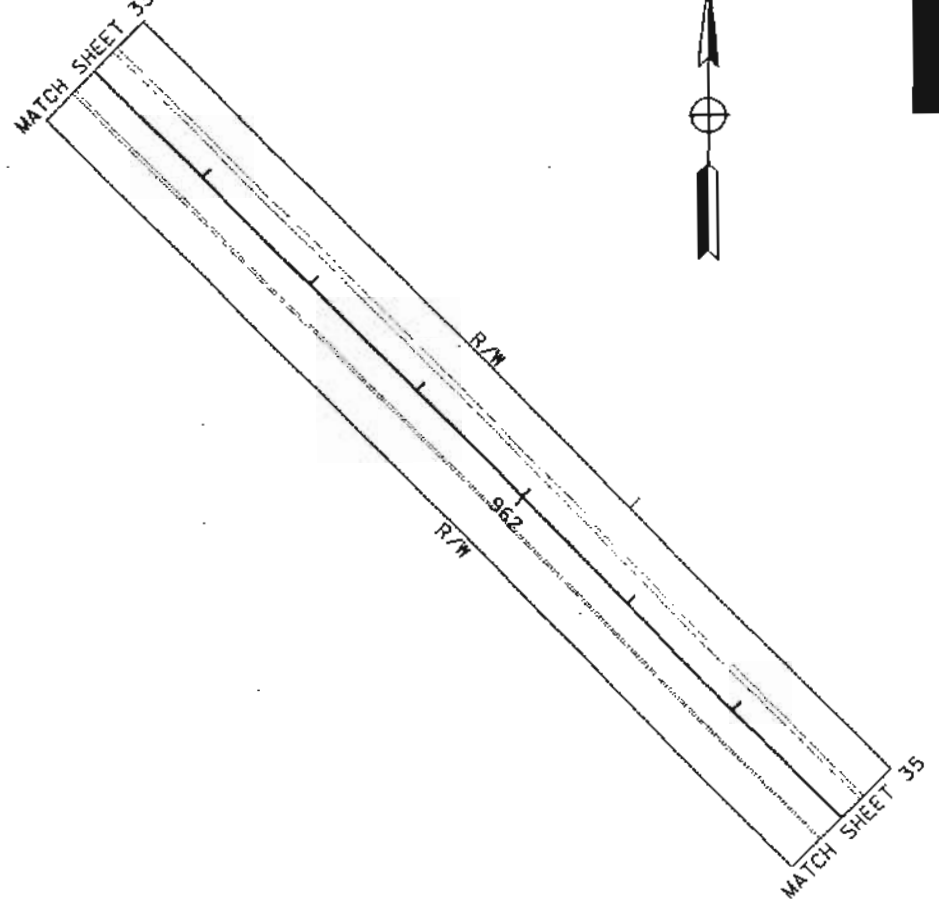
ATTACHMENT C
SHEET 32 OF 67



SCALE 1:500

ATTACHMENT C
SHEET 33 OF 67





SCALE 1:500

ATTACHMENT C
SHEET 34 OF 67

MATCH SHEET 34

961

960

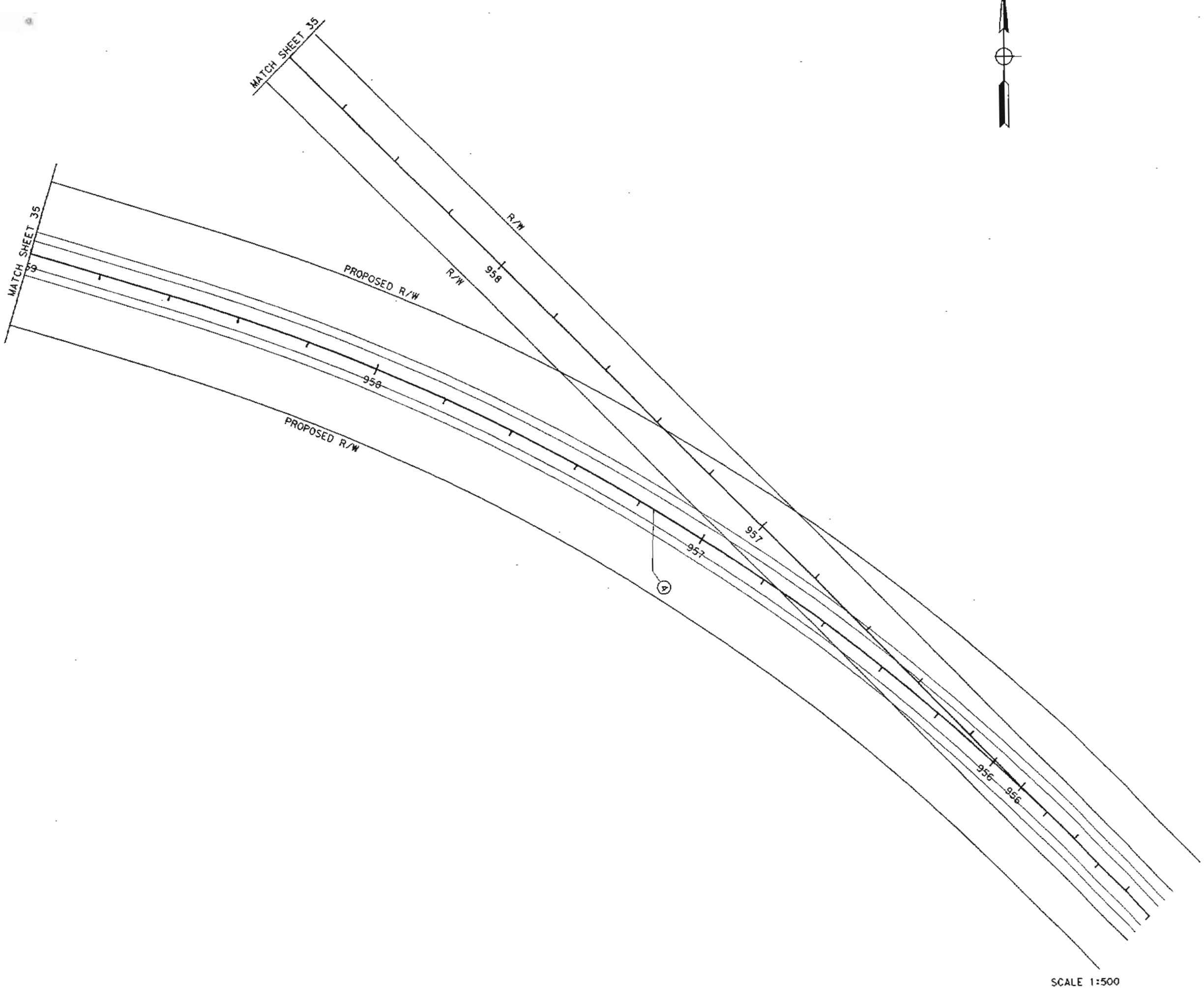
959

PI 959+08.121

MATCH SHEET 36

SCALE 1:500

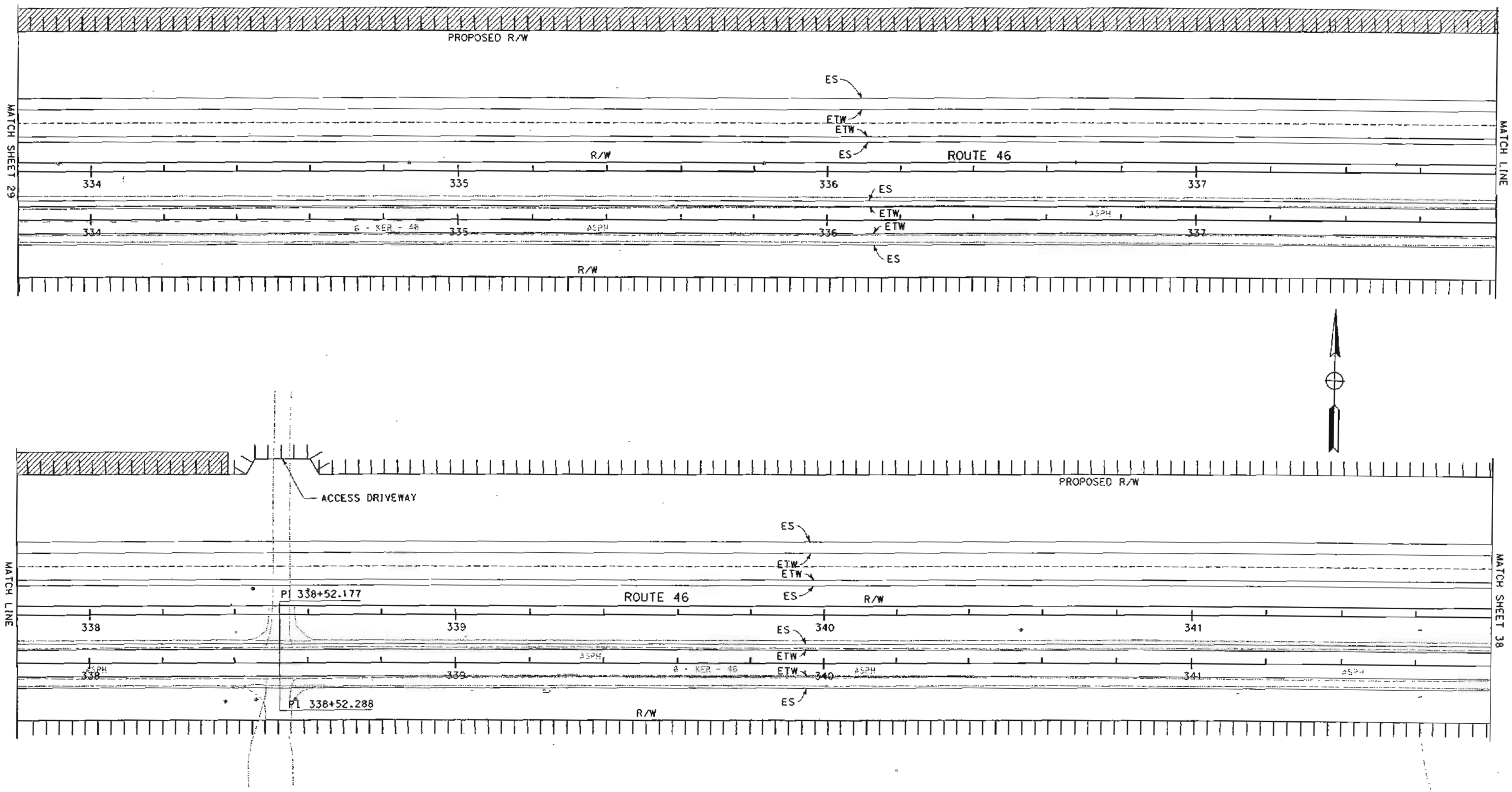
ATTACHMENT C
SHEET 35 OF 67



SCALE 1:500

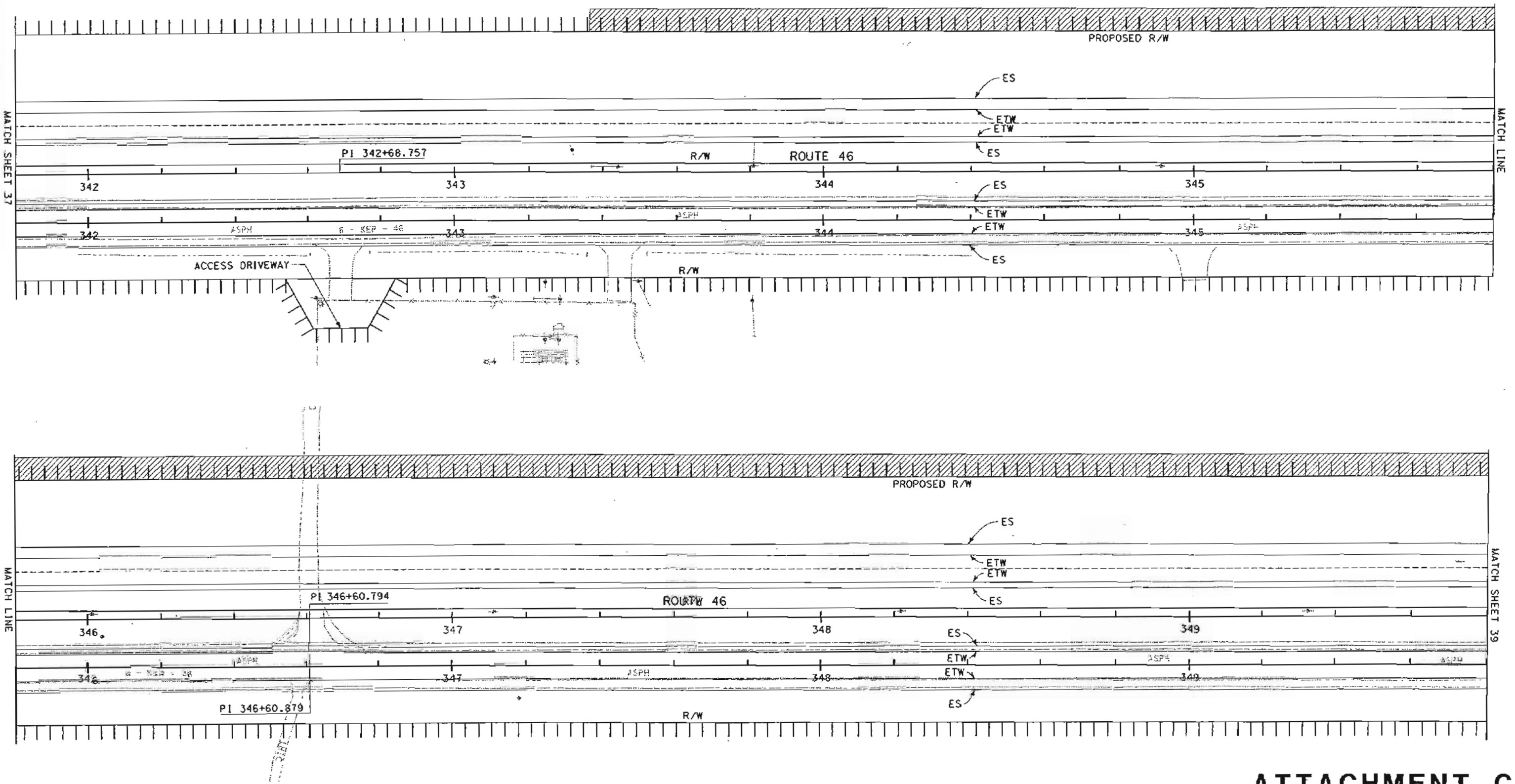
ATTACHMENT C
SHEET 36 OF 67

Metric



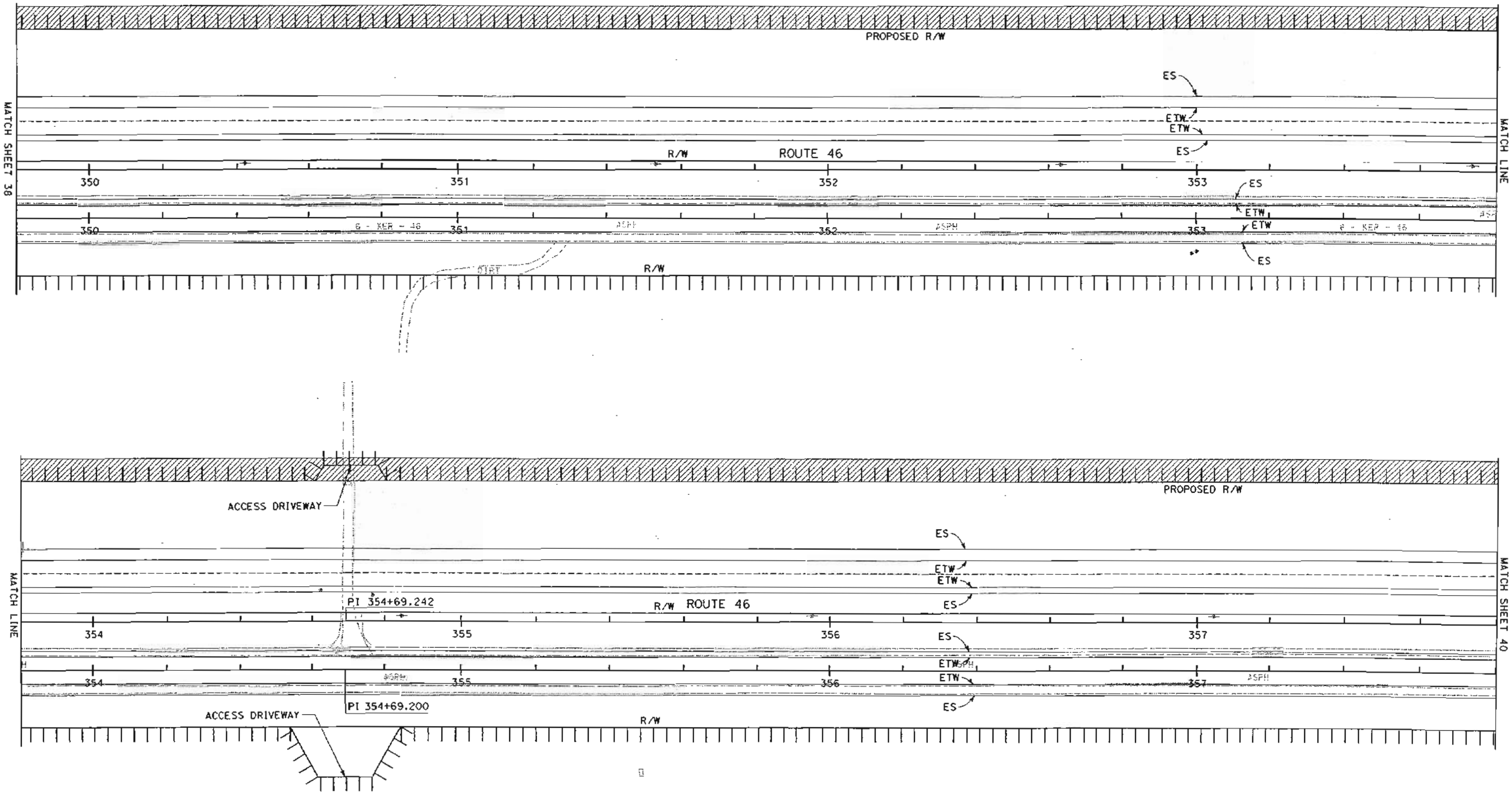
SCALE 1:500

ATTACHMENT C
SHEET 37 OF 67



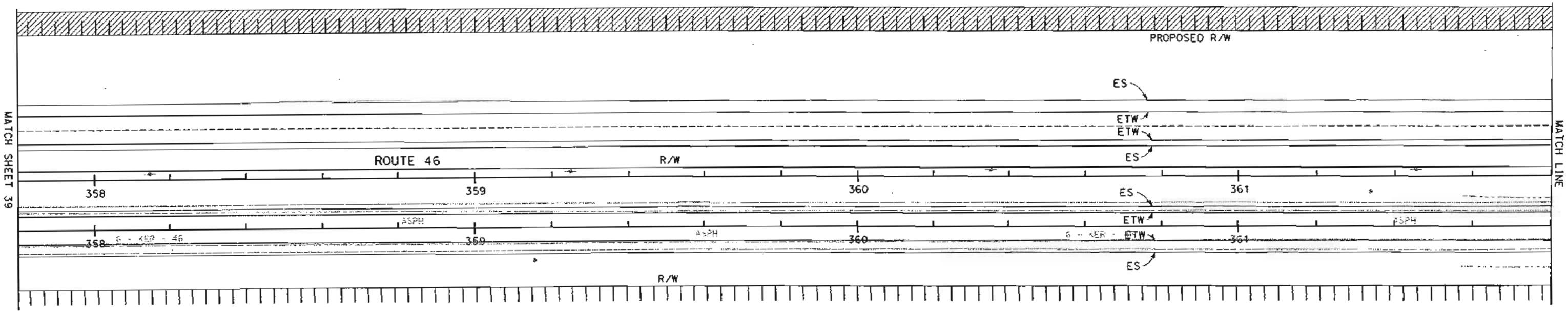
SCALE 1:500

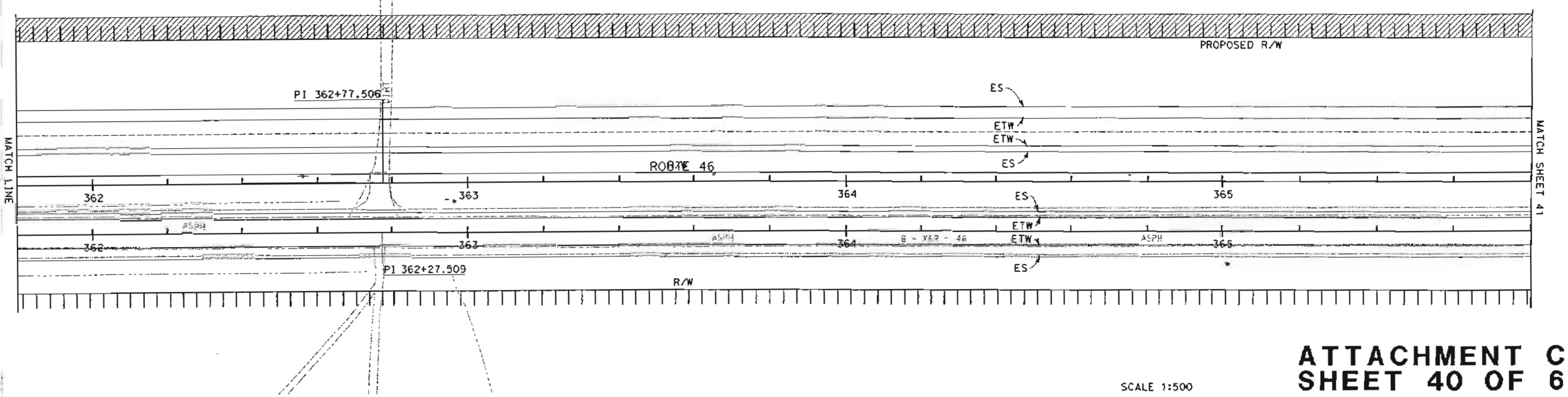
ATTACHMENT C
SHEET 38 OF 67



SCALE 1:500

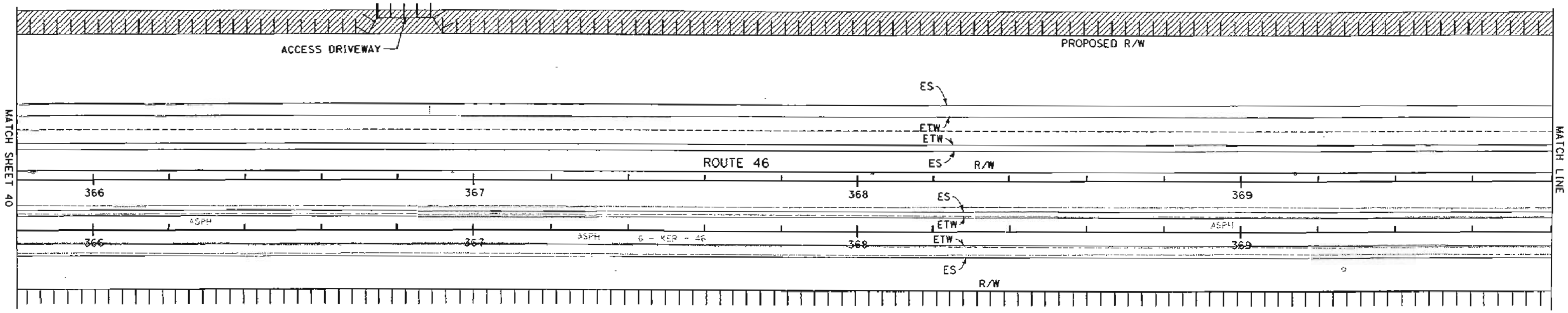
ATTACHMENT C
SHEET 39 OF 67

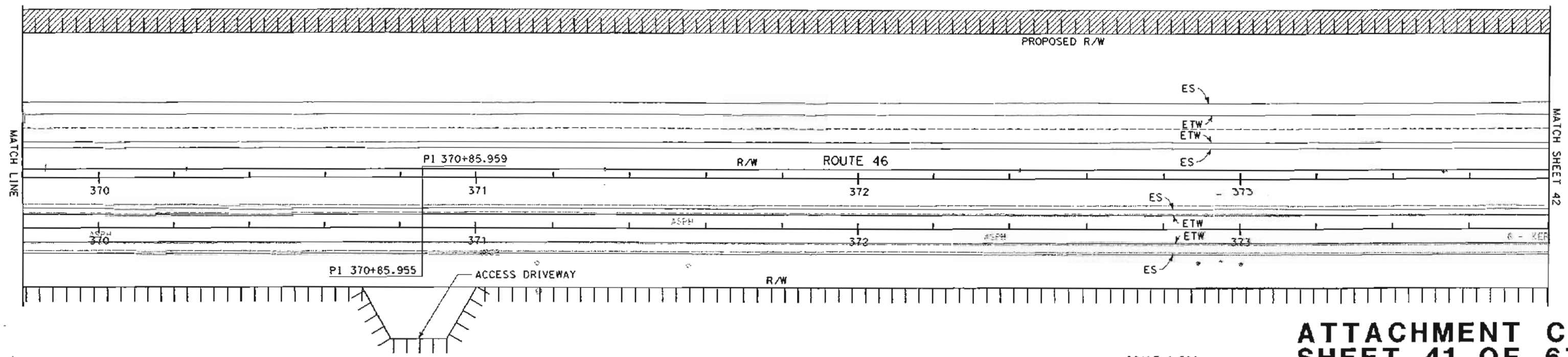




SCALE 1:500

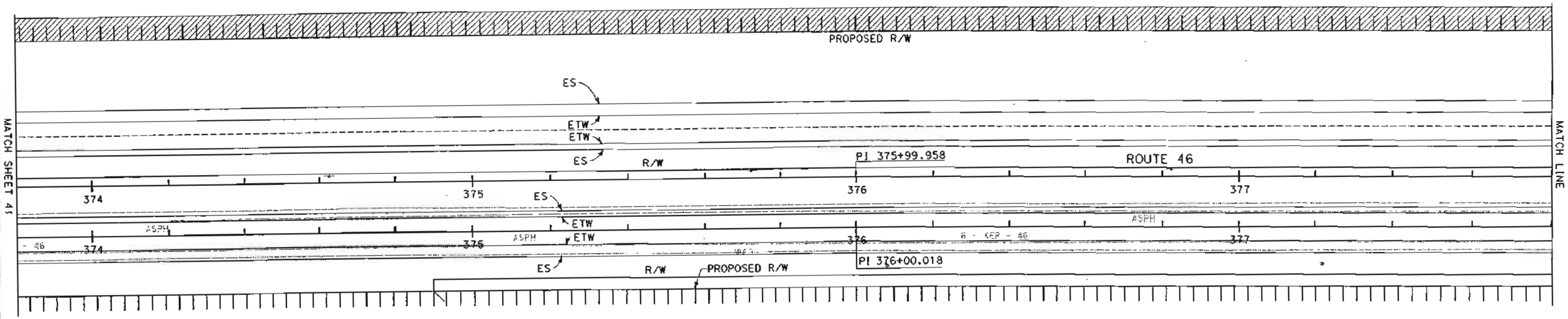
ATTACHMENT C
SHEET 40 OF 67

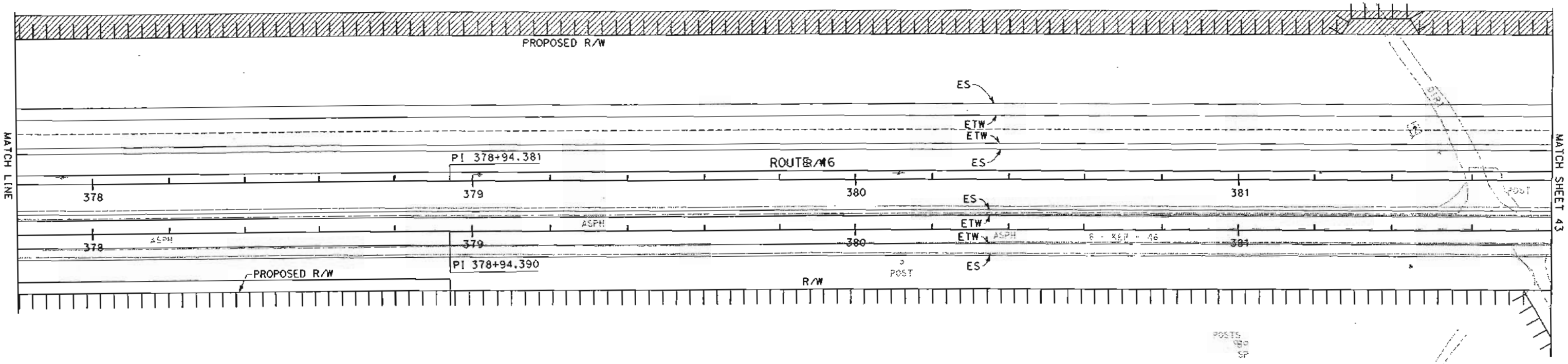




SCALE 1:500

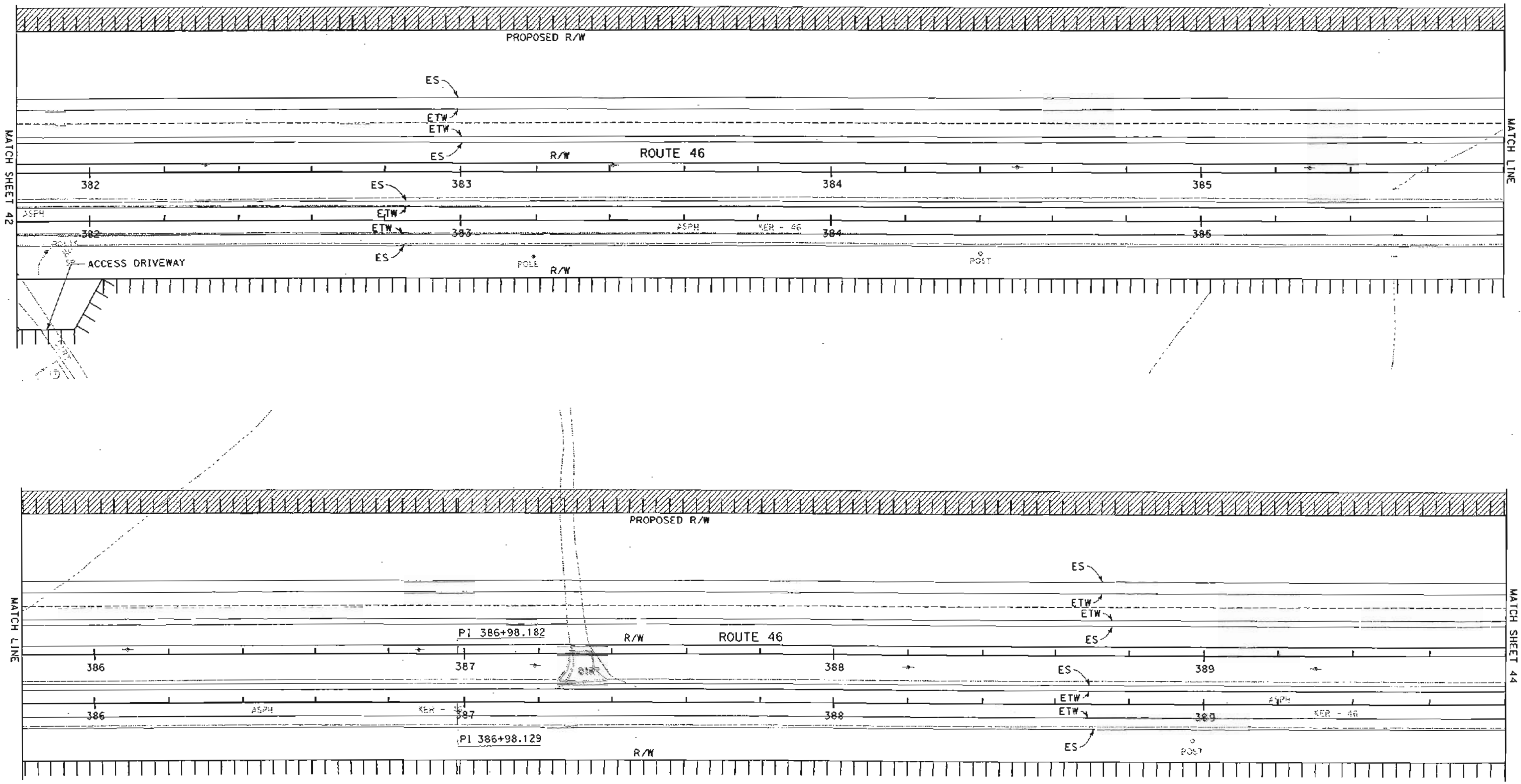
ATTACHMENT C
SHEET 41 OF 67





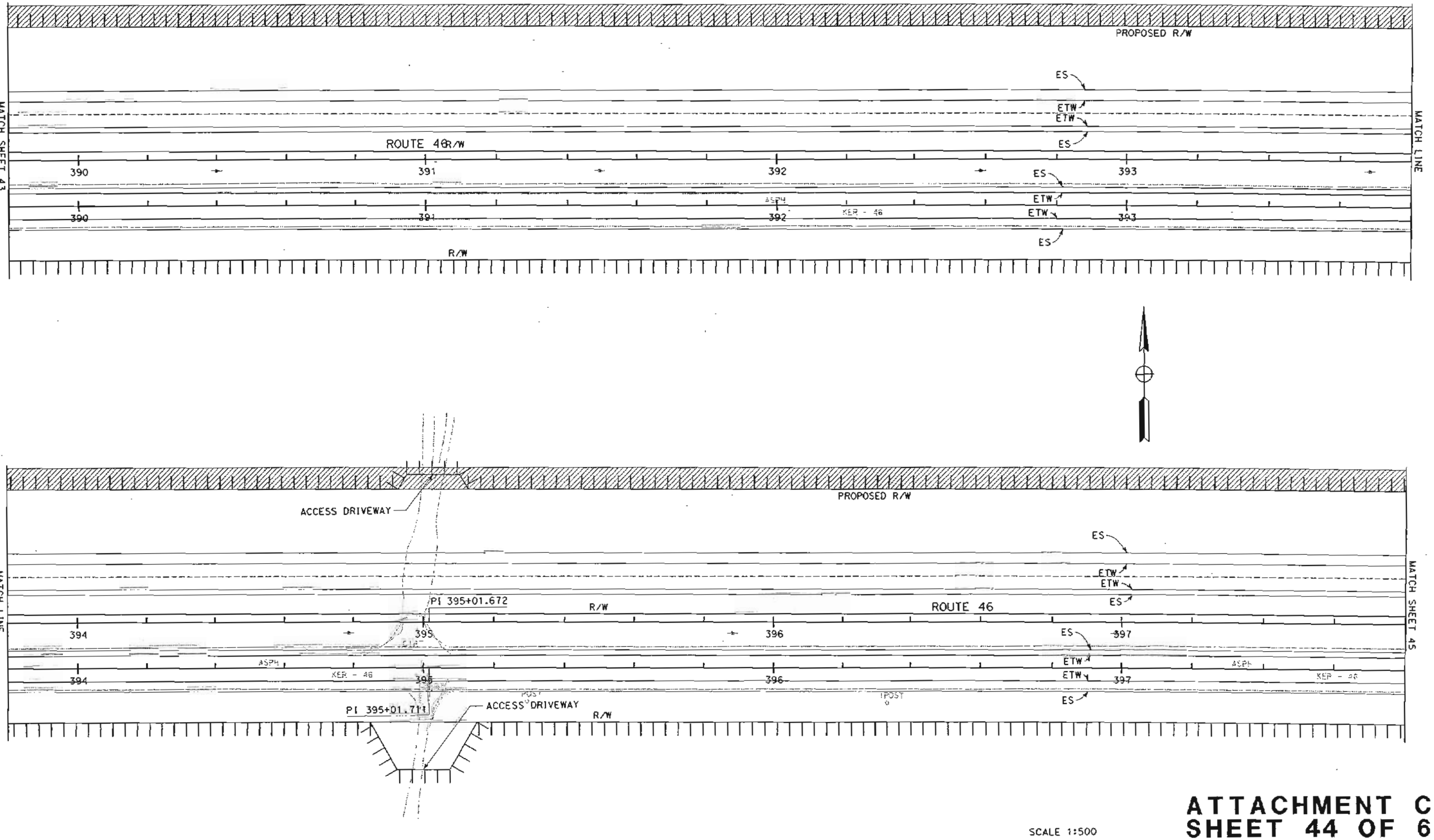
SCALE 1:500

ATTACHMENT C
SHEET 42 OF 67



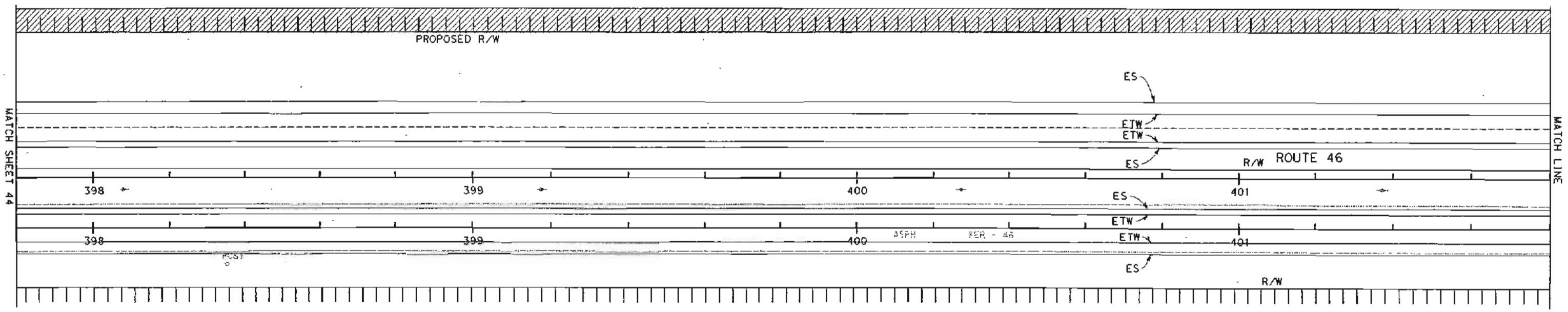
SCALE 1:500

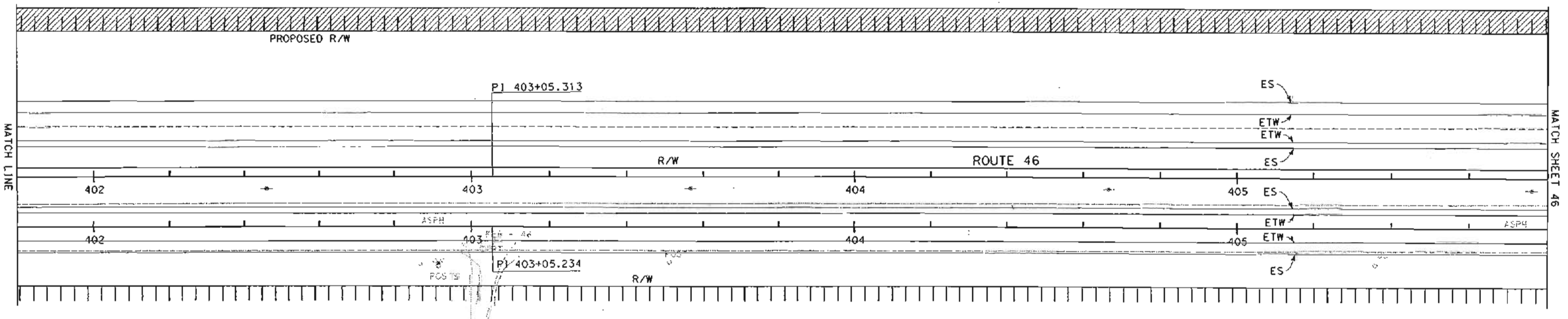
ATTACHMENT C
SHEET 43 OF 67



SCALE 1:500

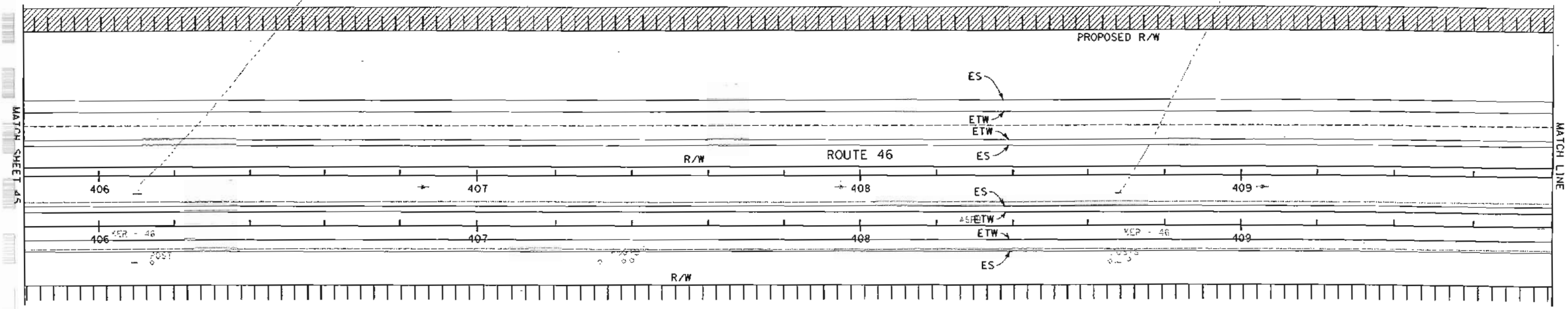
ATTACHMENT C
SHEET 44 OF 67

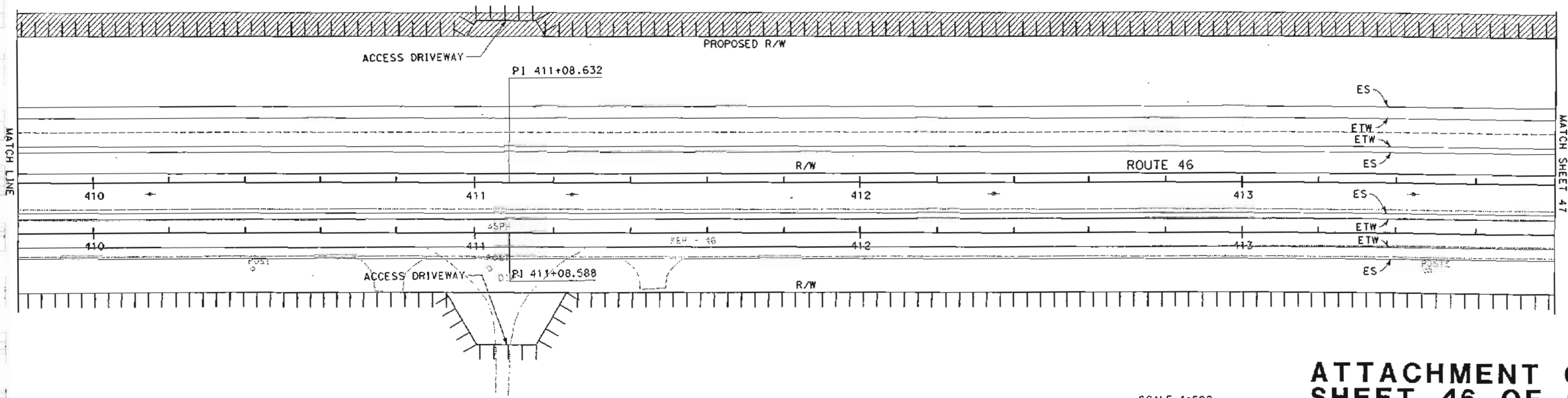




SCALE 1:500

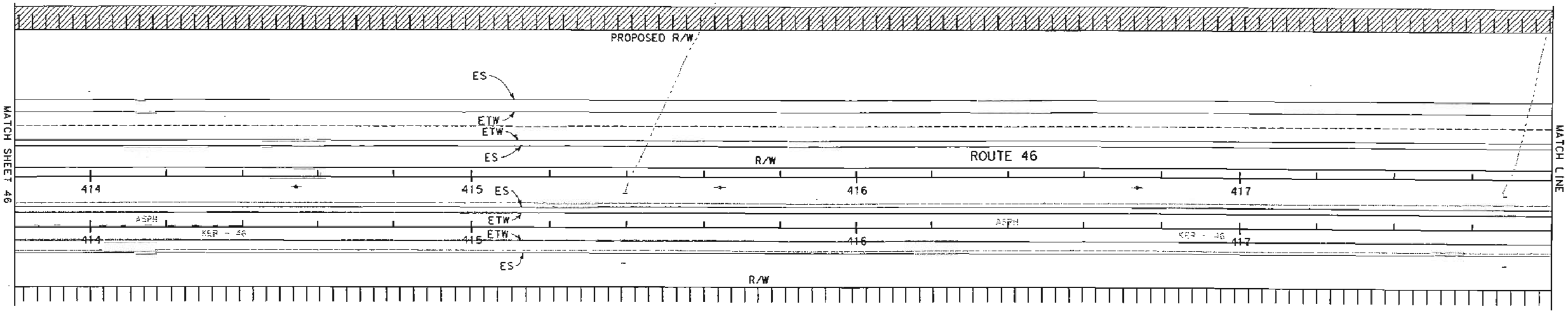
ATTACHMENT C
SHEET 45 OF 67

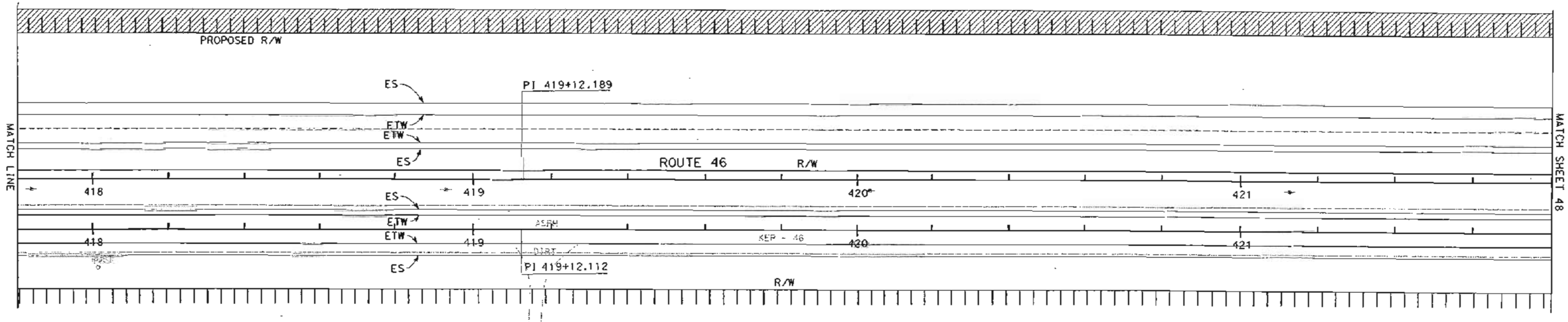




SCALE 1:500

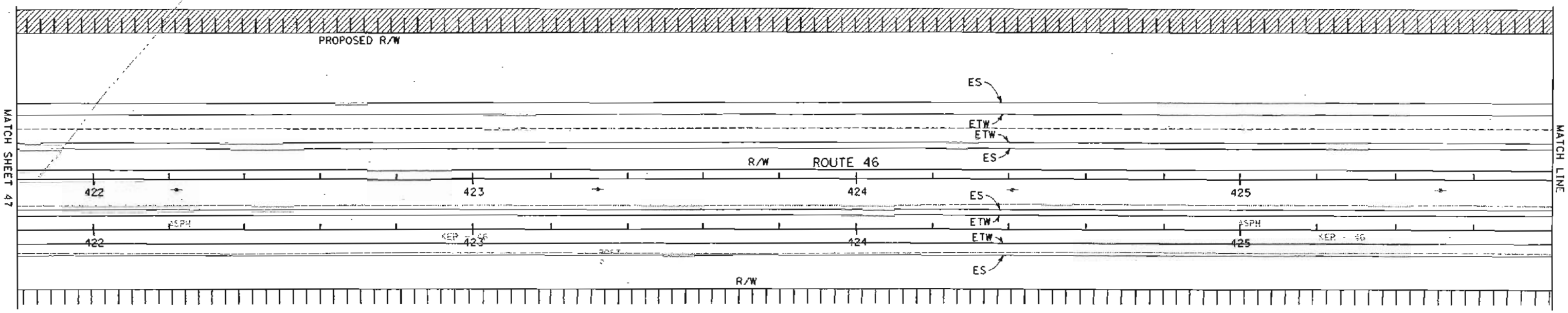
ATTACHMENT C
SHEET 46 OF 67

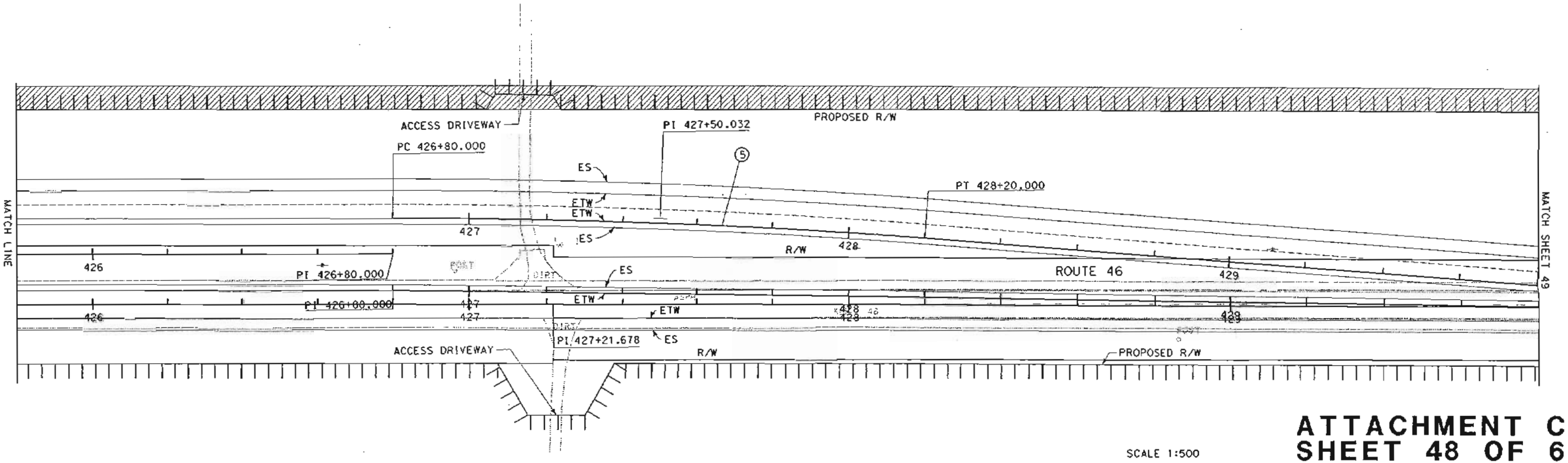




SCALE 1:500

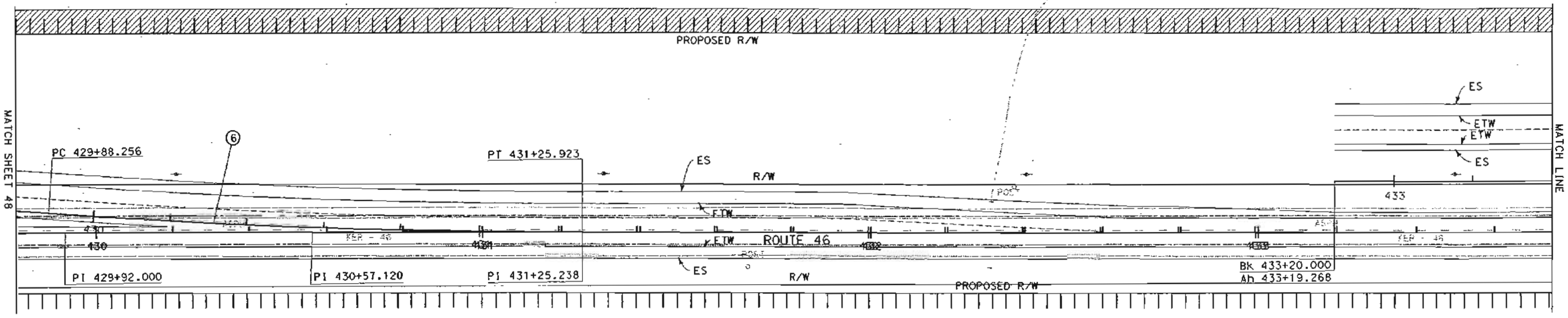
ATTACHMENT C
SHEET 47 OF 67

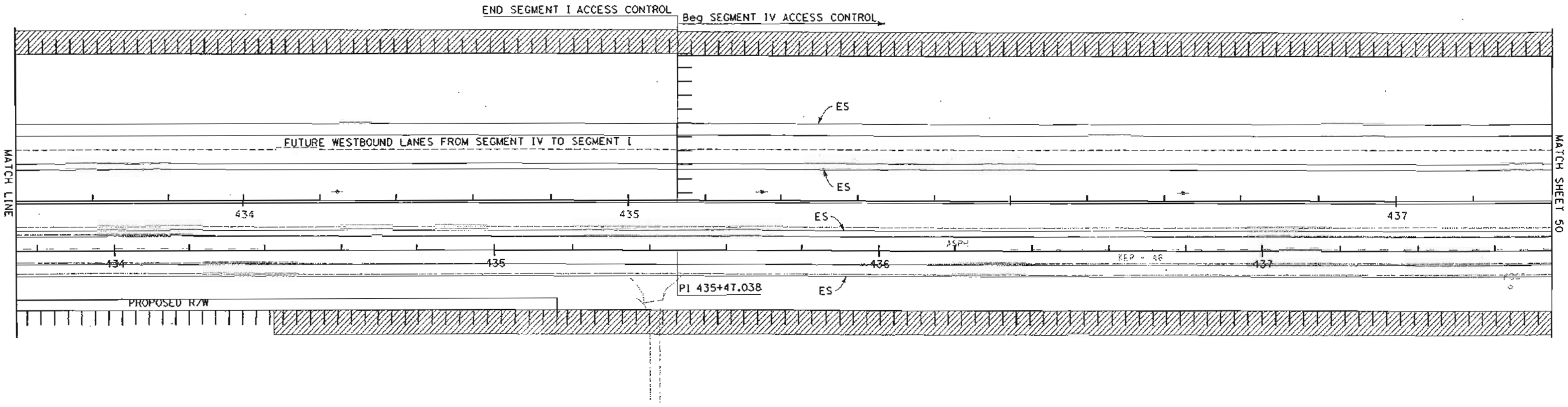




SCALE 1:500

ATTACHMENT C
SHEET 48 OF 67





SCALE 1:500

ATTACHMENT C
SHEET 49 OF 67

PROPOSED R/W

ES
3.0
7.2
ETW
ES
1.5
ES
7.2
ETW
3.0
ES

PC 00+13.729

ROUTE 46

438 439 440 441

15 16

438 439 440 441

PROPOSED R/W

PC 0+60.863
PT 0+60.863

POST
POLE
ASPH
KER - 45

442 443 444 445

PROPOSED R/W

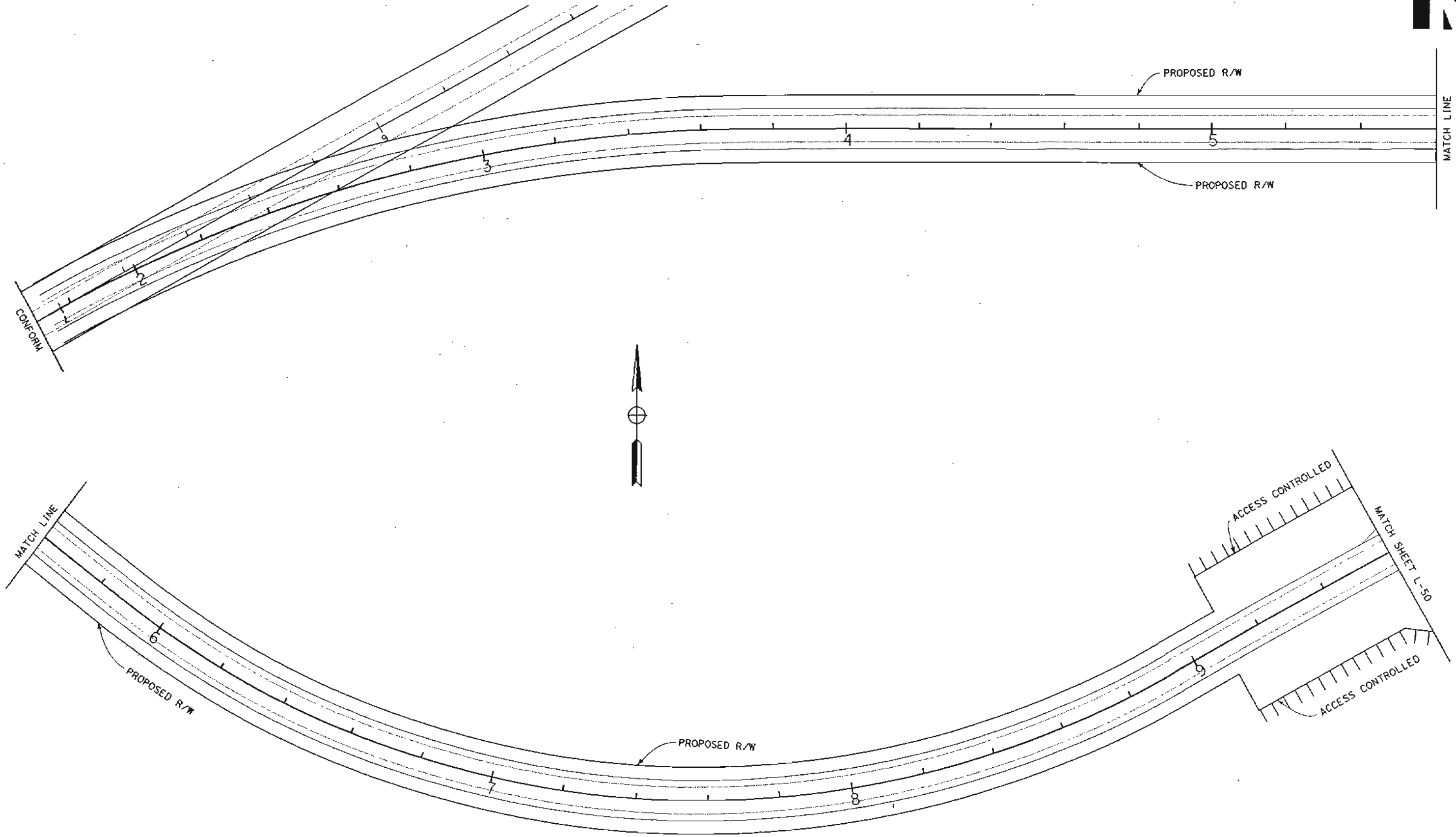
PI 443+52.214

ES
ETW
ES
ES
ETW
ES

SCALE 1:500

ATTACHMENT C
SHEET 50 OF 67

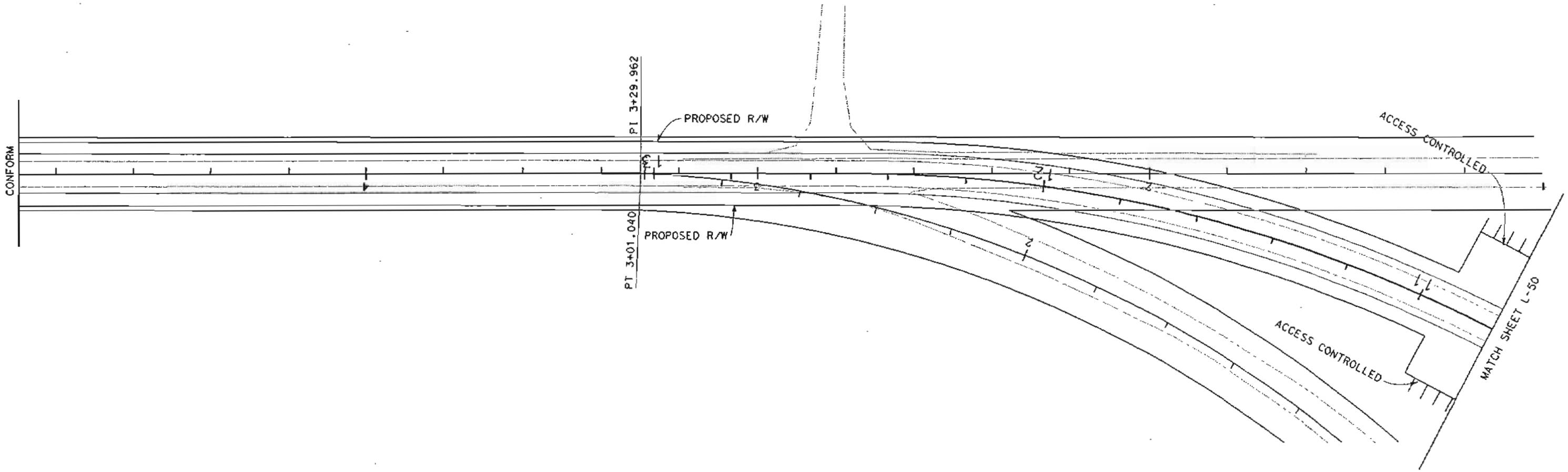
Caltrans Metric



SCALE 1:500

ATTACHMENT C
SHEET 51 OF 67

Caltrans Metric



SCALE 1:500

ATTACHMENT C
SHEET 52 OF 67

50 FT BUFFER FROM UTILITY EASEMENT

DIRT

PROPOSED R/W

TANK

DIRT PILE

DIRT

MATCH SHEET L-50

ES

DIRT ETW

ES

ROUTE 46

446

447

448

449

ES

ETW

ES

446

447

448

449

ASPH

KEP - 46

ASPH

POST

MATCH LINE

PROPOSED R/W

50 FT BUFFER FROM UTILITY EASEMENT

50 FT BUFFER FROM UTILITY EASEMENT

PIPELINE

DIRT

DIRT

DIRT

DIRT

PROPOSED R/W

DIRT

ES

ETW

ES

ROUTE 46

MATCH LINE

450

451

452

453

ES

ETW

ES

450

451

452

453

120040

120+40

PI 451+57.143

121040

116.85

PROPOSED R/W

PIPELINE

PIPELINE

50 FT BUFFER FROM UTILITY EASEMENT

MATCH SHEET L-54

SCALE 1:500

ATTACHMENT C
SHEET 53 OF 67

Caltrans Metric

50 FT BUFFER FROM UTILITY EASEMENT

MATCH SHEET L-53

ROUTE 46

454 455 456 457

ES ETW ES ES ETW ES

PI 456+00.017

MATCH LINE

50 FT BUFFER FROM UTILITY EASEMENT

MATCH LINE

ROUTE 46

458 459 460 461

ES ETW ES ES ETW ES

PI 459+58.458

MATCH SHEET L-55

50 FT BUFFER FROM UTILITY EASEMENT

SCALE 1:500

ATTACHMENT C
SHEET 54 OF 67

MATCH SHEET L-54

50 FT BUFFER FROM UTILITY EASEMENT

PIPELINES

DIRT

ASPH

ES

ETW

ROUTE 46

462 463 464 465

KER - 46

PIPELINE

50 FT BUFFER FROM UTILITY EASEMENT

MATCH LINE

MATCH LINE

BEG "A LINE"
STA 466+28.703

18

19

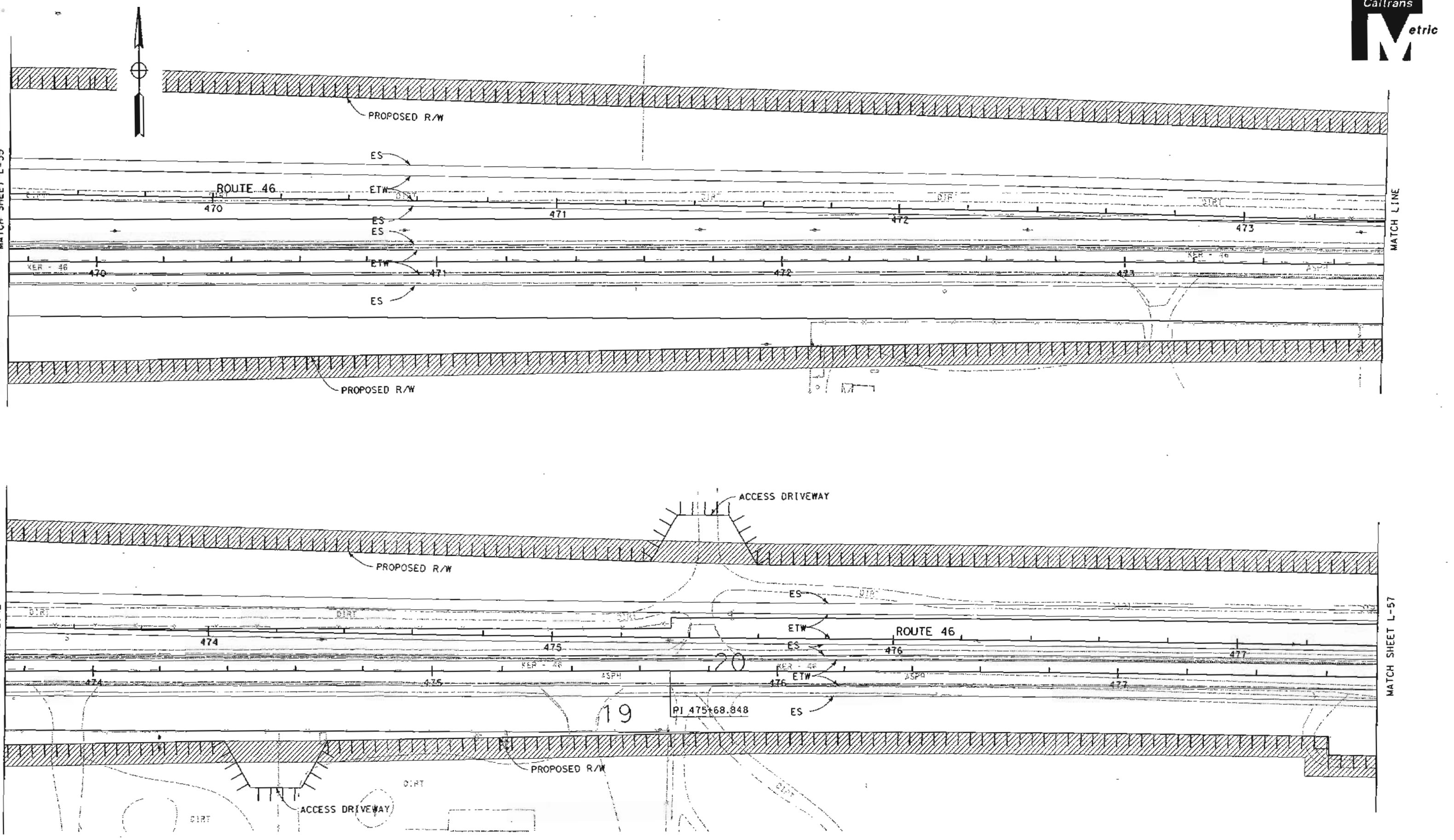
466 467 468 469

PI 467+63.331

MATCH SHEET L-56

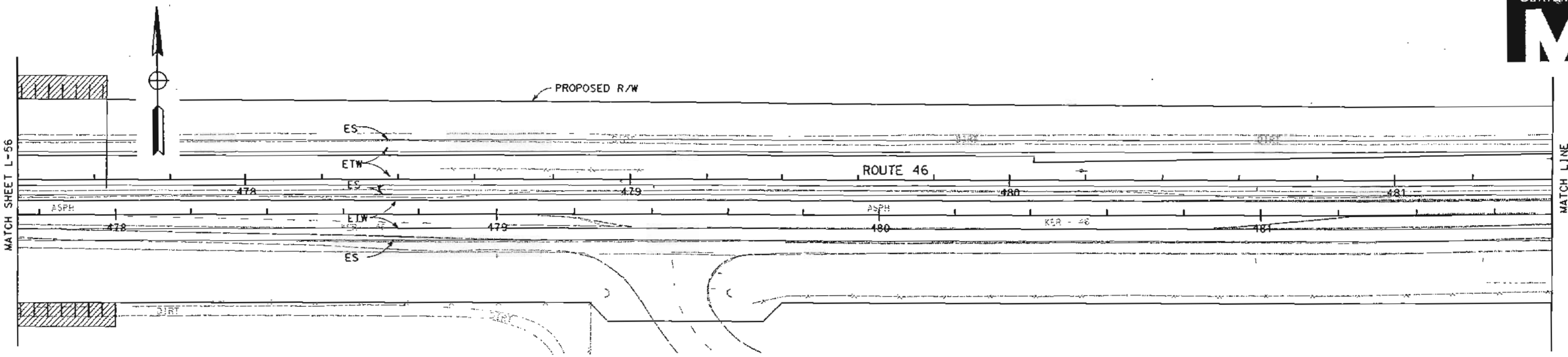
SCALE 1:500

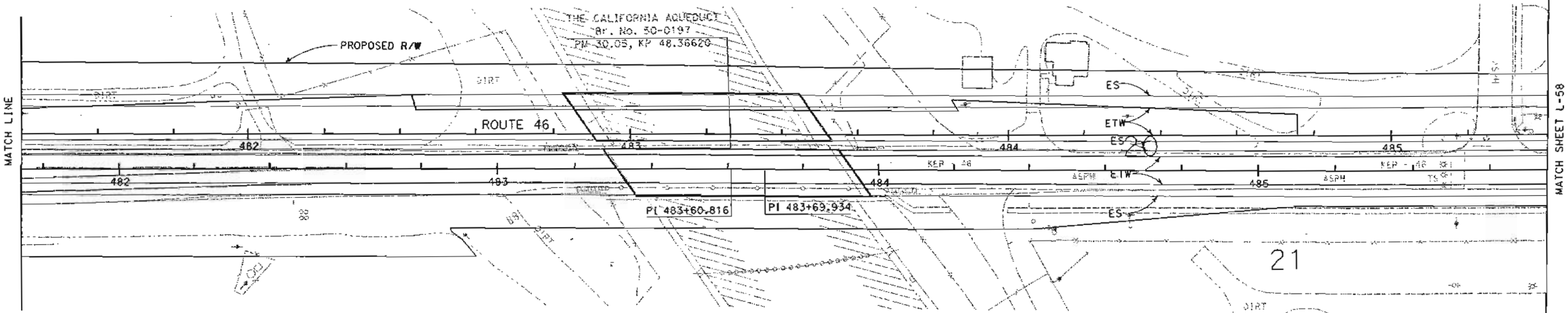
ATTACHMENT C
SHEET 55 OF 67



SCALE 1:500

ATTACHMENT C
SHEET 56 OF 67





SCALE 1:500

ATTACHMENT C
SHEET 57 OF 67

Caltrans Metric

MATCH SHEET L-57

PROPOSED R/W

ES

ETW

ES

ETW

ES

ROUTE 46

486

487

488

489

186

187

188

189

MATCH LINE

MATCH LINE

PROPOSED R/W

ES

ETW

ES

ETW

ES

ROUTE 46

490

491

492

493

490

491

PI 491+70.795

492

493

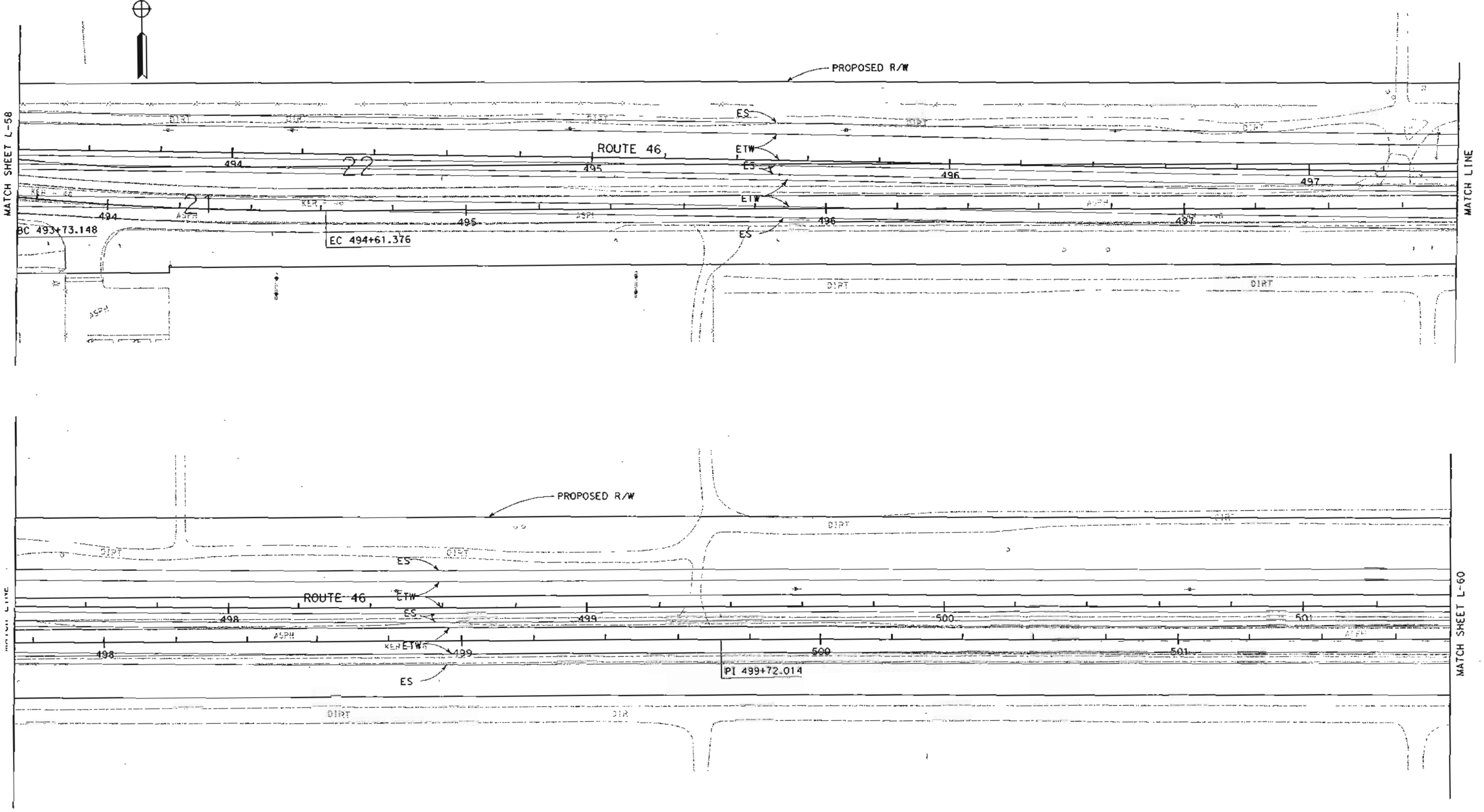
BC 492+24.301

EC 493+11.280

MATCH SHEET L-59

SCALE 1:500

ATTACHMENT C
SHEET 58 OF 67



SCALE 1:500

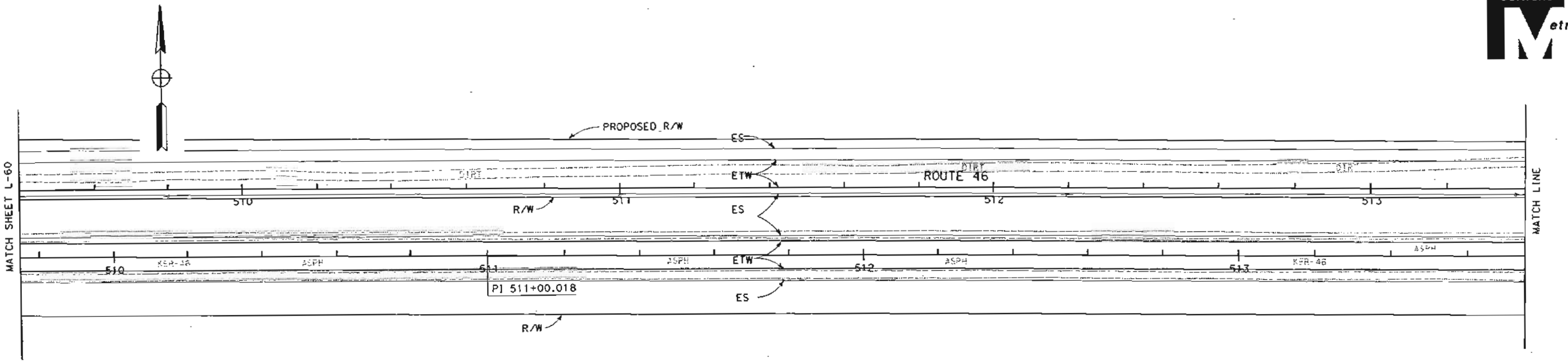
ATTACHMENT C
SHEET 59 OF 67

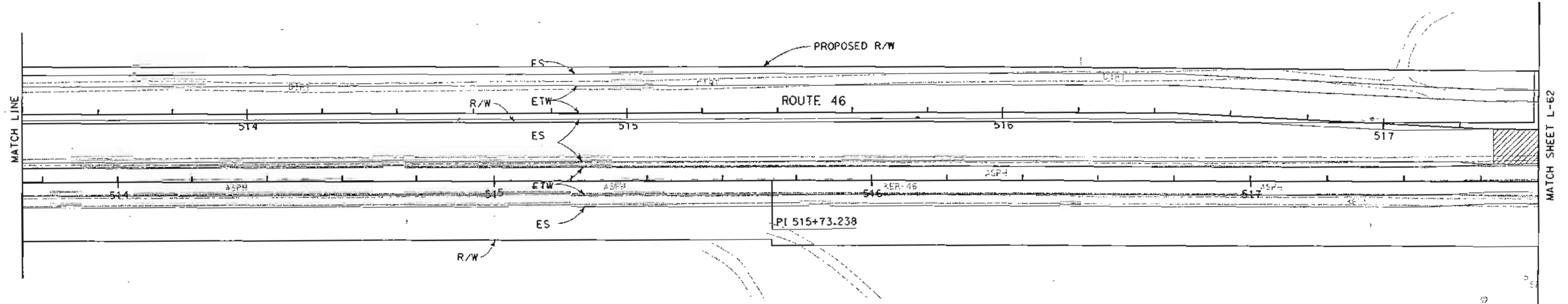
Caltrans Metric

DIRT
DIRT
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ES
ETW
ES
ETW
ES
ROUTE 46
502
503
504
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ASPH
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KSP 1 46
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ASPH
ASPH
504
KER-46
ASPH
505
ASPH
MATCH LINE
DIRT
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DIRT
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ES
ETW
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ASPH
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XER-46
ASPH
508
ETW
ASPH
509
PI 507+72.473
MATCH SHEET L-61

SCALE 1:500

ATTACHMENT C
SHEET 60 OF 67





SCALE 1:500

ATTACHMENT C
SHEET 61 OF 67

Caltrans Metric

WARREN

ALOMA

ROUTE 46

R/W

518 519 520 521

PC 521+50.799

MATCH SHEET L-63

SCALE 1:500

ATTACHMENT C
SHEET 62 OF 67

MATCH SHEET L-65

MATCH SHEET L-62

MATCH SHEET L-66

MATCH SHEET L-64

PROPOSED ROUTE 46/5
SEPARATION
Br. No. XX-XXX
PM 32.60
KP 52.46

PROPOSED ROUTE 46/5
SEPARATION
Br. No. 50-316
PM 32.60
KP 52.46

ROUTE 46

SB LOOP RAMP

SB OFF RAMP

SB ON RAMP

PC 936+32.176

PT 935+42.124

PI 936+61.42

PI 932+98.521

PT 932+98.521

PI 933+06.766

PI 933+73.843

PI 935+00

PI 934+51.648

R 282.920

936

935

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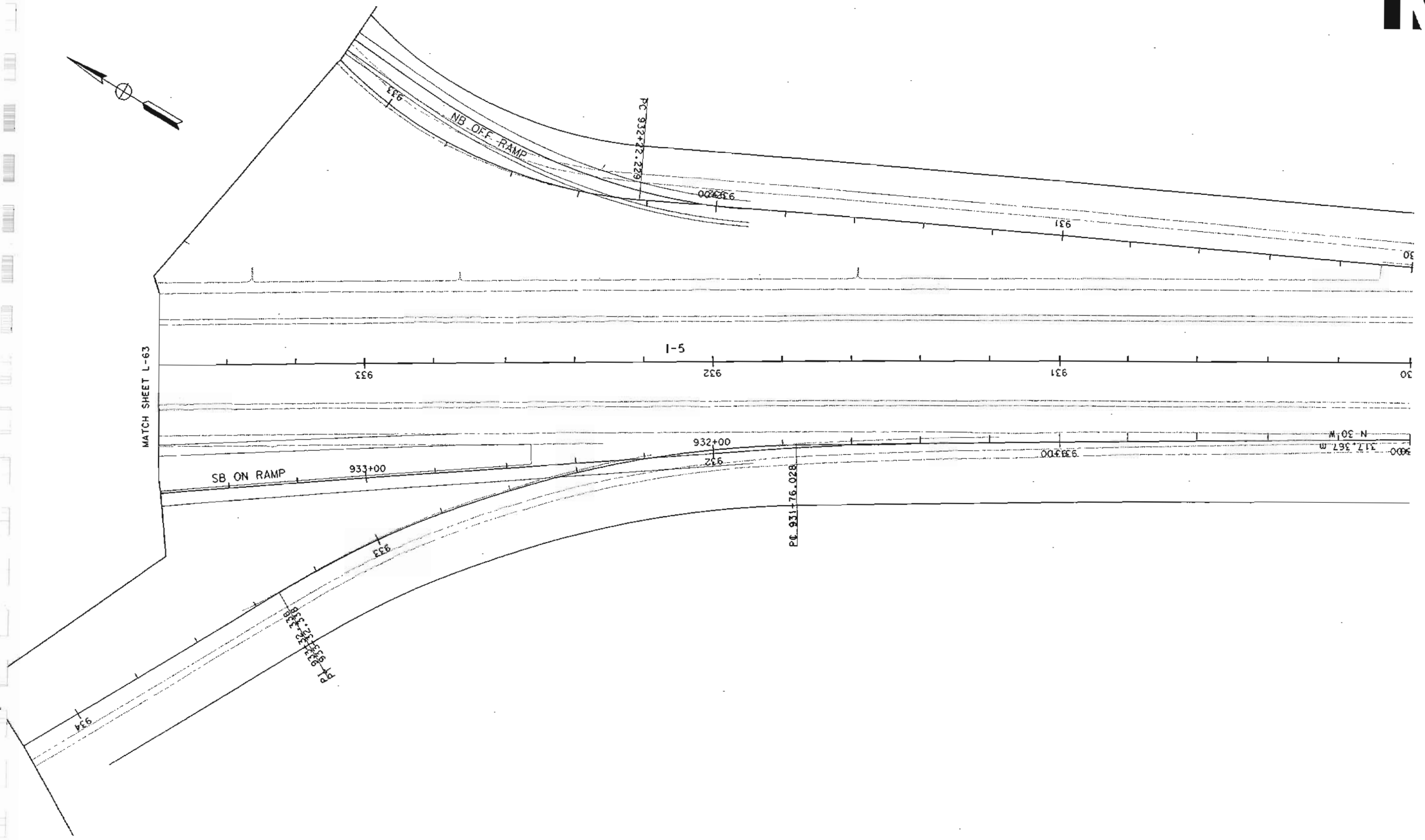
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DIKE

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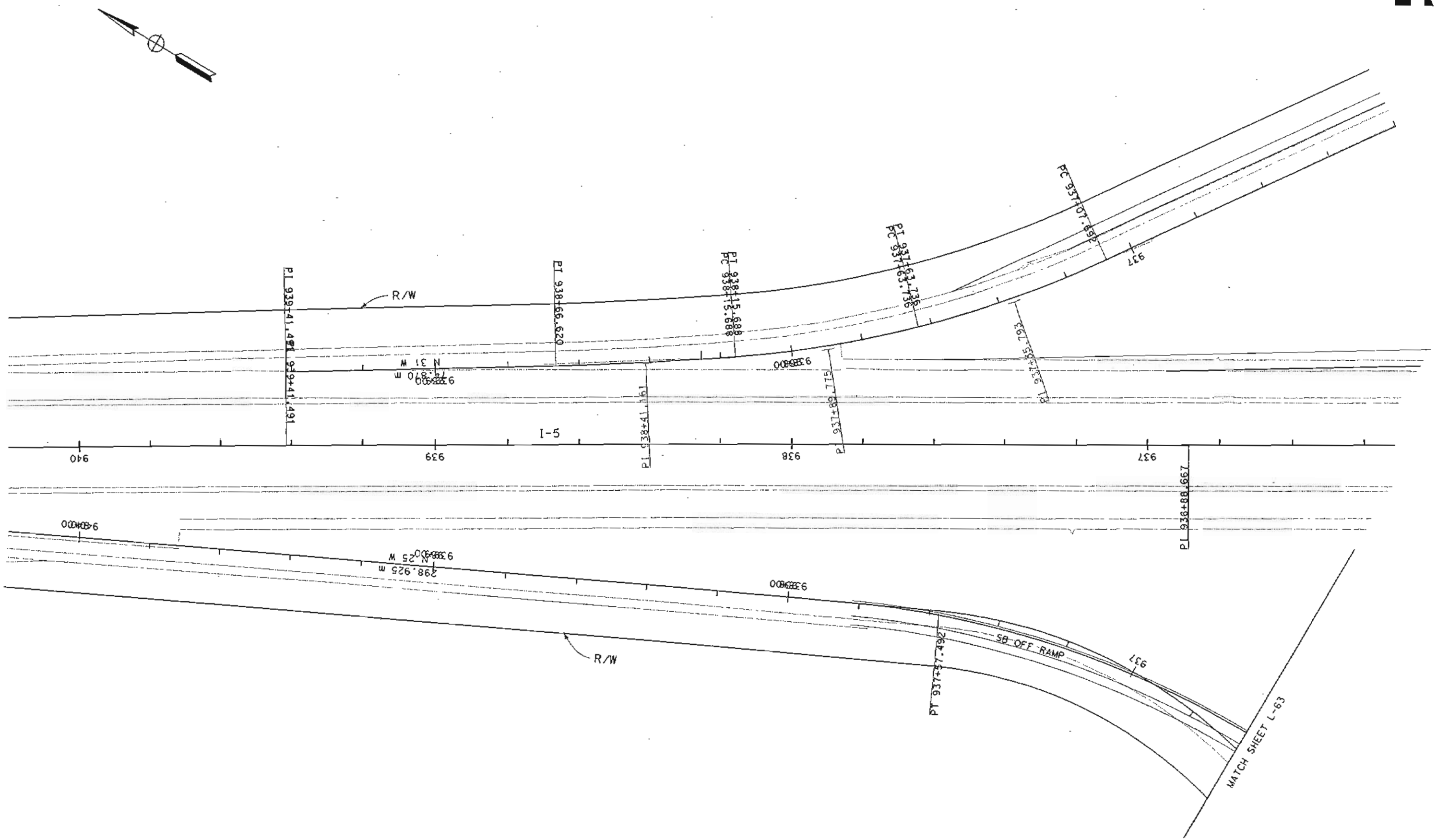
ATTACHMENT C
SHEET 63 OF 67

Caltrans Metric



SCALE 1:500

ATTACHMENT C
SHEET 64 OF 67



SCALE 1:500

ATTACHMENT C
SHEET 65 OF 67

MATCH SHEET L-65

MATCH SHEET L-63

MATCH SHEET L-65

MATCH SHEET L-64

ROUTE 46

PROPOSED MAIN FLOOD
CANNEL Br. No. XX-XX
PM 32.80
KP 52.79

PROPOSED MAIN FLOOD
CANNEL Br. No. 50-30
PM 32.80
KP 52.79

R/W

R/W

DIRT

DIRT

DIKE

934

ASPH

ASPH

ASPH

ASPH

CONC

TANK

R 45.000

PI 934+37.700

PI 934+43.365

PT 933+56.800

526

527

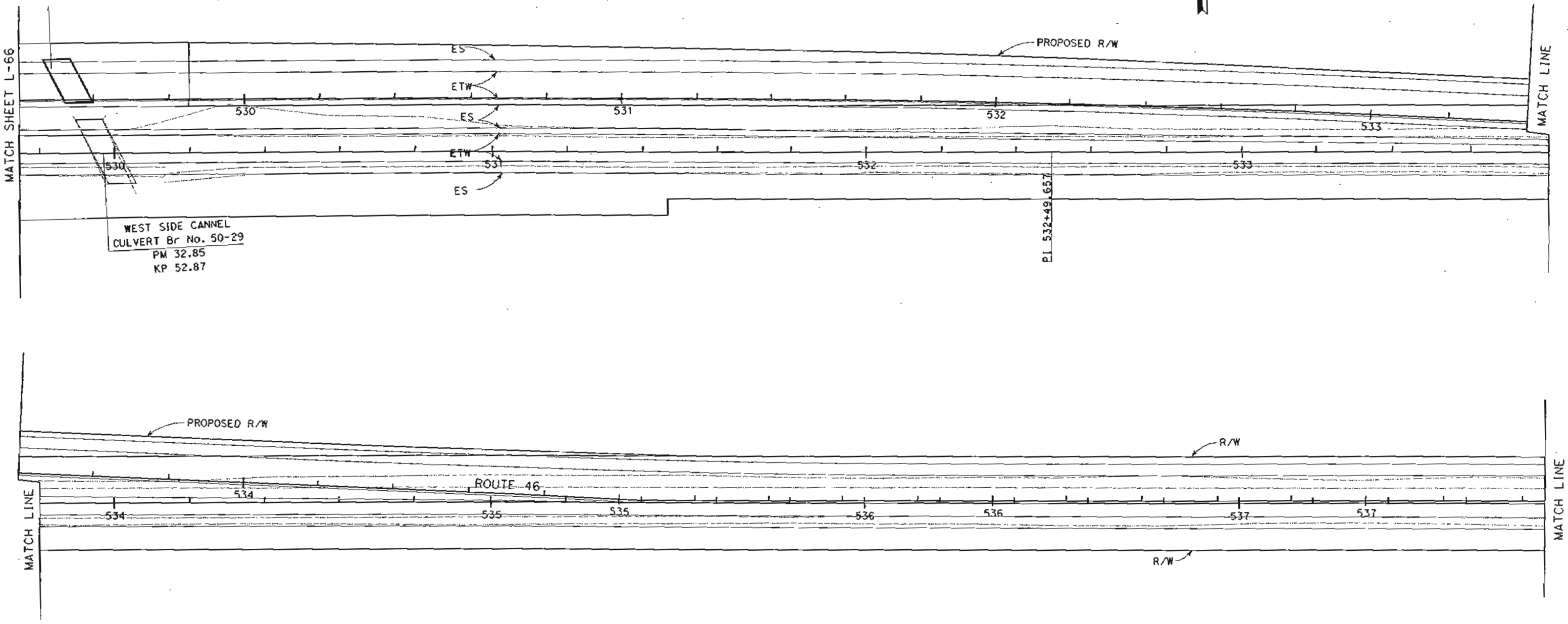
528

529

527+79.365 BL

SCALE 1:500

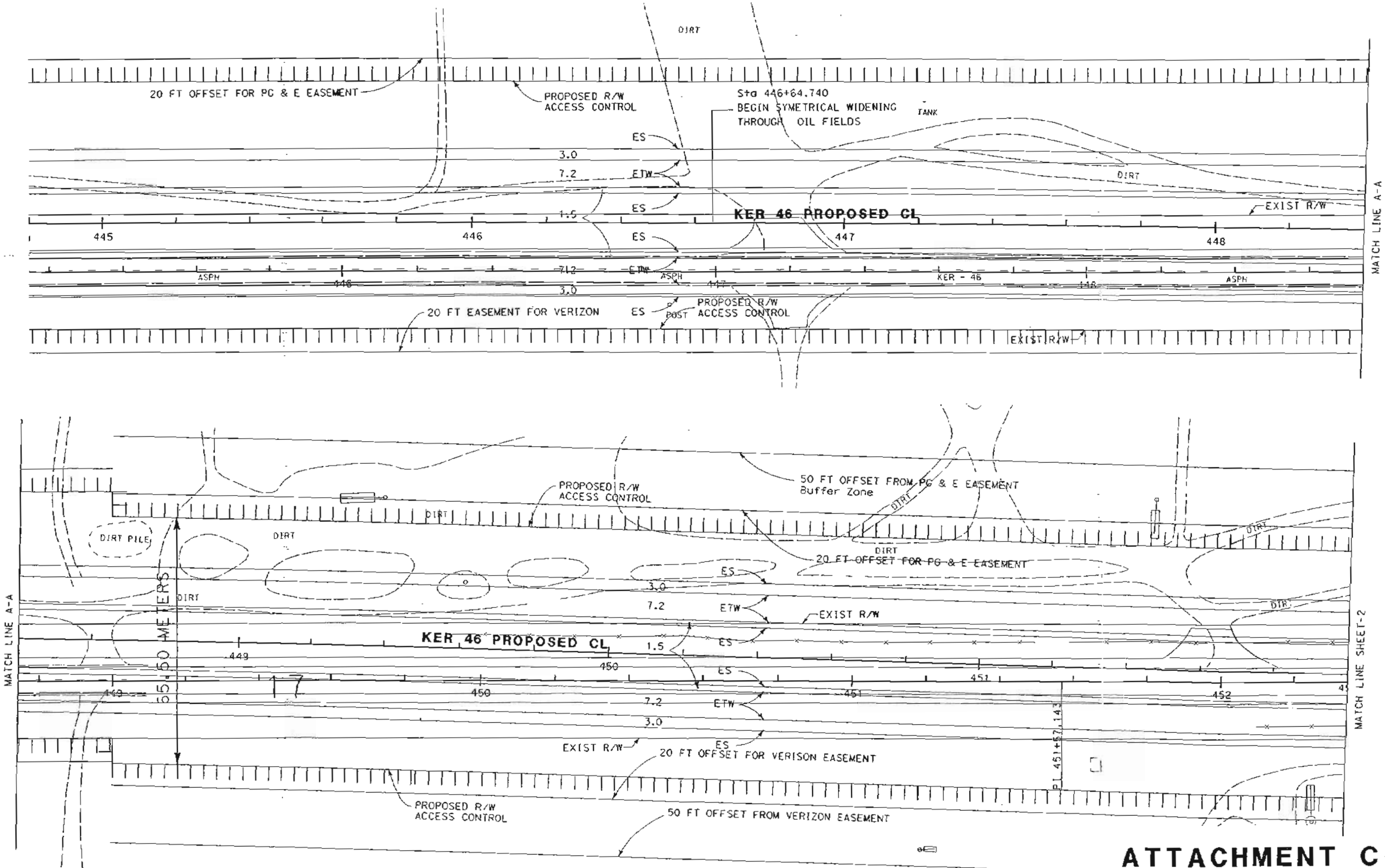
ATTACHMENT C
SHEET 66 OF 67



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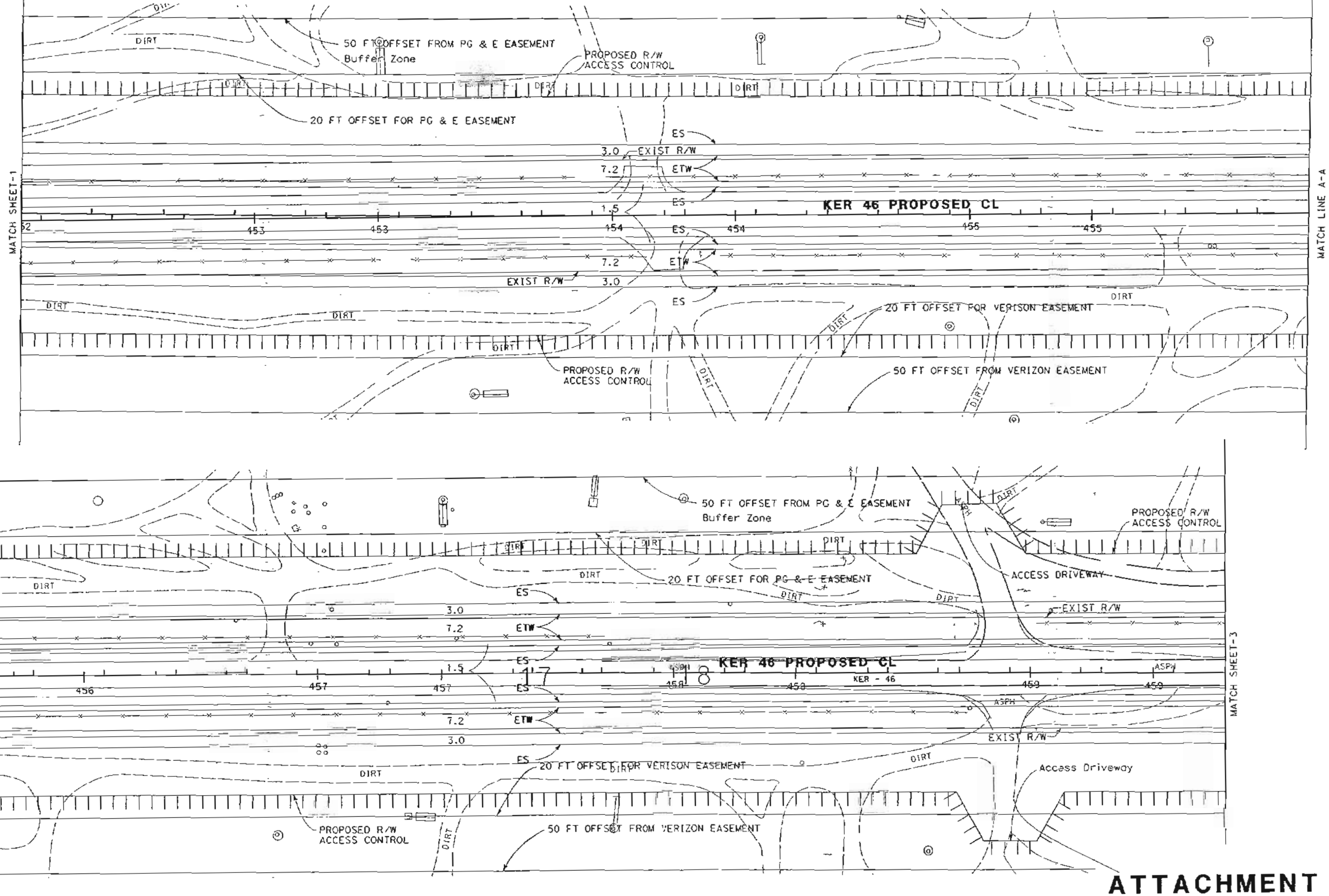
ATTACHMENT C
SHEET 67 OF 67

PROPOSED SYMETRICAL WIDENING THROUGH THE OIL FIELDS



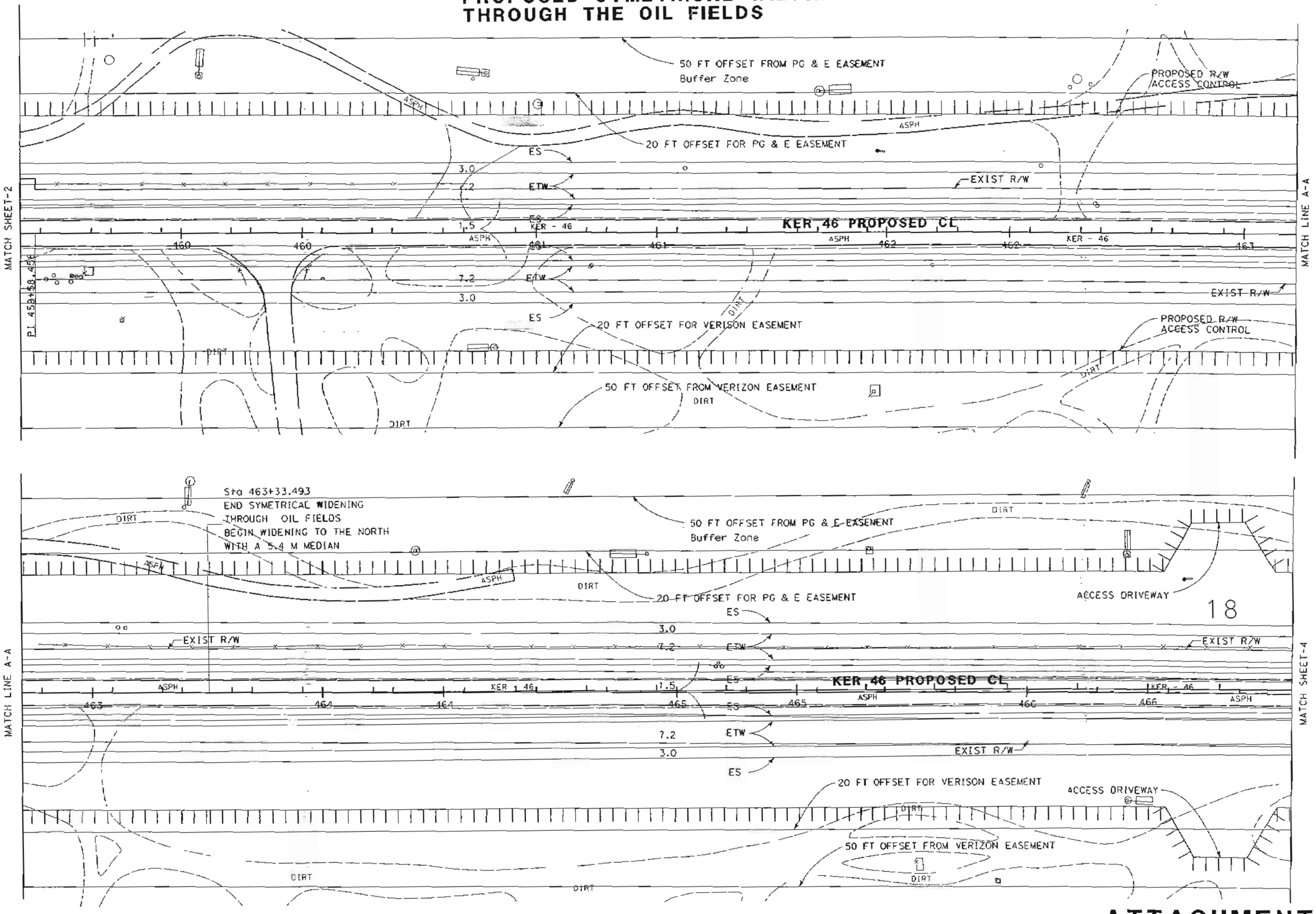
ATTACHMENT C-1
SHEET 1 OF 5

PROPOSED SYMETRICAL WIDENING THROUGH THE OIL FIELDS



ATTACHMENT C-1
SHEET 2 OF 5

PROPOSED SYMETRICAL WIDENING THROUGH THE OIL FIELDS

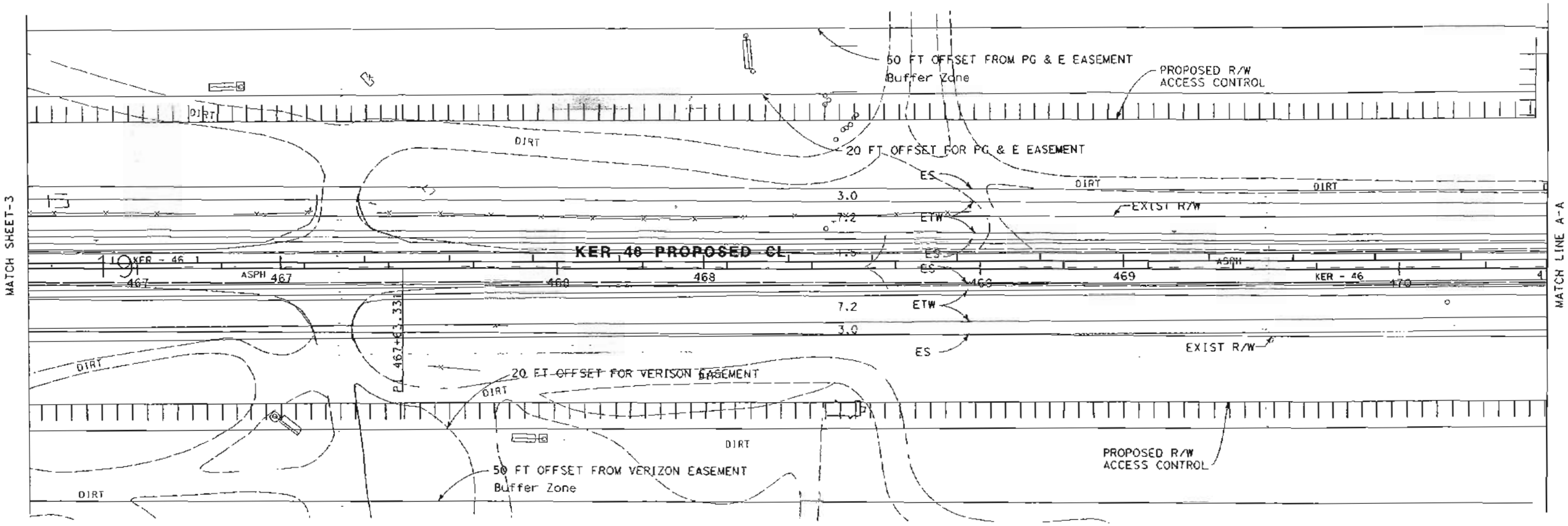


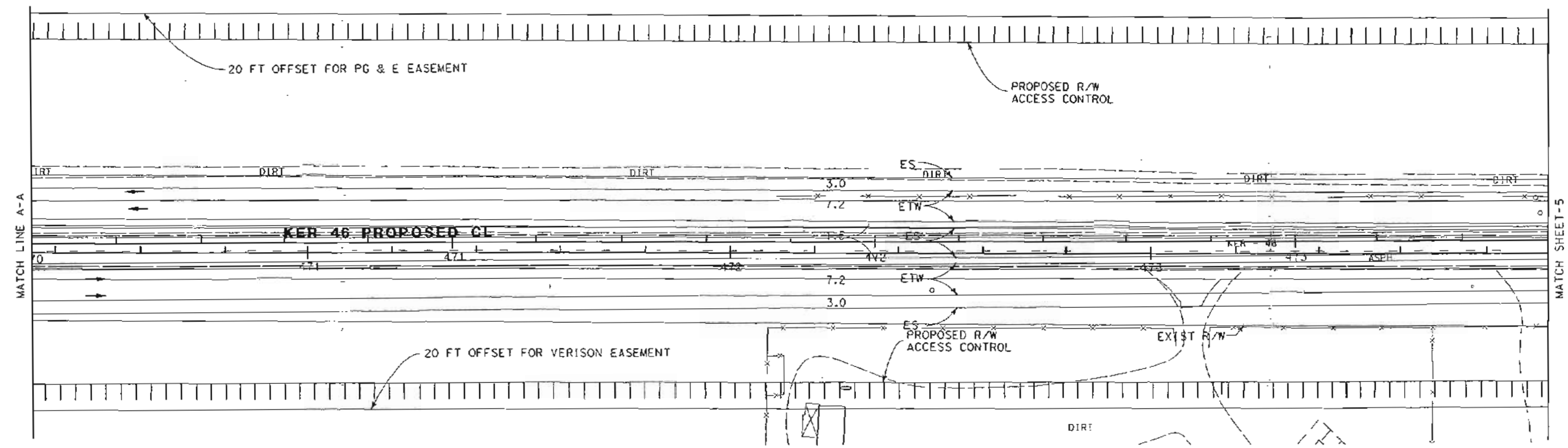
18

SCALE 1:500

ATTACHMENT C-1
SHEET 3 OF 5

PROPOSED SYMETRICAL WIDENING THROUGH THE OIL FIELDS

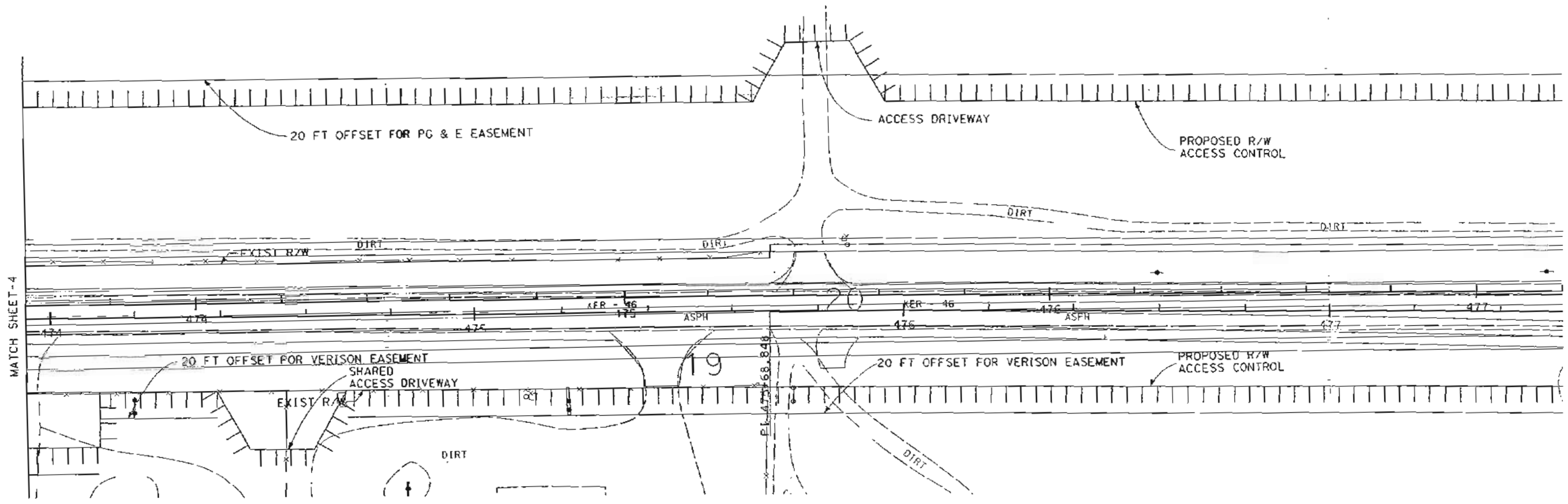




SCALE 1:500

ATTACHMENT C-1
SHEET 4 OF 5

PROPOSED SYMETRICAL WIDENING THROUGH THE OIL FIELDS



SCALE 1:500

ATTACHMENT C-1
SHEET 5 OF 5

District-County-Route	06-Ker-46
KP (PM)	11.75/53.90 (7.3/33.5)
EA	442500

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Roadway Excavation	350,000	M3	$15.00	$5,250,000	
Road way fill (IB)	125,000	M3	$10.00	$1,250,000	
Shoulder Backing (IB)	20,000	M3	$10.00	$200,000	
Clearing & Grubbing	LS	LS	LS	$225,000	
			Subtotal Earthwork		**$6,925,000**
Section 2 Structural Section					
Asphalt Concrete (type A)	474,000	TONNE	$45.00	$21,330,000	
Cold plane AC	144,000	M2	$2.00	$288,000	
Asphaltic Emulsion (Paint Binder)	151	TONNE	$200.00	$30,200	
paving Asphalt binder (PRF)	676	TONNE	$100.00	$67,600	
Aggregate Base (class 2)	303,146	M3	$30.00	$9,094,380	
Remove Asphalt Concrete	25,000	M2	$10.00	$250,000	
			Subtotal Pavement Structural Section		**$31,060,000**
Section 3 Drainage					
Large Drainage Facilities					
Storm Drains					
Erosion Control	163	ha	$13,000	$2,119,000	
Project Drainage	LS	LS	LS	$2,500,000	
			Subtotal Drainage		**$4,619,000**

PROJECT COST ESTIMATE SUMMARY

District-County-Route	06-Ker-46
KP (PM)	11.75/53.90 (7.3/33.5)
EA	442500
Program Code	HE-13

PROJECT DESCRIPTION:

Limits In Kern County on Route 46 from 0.1 East of Keck's Rd. to 1.3 km East of Interstate 5.

Proposed Improvement To upgrade the existing two lane conventional highway to four lane expressway.

Altrenative 2 Widening will be symmetrical through the oil fields and widening to the north with 18.6 m median width from KP 11.75 to KP 17.54 ,KP 31.85 to KP 47.0 and 3.6 m median width from KP 47.0 to KP 53.90.

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	**$69,250,000**
TOTAL STRUCTURE ITEMS	**$9,220,000**
SUBTOTAL CONSTRUCTION COSTS (As Of 2003)	**$78,470,000**
SUBTOTAL CONSTRUCTION COSTS (CURRENT - 2005)	**$84,059,000**
SUBTOTAL CONSTRUCTION COSTS (ESCLATED BY 5 YEARS @ 3.5%)	**$99,840,000**
TOTAL RIGHT OF WAY ITEMS (ESCLATED BY 5 YEARS @ 3.0%)	**$81,715,000**
TOTAL PROJECT CAPITAL OUTLAY **ESCLATED** COST	**$181,560,000**

Reviewed by District Program Manager _____ (Signature)

Approved by Project Manager _____ (Signature) Date _____

Phone No. _____ Page No. 1 of 6

ATTACHMENT D

District-County-Route	06-Ker-46
KP (PM)	11.75/53.90 (7.3/33.5)
EA	442500

Section 4 Specialty Items	Quantity	Unit	Unit Price	Unit Cost	Section Cost
COZEEP	LS	LS	LS	$140,000	
R.E. Office Space	LS	LS	LS	$375,000	
Partnering	LS	LS	LS	$22,000	
SWPPP	LS	LS	LS	$1,045,000	
Hazardous Waste Mitigation Work	LS	LS	LS	$2,336,000	
Environmental Mitigation	LS	LS	LS	$0	
Chain link fence (type CL-1.8)	84,000	M	25	$2,100,000	
PSWPPP	LS	LS	LS	$30,000	
	Subtotal Specialty Items				**$6,050,000**

Section 5 Traffic Items					
Lighting and Sign Illumination	LS	LS	LS	$290,000	
200 mm thermo plastic stripe		M			
Changeable Message Signs	2	EA	$135,000.00	$270,000	
Pavment markers(type G&H)	0	EA	$0.00	$0	
Pavment Delineation	LS	LS	LS	$400,000	
Construction Area Signs	LS	LS	LS	$30,000	
Portable CMS	19	EA	$4,000.00	$76,000	
Traffic Control System	LS	LS	LS	$1,200,000	
Maintain Traffic	LS	LS	LS	$600,000	
	Subtotal Traffic Items				**$2,870,000**

TOTAL SECTIONS 1 through 5	$51,524,000

			District-County-Route	06-Ker-46	
			KP (PM)	11.75/53.90 (7.3/33.5)	
			EA	442500	
				Item Cost	
Section 6 Minor Items	$51,524,000 (Subtotal Sections 1 through 5)	x	5%	2,576,200	Section Cost
			TOTAL MINOR ITEMS		**$2,576,000**
Section 7 Roadway Mobilization	$54,100,000 (Subtotal Sections 1 through 6)	x	10%	$5,410,000	
			TOTAL ROADWAY MOBILIZATION		**$5,410,000**
Section 8 Roadway Additions					
Supplemental Work	$54,100,000 (Subtotal Sections 1 through 6)	x	3%	$1,623,000	
Contingencies	$54,100,000 (Subtotal Sections 1 through 6)	x	15%	$8,115,000	
			TOTAL ROAD WAY ADDITIONS		**$9,740,000**
TOTAL ROAD WAY QUANTITIES (Subtotal Sections1 thru 8)					**$69,250,000**

Estimate Prepared By	Pete Petrakis (Print Name)	Phone #	(559) 230-3117	Date: 10/30/03
Estimate Checked By	(Print Name)	Phone #	(559) 243-8026	
6 page Estimate Updated by	Pete Petrakis (Print Name)	Phone #	(559) 243-8026	Date: 5/26/05

District-County-Route	06-Ker-46
KP (PM)	11.75/53.90 (7.3/33.5)
EA	442500

II STRUCTURE ITEMS

Bridge Name	Structure (1) California Aqueduct Br #50-197 (New)	Structure (2) RTE 46/5 SEP Br #50-316 (widen)	Structure (3) Main Flood Canal Br #50-30 (widen)	Structure (4) West Side Canal Br #50-29 (widen)	Structure (5) Bitterwater Creek Br #50-0437 (New)
Structure Type	CIP concrete box girder	Steel girder	Precast concrete girder	RC box culvert	CIP concrete box girder
Width (out to out)-(m)	14.50	11.22	12.76	13.11	25.65
Span Lengths-(m)	62.18	110.00	40.00	20.85	40.00
Total Area-(m^2)	902	1234	510	273	1026
Footing Type (pile/spread)					
Cost Per m^2 (incl. 10% mobilization and 20% contingency)	$2,982	$2,500	$2,000	$1,350	$2,000
Total Cost for Structure	$2,688,601	$3,085,500	$1,020,800	$369,014	$2,052,000

SUBTOTAL STRUCTURES ITEMS **$9,220,000**
(Sum of Total Cost for Structures)

Railroad Related Costs:

SUBTOTAL RAILROAD ITEMS

SUBTOTAL RAILROAD ITEMS

COMMENTS:

TOTAL STRUCTURES ITEMS **$9,220,000**
(Sum of Structures Items plus Railroad Items)

Estimate Prepared by P.Petrakis (Print Name) Phone# 230-3117 Date: May 26, 2005

District-County-Route	06-Ker-46
KP (PM)	11.75/53.90 (7.3/33.5)
EA	442500

III. RIGHT OF WAY ITEMS	CURRENT* VALUE	ESCALATED** VALUE
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill including 39 Oil wells	$52,535,939	$60,903,552
B. Utility Relocation (State share)	$14,068,860	$16,309,665
C. Relocation Assistance	$168,826	$195,716
D. Clearance/Demolition	$604,961	$701,316
E. Title and Escrow Fees	$213,144	$247,093
F. Mitigation	$2,896,257	$3,357,556

***TOTAL Right of Way Items (CURRENT-2005)**
Including 25% contingencies $70,487,987

TOTAL RIGHT OF WAY ITEMS (ESCALATED** BY 5 YEARS @ 3%) **$81,715,000**

Anticipated Date of Right of Way Certification

(Date to which Values are Escalated) _____

_____

_____

_____

Right of Way Branch Cost Estimate for Work * _____

* This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. Do not include in Right of Way Items.

COMMENTS:

Estimate Prepared by P.Petrakis (Print Name) Phone# 230-3117 Date: May 26, 2005

PRELIMINARY PROJECT COST ESTIMATE SUMMARY

District-County-Route	06-Ker-46
KP (PM)	31.9/43.4 (19.8/27.0)
EA	442500
Program Code	HA22

PROJECT DESCRIPTION:

Limits In Kern County on Route 46 from 0.1 km West of Route 33 to 0.15 km West of Holloway Road.

Proposed Improvement To upgrade the existing 2-lane conventional highway to a 4-lane expressway & cross slope correction of existing roadway

SEGMENT I

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$27,688,200
TOTAL STRUCTURE ITEMS	$0
SUBTOTAL CONSTRUCTION COSTS (As of2003)	$27,688,200
SUBTOTAL CONSTRUCTION COSTS (CURRENT-04/05)	$29,660,300
SUBTOTAL CONSTRUCTION COSTS (ESCALATED BY 5 YEARS @ 3.5%)	$35,230,000
TOTAL RIGHT OF WAY ITEMS (ESCLATED BY 5 YEARS @ 3%)	$6,088,000
TOTAL PROJECT CAPITAL OUTLAY ***ESCLATED*** COST	**$41,318,000**

Reviewed by District Program Manager _____
(Signature)

Approved by Project Manager _____ Date: _____
(Signature)

Phone No. _____ Page No. 1 of 6

ATTACHMENT D-1

District-County-Route	06-Ker-46
KP (PM)	31.9/43.4 (19.8/27.0)
EA	442500

I. ROADWAY ITEMS

Section 1 Earthwork	Quantity	Unit	Unit Price	Unit Cost	Section Cost
Roadway Excavation	96,710	M^3	$15	$1,450,650	
Imported Borrow	33,620	M^3	$20	$672,400	
Clearing & Grubbing	LS	LS	LS	$50,000	
Develop Wate Supply				$0	
Imported Material (Shoulder Backing)	5,000	M^3	$20	$100,000	
Cold Plane A.C. Pavement	0	M^2	$3	$0	
			Subtotal Earthwork		$2,273,050
Section 2 Structural Section					
Asphalt Concrete	143,000	TONNE	$60	$8,580,000	
Asphaltic Emulsion (Paint Binder)	100	TONNE	$200	$20,000	
Lean Concrete Base				$0	
Cement-Treated Base				$0	
Aggregate Subbase				$0	
Aggregate Base	96,000	M^3	$30	$2,880,000	
Remove Asphalt Concrete	12,000	M2	$40	$480,000	
			Subtotal Pavement Structural Section		$11,960,000
Section 3 Drainage					
Large Drainage Facilities				$0	
Storm Drains				$0	
Pumping Plants				$0	
Project Drainage	LS	LS	LS	$770,000	
			Subtotal Drainage		$770,000

District-County-Route	06-Ker-46
KP (PM)	31.9/43.4 (19.8/27.0)
EA	442500

Section 4 Specialty Items	Quantity	Unit	Unit Price	Unit Cost	Section Cost
COZEEP	LS	LS	LS	$50,000	
Metal Beam Guard Railing					
R.E. Office Space	LS	LS	LS	$125,000	
Cable Anchor Assembly					
Partnering	LS	LS	LS	$7,000	
Terminal Section					
Crash Cushion, Sand Filled					
Prepare Storm Water Pollution Prevention Plan	LS	LS	LS	$20,000	
Concrete Barrier, Type 50					
Water Pollution Control	LS	LS	LS	$831,000	
Hazardous Waste Mitigation Work	LS	LS	LS	$300,000	
Environmental Mitigation	LS	LS	LS	$0	
Erosion Control	45	HA	$13,000	$585,000	
Survey Monuments	15	EA	$650	$10,000	
Chain Link Fence (type CL-1.8)	23,200	M	$25	$580,000	
			Subtotal Specialty Items		$2,508,000

Section 5 Traffic Items					
Pavement Delineation	LS	LS	LS	$100,000	
Changeable Message Signs	2	EA	$135,000	$270,000	
Construction Area Signs	LS	LS	LS	$4,200	
Portable Changeable Message Signs	LS	LS	LS	$20,000	
Traffic Control System	LS	LS	LS	$300,000	
Maintain Traffic	LS	LS	LS	$150,000	
Lighting and Sign Illumination	LS	LS	LS	$290,000	
			Subtotal Traffic Items		$1,134,200
			TOTAL SECTIONS 1 through 5		$18,645,250

District-County-Route 06-Ker-46
KP (PM) 31.9/43.4 (19.8/27.0)
EA $442,500

				Item Cost	Section Cost
Section 6 Minor Items	18,645,250 (Subtotal Sections 1 through 5)	x	10%	$1,864,525	
			TOTAL MINOR ITEMS		$1,864,500
Section 7 Roadway Mobilization					
	20,509,750 (Subtotal Sections 1 through 6)	x	10%	$2,050,975	
			TOTAL ROADWAY MOBILIZATION		$2,051,000
Section 8 Roadway Additions					
Supplemental Work	20,509,750 (Subtotal Sections 1 through 6)	x	10%	$2,050,975	
Contingencies	20,509,750 (Subtotal Sections 1 through 6)	x	15%	$3,076,463	
			TOTAL ROADWAY ADDITIONS (Subtotal Sections 1 through 8)		$5,127,400
			TOTAL ROADWAY ITEMS		$27,688,200

Estimate Prepared By: Pete Petrakis (Print Name) Phone # 230-3117 Date: 10/23/03

Estimate Checked By: Richard Derby (Print Name) Phone # 230-3117 Date: 12/08/03

6 page Estimate Updated by: Pete Petrakis (Print Name) Phone # 230-3117 Date: 5/26/05

District-County-Route	06-Ker-46
KP (PM)	31.9/43.4 (19.8/27.0)
EA	442500

II STRUCTURE ITEMS

	Structure (1)	Structure (2)	Structure (3)	
Bridge Name				
Structure Type				
Width (out to out)-(m)				
Span Lengths-(m)				
Total Area-(m^2)				
Footing Type (pile/spread)				
Cost Per m^2 (incl. 10% mobilization and 20% contingency)	0			
Total Cost for Structure	$0	$0	$0	

SUBTOTAL STRUCTURES ITEMS (Sum of Total Cost for Structures)	$0
Railroad Related Costs:	$0
	$0
	$0
SUBTOTAL RAILROAD ITEMS	$0
TOTAL STRUCTURES ITEMS (Sum of Structures Items plus Railroad Items)	$0

COMMENTS:

Estimate Prepared by Pete Petrakis Phone # 230-3117 Date: May 26,2005
(Print Name)

District-County-Route	06-Ker-46
KP (PM)	31.9/43.4 (19.8/27.0)
EA	442500

III. RIGHT OF WAY ITEMS	CURRENT* VALUE	ESCALATED** VALUE
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$694,854	$805,527
B. Utility Relocation (State share)	$3,731,414	$4,235,731
C. Relocation Assistance	$0	$0
D. Clearance/Demolition	$0	$0
E. Title and Escrow Fees	$35,446	$41,091
F. Mitigation	$ 867,205.00	$1,005,328
***TOTAL Right of Way Items (CURRENT-2005)**		
Including 25% contingencies	$5,328,919	
TOTAL RIGHT OF WAY ITEMS (ESCLATED** BY 5 YEARS @ 3%)		**$6,088,000**

Anticipated Date of Right of Way Certification
(Date to which Values are Escalated)

F. Construction Contract Work

Brief Description of Work:

Right of Way Branch Cost Estimate for Work *

* This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. Do not include in Right of Way Items.

COMMENTS:

Estimate Prepared by Pete Petrakis (Print Name) Phone# 230-3117 Date:May 26, 2005

State of California Business, Transportation and Housing Agency

M e m o r a n d u m

To: Mehran Akhavan, Project Manager **Date:** May 24, 2005

Project Description: Keck's Road 4-Lane

Dist/Rte/P.M: 06-KER-46-7.3/33.5
EA: 442500

Alternate No: Combined 1 (COM1) Revised

From: **DEPARTMENT OF TRANSPORTATION**
Division of Right of Way, Central Region

Subject: **Right of Way Data Sheet**

As requested, here is the Right of Way Data Sheet you requested May 18, 2005. This Data Sheet updates the Data Sheet transmitted to Pete Petrakis on November 3, 2003 covering combined segments referred to as P1A1, P3A1, and P4A3. This revision includes the 39 oil wells affected in Segment IV, Alternative 1 using base figures provided by ChevronTexaco in their letter of July 30, 2003.

Right of Way Lead-Time will require a minimum of 35 months after we receive certified Appraisal Maps, the necessary environmental clearance has been obtained, and freeway agreements have been approved.

NICHOLAS G. DUMAS, Chief
Appraisal Branch
Right of Way--Fresno

ATTACHMENT E

RIGHT OF WAY DATA SHEET

DIST: 06 CO: KER RTE: 46 KP: 11.7/53.9 PM: 7.3/33.5 EA: 442500 ALTERNATE NO: COM1 Revised DATE: 5/24/05

REQUEST DATE: 5/18/05

1. Right of Way Cost Estimate:

	Current Value (Year 2005)	Rate of Escalation	Escalated Value (Year 2010)
Acquisition, including Excess Lands, Damages and Goodwill	$52,535,939	3%	$60,903,552
Mitigation	$ 2,896,257	3%	$ 3,357,556
Utility Relocation (State share)	$14,068,860	3%	$16,309,665
Relocation Assistance	$168,826	3%	$195,716
Clearance/Demolition	$604,961	3%	$701,316
Title and Escrow Fees	$213,144	3%	$247,093
TOTAL CURRENT VALUE	**$70,487,987**		**$81,714,898**
Construction Contract Work	$403,000		

2. Items of construction contract work: YES ☒ NO ☐
Construction contract work includes cost to perpetuate driveways and fencing.

3. ANTICIPATED RIGHT OF WAY LEAD-TIME REQUIREMENTS: **35** months.

4. Parcel Data:

TYPE	NUMBER	DUAL/APPR
X	0	
A	0	
B	20	
C	73	
D	13	
TOTAL	106	
EXCESS	18	

UTILITIES		RR INVOLVEMENT	
U4-1	0	None	0
U4-2	0	C & M Agmt	0
U4-3	0	Service Contract	0
U4-4	29	Lic/RE/Clauses	0
U5-7	0	**MISC. R/W WORK**	
U5-8	0	RAP Displacement	8
U5-9	29	Clear/Demo	8
		Construction Permits	0
		Condemnations	0

5. Project takes: Right of Way [310.64 acres] Excess land [3.06]

6. Utility facilities or rights of way affected: YES ☒ NO ☐
This estimate does not include a drainage easement, a creek crossing, two Berenda Mesa canal crossings and oil wells. Estimate is based on probable "worst case" for cost based on mapping and Utility information provided. Pac Bell, PG&E and Verizon will be affected. There are numerous overhead and underground facilities to be moved (poles, vent pipes, pedestals, and lines to be extended). An estimated 100 potholes will be required. Some facilities may need to be lowered. About 60 crossings are shown on the plans. Casings or protection will need to be extended beyond the proposed right of way lines. Utility relocation lead time is at least 18 months.

7. Railroad facilities or rights of way affected: YES ☐ NO ☒
If YES - Railroad involvement requires __ months lead-time.

8. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.): RIGHT OF WAY REQUIRED YES ☒ NO ☐
Properties required for the project are of mixed use, residential, agricultural (vineyard & dry grazing), and commercial property. Mainly partial acquisitions. Thirty-nine (39) oil wells will be affected.

9. Effect on assessed valuation: YES ☐ NONE EVIDENT ☒

10. Previously unidentified sites with hazardous waste and/or material found: YES ☐ NONE EVIDENT ☒

RIGHT OF WAY DATA SHEET

DIST: 06 CO: KER RTE: 46 KP: 11.7/53.9 PM: 7.3/33.5 EA: 442500 ALTERNATE NO: COM1 Revised DATE: 5/24/05

11. RAP displacements required: YES ☒ NO ☐ If YES, provide the following information:
Number of single family residences: 4 Number of business/nonprofit: 4
Number of multifamily units: ___ Number of farms:
Based on Draft/Final Relocation Impact Statement/Study dated N/A, it is anticipated that sufficient replacement housing will be available without Last Resort Housing.

12. Material borrow and/or disposal sites required: YES ☒ NO ☐
Per the Right of Data Sheet Request, a commercial borrow/disposal site will be required.

13. Potential relinquishments and/or abandonment: YES ☐ NO ☒

14. Existing and/or potential Airspace sites: YES ☐ NO ☒

15. Environmental mitigation parcels required: YES ☒ NO ☐
One additional parcel has been added to the parcel count to reflect mitigation parcel.

16. Caltrans staff will perform all Right of Way work: YES ☒ NO ☐

Estimator — E. SHERMAN — Date: 5/24/05

Railroad Liaison — _____ — Date: _____

Utility Relocation Coordinator — JULES GOTTSCHALK — Date: 5/24/05

I have personally reviewed this Right of Way Data Sheet and all supporting information. I find this Data Sheet complete and current, subject to the limiting conditions set forth.

5/24/05
Date

NICHOLAS G. DUMAS, Chief
Appraisal Branch
Right of Way--Fresno

Entered: PMCS (Event, Cost, Agree) By: _____ Date: _____

AGRE Screen (Railroad data only) By: _____ Date: _____

State of California | Business, Transportation and Housing Agency

M e m o r a n d u m

To: Mehran Akhavan, Project Manager

Date: May 24, 2005

Project Description: Keck's Road 4-Lane

Dist/Rte/P.M: 06-KER-46-31.9/43.5
EA: 442500

Alternate No: P1A1
Revised

From: **DEPARTMENT OF TRANSPORTATION**
Division of Right of Way, Central Region

Subject: **Right of Way Data Sheet**

As requested, here is the Right of Way Data Sheet you requested May 18, 2005. This Data Sheet updates the Data Sheet transmitted to Pete Petrakis on December 15, 2003 covering Alternate P1A1.

Right of Way Lead-Time will require a minimum of 33 months after we receive certified Appraisal Maps, the necessary environmental clearance has been obtained, and freeway agreements have been approved.

NICHOLAS G. DUMAS, Chief
Appraisal Branch
Right of Way--Fresno

ATTACHMENT E-1

RIGHT OF WAY DATA SHEET

DIST: 06 CO: KER RTE: 46 KP: 31.3/43.5 PM: 19.4/27.0 EA: 442500 ALTERNATE NO: P1A1 Revised DATE: 5/24/05

REQUEST DATE: 5/18/05

1. Right of Way Cost Estimate:

	Current Value (Year 2005)	Rate of Escalation	Escalated Value (Year 2010)
Acquisition, including Excess Lands, Damages and Goodwill	$ 694,854	3%	$ 805,527
Mitigation	$ 867,205	3%	$ 1,005,328
Utility Relocation (State share)	$ 3,731,414	3%	$ 4,235,731
Relocation Assistance	$0	3%	$0
Clearance/Demolition	$0	3%	$0
Title and Escrow Fees	$ 35,446	3%	$ 41,091
TOTAL CURRENT VALUE	**$ 5,328,919**		**$ 6,177,677**
Construction Contract Work	$120,000		

2. Items of construction contract work: YES ☒ NO ☐
Construction contract work includes cost to perpetuate driveways and fencing.

3. ANTICIPATED RIGHT OF WAY LEAD-TIME REQUIREMENTS: **33** months.

4. Parcel Data:

TYPE	NUMBER	DUAL/APPR
X	0	
A	0	
B	0	
C	20	
D	0	
TOTAL	20	
EXCESS	0	

UTILITIES		RR INVOLVEMENT	
U4-1	0	None	0
U4-2	0	C & M Agmt	0
U4-3	0	Service Contract	0
U4-4	10	Lic/RE/Clauses	0
U5-7	0	**MISC. R/W WORK**	
U5-8	0	RAP Displacement	0
U5-9	10	Clear/Demo	0
		Construction Permits	0
		Condemnations	0

5. Project takes: Right of Way [127.9 acres] Excess land [0.0]

6. Utility facilities or rights of way affected: YES ☒ NO ☐
I used the 130 PG&E pole count provided by the Engineer at $5,000 per pole [base] our liability because they had prior rights. Since Verizon has just been relocated as part of a shoulder widening project we will pay all of the cost to relocate them. They have a buried cable and two 4" ducts on the South side of the highway according to the permit. There are at least 4 water line crossings, 2 Chevron oil line crossings, and 2 gas line crossings. Confirmation of prior rights and applicability of master agreements has not been verified.

7. Railroad facilities or rights of way affected: YES ☐ NO ☒
If YES - Railroad involvement requires __ months lead-time.

8. Provide a general description of the right of way and excess lands required (zoning, use, major improvements, critical or sensitive parcels, etc.): RIGHT OF WAY REQUIRED YES ☒ NO ☐
Primarily Agricultural Property - Grazing appears to have no irrigation lines. Barbed wire fencing is included as Construction Contract Work in the amount of $120,000 for its replacement. Assume not affecting Store/Gas Pumps at Southwest Corner of 46 and 33.

9. Effect on assessed valuation: YES ☐ NONE EVIDENT ☒

10. Previously unidentified sites with hazardous waste and/or material found: YES ☐ NONE EVIDENT ☒

RIGHT OF WAY DATA SHEET

DIST: 06 CO: KER RTE: 46 KP: 31.3/43.5 PM: 19.4/27.0 EA: 442500 ALTERNATE NO: P1A1 Revised DATE: 5/24/05

11. RAP displacements required: YES ☐ NO ☒ If YES, provide the following information:
Number of single family residences: 0 Number of business/nonprofit: 0
Number of multifamily units: ___ Number of farms:
Based on Draft/Final Relocation Impact Statement/Study dated N/A, it is anticipated that sufficient replacement housing will be available without Last Resort Housing.

12. Material borrow and/or disposal sites required: YES ☐ NO ☒
Per the Right of Data Sheet Request, a commercial borrow/disposal site will be required.

13. Potential relinquishments and/or abandonment: YES ☐ NO ☒

14. Existing and/or potential Airspace sites: YES ☐ NO ☒

15. Environmental mitigation parcels required: YES ☒ NO ☐
One additional parcel has been added to the parcel count to reflect mitigation parcel.

16. Caltrans staff will perform all Right of Way work: YES ☒ NO ☐

Estimator — E. SHERMAN — Date: 5/24/05

Railroad Liaison — Date: _____

Utility Relocation Coordinator — JULES GOTTSCHALK — Date: 5/24/05

I have personally reviewed this Right of Way Data Sheet and all supporting information. I find this Data Sheet complete and current, subject to the limiting conditions set forth.

5/24/05
Date

NICHOLAS G. DUMAS, Chief
Appraisal Branch
Right of Way--Fresno

Entered: PMCS (Event, Cost, Agree) By: _____ Date: _____

AGRE Screen (Railroad data only) By: _____ Date: _____

LOCATION DESCRIPTION	RA GRP (RUS)	*-NUMBER OF ACCIDENTS/SIGNIFICANCE* TOT	FAT	INJ	MULTI F+I	VEH	WET	DARK	PER KLD INJ	*ADT * MAIN X-ST	TOTAL MV+ OR MVM	*-ACCIDENT RATE ACCS/MV+ OR MVM-* ACTUAL FAT	F+I	TOT	AVERAGE FAT	F+I	TOT
046 KER 7.300 THRU KER 033.500 06-0001 26.201M 00-01-01 02-12-31 36 MO (R)	H	~~148~~	1	~~36~~	37	104	6	52	1 75	6.6	189.42	.005	.20	.78	.036	.62	1.30

78 1 23 PDO-54

	ACCS/MVKm F	F+I	T
ACTUAL	0.003	0.12	0.48
AVERAGE	0.022	0.39	0.81

ACCS/MVM =

$$= \frac{\text{NO. OF ACCS} \times 10^6}{\text{ADT} \times \text{DIST. IN MILES} \times 365\ (3)}$$

ATTACHMENT F

LOCATION DESCRIPTION	RA GRP (RUS)	*-NUMBER OF ACCIDENTS/SIGNIFICANCE* TOT	FAT	INJ	MULTI F+I	VEH	WET	DARK	PER KLD INJ	*ADT * MAIN X-ST	TOTAL MV+ OR MVM	*-ACCIDENT RATE ACCS/MV+ OR MVM-* ACTUAL FAT	F+I	TOT	AVERAGE FAT	F+I	TOT
046 KER 1 7.330 KECKS RD, COALINGA RD, 06-0001 00-01-01 02-12-31 36 MO	I17 (R)	0	0	0	0	0	0	0	0 0	7.0 .0	7.69+	.000	.00	.00	.004	.10	.22
046 KER 2 17.370 SIMMLER RD, BITTERWATER 06-0001 00-01-01 02-12-31 36 MO	I17 (R)	0	0	0	0	0	0	0	0 0	7.0 .1	7.73+	.000	.00	.00	.004	.10	.22
046 KER 3 20.543 JCT RTE 46, BLACKWELL'S 06-0001 00-01-01 02-12-31 36 MO	I05 (R)	6	0	2	2	6	0	3	0 4	5.5 2.2	8.41+	.000	.24	.71	.009	.31	.70
046 KER 4 21.260 COUNTY ROAD 06-0001 00-01-01 02-12-31 36 MO	I16 (R)	0	0	0	0	0	0	0	0 0	6.1 .1	6.75+	.000	.00	.00	.003	.06	.14
046 KER 5 27.370 CO RD P181J, BROWNS 06-0001 00-01-01 02-12-31 36 MO	I02 (R)	1	0	1	1	1	0	1	0 1	6.1 .1	6.77+	.000	.15	.15	.008	.16	.33
046 KER 6 27.410 CONNECTION TO CO RD 06-0001 00-01-01 02-12-31 36 MO	I17 (R)	0	0	0	0	0	0	0	0 0	6.1 .2	6.90+	.000	.00	.00	.004	.10	.22
046 KER 7 27.480 CONNECTION TO CO RD 06-0001 00-01-01 02-12-31 36 MO	I17 (R)	1	0	1	1	0	0	1	0 2	6.3 .9	7.83+	.000	.13	.13	.004	.10	.22
046 KER 8 28.660 ROAD TO STANDARD OF 06-0001 00-01-01 02-12-31 36 MO	I17 (R)	0	0	0	0	0	0	0	0 0	6.3 .1	6.95+	.000	.00	.00	.004	.10	.22
046 KER 9 29.950 ROAD TO STANDARD OF 06-0001 00-01-01 02-12-31 36 MO	I17 (R)	0	0	0	0	0	0	0	0 0	6.3 .1	6.95+	.000	.00	.00	.004	.10	.22
046 KER 10 30.130 BRUNING ST (NORTH) 06-0001 00-01-01 02-12-31 36 MO	I17 (R)	3	0	0	0	3	0	2	0 0	6.3 .2	7.15+	.000	.00	.42	.004	.10	.22
046 KER 11 30.220 FARNSWORTH ST ST 06-0001 00-01-01 02-12-31 36 MO	I02 (R)	1	0	0	0	1	0	0	0 0	6.3 .3	7.21+	.000	.00	.14	.008	.16	.33
046 KER 12 30.310 GIDDINGS ST 06-0001 00-01-01 02-12-31 36 MO	I17 (R)	0	0	0	0	0	0	0	0 0	6.3 .2	7.14+	.000	.00	.00	.004	.10	.22
046 KER 13 30.390 MARTIN ST 06-0001 00-01-01 02-12-31 36 MO	I02 (R)	3	0	0	0	3	0	0	0 0	6.3 .2	7.12+	.000	.00	.42	.008	.16	.33
046 KER 14 30.480 LOST HILLS L/WOODWARD R 06-0001 00-01-01 02-12-31 36 MO	I02 (R) H99	11	0	4 H92	4 H92	10	1	4 H95	0 6	6.3 1.7	8.80+	.000	.45	1.25	.008	.16	.33
046 KER 15 32.182 WARREN DRIVE 06-0001 00-01-01 02-12-31 36 MO	I02 (R) H99	12	0	0	0	11	0	5 H97	0 0	9.0 .5	10.39+	.000	.00	1.16	.008	.16	.33
046 KER 16 32.292 ALOMA ST 06-0001 00-01-01 02-12-31 36 MO	I02 (R) H99	18	0	2	2	16	0	4 H90	0 2	9.0 2.1	12.11+	.000	.17	1.49	.008	.16	.33

+ DENOTES MV USED IN RATES

LOCATION DESCRIPTION	RA GRP (RUS)	*-NUMBER OF ACCIDENTS/SIGNIFICANCE* TOT	FAT	INJ	MULTI F+I	VEH	WET	DARK	PER KLD INJ	*ADT * MAIN X-ST	TOTAL MV+ OR MVM	*-ACCIDENT RATE ACCS/MV+ OR MVM-* ACTUAL FAT	F+I	TOT	AVERAGE FAT	F+I	TOT
046 KER 17 32.391 RAMPS ON & OFF SB 5 06-0001 00-01-01 02-12-31 36 MO	I02 (R)	11 H99	0	1	1	8	1	2	0 1	9.0 2.9	12.98+	.000	.08	.85	.008	.16	.33
046 KER 18 32.667 RAMPS ON & OFF NB 5 06-0001 00-01-01 02-12-31 36 MO	I02 (R)	10 H99	0	2	2	9	0	2	0 7	4.9 3.3	8.87+	.000	.23	1.13	.008	.16	.33
046 KER 19 32.722 BUFORD STREET 06-0001 00-01-01 02-12-31 36 MO	I17 (R)	3	0	0	0	3	0	1	0 0	5.4 .4	6.37+	.000	.00	.47	.004	.10	.22

+ DENOTES MV USED IN RATES

District : 06

Bridge Number : 50 0436 | Total Length : 6.7 | Permit Rating : PPPPP | Suff Rating : 58.00
Feat Intersected : RATTLESNAKE CREEK | Total Width : 0 | Rail Rating : 0000 | FUNCTIONALLY OBSOLETE
Location : 06-KER-155-64.92 | Approach Width : 7.9

Item	Fis Yr	Project Type	Urgency Factor	Cost	Status	Tech. rank
1	2001	Rail Upgrade	No Defer	$62	Proposed	

Project Details :

1 F1-10 / F2-0 / F3-5 / Rail Type-NONE

Bridge Number : 50 0437 | Total Length : 6.7 | Permit Rating : PPPPP | Suff Rating : 48.00
Feat Intersected : BITTERWATER CREEK | Total Width : 16.5 | Rail Rating : 0000 | FUNCTIONALLY OBSOLETE
Location : 06-KER-046-15.88 | Approach Width : 12.8

Item	Fis Yr	Project Type	Urgency Factor	Cost	Status	Tech. rank
1	2001	Scour	No Defer	$479	Programmed	804.65
2	2001	Rail Upgrade	No Defer	$62	Programmed	

Project Details :

1 EXTENSIVE SUBSTRUCTURE MODIFICATIONS ARE REQUIRED TO PROTECT THE STRUCTURE FROM CHANNEL DEGRADATION. STRUCTURE REPLACEMENT MAY BE APPROPRIATE.
2 F1-10 / F2-0 / F3-5 / Rail Type-NONE

Bridge Number : 50 0467S | Total Length : 8.5 | Permit Rating : PPPPP | Suff Rating : 93.40
Feat Intersected : ERSKINE CREEK | Total Width : 0 | Rail Rating : 0000
Location : 06-KER-178-R41.59 | Approach Width : 6.7

Item	Fis Yr	Project Type	Urgency Factor	Cost	Status	Tech. rank
1	2001	Rail Upgrade	No Defer	$68	Proposed	

Project Details :

1 F1-10 / F2-0 / F3-5 / Rail Type-NONE

APPENDIX E

Storm Water Data Report

Caltrans Metric

Dist-County-Route: 06-Ker-46-
Kilometer Post (Post Mile) Limits:KP11.7/53.9
Project Type: Highway Widening
EA: 06-442500
RU: _____
Program Identification: STIP
Phases: ❑ PID
X PA/ED
❑ PS&E

Regional Water Quality Control Board(s): Fresno RWQCB

Project Manager: Mehran Akhavan

Is the Project exempt from incorporating Treatment BMPs? Yes ❑ No ✓ N/A ❑
If yes, attach the Exemption Documentation Form

Estimated Construction Start Date:June 01,2007

Notification of Construction (NOC) Date to be Submitted:February 01,2007

Notification of ADL reuse (if yes, provide date) Yes ❑ Date_____ No ✓ N/A ❑

Separate Dewatering Permit (if yes, permit no.) Yes ❑ Permit #_____ No ✓ N/A ❑

I have reviewed the storm water quality design issues contained in the Storm Water Data Report and Attachments attached hereto, and find the data to be complete, current, and accurate:

This Storm Water Data Report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based. PE stamp required at PS&E.

Peter Pelletier — 11-24-03
Registered Project Engineer — *Date*

for Mac Boswell — 1/14/04
Design District/Regional Storm Water Coordinator or Designee — *Date*

Lori Butler — 11/26/03
Designated Landscape Representative — *Date*

Bill Mann — 12/04/03
Designated Maintenance Representative — *Date*

APPROVAL RECOMMENDED: Mehran Akhavan — 12/1/03
Project Manager — *Date*

ATTACHMENT H

District 6 – Transportation Management Plan
DATA SHEET

CO/RTE/PM-KP	KER-46 KP 11.7/52.3 (PM 7.3/33.5)	**EA**	06-442500
PROJECT LIMIT	In Kern County, from Kecks Road (Coalinga Road) to 1.6 Km East of SR 46/5 Separation Bridge 50-316.		
PROJECT DESCRIPTION	Convert the Existing Two(2)-Lane Conventional Highway to a Four(4)-Lane Expressway throughout the project limits.		

A) The project includes the following:
(Check all applicable type of facility closures.)

- ✓ Highway or Freeway Lanes
- ✓ Highway or Freeway Shoulders
- ❑ Freeway Connectors
- ❑ Freeway Off-ramps
- ❑ Freeway On-ramps
- ✓ Local Streets

B) Are there any construction strategies that can restore existing number of lanes?
Yes __ No **X** (*Check all applicable strategies.)*

- ❑ Temporary Roadway Widening
  Structure Involvement ? Yes ___ No ___ If "Yes", notify Project Manager.
- ❑ Lane Restriping (Temporary narrow lane widths)
- ❑ Roadway Realignment (Detour around work area)
- ❑ Median and/or Right Shoulder Utilization
- ❑ Use of HOV lane as a Temporary Mixed Flow Lane
- ❑ Staging Alternatives (Explain Below)

C) Calculated Delay *(To be performed if construction strategies in Item B do not mitigate congestion resulting from Item A or on all projects along Interstate 5 and Route 99).*

1. Estimated Maximum Individual Vehicle Delay		0	Minutes
2. Existing or Acceptable Individual Vehicle Delay		0	Minutes
3. Estimated Individual Vehicle Delay Requiring Mitigation [(1)-(2)]		0	Minutes
4. Estimated Delay Cost *(Most Applicable)*			
	❑ Extended Weekend Closure	$	
	❑ Weekly (7 days)	$	
5. Estimated Duration of Project Related Delays			# of Days
6. Cost of Construction Related Delays [(4) x (5)]		$	

ATTACHTMENT I

D) Preliminary TMP Elements and Cost:
(Identify all elements and estimated costs that will be used to mitigate congestion resulting from the proposed construction activities.)

1. Public Information	BEES ITEM CODE NO. 066063
✓ a. Brochures and Mailers	$3,000
✓ b. Press Release	$2,000
✓ c. Paid Advertising	$6,000
☐ d. Public Information Center/Kiosk	
✓ e. Public Meeting/Speakers Bureau	$1,000
✓ f. Telephone Hotline	$0
✓ g. Internet	$0
☐ h. Others	
2. Motorists Information Strategies	
☐ a. Changeable Message Signs (Fixed)	
✓ b. Changeable Message Signs (Portable) - BEES ITEM CODE NO. 128650	$42,000
☐ c. Ground Mounted Signs	
☐ d. Highway Advisory Radio	
✓ e. Caltrans Highway Information Network (CHIN)	$0
☐ f. Others	
3. Incident Management	
☐ a. Construction Zone Enhanced Enforcement Program (COZEEP)	
☐ b. Freeway Service Patrol	
☐ c. Traffic Management Team	
☐ d. Helicopter Surveillance	
☐ e. Traffic Surveillance Stations (Loop Detector and CCTV)	
☐ f. Others	
4. Construction Strategies *(In Addition to Elements Identified on Item B)*	
✓ a. Lane Closure Charts	$0
✓ b. Reversible Lanes	$0
☐ c. Total Facility Closure	
☐ d. Extended Weekend Closure	
☐ e. Truck Traffic Restrictions	
✓ f. Reduced Speed Zone	$0
☐ h. Connector and Ramp Closures	
✓ i. Incentive and Disincentive	*
☐ j. Moveable Barrier	
✓ k. Construction Contingency Plan	**
✓ l. Traffic Contingency/Emergency Detour Plan	**

5. Demand Management	
☐ a. HOV Lanes/Ramps (New or Convert)	
☐ b. Park and Ride Lots	
☐ c. Rideshare Incentives	
☐ d. Variable Work Hours	
☐ e. Telecommute	
☐ f. Ramp Metering (New Installation)	
☐ g. Ramp Metering (Maintain Existing)	
☐ h. Others	
6. Alternate Route Strategies	
☐ a. Add Capacity to Freeway Connector	
☐ b. Street Improvement (widening, traffic signal, etc)	
☐ c. Traffic Control Officers	
☐ d. Parking Restrictions	
☐ e. Others	
7. Other Strategies	
☐ a. Application of New Technology	
☐ b. Others	
TOTAL ESTIMATED COST OF TMP ELEMENTS	**$54,000**

Project Notes:

* The I/D amount should be determined based on established construction costs, related traffic control and maintenance costs, detour costs, and motorists delay costs by the Design Engineer.

** This is per the discretion of the Engineer and Contractor.

PREPARED BY: Jose D. Fernandez, Jr.	Traffic Operations	**DATE**	04/19/02

State of California — Business, Housing and Transportation Agency

Memorandum

To: **SHAHIN MANSOUR,** Senior
Design Branch B
Project Development Division IV

Date: April 19, 2002

File: 06-KER-46-KP 11.7/52.3
(PM 7.3/33.5)
EA 442500

From: **DEPARTMENT OF TRANSPORTATION**
District 06 – Office of Traffic Operations

Subject: Transportation Management Plan and Lane Closure Recommendations

This Transportation Management Plan (TMP) is prepared in response to your Memo dated April 17, 2002 for the above project. The scope of this project is to convert the existing two(2)-lane conventional highway to a four(4)-lane expressway on State Route (SR) 46 from Kecks Road (Coalinga Road) (PM 7.3) to 1.6 Km East of SR 46/5 Separation Bridge 50-316 (PM 33.5) in Kern County. This project is proposed under the HE13 program. The estimated project construction cost is $92,000,000.

Transportation Management Plans (TMP) are prepared to comply with Deputy Directive No. 60 that requires TMPs to be prepared for all projects on the State highway system.

The purpose of this TMP is to plan a set of strategies to reduce traffic delay and congestion associated with construction activities induced by above proposed project. It is also a method for minimizing traffic delay/congestion and incidents in the construction area during the construction operation periods. The goal of this TMP is to provide congestion relief during the project period by managing traffic flow through the construction area. Implementation of this TMP requires smooth coordination among various functional units. Each functional unit plays an important role in planning and executing certain tasks during the construction phase. As construction progresses, all TMP elements for this project should be closely monitored for operational and cost effectiveness. These elements may be modified, changed or eliminated as necessary to maximize safety and/or minimize traffic delay throughout the corridor according to the field conditions. The following are recommended TMP elements/strategies for this project.

- Public Information
- Motorist Information Strategies
- Construction Strategies

PUBLIC INFORMATION

The goal of the public information campaign is to disseminate timely information related to construction activities. The scope of the campaign includes informing the public about the construction project and its impacts on the communities, and to provide information on various alternatives commuters may take to avoid anticipated congestion. The Public Information Office (PIO) and Transportation Management Center (TMC) will be responsible for identifying target audience and distributing information.

- Brochures and Mailers
  Pamphlets and flyers containing construction information and traffic management activities may be distributed by direct mail or handouts. The local commuters, employers, and business should be targeted for this information.

- Press Releases
  Informing the public of upcoming lane closures, project information, and construction events through regularly issued press releases. Fax list may include news media, businesses, associations, and governmental agencies.

- Paid Advertising
  Advertisements in the print media may be utilized to inform the public of upcoming construction events.

- Public Meetings / Speakers Bureau
  Open houses or community meetings may be scheduled to inform the public of upcoming construction activities.

- Telephone Hotlines
  Toll free telephone hotlines may be set up to provide project information via recorded messages that are updated as needed.

- Internet
  The Internet should be utilized to provide project information presented through Traveler Information Systems (CHIN/Internet). A project web page may be setup for providing pertinent construction information and detailed maps to the public. Project web page would be updated as needed by the Caltrans' Public Information Office.

- Coordination with the California Trucking Association (CTA) and the Automobile Club of California (AAA)
  Due to the high percentage of truck traffic on Route 46, it will be necessary to inform the trucking industry about the project prior to construction to allow truckers sufficient time to select alternate routes or change their delivery schedule to avoid

peak congestion periods. Informing AAA is another means of informing a large number of motorists about the project.

The responsibility of making the project information available to all applicable entities will be held by the Caltrans' Public Information Office with information provided by the Resident Engineer through the District 6 Transportation Management Center (TMC). The Resident Engineer shall keep the District 6 TMC well informed and up-to-date on the construction progress, delays, closures, and other information which may assist them in the performance of their duties. The estimated cost of this Public Information / Awareness Campaign is $12,000.

MOTORIST INFORMATION STRATEGIES

Another critical component of this TMP is the Motorist Information System that will go into effect during the implementation phase of this project. This element will provide information that will guide and assist the motorists around the impacted area. This information has been developed for this project to encourage voluntary diversion away from the impacted areas and to guide motorists through the various alternate routes. The various motorist information system elements are discussed below:

- Portable Changeable Message Signs (PCMS)
  Portable Changeable Message Signs (PCMS) are truck or trailer mounted and may be controlled locally. PCMSs will be part of the TMP for traffic control purposes. One PCMS per direction of every lane closure shall be utilized. Additional PCMS may be used as deemed necessary by the Engineer to provide motorist with information about specific situations. The estimated cost per unit is $3,000 per month.

- Caltrans Highway Information Network (CHIN)
  Real-time highway condition information should be provided through Caltrans Highway Information Network (CHIN) accessible via telephone (1-800-427-ROAD).

CONSTRUCTION STRATEGIES

Construction strategies are TMP measures that are implemented through plans and specifications, and performed by the contractor during construction. The objectives of construction strategies are to reduce construction time, minimize traffic disruptions and avoid potential safety problems during construction. The following construction strategies shall apply:

- Lane Closure Charts
  A Lane Closure Chart is a standard requirement in the Caltrans Standard Special Provision (SSP) that provides allowable time periods for construction

activity. This chart shall be enforced with the contractors to minimize traffic impacts.

- Reversible Lanes
  When a portion of this two-lane conventional highway is occupied for construction, an existing lane shall be assigned a reversible role to accommodate the flow of traffic in both directions. This flagging operation shall not stop traffic longer than 20 minutes (10 minutes in each direction).

- Reduced Speed Zone
  Traffic usually moves at slower-than-normal speeds in locations where construction work is being performed. Posting a lower advisory speed limit would be justified for this project. Advisory speed plates attached to work zone signs are preferred.

- Incentive/Disincentive (I/D)
  This element is designed to motivate the contractor to complete work earlier than schedule, which may lessen the project's traffic impact on highway operations. Financial incentives may be used to reward the contractor for completing the work ahead of schedule or assess penalties on the contractor for not meeting the completion date. The I/D amount should be determined based on established construction engineering costs, state-related traffic control and maintenance costs, detour costs, and motorists delay costs. These I/D clauses shall be included in the SSPs.

- Others
  - Construction Contingency Plans
    Having alternate material and/or extra equipment on-site and the implementation of a timing plan for critical operation completion shall be employed per the discretion of the Engineer and Contractor.

  - Traffic Contingency Plans/Emergency Detour Plan
    When highway mainline needs to be completely closed or when there is a significant delay within the project limits caused by unforeseen circumstances during the construction operation, a contingency detour route should be marked and identified for public traffic to use. SR 33, SR 5 and other local roads parallel to SR 46 are recommended as detour routes. The Engineer and Contractor shall have the discretion on the traffic contingency or emergency detour plan to be used. The Engineer shall also contact the County of Kern for the use of its local roads as detour routes.

The District 6 TMC is responsible for coordination with CHP officers, Caltrans field units, local emergency responders and other resources for the removal of major incidents in the construction zone so as to minimize its impact on the motoring public.

District Traffic Manager and TMC should be consulted for appropriate action for all the construction, maintenance and permits activities on the corridor.

Further transportation management measures may be implemented, should unusual and unplanned circumstances warrant. These will be determined on an individual, day-to-day basis. The District 06 TMC, in conjunction with Maintenance and Construction, will continuously monitor the project to ensure the safe and efficient movement of traffic. All changes or modifications are to be coordinated through the Office of Traffic Operations except in those instances where any delay could cause a degradation of the system or public safety.

All costs of implementing this TMP including its preparation will be borne by the project. Please allow **$54,000** for the items discussed above towards the cost of implementing this TMP. See attached TMP data sheet for details.

If you have any questions regarding this TMP, please call me at 488-4111 or Joe Fernandez of my staff at 444-2514.

ALBERT LEE, Chief
Office of Traffic Operations

Attachments

DISTRICT 6 - MAINTENANCE AND OPERATIONS DIVISION
OFFICE OF TRAFFIC OPERATIONS

DATE:	4/16/02
PREPARED BY:	S. Ahmed

CHART No. 1 OF 1

EA:	442500	PROJECT LOCATION:	KER-46-KP 11.7/52.3 (PM 7.3/33.5)

					KP	(PM)			KP	(PM)
CLOSURE LIMITS :	ROUTE	46		Kecks Road, Coalinga Road	11.7	7.3		1.6 Km East of SR 46/5 Separation Bridge 50-316	53.9	33.50

TYPE OF WORK:	Convert the Existing Two(2)-Lane Conventional Highway to Four(4)-Lane Expressway		
TYPE OF FACILITY:	2 Lane Conventional Highway	ESTIMATED MAXIMUM CAPACITY:	850 PCPHPL

DIRECTION: East/Westbound

LANE REQUIREMENTS AND HOURS OF WORK

	AM												PM											
	Midnight	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	Noon	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	Midnight
Monday through Thursday							R	R	R	R	R	R	R	R	R	R	R	R						
Friday							R	R	R	R	R	R	R	R	R	R	R	R						
Saturday																								
Sunday																								
Workday before & after legal holidays																								
Designated legal holidays																								

LEGEND:

R	A MINIMUM OF ONE PAVED LANE SHALL BE OPEN FOR USE BY PUBLIC TRAFFIC (REVERSING CONTROL).
	NO LANE CLOSURE PERMITTED

REMARKS:

a. Close one traffic lane and stop public traffic for period not to exceed 20 minutes (10 minutes in each direction).

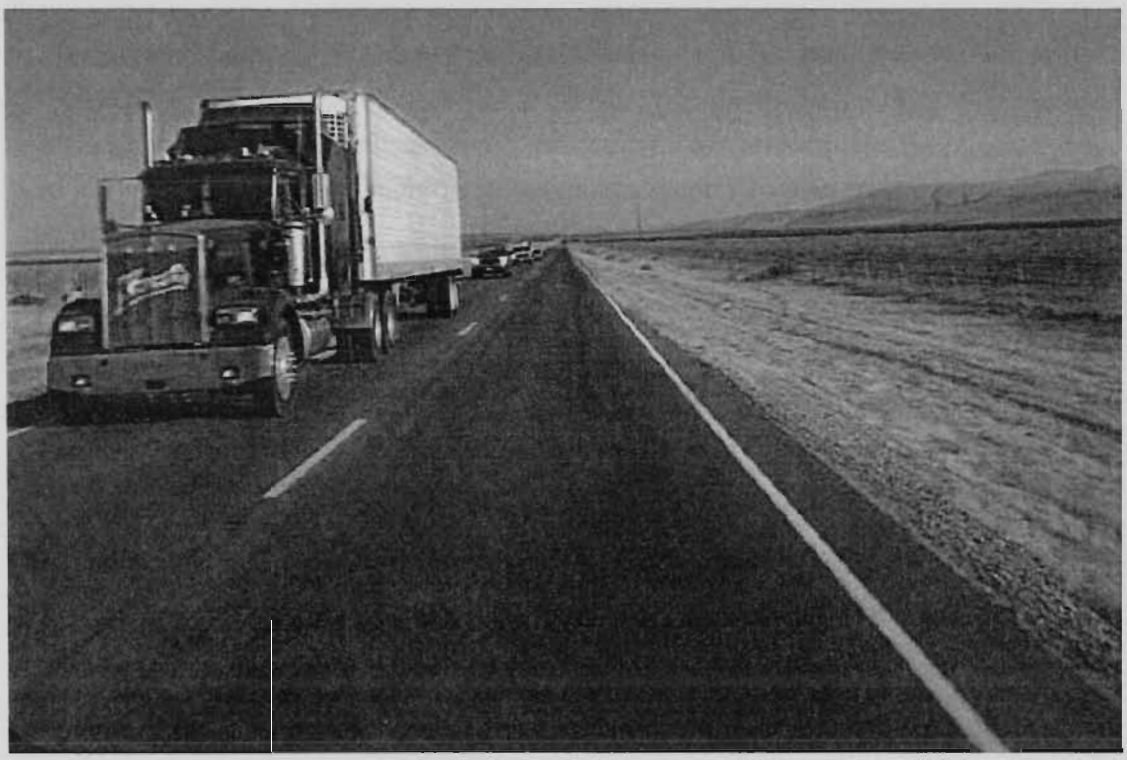
b. Maximum permitted length of closure is 1.6 Km (1.0 miles).

c. No two consecutive intersections may be closed at the same time.

d. Distances between consecutive lane closures shall not be less than 8 Km (5 miles).

Counts Based On: CS No 4 and 11 taken in April and July 2000 respectively

San Luis Obispo and Kern Counties
State Route 46 4-Lane Widening Project



Environmental Assessment with
Finding of No Significant Impact
Initial Study with Negative Declaration

State Route 46 through

San Luis Obispo and Kern Counties

05-SLO-46 EA 0C6500: From kilometer posts 88.7 to 97.9 (post miles 55.1 to 60.9)

06-KERN-46 EA 353410: From kilometer posts 0.00 to 11.75 (post miles 0.00 to 7.3)

06-KERN-46 EA 442500: From kilometer posts 11.75 to 53.9 (post miles 7.3 to 33.5)

SCH Number: 2003041036

April 2005

DEPARTMENT OF TRANSPORTATION
UNITED STATES OF AMERICA

Caltrans Metric

Caltrans

General Information About This Document

This document is an Environmental Assessment with a Finding of No Significant Impact and an Initial Study with Negative Declaration. The Finding of No Significant Impact indicates that the Federal Highway Administration has found that this project would have no significant impacts to the environment. The Negative Declaration indicates that the California Department of Transportation has determined that any impacts could be mitigated to a "less than significant" impact.

This document examines the potential environmental impacts of alternatives for the proposed project located in San Luis Obispo and Kern counties in California. The document describes why the project is being proposed, the existing environment that could be affected by the project, potential impacts from each of the alternatives and the suggested mitigation measures. The Preferred Alternative minimizes impacts to the community and meets the purpose and need of the project.

A previous version of the document – an Environmental Assessment/Initial Study – was circulated to the public and public agencies from April 7, 2003 to June 9, 2003. A Public Hearing was held on May 7, 2003 where the public commented on the recommended alternative. Appendix H was added to provide the comments and responses from the public hearing. Appendix E was expanded to add the Finding of Effect and Memorandum of Agreement between the State Historic Preservation Office and the Federal Highway Administration.

A vertical line in the outside margin of the page indicates changes made to the document since the first environmental document was circulated during April, May and June 2003. The information in this document supercedes and/or clarifies information contained in that original Environmental Assessment/Initial Study.

For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette or computer disk. To obtain a copy in one of these alternate formats, please call or write to Caltrans, Attn: Mike Donahue, Southern Sierra Environmental Branch, 2015 E. Shields Avenue, Suite 100, Fresno, CA 93726; phone (559) 243-8157; Voice or use the California Relay Service TTY number at 1-800-735-2929.

San Luis Obispo and Kern Counties
State Route 46 4-Lane Widening Project



Environmental Assessment with
Finding of No Significant Impact
Initial Study with Negative Declaration

State Route 46 through

San Luis Obispo and Kern Counties

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FEDERAL HIGHWAY ADMINISTRATION
FINDING OF NO SIGNIFICANT IMPACT
For
State Route 46 Four-Lane Widening Project
(From Sate Routes 46/41 Junction to
Interstate 5/State Route 46 Interchange)
San Luis Obispo and Kern Counties, California

The Federal Highway Administration (FHWA) has determined that this project will not have any significant impact on the human environment. This finding of no significant impact is based on the attached Environmental Assessment, which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the environmental issues and impacts of the proposed project. It provides sufficient evidence and analysis for determining that an environmental impact statement is not required. The FHWA takes full responsibility for the accuracy, scope, and content of the environmental assessment.

5/12/2005
DATE

For
Gene K. Fong
Division Administrator
Federal Highway Administration

05-SLO-46 EA 0C6500 Kilometer Posts 88.67/97.9 (Post Miles 55.1/60.9)
06-KERN-46 EA 353410 and EA 442500 Kilometer Posts 0.0/11.75 and 11.75/53.9 (Post Miles 0.0/7.3 and 7.3/33.5)

San Luis Obispo/Kern Counties State Route 46 4-Lane Widening

ENVIRONMENTAL ASSESSMENT/INITIAL STUDY

Submitted Pursuant to: (State) Division 13, Public Resources Code
(Federal) 42 USC 4332(2)(C)

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration, and
THE STATE OF CALIFORNIA
Department of Transportation

March 5, 2003
Date of Approval

Mike Donahue
Mike Donahue
Branch Chief
Southern Sierra Environmental Analysis Branch
California Department of Transportation

3/6/03
Date of Approval

Gary N. Hamby
Division Administrator
Federal Highway Administration



State of California
Department of Transportation

SCH Number: 2003041036
05-SLO-46 KP 88.7/97.9 (PM 55.1/60.9)
06-KERN-46 KP 0.0/11.75 (PM 0.0/7.3)
06-KERN-46 KP 11.75/53.9 (PM 7.3/33.5)

Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to widen a 63.2-kilometer (39.3-mile) portion of State Route 46 located in San Luis Obispo and Kern counties. The project would widen the existing two-lane conventional highway to a four-lane expressway with an 18.6-meter-wide (61-foot-wide) median. A four-lane conventional highway with a 5.4-meter-wide (18-foot-wide median) is proposed through the community of Lost Hills and ending just east of the West Side Canal in Kern County.

Determination

Caltrans has prepared an Initial Study, and determines from this study that the proposed project would not have a significant effect on the environment for the following reasons:

- The project would not increase floodplain or seismic hazards. Impacts to cultural resources would be mitigated under the provisions of the Federal Highway Administration, State Historic Preservation Office, and California Department of Transportation Memorandum of Agreement. There would be no significant effects on recreational facilities or to any park.

- There would be no change in the planned land use, or in the character and composition of local traffic.

- Impacts to threatened or endangered animal species, or riparian habitat would be mitigated by implementation of the measures specified in the Biological Opinions rendered by the U.S. Fish and Wildlife Service and the California Department of Fish and Game. Impacts to wetlands would be mitigated by measures specified by the U.S. Army Corps of Engineers. Impacts to "other waters of the U.S." would by mitigated under Nationwide Permit #14 issued by the Army Corps of Engineers.

- Air and water quality would not be affected, and noise levels would not increase near sensitive receptors. There would be no effects upon hazardous waste sites. Impacts to farmland would be considered less than significant.

Mike Donahue

Mike Donahue
Branch Chief
Southern Sierra Environmental Analysis Branch
California Department of Transportation

5/12/05

Date

Summary

The California Department of Transportation and the Federal Highway Administration propose to widen State Route 46 to four lanes in a portion of San Luis Obispo and Kern counties.

The project is composed of three separate projects, which cover a 63.2-kilometer (39.3-mile) segment of State Route 46. The first project starts at kilometer post 88.7 (post mile 55.1) just east of the junction of State Routes 41 and 46 (referred to as the "Wye") in San Luis Obispo County and passes through rolling hills and mountainous terrain and ends at the Kern County Line. The second project starts at the Kern County line at kilometer post 0.0 (post mile 0.0) and ends at Kecks Corner at kilometer post 11.75 (post mile 7.3). The third project starts at Kecks Corner, goes through the Lost Hills oil fields and the community of Lost Hills, and ends just east of the West Side Canal at kilometer post 53.9 (post mile 33.5) in Kern County. The environmental analysis combined the three projects into one environmental document.

The purpose of the proposed widening of State Route 46 is to reduce congestion, improve level of service, improve safety, and provide route continuity. Based upon projected traffic volumes, the current roadway within the project limits would be insufficient to manage the increased volume by 2007. Without the project, the projected level of service for the year 2007 will range from level of service D (congestion) to E (congested conditions and delays). For the year 2007, the average daily traffic count will range from 7,900 vehicles to as high as 8,400 vehicles within the Kern County portions of the project, with many weekends experiencing even higher volumes of traffic and lower levels of service. Most of the intersections within the project limits are experiencing accident rates above the state highway average for a two-lane conventional highway.

The proposed project would provide route continuity by improving State Route 46 to the same standards proposed by two other adjoining projects just west of the junction of State Routes 41/46 in San Luis Obispo County: A four-lane expressway is proposed from Airport Road to Lucy Brown Road and from Lucy Brown Road to the east junction of State Route 41/46 in Paso Robles. These two projects, proposed in a separate environmental document, along with this proposed project would provide a continuous four-lane road from U.S. Highway 101 in San Luis Obispo County to Interstate 5 in Kern County and an interchange at the existing State Route 46/41 at-grade intersection. According to the San Luis Obispo and Kern County Planning Departments, there is no new private development proposed within the project limits.

For the proposed four-lane widening project, the San Luis Obispo project is included in the 2001 Regional Transportation Plan; the two Kern County projects are programmed in the 2002 Federal Transportation Improvement Program and the 2000 Regional Transportation Plan.

Preferred Alternative

Based on environmental, design engineering, and cost considerations, the "recommended" build alternative in the original environmental document has been chosen as the Preferred Alternative. The selection of the Preferred Build Alternative was made on November 20, 2003 after the full evaluation of environmental impacts, and consideration of public hearing comments.

The build alternative would widen a 63.2-kilometer (39.3-mile) segment of State Route 46 between the 41/46 intersection in San Luis Obispo County and the Interstate 5/Route 46 interchange in Kern County. A north/south, or symmetrical, alignment was proposed due to environmental and engineering constraints. Design options within three specific areas of environmental concern in Kern County (the Tosco Antelope Pumping Station, Lost Hills Oil Fields, and the community of Lost Hills) were studied and incorporated into the Preferred Alternative to minimize costs and environmental impacts.

The existing intersections within the project limits (including one at State Route 33) would be upgraded to current design standards and, where needed, acceleration and deceleration lanes would be provided to accommodate large trucks moving on and off the highway. The north and south lanes of State Route 33 would be realigned, and right- and left-turn lanes would be constructed.

The Preferred Alternative would construct five new bridges or box culverts. The new bridges include the replacement of the existing Bitterwater Creek Bridge (#50-437), and new structures would be constructed adjacent to and north of the existing two bridges, California Aqueduct Bridge (#50-197) and Route 46/5 Separation Bridge (#50-316). The Main Flood Canal Bridge (#50-30) and the West Side Canal Bridge (#50-29) would be extended.

Traffic signals would be installed at the State Route 46/33 intersection, Bruning Avenue, Warren Drive, and at Interstate 5 southbound and northbound offramps. Traffic signals would be installed at Lost Hills Road prior to this four-lane project as a separate minor project.

Design Options (Kern County)

- *Tosco Antelope Pumping Station*
  This design option proposes a split alignment within the Tosco Antelope Pumping Station site, with the future two-lane (preferred design option) starting at kilometer post 1.93 (post mile 1.2) and merging to the east at kilometer post 4.8 (post mile 3.0). The new lanes would be located approximately 201 meters (600 feet) north of the existing State Route 46. Relocating the future lanes to the north would not only allow the roadway to avoid the natural creek, it would eliminate the need to relocate the California Coastal Aqueduct 58-inch distribution pipeline located along the north side of the highway.

- *Lost Hills Oil Fields*
  This design option proposes a symmetrical alignment through the Lost Hills oil fields from kilometer posts 44.9 to 45.99 (post miles 27.9 to 29.2) with an 18.6-meter-wide (61-foot-wide) median. This option would reduce the number of oil wells to be relocated from 28 to 22. Complete avoidance of the oil wells is not possible because the oil fields are on both sides of the existing highway. Differences arose with landowners on the number and value of oil wells to be affected by the project. An evaluation would be performed prior to the purchase of right-of-way.

- *Lost Hills Community*
  This option proposes a four-lane conventional highway with an alignment to the north and a 5.4-meter-wide (18-foot-wide) median. This option would reduce the number of residences and businesses to be relocated.

No Action Alternative

The No Action (no-build) alternative would keep the existing highway as it is. No improvements would be built to bring the roadway to current design standards, and no measures would be taken to improve the safety concerns or reduce the increasing congestion that State Route 46 motorists now endure. Motorist frustration associated with conflicts from vehicles passing in the opposing travel lanes would continue to exist, along with the potential increase of head-on collisions as a result of an increase in traffic.

Coordination and Consultation

Coordination and consultation was conducted between the following agencies: U.S. Fish and Wildlife Service, the Department of Fish and Game, State Office of Historic Preservation, Salinan Nation, Santa Rosa Rancheria, Native American Heritage Commission, and the U.S. Army Corps of Engineers. Two Biological Assessments were reviewed by the U.S. Fish and Wildlife Service offices in Ventura for the San Luis Obispo County portion and in the Sacramento office for the Kern County portion of the project.

A Public Information Meeting was held on April 19, 2001 at the Lost Hills Elementary/Middle School in the town of Lost Hills. The purpose of the meeting was to allow the public input with regard to the proposed recommended build alternative. Approximately 26 people attended the meeting. All attendees felt the project would improve the safety of motorists in the area, and there was no opposition to the recommended build alternative.

A Public Hearing was held on May 7, 2003 at the Lost Hills Elementary/Middle School in the town of Lost Hills. The purpose of the hearing was to provide the public the opportunity to view the Recommended Build Alternative and design options, ask questions, and comment on the project, either by dropping their written comments into the comment box at the hearing or writing to the appropriate Caltrans office. A court reporter was onsite to take down oral comments for the record. Of the comments received, many residents of Lost Hills were concerned about students crossing State Route 46 at the Lost Hills Elementary/Middle School and requested a pedestrian overpass. Some attendees requested traffic lights and lowering the speed limit through town. Farmers were concerned about access to their properties, farming employees crossing the expressway with large equipment and trucks, and the acquisition of right-of-way. All comments and responses to the draft environmental document are incorporated into this document in Appendix H.

A summary of the potential impacts from the Preferred and No Action alternatives is provided in the following table.

Summary of Potential Impacts from Alternatives

Potential Impact		Preferred (Build) Alternative	No Action Alternative
Land Use	**Consistency with Kern County *General Plan***	This alternative is consistent with the Kern County long-range plans for State Route 46	This alternative is not consistent with Kern County long-range plan for State Route 46
	Consistency with the SLO County *General Plan*	SLO County long-range plan for State Route 46 is a four-lane expressway	This alternative is not consistent with SLO County's General Plan
Farmland converted		Approximately 44 hectares (108.7 acres)	No Impact
Business displacements		Four businesses would be relocated	No impact
Housing displacements		Four residences would be relocated	No impact
Utility service relocation		Oil pipeline, fiber optics, gas lines, water and sewer mains, toll cable, water district crossings	No impact
Air quality		During construction some wind-blown dust and particulates may be generated	Carbon monoxide and particulate matter may exceed state or federal standards due to projected increase in congestion. No construction impacts.
Noise		Soundwalls determined not to be feasible	No impact
Water quality		Section 401 addresses minor impacts	No impact
Wildlife		191.3 hectares (473.9 acres)	No Impact
Threatened or endangered species		California red-legged frog and the San Joaquin kit fox	No Impact
Impact on wetlands		.029 hectare (.071 acre)	No Impact
Impact on Other Waters of the U.S.		.352 hectare (.871 acre)	No impact
Increase in Floodplain		No significant floodplain encroachment	No impact
Cultural resources		Prehistoric site CA-SLO-1355 is within the Area of Potential Effects of the project	No impacts to historic and archaeological resources
Number of potential hazardous waste sites		11 areas of concern	No Impact
Visual quality		With the incorporation of the recommended mitigation, the project would not adversely affect the visual quality of the area	No Impact

Required Permits

- A 1602 Streambed Alteration Agreement from the California Department of Fish and Game
- Clean Water Act Section 404, Nationwide Permit #14 from the U.S. Army Corps of Engineers
- Clean Water Act Section 401 certification from the Regional Water Quality Control Board and a Notice of Intent filed with the State Water Resources Control Board
- Section 2081 Incidental Take Permit from the California Department of Fish and Game
- Two Section 7 Biological Opinions from the U.S. Fish and Wildlife Service offices in Ventura and Sacramento, California

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List of Technical Studies Bound Separately

Draft Relocation Statement
Air Quality Report
Noise Study Report
Water Quality Report
Natural Environment Study/Biological Assessment
Location Hydraulic Study
Initial Paleontology Study
Hazardous Waste Reports
Scenic Resource Evaluation/Visual Assessment
Traffic Management Plan
Updated Safety Analysis

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List of Abbreviated Terms

Caltrans	California Department of Transportation
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
dBA	Level of sound pressure measured in decibels on the A-weighted scale
EA	Environmental Assessment
FHWA	Federal Highway Administration
km	kilometer(s)
KP	kilometer post
LOS	Level of Service
NEPA	National Environmental Policy Act
NPDES	National Pollution Discharge Elimination System
PM	post mile
PM_{10}	Particulate matter of 10 microns in diameter or smaller

Chapter 1 Purpose and Need

1.1 Project Description

The proposed project involves three separate widening projects, which cover a 63.2-kilometer (39.3-mile) project of State Route 46 located in both San Luis Obispo and Kern counties (see Figure 1.1). The first project starts just east of the junction of State Routes 41 and 46 (referred to as the "Wye") at kilometer post 88.7 (post mile 55.1) in San Luis Obispo County and passes through rolling hills and mountainous terrain. It continues into Kern County (kilometer post 0.0, post mile 0.0) through Kecks Corner (kilometer post 11.75, post mile 7.3), the Lost Hills oil fields, and the community of Lost Hills, ending just east of the Interstate 5/State Route 46 interchange at kilometer post 53.9 (post mile 33.5) in Kern County (see Figure 1.2).

1.2 Project Background

State Route 46 was adopted into the California Highway System in 1915 and is part of the California Freeway and Expressway System. It is a major interregional route for recreational traffic going back and forth between the Central Coast and the Central Valley. State Route 46 also serves as a major corridor for heavy trucks (40% of the traffic volume), particularly for agricultural products. State Route 46 is designated as a High Emphasis Focus Route from U.S. Highway 101 in San Luis Obispo County to Interstate 5 in Kern County. This route has been designated as a State Highway Terminal Access Route for larger trucks under the Federal Surface Transportation Act of 1982. State Route 46, from its junction with U.S. Highway 101 to its junction with Interstate 5, is a State Highway Extra Legal Load Route and is part of the National Highway System.

In San Luis Obispo County, State Route 46 is designated for expansion to a four-lane road from U.S. Highway 101 to Interstate 5 in Kern County per the Caltrans Interregional Transportation Strategic Plan dated June 1998. According to the San Luis Obispo Council of Governments staff report dated July 1999, "Traffic volumes along the Route 1, 101, 41/46 corridor are expected to continue to grow faster than the rate of local growth as a result of the State's population and economy." On December 8, 1999, the San Luis Obispo Council of Governments board approved the four-lane expressway concept for State Route 46 as part of the board's plan to upgrade the corridor in San Luis Obispo County.

There has been considerable media attention given to what some have called San Luis Obispo County's "blood alley." Several high profile, multi-vehicle, multiple-fatality accidents have occurred within the corridor. In January 1996, concerned citizens established a grassroots committee (called *FIX 46*) to facilitate the construction of safety projects and convert the roadway from the two-lane highway to a four-lane divided expressway. The committee's efforts have included receiving grants for increased law enforcement along the route, increasing fines for motorists caught driving in an unsafe manner, installing concrete median barriers in areas of high accident concentrations, and designating the project area as a daytime headlight zone. In addition, California Senator Dean Florez, a supporter of the construction of the State Route 46 four-lane project and a resident of Shafter, California, ultimately approached the Kern Council of Governments to make this project a priority.

Public support of the project is very strong among residents of not only San Luis Obispo County, but the Central Valley as well. Much of the weekend traffic consists of families who live in the metropolitan areas of Fresno and Bakersfield vacationing along the Central Coast. State Route 46 offers the only feasible route for motorists to take to the coast. On holiday and summertime weekends, travelers coming from these metropolitan areas converge on State Route 46 causing congestion and substantial traffic delays.

Within Kern County, State Route 46 is predominately a two-lane conventional highway. This project is planned as a four-lane expressway with an ultimate right-of-way of 65.53 meters (215 feet). It is designated as a High Emphasis East-West Focus Route in the Caltrans Interregional Transportation Strategic Plan. It is essential for interstate and regional commerce and travel. Currently, heavy trucks and recreational vehicles, which compose much of State Route 46 traffic in both directions, travel about 50 kilometers per hour (31 miles per hour) along this segment. Faster-moving vehicles coming up behind the trucks and recreational vehicles have limited passing opportunities. This contributes to driver frustration. The situation is compounded on busy weekends with additional recreational traffic sharing the road.

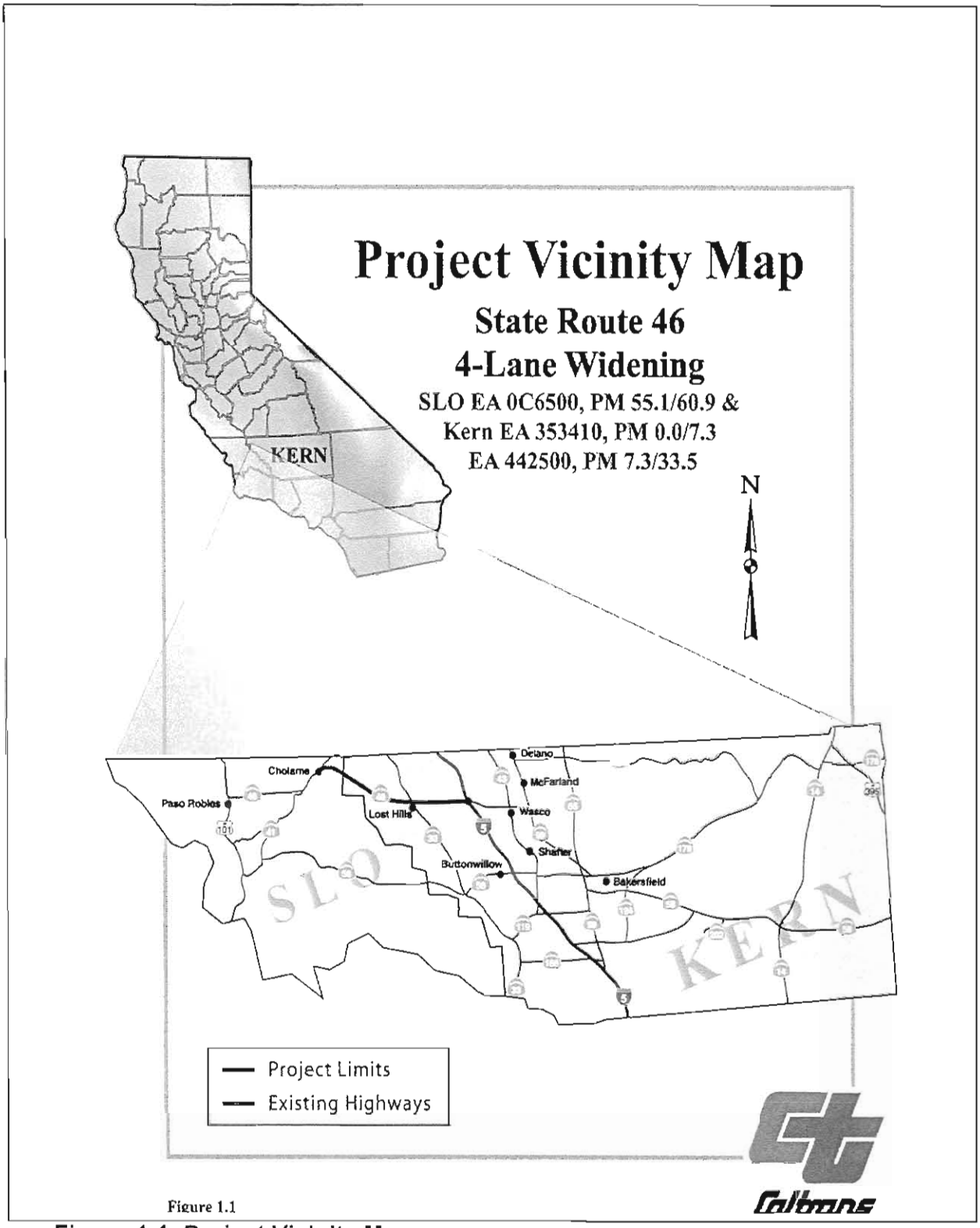


Figure 1.1

Figure 1.1 Project Vicinity Map

CALIFORNIA 46

Kern - San Luis Obispo

4 Lane Widening

Project Locations

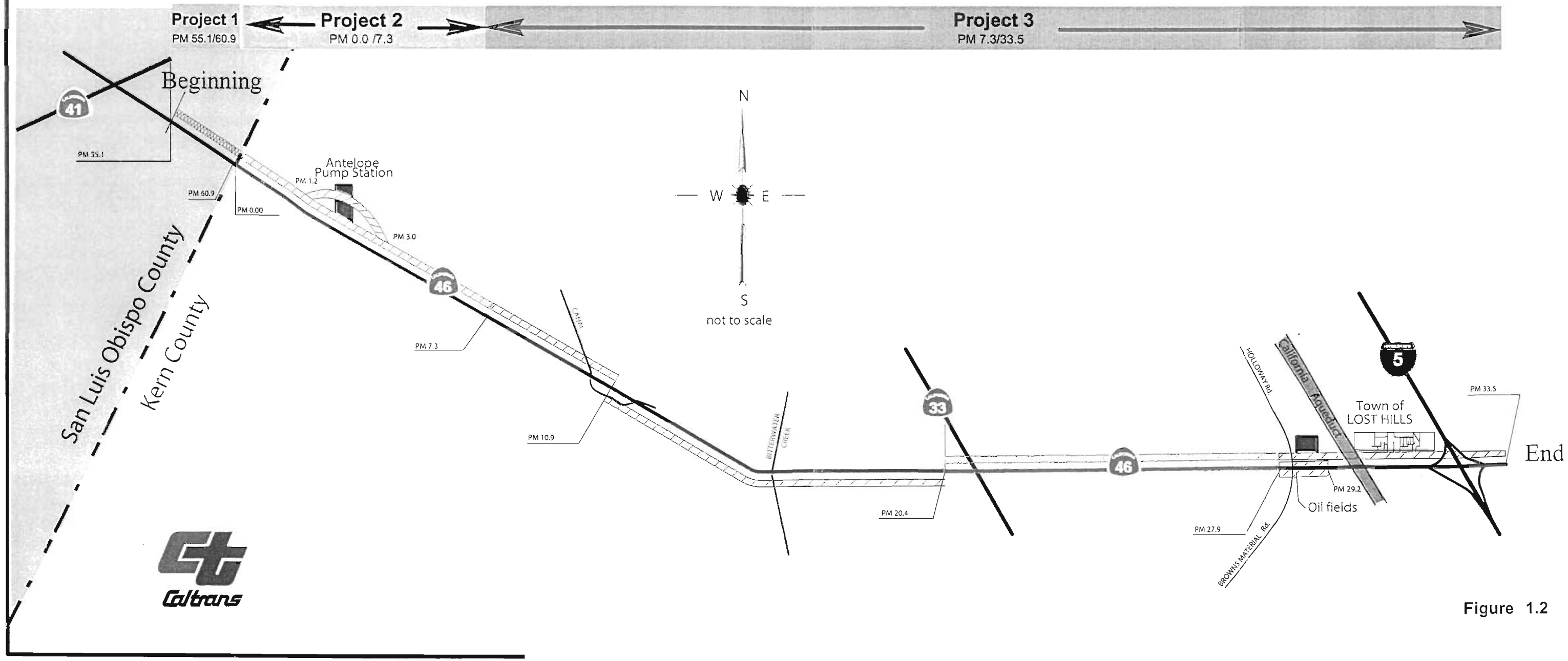


Figure 1.2

1.3 Need for the Project

State Route 46 is a major route for trucks and recreational traffic traveling between the Central Coast and the Central Valley. Currently, with only one lane of travel in either direction, there is little opportunity for drivers to safely pass slower-moving vehicles. More traffic will only compound the problem. Based on projected traffic volumes (see Table 1.1), the current roadway within the project limits will be insufficient for future traffic volumes.

Table 1.1 Level of Service for Existing and 2027 Traffic Volumes

San Luis Obispo kilometer posts 88.7/97.9 (post miles 55.1/60.9)	**Existing 2002**	**Forecast 2014**	**Forecast 2034**
Average Daily Traffic	7,00	9,980	18,026
Level of Service without project	C	D	E
Level of Service with project	---	A	B
Kern kilometer posts 0.0/11.75 (post miles 0.0/7.3)	**Existing 2001**	**Forecast 2017**	**Forecast 2027**
Average Daily Traffic	6,100	11,900	16,800
Level of Service without project	D	E	F
Level of Service with project	---	A	B
Kern kilometer posts 11.75/53.9 (post miles 7.3/33.5)	**Existing 2001**	**Forecast 2017**	**Forecast 2027**
Average Daily Traffic	6,100	11,100	15,550
Level of Service without project	B/C	C/D	D/E
Level of Service with project	B/C	A	A/B

Note: See Figure 1.3 for Level of Service rankings

On State Route 46, the projected daily traffic volumes — most notably the number of trucks and recreational vehicles traveling the route — are twice (20%) the normal (10%) levels recommended for a two-lane conventional highway. In addition, this roadway experiences even greater congestion on weekends when travel demand is the greatest. By providing additional lanes, the proposed project would improve capacity for this heavily traveled east-west corridor and reduce traffic congestion.

Roadway capacity is generally measured by the number of vehicles that can reasonably pass over a specific section of road at a given time. The Highway Capacity Manual, prepared by the Transportation Research Board, identifies travel speed, freedom to maneuver, and proximity to other vehicles as important parameters in determining level

LEVELS OF SERVICE

for Freeways

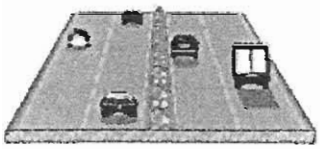
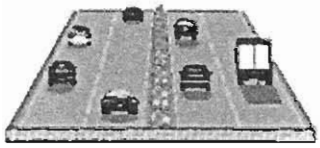
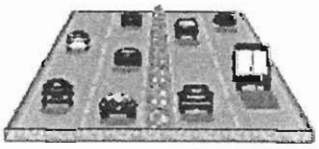
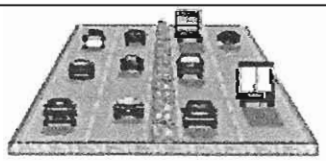
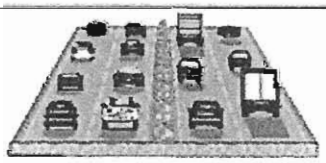
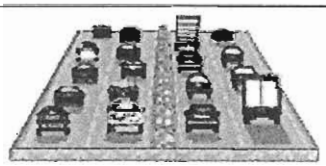
Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		70	Highest quality of service. Traffic flows freely with little or no restrictions on speed or maneuverability. **No delays**
B		70	Traffic is stable and flows freely. The ability to maneuver in traffic is only slightly restricted. **No delays**
C		67	Few restrictions on speed. Freedom to maneuver is restricted. Drivers must be more careful making lane changes. **Minimal delays**
D		62	Speeds decline slightly and density increases. Freedom to maneuver is noticeably limited. **Minimal delays**
E		53	Vehicles are closely spaced, with little room to maneuver. Driver comfort is poor. **Significant delays**
F		<53	Very congested traffic with traffic jams, especially in areas where vehicles have to merge. **Considerable delays**

Figure 1.3 Six Levels of Service

1.3.1 Congestion

The current level of service within the project limits ranges from a ranking of C to D. Refer to Table 1.1 for a list of the current and projected level of service rankings for the existing roadway as well as the projected level of service with the proposed improvements. By 2007, the level of service will fall below C due to an increase in average daily traffic. Weekends historically experience higher volumes of traffic to result in even lower levels of service. If the proposed improvements are constructed by 2027, a level of service of A/B would be projected for the route.

Adding a travel lane in each direction would improve level of service, traffic flow, and safety conditions along the route by giving drivers a safe way to pass slower moving traffic (trucks or recreational vehicles). Truck traffic accounts for approximately 40% of the average annual daily traffic.

1.3.2 Accident History

The accident history from January 1, 1999 to December 31, 2002 indicates that the actual accident rate is lower than the statewide average rate (see Table 1.2).

Table 1.2 Actual vs. State Average Accident Rates

Location	Accident Rate Per Million Vehicles Miles		
San Luis Obispo kilometer posts 88.7/98.0 (post miles 55.1/60.9)	**Fatal**	**Fatal + Injury**	**Total**
Actual (Project Limits)	.054	.12	.29
Average (State)	.022	.28	.60
Kern kilometer posts 0.0/11.75 (post miles 0.0/7.3)	**Fatal**	**Fatal + Injury**	**Total**
Actual (Project Limits)	.018	.16	.49
Average (State)	.035	.62	1.31
Kern kilometer posts 11.75/53.74 (post miles 7.3/33.5)	**Fatal**	**Fatal + Injury**	**Total**
Actual (Project Limits)	.003	.12	.48
Average (State)	.022	.39	.81

For the highway section only, a total of 123 accidents were reported. They included eight fatalities, 50 injury collisions, and 65 with property damage only. The intersection accidents were analyzed separately (see Table 1.3). Sideswipe, head-on and hit-object collisions accounted for approximately 60% of the accidents. The nature of these

In the proposed project, existing intersections within the project limits would be upgraded to current design standards. Left- and right-turn lanes and acceleration and deceleration lanes would be added where required to accommodate large trucks moving on and off the highway and to provide motorists easier maneuverability.

1.3.4 Route Continuity

Construction of the additional lanes within the project limits in conjunction with adjoining projects to the west located within San Luis Obispo County would complete the State Route 46 corridor as a continuous four-lane from U.S. Highway 101 to Interstate 5. Five projects east and west of this project are currently included in regional transportation plans. All of these projects would provide route continuity from U.S. Highway 101 to Interstate 5.

Chapter 2 Alternatives

2.1 Alternative Development Process

Three design variations were considered during the development of the project: one for a four-lane expressway with an 18.6-meter-wide (61-foot-wide) median with a north/south (symmetrical) alignment; one for a four-lane conventional highway with a 5.4-meter-wide (18-foot-wide) median through the town of Lost Hills; and one for split alignments (two- or four-lane) around the Tosco Antelope Pumping Station.

The build alternative was chosen as the Preferred Alternative based on environmental, design engineering, and cost considerations. The selection of the Preferred Alternative was made on November 20, 2003 after the full evaluation of environmental impacts and consideration of public hearing comments.

2.2 Preferred Alternative

The Preferred Alternative proposes to widen 63.2 kilometers (39.3 miles) of State Route 46 in San Luis Obispo and Kern counties from a two-lane highway to a four-lane expressway with an 18.6-meter-wide (61-foot-wide) median. The project begins one-quarter mile east of the existing State Routes 46/41 intersection and ends approximately one-quarter mile east of the Interstate 5/State Route 46 interchange.

The San Luis Obispo County project, from kilometer post 88.7 to 97.9 (post miles 55.1 to 60.9), would shift the alignment north from the existing centerline because of the mountainous terrain on the south side of the roadway. The north alignment would continue into Kern County until the Tosco Antelope Pumping Station at kilometer post 1.93 (post mile 1.2). From there, a split alignment is proposed to avoid a natural creek on the south side and utility lines, oil lines, and the California Coastal Aqueduct's 1.4-meter (58-inch) distribution pipeline on the north side of the existing highway. The future two-lane would be constructed approximately 201 meters (660 feet) north of the existing route. The split alignment would start at kilometer post 1.93 (post mile 1.2) and merge to the east at kilometer post 4.8 (post mile 3.0).

To avoid agricultural development and a privately operated airport located to the north, the alignment would shift to the south from the existing centerline from approximately kilometer post 17.54 (post mile 10.9) and continue until just before the intersection of State Routes 46 and 33. The alignment would then shift back to the north until the Lost Hills oil fields. Through the oil fields, from kilometer posts 44.90 to 46.99 (post miles 27.9 to 29.2), a

that is located along the north side of the highway. Future fifth and sixth passing lanes have not been considered because a four-lane roadway should be adequate for over 20 years beyond construction.

Lost Hills Oil Fields

This design option proposes a symmetrical alignment through the Lost Hills oil fields from kilometer posts 44.9 to 45.99 (post miles 27.9 to 29.2) with an 18.6-meter-wide (61-foot-wide) median. This option would reduce the number of oil wells to be relocated from 28 to 22. Complete avoidance of the oil wells is not possible because the oil fields are on both sides of the existing highway. Differences arose with landowners on the number and value of oil wells to be affected by the project. An evaluation would be performed prior to the purchase of right-of-way.

Lost Hills Community

This option proposes a four-lane conventional highway with an alignment to the north of the existing roadway. The north alignment could affect four residences and four businesses. A symmetrical alignment would more than double the number of residences and businesses affected.

2.2.2 Preferred Alternative Cost and Scheduling

The estimated total project cost for the San Luis Obispo County portion, Project 1, is $45,076,000 (construction cost $44,113,000 and right-of-way cost $963,000). The Kern County portion, Project 2, total project cost is estimated at $47,730,000 (construction cost $32,880,000 and right-of-way cost $14,850,000). For Project 3 within the Kern County portion, total project cost is $159,600,000 (construction $87,000,000 and right-of-way $72,603,000). The first phase, located east of State Route 33 to west of Browns Material Road (kilometer posts 31.8 to 43.4, post miles 19.8 to 27.0) within Project 3, is scheduled for construction in the 2006/2007 fiscal year, with a total estimated at $35,874,000.

2.3 Alternatives Considered and Eliminated

The following alternatives were considered within the project limits but were eliminated from consideration.

Project 1 - San Luis Obispo: Kilometer Posts 88.7/97.9 (Post Miles 55.1/60.9)

Alternative 1

This alternative proposed the same improvements as the preferred alternative, but with a reduced design speed to 88.51 kilometers per hour (55 miles per hour) between kilometer posts 94.46 and 95.75 (post miles 58.7 and 59.5). This alternative was eliminated from

2.3.1 Cross-Sections

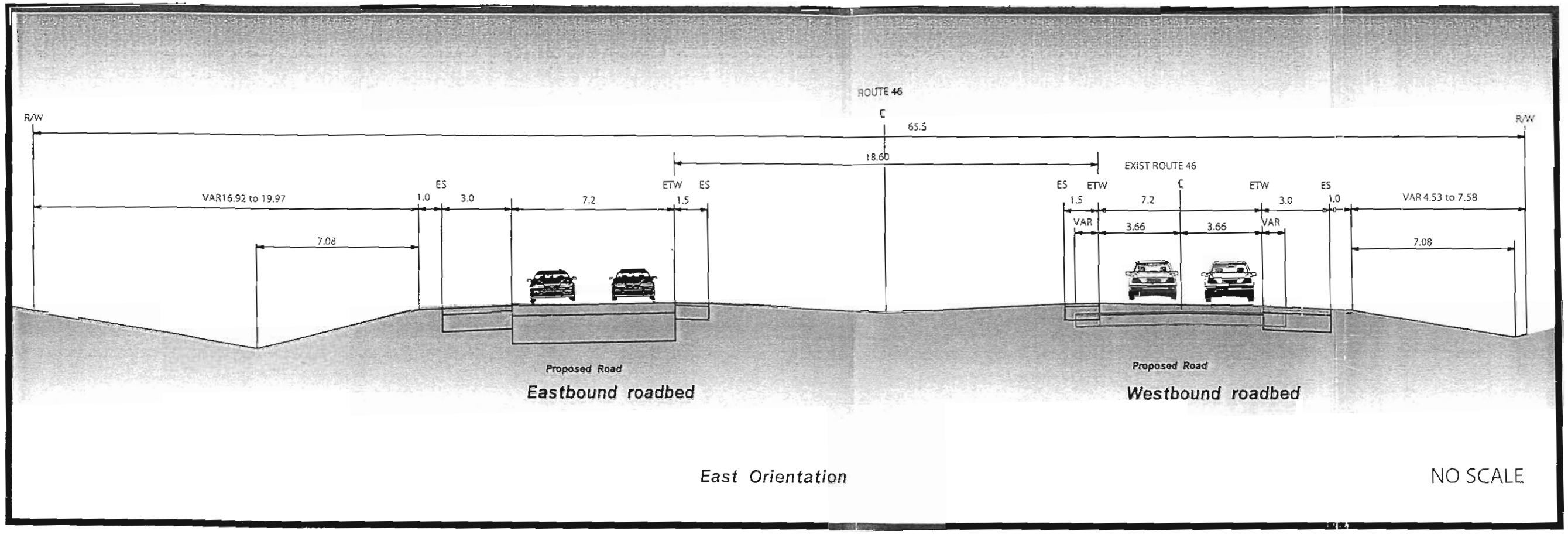
Cross-sections depicting the north, south, split, and symmetrical alignments are provided in Figures 2.1, 2.2, 2.3, 2.4, 2.5, and 2.6.

2.4 Related Projects

The Antelope Grade project, a San Luis Obispo County State Route 46 project that involves extending the eastbound truck-climbing lane, is proposed from kilometer posts 90.8 to 93.3 (post miles 56.5 to 58.0) prior to the construction of the four-lane expressway described in this environmental document. The project would provide greater passing opportunities by extending the existing eastbound truck-climbing lane. The Antelope Grade project is proposed for construction in 2006.

A Kern County State Route 46 signal installation project, a separate minor project, is proposed at the Lost Hills Road/State Route 46 intersection in Lost Hills. This signal installation project would be completed in November 2006.

4 Lane Widening



LEGEND	
R/W	Right of Way
ES	Edge of Shoulder
ETW	Edge of Travel Way

Meters	Feet
65.5	215.0
29.0	95.1
19.9	65.5
18.6	61.0
16.9	55.5
12.0	39.3
7.3	24.0
7.2	23.6
7.0	23.2
5.7	18.9
5.4	17.7
4.5	14.8
3.6	12.0
3.0	9.8
2.4	7.8
1.5	4.9
1.0	3.2
.6	1.9

WIDENING TO THE NORTH

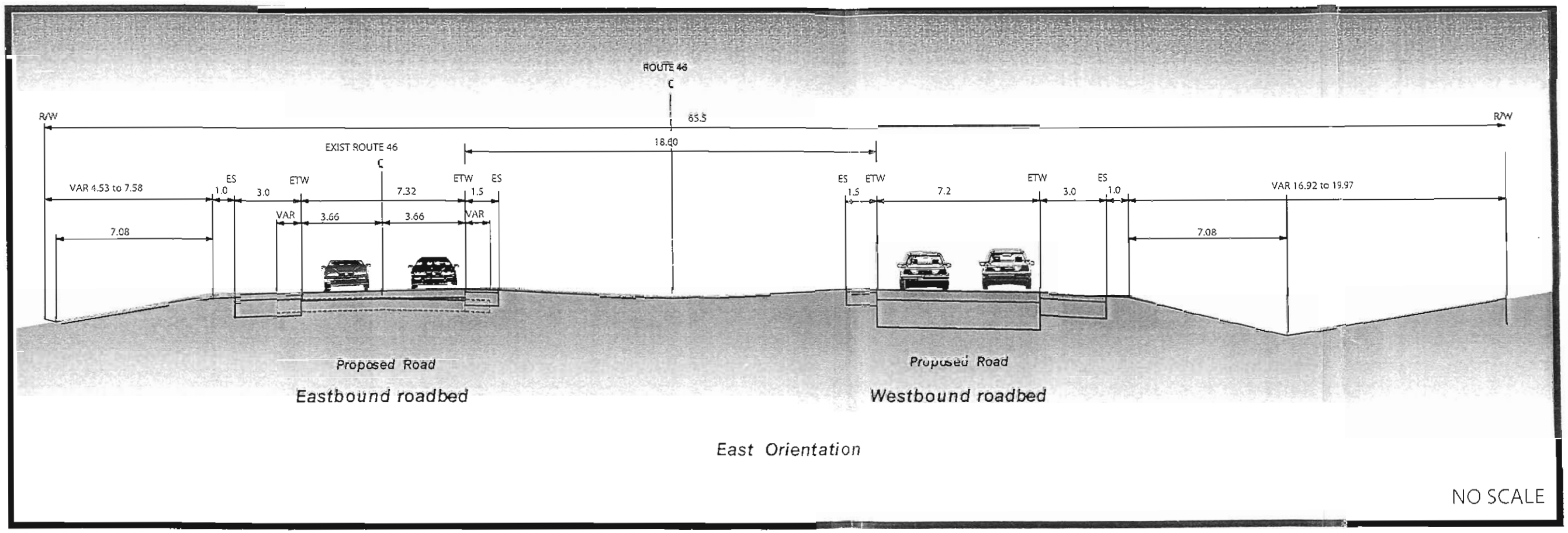
Caltrans

PRELIMINARY

TYPICAL CROSS SECTION

Figure 2.1

Kern – San Luis Obispo 46 4 Lane Widening



LEGEND	
R/W	Right of Way
ES	Edge of Shoulder
ETW	Edge of Travel Way

Meters	Feet
65.5	215.0
29.0	95.1
19.9	65.5
18.6	61.0
16.9	55.5
12.0	39.3
7.3	24.0
7.2	23.6
7.0	23.2
5.7	18.9
5.4	17.7
4.5	14.8
3.6	12.0
3.0	9.8
2.4	7.8
1.5	4.9
1.0	3.2
.6	1.9

WIDENING TO THE SOUTH

Caltrans

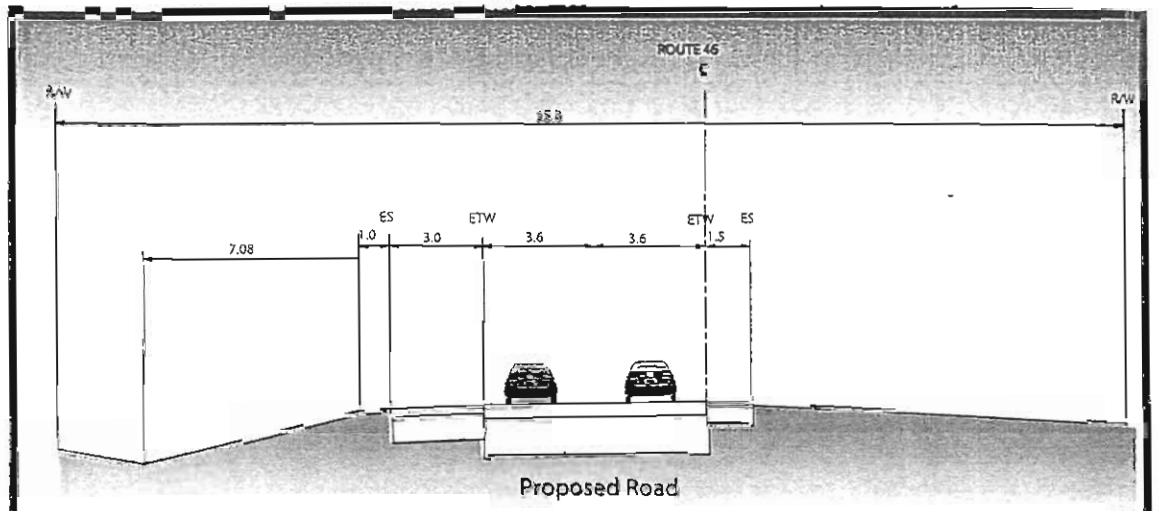
PRELIMINARY

TYPICAL CROSS SECTION

Figure 2.2

4 Lane Widening

ANTELOPE PUMPING PLANT

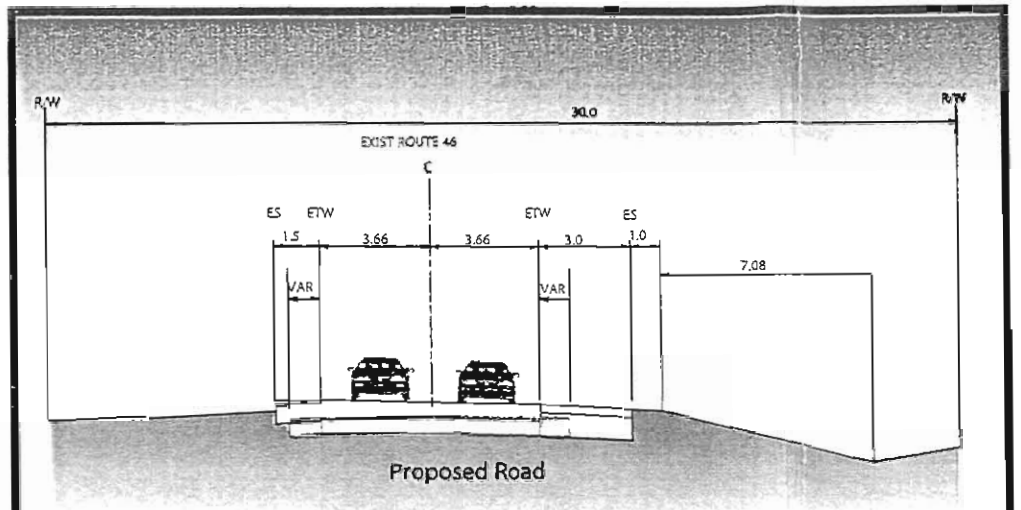


Westbound roadbed

East Orientation

Not to Scale

SPLIT ALIGNMENT TO THE NORTH

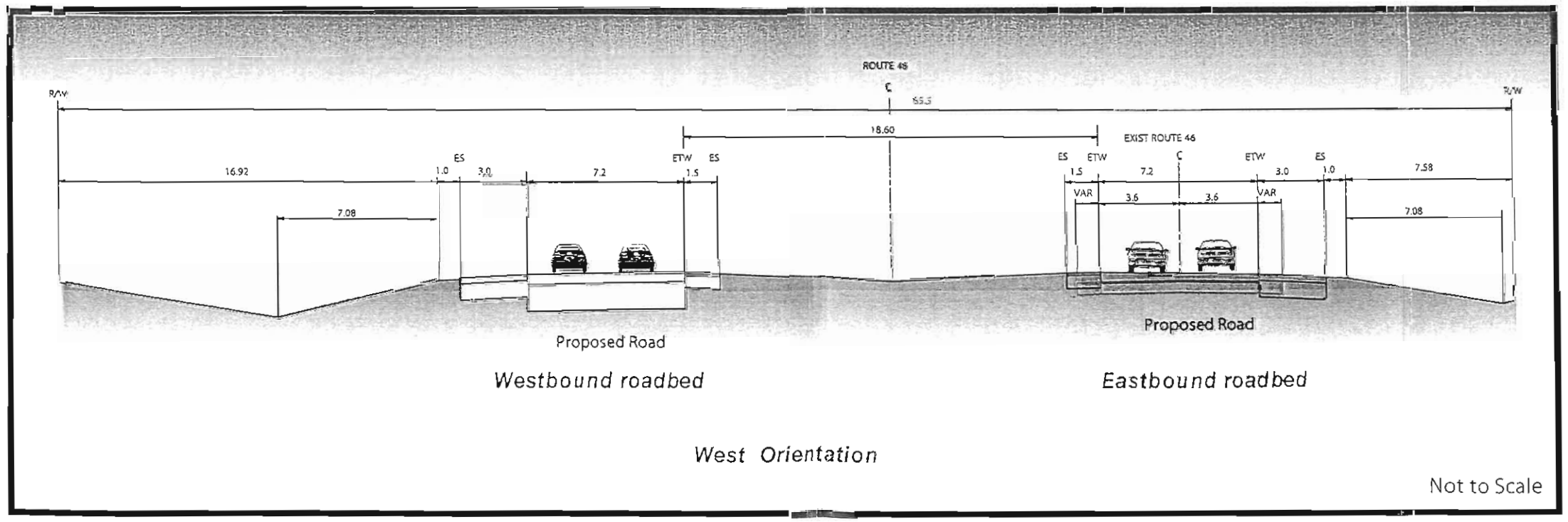


Eastbound roadbed

East Orientation

Not to Scale

SPLIT ALIGNMENT REHAB SECTION



Westbound roadbed

Eastbound roadbed

West Orientation

Not to Scale

WIDENING TO THE NORTH WITH 18.6 m MEDIAN (through alignment)

LEGEND	
R/W	Right of Way
ES	Edge of Shoulder
ETW	Edge of Travel Way

Meters	Feet
65.5	215.0
29.0	95.1
19.9	65.5
18.6	61.0
16.9	55.5
12.0	39.3
7.3	24.0
7.2	23.6
7.0	23.2
5.7	18.9
5.4	17.7
4.5	14.8
3.6	12.0
3.0	9.8
2.4	7.8
1.5	4.9
1.0	3.2
.6	1.9

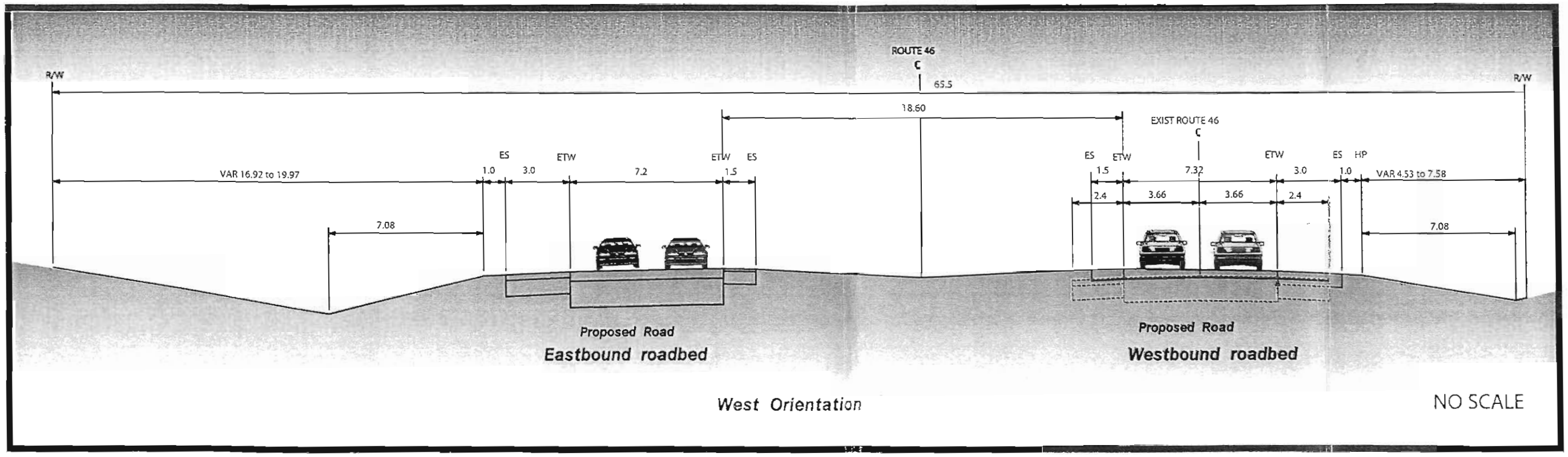
PRELIMINARY

TYPICAL CROSS SECTION

Figure 2.3

4 Lane Widening

LOST HILLS - OIL FIELDS



LEGEND	
R/W	Right of Way
ES	Edge of Shoulder
ETW	Edge of Travel Way

Meters	Feet
65.5	215.0
29.0	95.1
19.9	65.5
18.6	61.0
16.9	55.5
12.0	39.3
7.3	24.0
7.2	23.6
7.0	23.2
5.7	18.9
5.4	17.7
4.5	14.8
3.6	12.0
3.0	9.8
2.4	7.8
1.5	4.9
1.0	3.2
.6	1.9

WIDENING TO THE NORTH WITHIN THE OIL FIELDS

W/61 m median

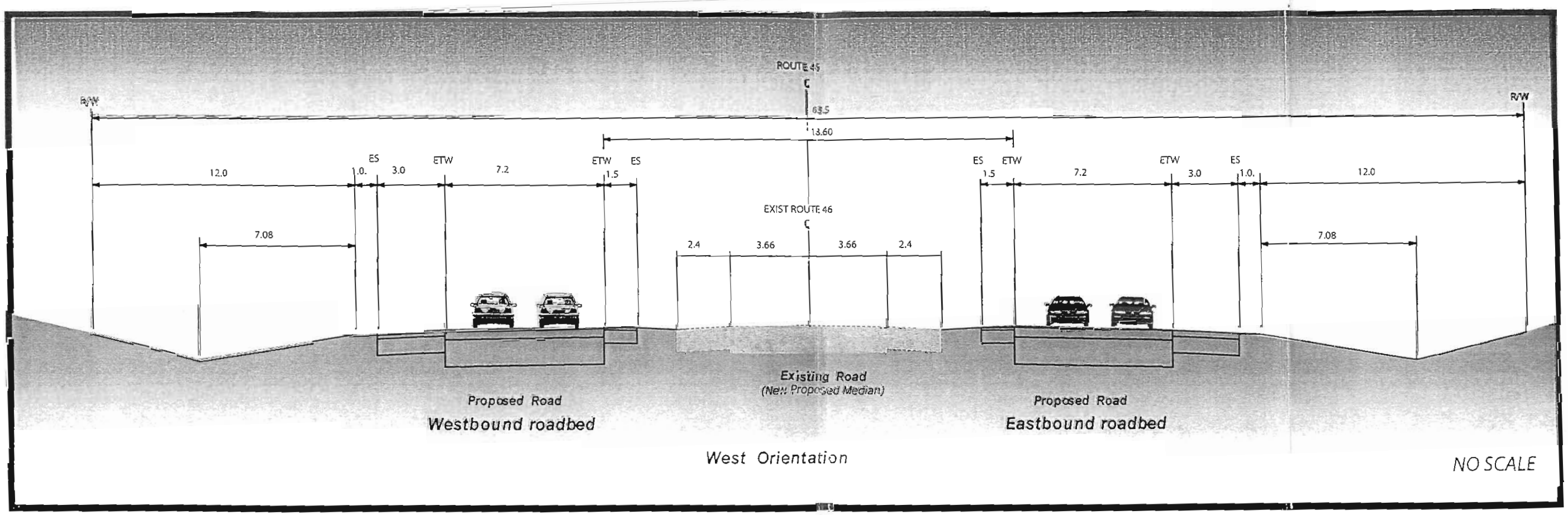
PRELIMINARY

TYPICAL CROSS SECTION

Figure 2.4

4 Lane Widening

LOST HILLS - OIL FIELDS



LEGEND	
R/W	Right of Way
ES	Edge of Shoulder
ETW	Edge of Travel Way

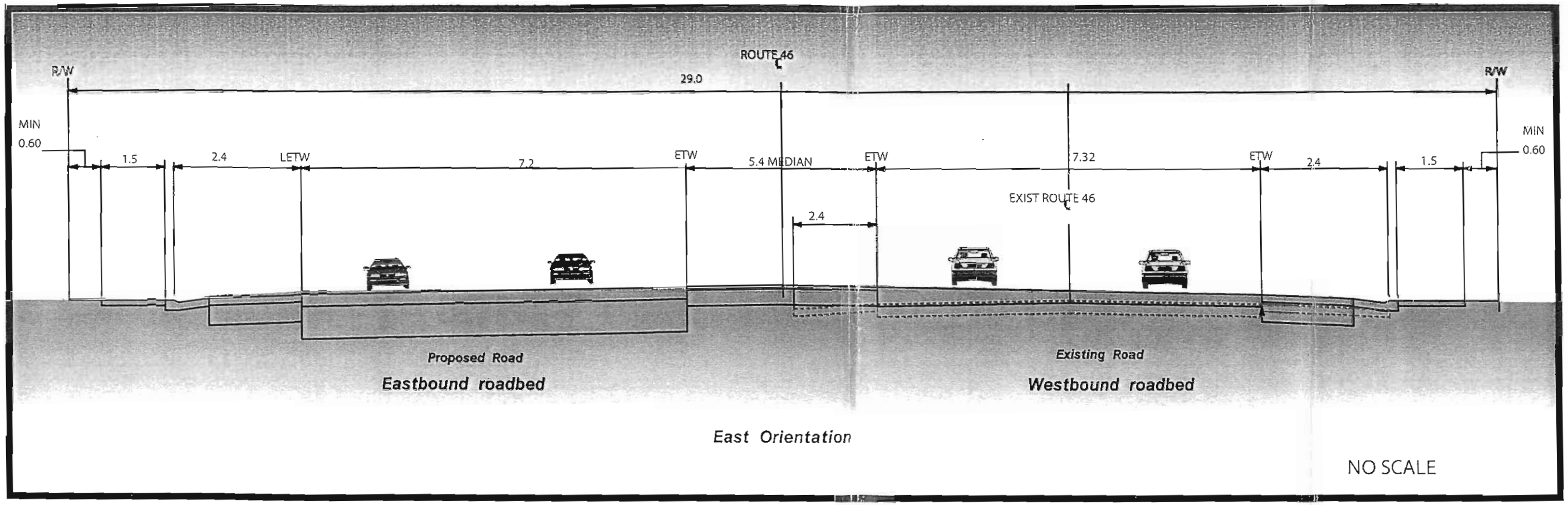
Meters	Feet
65.5	215.0
29.0	95.1
19.9	65.5
18.6	61.0
16.9	55.5
12.0	39.3
7.3	24.0
7.2	23.6
7.0	23.2
5.7	18.9
5.4	17.7
4.5	14.8
3.6	12.0
3.0	9.8
2.4	7.8
1.5	4.9
1.0	3.2
.6	1.9

SYMMETRICAL WIDENING WITHIN THE OIL FIELDS

W/61 m median

4 Lane Widening

TOWN OF LOST HILLS



LEGEND	
R/W	Right of Way
ES	Edge of Shoulder
ETW	Edge of Travel Way

Meters	Feet
65.5	215.0
29.0	95.1
19.9	65.5
18.6	61.0
16.9	55.5
12.0	39.3
7.3	24.0
7.2	23.6
7.0	23.2
5.7	18.9
5.4	17.7
4.5	14.8
3.6	12.0
3.0	9.8
2.4	7.8
1.5	4.9
1.0	3.2
.6	1.9

WIDENING TO THE NORTH WITH 5.4m MEDIAN WIDTH WITHIN THE CITY OF LOST HILLS

PRELIMINARY

TYPICAL CROSS SECTION

Figure 2.6

Chapter 3 Affected Environment, Environmental Consequences, and Mitigation

3.1 Land Use

Current land use in and around the proposed project area is zoned as agricultural, commercial, residential, and light industrial. The proposed project is compatible with the general plans of both San Luis Obispo and Kern counties.

3.1.1 Affected Environment

The project area is located in the northeastern portion of San Luis Obispo County and the northwestern portion of Kern County. Within the project limits, State Route 46 is a two-lane road, with expansive pasture or grasslands, cultivated pistachio orchards, as well as petroleum industry properties alternating south and north of the road. Population in the area is sparse, except for the community of Lost Hills where the population is 1,938 according to the 2000 U.S. Census Bureau. The properties surrounding the highway are used mainly for agriculture.

3.1.2 Impacts

Improvements to State Route 46 were envisioned in the circulation element of the General Plans for San Luis Obispo and Kern counties. The project is included in the current Regional Transportation Plans prepared by the metropolitan planning organizations Kern Council of Governments and the San Luis Obispo Council of Governments.

3.2 Farmland

The predominant land use in the project area is agricultural with some urban land uses. Agriculture is important to the local economies in San Luis Obispo and Kern counties. The San Luis Obispo County portion of the project is composed of primarily grazing land. The Kern County portion is composed of grazing land in the Coast Range and irrigated and non-irrigated farmland in the San Joaquin Valley. Agricultural production in Kern County includes almond and pistachio orchards along with cotton and other row crops.

Urban uses are in the unincorporated community of Lost Hills and at the Interstate 5/State Route 46 interchange.

3.2.1 Affected Environment

Approximately 196.5 hectares (485.6 acres) of additional right-of-way would be acquired for the project. Agricultural lands make up 95% of the needed right-of-way for the project. Approximately 44 hectares (108.7 acres) that are required for the project right-of-way are classified as prime or unique farmland, statewide and local importance farmland or other lands according to the U.S. Department of Agriculture Farmland Conversion Impact Rating Forms. See Appendix C and Table 3.1 for a breakdown of farmland categories in each segment of the overal project.

Table 3.1 Farmland

Farmland	Project 1 San Luis Obispo	Project 2 Kern County	Project 3 Kern County	Totals
Prime or Unique	3.1 hectares (7.7 acres)	3.4 hectares (8.5 acres)	36.2 hectares (89.6 acres)	42.8 hectares (105.8 acres)
Statewide and Local Importance	1.2 hectares (2.9 acres)	0	0	1.2 hectares (2.9 acres)
Totals	4.3 hectares (10.6 acres)	3.4 hectares (8.5 acres)	36.2 hectares (89.6 acres)	43.9 hectares (108.7 acres)

Source: Farmland Conversion Impact Ratings

The State Department of Conservation identifies "Important Farmland" as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland. Important Farmland acreages are reduced from the Farmland Conversion Impact Rating definitions of the same farmland categories because of the lack of irrigation for many properties in the project area.

In most of the project area, large agricultural preserves have been established by San Luis Obispo and Kern counties. In these preserves, Williamson Act contracts can be entered into between the property owner and the county. The purpose of the Williamson Act contracts is to preserve "open space" uses, such as agriculture, for their scenic, social, aesthetic, and wildlife values. The Williamson Act contracts provide tax relief for the farmers, while the public benefits from the preservation of the open space values. The Williamson Act contracts in San Luis Obispo and Kern counties run for 10 years, and there have been few cancellations in the project area.

3.2.2 Impacts

Farmland impacts for highway projects have been determined through the use of the U.S. Department of Agriculture's Farmland Conversion Impact Rating Forms from the Natural Resources Conservation Service. The form assigns the affected farmland a total score of up

3.3.1 Affected Environment

Population in the project area is sparse, except for the community of Lost Hills where the population is 1,938 according to the 2000 U.S. Census Bureau. A Relocation Impact Memorandum, which is prepared when there are fewer than 10 displacements and there is ample replacement property, was prepared for the community of Lost Hills.

3.3.2 Impacts

The Relocation Impact Memorandum determined there are four single-family homes and four businesses that would be affected by this project. Based on a 6% vacancy rate for this community, sufficient single-family residential property that is equal to or better than the displacement properties would be available for rent or purchase. Caltrans would consider the effects on businesses to determine an amount of just compensation.

3.3.3 Mitigation

All activities would be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970. Relocation resources would be available to anyone who is displaced.

3.4 Air Quality

Current legislation requires all transportation plans, programs and projects to demonstrate air quality conformity. Transportation conformity is a way to ensure that federal funding and approval are given to those transportation activities that are consistent with air quality goals. The primary legislation that governs air quality regulations is the federal Clean Air Act Amendments of 1990. The Clean Air Act delegated responsibility for air quality to the U.S. Environmental Protection Agency. Transportation projects must meet conformity requirements in areas that are or have been in non-attainment for federal air quality standards. A non-attainment area is a geographic region that the Environmental Protection Agency has designated as not meeting the National Ambient Air Quality Standards.

The Environmental Protection Agency has established the National Ambient Air Quality Standards for six pollutants: ozone, carbon monoxide, suspended particulate matter, sulfur dioxide, lead and nitrogen dioxide. (For the lead discussion, see Hazardous Waste in section 3.13 of this chapter.) Each pollutant is evaluated differently depending upon whether it is a regional or project-level pollutant.

Guidelines require that, in determining regional air quality conformance, a project must come from a Regional Transportation Plan and Transportation Improvement Program that have

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Guidelines require that, in determining regional air quality conformance, a project must come from a Regional Transportation Plan and Transportation Improvement Program that have

been found to conform under the Clean Air Act Amendments of 1990. Project-level air quality analysis is required only for the federal pollutants particulate matter and carbon monoxide. Where large volumes of traffic operate under heavily congested conditions or where unusually large numbers of diesel-powered vehicles can be expected to occur, there is the potential for roadways to generate localized high concentrations of air pollutants.

The Environmental Protection Agency requires hot spot analysis to determine project-level conformity in particulate matter and carbon monoxide in non-attainment or maintenance areas (per federal standards). Both quantitative and qualitative analyses are required for all federal projects. Specific guidance from the Environmental Protection Agency published in the Federal Register is required before the conformity rules for quantitative analysis requirements apply. As of February 2004, the Environmental Protection Agency has not issued quantitative particulate matter hot spot analysis guidance. Therefore, quantitative particulate matter hot spot analysis is not required under conformity at this time. Hot spot analysis for carbon monoxide is only recommended for intersections with traffic signals where the level of service is D or F (refer to Figure 1.3 for level of service rankings).

3.4.1 Affected Environment

The San Luis Obispo County portion of the project is located in an area classified under the federal regulations as an attainment area for carbon monoxide, particulate matter, and ozone. The project is not subject to regional conformity determination. It is also not subject to project-level particulate matter hot spot analysis for the same reason. Because there are no intersections with traffic signals within this portion of the project, hot spot analysis for carbon monoxide is not required.

The project is included in the San Luis Obispo County Regional Transportation Plan. That plan indicates that the San Luis Obispo County portion of this project is Phase IV of the State Route 46 highway improvements between U.S. Highway 101 and the San Luis Obispo County boundary with Kern County.

The Kern County projects are subject to regional analysis because they are located in a non-attainment area for ozone and particulate matter. Both Kern County projects are listed in a conforming 2000 Regional Transportation Plan and the 2002 Federal Transportation Improvement Program adopted on October 4, 2002.

This portion of the project is also subject, under federal regulations, to project-level air quality analysis for suspended particulate matter; therefore, hot spot analysis is required. The monitored particulate matter for the federal standard concentration at the China Lake-Powerline Road station showed no violations in the last three years (2000 to 2002). The proposed project would ease mobility, increase capacity, reduce congestion, enhance traffic

safety, and improve the level of service to A/B for year 2027. Based on those improvements, this project should not contribute to a suspended particulate matter hot spot that would cause or contribute to violations of the suspended particulate matter. Quantitative suspended particulate matter hot spot analysis is not required because the Environmental Protection Agency has not issued a suspended particulate matter hot spot analysis guidance as of February 2004.

This portion of the project is in an area that is in attainment for carbon monoxide that is subject to a maintenance plan, according to federal standards. The ambient carbon monoxide levels monitored at the Bakersfield-Golden State Highway and at Bakersfield – 5558 California Avenue stations, the closest stations with monitored carbon monoxide data, showed no violations in the last three years (2000 to 2002). No significant local carbon monoxide impacts occur as a result of the proposed project. There are no signalized intersections with a Level of Service C or worse, and there are no sensitive receptors in the vicinity of any intersection.

3.4.2 Impacts

Short-term impacts are limited to the construction period. During construction, the proposed project would generate air pollutants. The exhaust from construction equipment contains hydrocarbons, oxides of nitrogen, carbon monoxide, suspended particulate matter, and odors. Most pollutants would be windblown dusts generated during excavation, grading, hauling, and various other construction activities.

3.4.3 Mitigation

During construction, the proposed project would generate air pollutants. Caltrans Standard Specifications pertaining to dust control and dust palliative requirement are part of all construction contracts and should effectively reduce and control emission impacts during construction. The provisions of Caltrans Standard Specifications, Section 7-1.OF, "Air Pollution Control," and Section 10, "Dust Control," require the contractor to comply with rules, ordinances, and regulations of the San Luis Obispo Air Pollution Control District and the San Joaquin Valley Unified Air Pollution Control District.

An inspection by a certified asbestos inspector is required before demolition or renovation work. Most air districts will ask for the results of the inspection when a notification is filed. For renovations, the results must be on file to show air district or Environmental Protection Agency personnel on request. Most air districts require testing by a registered geologist to determine whether naturally occurring asbestos is present in sufficient quantity to trigger application of the rules or the Air Resources Board requirements.

3.5 Noise

A noise investigation has been completed for this project, which is considered a Type 1 project under the National Environmental Policy Act. A Type 1 project is defined by Title 23, Part 772 of the Code of Federal Regulations as follows: a proposed federal-aid highway project for the construction of a highway on a new location, or the physical alteration of an existing highway that significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes. Completion of a traffic noise analysis complies with Title 23, Part 772, of the Code of Federal Regulations, "Procedures for Abatement of Highway Traffic Noise," and Caltrans Noise Analysis Protocol.

3.5.1 Affected Environment

Under Title 23, Part 772, of the Code of Federal Regulations, noise abatement must be considered for Type I projects when the project results in a substantial noise increase (at least 12 dBA) or when the predicted noise levels approach or exceed the Noise Abatement Criteria. A traffic noise analysis was completed for this project. Noise abatement measures that are reasonable and feasible and that are likely to be incorporated in the project, as well as noise impacts for which no apparent solution is available, must be identified and incorporated into the project plans and specifications (per 23 CFR 772.11 (e)(1) and (2)).

3.5.2 Impact

The traffic analysis for the proposed project was prepared according to Caltrans Traffic Noise Analysis Protocol. Caltrans identified noise receptors (residential houses, churches, and schools) within the community of Lost Hills, but concluded that soundwalls would not be feasible because their construction would block access to driveways and local cross-streets. Creating breaks or gaps within a continuous soundwall would make the wall ineffective.

3.5.3 Mitigation

No mitigation measures are required.

3.6 Water Quality

A water quality assessment evaluates potential impacts of the proposed project on water quality. The assessment identifies the effect on surface water and groundwater resources and describes mitigation measures, if necessary, to reduce any substantial impacts.

3.6.1 Affected Environment

Regional

The project limits (within San Luis Obispo and Kern counties) are located in the western foothill belt of the Sierra Nevada in the San Joaquin Valley. The valley is a topographic and structural trough, which has received a thick accumulation of sediments from the Sierra Nevada on the east and the Coast Range on the west. The east side of the valley, bounded by the Sierra Nevada fault block, dips gently to become flat and lies over the granite rocks of the Sierra Nevada. The west side of the valley dips steeply at its extreme western boundary along the base of the Coast Range, where it lies over the Franciscan Formation.

Surface Water

The San Luis Obispo portion of the project area lies in the Estrella River watershed. Major water bodies there are the Estrella River and San Juan Creek, approximately 15 miles east and southeast of the project limits. Other surface water resources within the San Luis Obispo area include roadside ditches, agricultural and wastewater ponds, seasonal wet meadows, and temporary drainages. The proposed project runs through mostly rural and rolling terrain that descends from the coastal ranges. Most of the streams and drainages are perennial and are dry most of the year.

The Kern project area is located in the San Joaquin basin. Major water bodies there are the Kern River and the California Aqueduct. The Kern River is not in the immediate vicinity of the project, and any water discharge from the project in the form of runoff or spills would not discharge into the Kern River. Other surface water resources within the project area include roadside ditches, agricultural and oil field-generated wastewater ponds, seasonal wet meadows, and temporary drainage. Except for seasonal wet meadows and the temporary drainage, these surface water resources are man-made, not natural water bodies.

Groundwater

The San Luis Obispo project area is located at the boundary of the San Joaquin Valley and the Central Coast groundwater basins. Most of the study area lies within the Cholame Valley, which is part of the Salinas groundwater basin. Groundwater quality conditions in the Salinas basin are generally good.

The Kern project area is located within the San Joaquin River groundwater basin, which drains to Buena Vista Lake via Kern River and to Tulare Lake via the Tule, Kaweah, and Kings rivers. Most of the project area lies within the Tulare Lake basin, a sub-basin of the San Joaquin River groundwater basin. The Tulare Lake basin is bounded on the south by the Kings-Kern county line, on the north by the southern boundary of the Kings basin, on the west by the California Aqueduct and the eastern boundary of the Westlands Water District,

and on the east by the westerly boundaries of the Kaweah and Tule basins. Groundwater in this area is deep and generally of poor quality.

3.6.2 Impacts

The project could result in both short-term and long-term impacts to surface water and groundwater. Short-term impacts to surface water quality could occur during construction, primarily from exposure of loose soil during excavation, grading, and filling activities. The suspended solids, dissolved solids, and organic pollutants in surface water bodies could increase when nearby soils are disturbed and dust is generated. These conditions would likely persist until the project construction was completed and long-term erosion control measures have been implemented.

These short-term water quality impacts are minor and would not cause or contribute greatly to the impairment of a designated beneficial use. Implementing appropriate best management practices during construction can mitigate these short-term impacts. With implementation of a Storm Water Pollution Prevention Plan and a Storm Water Management Plan, no long-term impacts to surface water quality would be expected as a result of the proposed project.

3.6.3 Mitigation

No groundwater impacts would be expected from the project. Short-term surface water quality impacts would be expected from the implementation of the project. The major potential surface water quality impacts are as follows:

- Increases in sediments, turbidity (murkiness or clarity of the water) and total dissolved solids
- Toxicity due to chemical substances originating from construction activities
- Inadequate storm water drainage

With use of proper and accepted engineering practices and best management practices, the proposed project would not produce major impacts to water quality during construction or operation of this project.

During construction, a Storm Water Pollution Prevention Plan would be implemented to help identify the sources of sediment and other pollutants that affect the quality of storm water discharges. The plan would also describe and ensure the implementation of best management practices to reduce or eliminate sediment and other pollutants in storm water as well as non-storm water discharges.

Long-term water quality impacts would be expected due to changes in storm water drainage. The main pollutants would be petroleum distillates and metals. With implementation of a Storm Water Pollution Prevention Plan during construction and a Storm Water Management Plan after construction, the proposed project would result in no long-term impacts to surface water quality.

Below are specific best management practices that must be addressed at various phases of the project, from the planning phase to the construction and operational phases. Key management measures for roads, highways, and bridges include the following:

- Protect areas that provide important water quality benefits or are particularly susceptible to erosion or sediment loss.
- Limit land disturbance such as clearing and grading and cut/fill to reduce erosion and sediment loss.
- Limit disturbance of natural drainage features and vegetation.
- Place bridge structures so that sensitive and valuable aquatic ecosystems are protected.
- Prepare and implement an approved erosion control plan.
- Ensure proper storage and disposal of toxic material.
- Incorporate pollution prevention into operation and maintenance procedures to reduce pollutants getting into surface runoff.
- Develop and implement runoff pollution controls for existing road systems to reduce pollutant concentrations and volumes.

Mitigation measures to avoid or minimize negative impacts of the project on water quality are based on the following:

- Caltrans project development process,
- Caltrans environmental planning process,
- Best management practices in the Caltrans Construction Site Best Management Practices Manual,
- Caltrans Standard Specifications,
- Caltrans Standard Special Provisions, and
- Caltrans construction inspection and contract enforcement procedures.

Best management practices are selected for each project when the Water Pollution Control Plan or the Storm Water Pollution Prevention Plan is created. Their selection depends on the specific circumstances and conditions in the project area. The best management practices are described in detail in the Construction Site Best Management Practices Manual (November 2000).

Caltrans Standard Specifications, Section 7-1.01G, require the construction contractor to implement pollution control practices related to construction projects via a Water Pollution Control Plan or a Storm Water Pollution Prevention Plan. Storm Water Pollution Prevention Plans are produced for projects disturbing 1.6 hectares (1 acre) of total land area, as otherwise specified in the appropriate National Pollution Discharge Elimination System permit, or as determined during the environmental planning and project development process. All other projects use a Water Pollution Control Plan. The contract's Special Provisions specify which type of plan to be used.

3.7 Wetlands and Waters of the U.S.

Wetlands, as defined by the U.S. Army Corps of Engineers, are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. The boundaries of potential wetlands were identified using a routine onsite method described in the 1987 U.S. Army Corps of Engineers Wetlands Delineation Manual.

The term "waters of the United States" includes interstate lakes, rivers, streams, (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, and natural ponds.

3.7.1 Affected Environment

An analysis of wetlands and "Other Waters of the U.S." was made within the project limits. Potential jurisdictional wetlands and "Other Waters of the U.S." were identified. Three potential jurisdictional wetlands and one potential jurisdictional waters of the U.S. were identified within the San Luis Obispo County portion of the project, as follows:

San Luis Obispo County Location 1

This site is located 0.4 hectare (1 mile) east of the intersection of State Routes 46 and 41 at approximately kilometer post 89.46 (post mile 55.6). There, a small drainage flows from the south side under State Route 46 via box culverts to the north side. This drainage appears to originate on the south side of State Route 46 in the surrounding hills and empties into a

natural flood basin in and around the State Routes 41/46 intersection. The drainage contains pockets of wetland areas meeting the U.S. Army Corps of Engineers' three-parameter test of soils, hydrology, and vegetation. The entire drainage in and around the project area was delineated as a potential jurisdictional "Other Waters of the U.S." Pockets of wetland areas were delineated separately as potential jurisdictional wetlands.

San Luis Obispo County Location 2

This site is located at approximately kilometer post 95.41 (post mile 59.3) and is a small drainage that begins about 0.80 kilometer (0.5 mile) south of State Route 46. This drainage flows south under State Route 46 via a corrugated culvert. The drainage continues in a south-to-southwestern direction along State Route 46. This drainage contains pockets of wetland areas meeting the three-parameter test. The entire drainage in and around the project area was delineated as a potential jurisdictional "Other Waters of the U.S." The wetland areas were identified separately as jurisdictional wetlands.

San Luis Obispo County Location 3

This site is within the same drainage evaluated at location 2, but situated approximately 0.40 kilometer (0.25 mile) southeast of location 2. This drainage contains pockets of wetland areas meeting the three-parameter test. The entire drainage in and around the project areas was delineated as a potential jurisdictional "Other Waters of the U.S." The wetland areas were identified separately as jurisdictional wetlands.

Kern County Segment

The Kern County segment has four potential jurisdictional "Other Waters of the U.S.":

- A small creek/drainage exists at approximately kilometer post 11.26 (post mile 7.0). This drainage is channeled and runs parallel to the south side of State Route 46, crossing at kilometer post 11.26 (post mile 7.0).
- Franciscan Creek crosses State Route 46 at approximately kilometer post 12.06 (post mile 7.5). This creek is channeled on the north side of State Route 46.
- Bitterwater Creek crosses State Route 46 at approximately kilometer post 25.58 (post mile 15.9).
- The West Side Kern River Channel crosses State Route 46 immediately east of the Interstate 5 and State Route 46 interchange. This river is channeled south of State Route 46.

3.7.2 Impacts

The following impacts would be expected to occur:

Within the San Luis Obispo Segment

Impacts to potential jurisdictional wetlands

- Location 1 — 0.005 hectare (0.013 acre)
- Location 2 — 0.022 hectare (0.055 acre)
- Location 3 — 0.0012 hectare (0.003 acre)

Potential jurisdictional "Other Waters of the U.S."

- 0.064 hectare (0.16 acre) in and around location 2

Within Kern County Segment

Potential jurisdictional "Other Waters of the U.S."

- 0.068 hectare (0.170 acre) to an unnamed creek
- 0.076 hectare (0.190 acre) at Franciscan Creek
- 0.070 hectare (0.175 acre) at Bitterwater Creek
- 0.071 hectare (0.176 acre) at the West Side Kern River Canal

3.7.3 Mitigation

Minor project wetland impacts (0.029 hectare/0.071 acre) would be mitigated via wetland creation or purchases of wetland credits. The project minor wetland and other waters impacts would be subject to an U.S. Army Corp of Engineers Nationwide #14 permit under the Clean Water Act. A California Department of Fish and Game 1601 Streambed Alteration Agreement would be required for the small streambeds located in the project area.

3.8 Vegetation and Wildlife

A Natural Environment Study was prepared to evaluate the existing biological environment and how the project would affect that environment. The Natural Environment Study is a technical report that contains information that supports the statements made in this environmental document concerning plants, animals, and natural communities that exist in the project study area.

3.8.1 Affected Environment

For vegetation, the following habitats have been identified within the project limits: ruderal, non-native grasslands, valley saltbush scrub, riparian scrub (Tamarisk), and agricultural.

Ruderal habitat is considered bare ground or nearly bare ground with little or no vegetation. This habitat type is found abundantly along the shoulders of the existing highway and within

portions of the Caltrans right-of-way. Ruderal habitat is also found in and around the community of Lost Hills.

Non-native grasslands are a dense to sparse cover of annual flowering grasses. This habitat type is found in the valleys and foothills of California except for the north coastal and desert regions. Non-native grasslands comprise approximately 99 hectares (244.9 acres) of the project area.

Valley saltbush scrub is open, gray- or blue- shrubs belonging to the Goosefoot Family (10-40% cover) usually over a low vegetative layer consisting of annual non-woody plants.

Tamarisk riparian scrub is a weedy complex of any of several *Tamarix* species, usually replacing native vegetation following major disturbance. This habitat is in sandy or gravelly braided washes or intermittent streams, often in areas where high evaporation increases the stream's saltiness. This habitat is found around only the main flood canal immediately east of Interstate 5 in Kern County.

Agricultural lands make up 95% of the needed right-of-way for the project, approximately 44 hectares (108.7 acres). The San Luis Obispo County portion of the project is composed of primarily grazing land. The Kern County portion is composed of grazing land in the Coast Range and irrigated and non-irrigated farmland in the San Joaquin Valley. Agricultural production in Kern County includes almond and pistachio orchards along with cotton and other row crops.

The following threatened and endangered species have the potential to occur within the project limits: California red-legged frog, California tiger salamander, San Joaquin kit fox, giant kangaroo rat, Tipton kangaroo rat, blunt-nosed leopard lizard, San Joaquin antelope squirrel, California jewelflower, and the San Joaquin woolly-threads. These species are discussed in section 3.9 Threatened and Endangered Species.

3.8.2 Impacts

In the proposed project, State Route 46 would be widened in a linear path, adjacent to the existing roadway. Additional right-of-way would be required. Permanent and temporary impacts to habitat are approximately 191.3 hectares (473.9 acres). Permanent impacts would affect 10.5 hectares (26 acres) of the San Luis Obispo portion and 157.3 hectares (388.9 acres) of the Kern portion. Temporary impacts would affect 22.3 hectares (55 acres) of the San Luis Obispo portion and 1.6 hectares (4 acres) of the Kern portion.

3.8.3 Mitigation

Land acquisition, which would be required as compensation for the loss of habitat, would apply only to newly disturbed habitat and not to previously paved or disturbed areas within the roadway, shoulder areas, or right-of-way. Priorities in considering site selection for land acquisition and other recommended actions are as follows:

1. The proposed mitigation site would be of equal or superior habitat to that of the disturbed habitat.

2. The proposed mitigation site would contain the aspects vital to the continued existence of San Joaquin kit foxes, giant kangaroo rats, Tipton kangaroo rats, blunt-nosed leopard lizards, and San Joaquin antelope squirrels.

3. The proposed mitigation site would be of similar habitat type and would attempt to include saltbush scrub, valley and foothill grasslands, and non-native grasslands.

4. The proposed mitigation site would maintain close geographical connection to disturbed areas. The proposed mitigation site would be natural land in the vicinity of western Kern County or eastern San Luis Obispo County.

5. The proposed mitigation site would attempt to enhance movement corridors, link natural lands, and protect existing listed species habitat.

Table 3.2 shows the proposed mitigation ratios for the habitat types found within the project area.

Table 3.2 Mitigation Ratios

San Luis Obispo Project 1	**Area Affected in Hectares (Acres)**	**Ratio**	**Mitigation in Hectares (Acres)**
Permanent Impacts			
Non-Native Grassland	10.5 (26)	3:1	31.5 (78)
Temporary Impacts	22.3 (55)	1.1:1	24.5 (60.5)
Kern Projects 2 and 3	**Area Affected in Hectares (Acres)**	**Ratio**	**Mitigation in Hectares (Acres)**
Permanent Impacts			
Non-Native Grassland	98.7 (244.9)	3:1	296.1 (734.7)
Valley Saltbush Scrub	7.3 (18)	3:1	21.9 (54)
Agricultural	50.9 (126)	1.1:1	55.9 (138.6)
Temporary Impacts	1.6 (4)	1.1:1	1.76 (4.4)
Project Totals			
Permanent	167.4 (414.9)		405.9 (1005.3)
Temporary	23.9 (59)		26.9 (64.9)
Total Project Mitigation**	191.3 (473.9)		431.8 (1070.2)

**The Sacramento Fish and Wildlife Service Kern County Biological Opinion included additional mitigation for Kern State Route 46 rehabilitation project from PM 0.0/20.5 within the limits of the Kern projects 2 and 3. Those mitigation acreages are not reflected in this table, but are included in the Biological Opinion Terms and Conditions (page 63) acreage totals.

3.9 Threatened and Endangered Species

The Federal Endangered Species Act and the California Endangered Species Act are the laws that enforce the protection of threatened and endangered species. If species listed under one or both of these acts could potentially be affected by a proposed highway project, a Biological Assessment must be prepared. Two Biological Assessments were prepared for this project due to U.S. Fish and Wildlife Service jurisdictional boundaries. The San Luis Obispo County portion of the project lies within the jurisdiction of U.S.Fish and Wildlife Service Ventura office, and the Kern County portion lies within the jurisdiction of the U.S. Fish and Wildlife Service Sacramento office.

3.9.1 Affected Environment

Table 3.3 reflects the results of both Biological Opinions. Within the San Luis Obispo portion, the California red-legged frog, California tiger salamander, and the San Joaquin kit fox were found to be potentially affected. Within the Kern County portion, species

potentially found to be affected included the San Joaquin kit fox, the giant kangaroo rat, Tipton kangaroo rat, blunt-nosed leopard lizard, San Joaquin Antelope squirrel, California jewelflower, San Joaquin woolly-threads, and the Buena Vista Lake shrew. See Appendix G for U.S Fish and Wildlife Service species lists.

The California red-legged frog is chiefly a pond frog found in marshes, streams, lakes, reservoirs, and other permanent sources of water. Three water sources, in the form of spring-fed drainage and annual runoff streams, were found within this portion of the project. These water sources could potentially serve as dispersal corridors for the frog.

In the San Luis Obispo portion, one stream crosses State Route 46 at approximately kilometer post 94.9 (post mile 59.3). One adult red-legged frog and one juvenile red-legged frog were identified by Caltrans biologists at this location. The two other annual streams are located at approximately kilometer post 90.6 (post mile 56.3) and kilometer post 92.3 (post mile 57.4). These streams appear to hold water only part of the year. They originate on the south side of State Route 46 and flow north under the existing route via a box culvert. No red-legged frogs were identified in this watershed during the surveys.

Two isolated permanent ponds are located several hundred feet south of the project limits on the Central Coast Water Authority property. These ponds contain several hundred adult and juvenile frogs and appear to serve as breeding ponds. Because the project limits are far enough away, the proposed project would not affect these ponds.

The portion of the project area located within Kern County contains known populations of San Joaquin kit fox and is presumed to be occupied by giant kangaroo rat, Tipton kangaroo rat, and San Joaquin antelope squirrel according to the Recovery Plan for Upland Species for the San Joaquin Valley by the U.S. Fish and Wildlife Service (1998). The recovery plan states the current known occupied range for blunt-nosed leopard lizards is in scattered parcels of undeveloped land on the valley floor and in the foothills of the Coast Range from western Merced County south to southwestern Kern County. Also known to exist in Kern County are populations of the plant species California jewelflower, and San Joaquin woolly-threads, and the Hoover's woolly-star. The recovery plan notes that Hoover's woolly-star exists within the project area and that the San Joaquin woolly-threads population exists near the vicinity of the Interstate 5 and State Route 46 interchange. California jewelflower, Hoover's woolly-star, or San Joaquin woolly-threads were not observed during surveys.

Table 3.3 Sensitive Species

Common Name	Species	Status Federal/State	Effect Determinations by county San Luis Obispo/Kern
Mammals			
Buena Vista Lake shrew	*Sorex ornatus relictus*	FE/CSC	No Effect/May Affect, Likely to Adversely Affect
Giant kangaroo rat	*Dipodomys ingens*	FE/SE	No Effect/May Affect, Likely to Adversely Affect
Tipton kangaroo rat	*Dipodomys nitratoides nitratoides*	FE/SE	No Effect/ May Affect, Likely to Adversely Affect
San Joaquin kit fox	*Vulpes macrotis mutica*	FE/ST	May Affect, Likely to Adversely Affect/ May Affect, Likely to Adversely Affect
San Joaquin antelope squirrel	*Ammospermophilus nelsoni*	FSC/ST	No Effect/May Affect, Not Likely to Adversely Affect
Pacific western big-eared bat	*Corynorhinus townsendii townsendii*	FSC/CSC	No Effect/ No Effect
Short-nosed kangaroo rat	*Dipodomys nitratoides brevinasus*	FSC/CSC	No Effect/ No Effect
Greater western mastiff-bat	*Eumops perotis californicus*	FSC	No Effect/ No Effect
Small-footed myotis bat	*Myotis ciliolabrum*	FSC/NL	No Effect/ No Effect
Long-eared myotis bat	*Myotis evotis*	FSC/NL	No Effect/ No Effect
Fringed myotis bat	*Myotis thysanodes*	FSC/NL	No Effect/ No Effect
Long-legged myotis bat	*Myotis volans*	FSC/NL	No Effect/ No Effect
Yuma myotis bat	*Myotis yumanensis*	FSC/NL	No Effect/ No Effect
Southern grasshopper mouse	*Onychomys torridus ramona*	SC/CSC	No Effect/ No Effect
Tulare grasshopper mouse	*Onychomys torridus tularensis*	SC/CSC	No Effect/ No Effect
San Joaquin pocket mouse	*Perognathus inoratus*	SC/NL	No Effect/ No Effect
Birds			
Tricolored blackbird	*Agelaius tricolor*	FSC/CSC	No Effect/ No Effect
Western burrowing owl	*Athene cunicularia hypugea*	FSC/CSC	No Effect/ No Effect
Ferruginous hawk	*Buteo regalis*	FSC/CSC	No Effect/ No Effect
Little willow flycatcher	*Empidonax traillii brewsteri*	FSC/NL	No Effect/ No Effect
White-faced ibis	*Plegadis chihi*	FSC/CSC	No Effect/ No Effect
San Joaquin LeContes thrasher	*Toxostoma leconti macmillanorum*	FSC/CSC	No Effect/ No Effect
American Peregrine falcon	*Falco peregrinus anatum*	D/SE	No Effect/ No Effect
San Joaquin LeContes thrasher	*Toxostoma lecontei macmillanorum*	FSC/CSC	No Effect/ No Effect
Bald eagle	*Haliaeetus leucocephalus*	D/SE	No Effect/ No Effect
California condor	*Gymnogyps californianus*	FE/SE	No Effect/ No Effect
Least bell's vireo	*Vireo bellii pusillus*	FE/NL	No Effect/ No Effect
Mountain plover	*Charadius montanus*	PT/NL	No Effect/ No Effect

Status Definitions: FE-Federal Endangered, FT-Federal Threatened, FSC-Federal Species of Concern, SE-State Endangered, ST-State Threatened, CSE-California Species of Concern, NL-Not listed, P-Proposed, D-Delisted

Common Name	Species	Status Federal/State	Effect Determinations by county San Luis Obispo/Kern
Reptiles			
Northwestern pond turtle	*Clemmy marmorata marmorata*	FSC/CSC	No Effect/May Affect, Not Likely to Adversely Affect
Southwestern pond turtle	*Clemmys marmorata pallida*	FSC/CSC	No Effect/May Affect, Not Likely to Adversely Affect
San Joaquin coachwhip	*Masticophis flagellum ruddocki*	FSC/CSC	No Effect/ No Effect
California horned lizard	*Phrynosoma coronatum frontale*	FSC/CSC	No Effect/ No Effect
Silvery legless lizard	*Anniella pulchra pulchra*	FSC/CSC	No Effect/ No Effect
Blunt-nosed leopard lizard	*Gambelia sila*	FE/SE	No Effect/May Affect, Likely to Adversely Affect
Giant garter snake	*Thamnophis gigsas*	FT/ST	No Effect/ No Effect
Amphibians			
Western spadefoot toad	*Scaphiopus hammondii*	FSC/CSC	No Effect/ No Effect
Arroyo toad	*Bufo microscaphus californicus*	FE/CSC	No Effect/ No Effect
California red-legged frog	*Rana aurora draytonii*	FT/CSC	May Affect, Likely to Adversely Affect/No Effect
California tiger salamander**	*Ambystoma californiense*	FT/CSC	May Affect, Not Likely to Adversely Affect/No Effect
Fish			
Longfin smelt	*Spirinchus thaleichthys*	FSC/CSC	No Effect/ No Effect
Delta smelt	*Hypomesus transpacificus*	FT/ST	No Effect/ No Effect
Sacramento splittail	*Pogonichthys macrolepidotus*	FT/CSC	No Effect/ No Effect
Invertebrates			
California linderiella	*Linderiella occidentalis*	FSC/NL	No Effect/ No Effect
Molestan blister beetle	*Lyyys molrdys*	FSC	No Effect/ No Effect
Longhorn fairy shrimp	*Branchinecta longientenna*	FE/NL	No Effect/ No Effect
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT/NL	No Effect/ No Effect
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	FT/NL	No Effect/ No Effect
Plants			
California jewelflower	*Caulanthus californicus*	FE/SE	No Effect/May Affect, Likely to Adversely Affect
Camatta canyon amole	*Chlorogalum purpureum* var. *reductum*	FT/NL	No Effect/ No Effect
Hoover's woolly star	*Eriastrum hooveri*	FD/NL	No Effect/ No Effect
Purple amole	*Chlorogalum purpurem* var. *purpureum*	FT/NL	No Effect/ No Effect
Kern mallow	*Eremalche kernensis*	FE	No Effect/ No Effect
San Joaquin woolly-threads	*Lembertia congdonii*	FE/NL	No Effect/May Affect, Likely to Adversely Affect

Status Definitions: FE-Federal Endangered, FT-Federal Threatened, FSC-Federal Species of Concern, SE-State Endangered, ST-State Threatened, CSE-California Species of Concern, NL-Not listed, P-Proposed, D-Delisted
**The proposed project is outside the boundary of proposed critical habitat for California tiger salamander.

3.9.2 Impacts

Surveys found the following impacts within the project limits:

California Red-Legged Frog

Protocol surveys were conducted for California red-legged frogs. Potential water sources within a one-mile buffer area were also surveyed. Based on literature searches, personal communications and surveys identifying red-legged frogs, Caltrans found that this project may affect, likely to adversely affect the California red-legged frog for the San Luis Obispo project. Critical habitat has been proposed in San Luis Obispo County project area, however, the final revised critical habitat designation is scheduled for publication in November 2005. No breeding habitat would be directly affected as a result of this project, but non-breeding habitat, dispersal habitat, and associated upland habitat may be affected. No habitat exists for this species within the Kern County project limits.

California tiger salamander

The California tiger salamander was listed as threatened on August 4, 2004. The proposed project is outside the boundary of proposed critical habitat for California tiger salamander. The proposed project may affect, not likely to adversely affect for the San Luis Obispo County portion of the project. The proposed project would have a no effect on California tiger salamander for the Kern County portion of the project.

San Joaquin Kit Fox

Protocol kit fox surveys were performed. Kit foxes were observed within the project limits during the surveys. Twenty-one kit foxes were seen along State Route 46 between the Kern/San Luis Obispo county line and the State Routes 33/46 intersection. However, these sightings occurred in the same locations each night and may have been repeat sightings of the same kit foxes each night. California Natural Diversity Database sheets were completed, along with a map of sightings, and filed with the California Department of Fish and Game and U.S. Fish and Wildlife Service. No kit fox dens were observed during surveys. Based on the surveys, personal communications, and literature searches, the project may affect, likely to adversely affect the San Joaquin kit fox. Direct impacts as a result of construction of the project may occur in the forms of mortality, morbidity, and displacement. Indirect impacts as a result of construction of the project may occur in the form of disrupted social ecology, reduced productivity, displacement, altered space use, blocked corridors, reduced genetic exchange, genetic damage, and decreased carrying capacity (Cypher 2000).

Giant Kangaroo Rat

Giant kangaroo rats were not observed during any biological surveys, nor were any signs (precincts, surface pits for seed stacks) of giant kangaroo rats detected. The U.S. Fish and Wildlife Service assumed presence of the endangered giant kangaroo rat because of the

biology and ecology of the species, the presence of suitable habitat in and adjacent to the project, and the observations of the species to the vicinity of the project area. Based on the distribution outlined in the Kern County Biological Opinion, the project may affect, likely to adversely affect the giant kangaroo rat. The proposed project would have no effect on the giant kangaroo rat for the San Luis Obispo County portion of the project. Direct impacts may occur in the form of habitat loss. Indirect impacts may occur in the form of displacement from home range activities and increased fragmentation.

Tipton Kangaroo Rat

Although no Tipton kangaroo rats were observed during the surveys, the Recovery Plan for Upland Species of the San Joaquin Valley indicates the species exists within the project limits near the town of Lost Hills. The project may affect, likely to adversely affect the endangered Tipton kangaroo rat for the Kern County portion of the project. The proposed project would have no effect on the Tipton kangaroo rat for the San Luis Obispo County portion of the project. Direct impacts may occur in the form of habitat loss. Indirect impacts may occur in the form of displacement from home range activities and increased fragmentation.

San Joaquin Antelope Squirrel

The Recovery Plan for Upland Species indicates scattered populations of the San Joaquin antelope squirrel within the vicinity of the Kern County portion of the proposed project. The project may affect, not likely to adversely affect the San Joaquin antelope squirrel for the Kern County portion of the project. The proposed project would have no effect on the San Joaquin Antelope squirrel for San Luis Obispo County portion of the project. Direct impacts may occur in the form of habitat loss. Indirect impacts may occur in the form of displacement from home range activities and increased fragmentation.

Buena Vista Shrew

The endangered Buena Vista Lake shrew has recently been documented to occur at the Kern National Wildlife Refuge, located approximately 11.7 kilometers (7.3 miles) north of the project area. Based on the distribution outlined in the Kern County Biological Opinion, and project disturbance to habitat adjacent to the West Side Kern River Canal, the project may affect, likely to adversely affect the Buena Vista shrew for the Kern County portion of the project. The proposed project would have no effect on the Buena Vista shrew for the San Luis Obispo County portion of the project.

Blunt-Nosed Leopard Lizard

No blunt-nosed leopard lizards were observed during the surveys. The Recovery Plan for Upland Species in the San Joaquin Valley identifies blunt-nosed leopard lizards within the vicinity of the proposed projects. Potential habitat (valley saltbush scrub) exists next to the

town of Lost Hills. The proposed project would disturb approximately 7.2 hectares (18 acres) of this habitat in the Kern County portion of the project. Based upon proposed habitat replacement, the project may affect, likely to adversely affect the endangered blunt-nosed leopard lizard for the Kern County portion of the project. The proposed project would have no effect on the blunt-nosed leopard lizard for the San Luis Obispo County portion of the project. Indirect impacts may occur in the form of displacement from home range activities and increased fragmentation.

California Jewelflower

This annual plant is historically known from various community types in the San Joaquin Valley, from Fresno to Kern counties. No California jewelflower was observed during the surveys. The U.S. Fish and Wildlife Service assumed presence of the California jewelflower because of the biology and ecology, the presence of suitable habitat in and adjacent to the project, and the observations of the species to the vicinity of the project area. The project may affect, likely to adversely affect the endangered California jewelflower for the Kern County portion of the project. The proposed project would have no effect on the California jewelflower for the San Luis Obispo County portion of the project. Direct impacts may occur in the form of habitat loss.

San Joaquin Woolly-Threads

This species occurs in non-native grassland, valley saltbush scrub, interior coast range saltbush scrub, and upper Sonoran subshrub scrub in the Kern County portion of the project. Many new occurrences of the endangered San Joaquin woolly-threads have been discovered primarily in the hills and plateaus west of the San Joaquin Valley. No species were observed during surveys. The U.S. Fish and Wildlife Service assumed presence of the San Joaquin woolly-threads because of the biology and ecology, the presence of suitable habitat in and adjacent to the project, and the observations of the species to the vicinity of the project area. The project may affect, likely to adversely affect San Joaquin woolly-threads for the Kern County portion of the project. The proposed project would have no effect on the San Joaquin woolly-threads for the San Luis Obispo County portion of the project. Direct impacts may occur in the form of habitat loss.

3.9.3 Mitigation

Habitat mitigation for threatened and endangered species (San Joaquin kit fox) in San Luis Obispo and Kern counties would be proposed offsite to reduce project effects on these sensitive resources. Wildlife pre-construction surveys in appropriate habitats would also be conducted to identify the presence of any listed species or important habitat for listed species.

Impacts to the California red-legged frog would be mitigated onsite or close to the project via habitat preservation or habitat creation.

If populations of California jewelflower and San Joaquin woolly-threads are identified within the project area, their locations would be noted and avoided with temporary fencing or prominently flagged to prevent inadvertent encroachment by vehicles and equipment during construction. If populations cannot be avoided, surface disturbance should be scheduled after seed set and before germination. Collection of seed may also be required, with reseeding done at the site following construction during seasonal time frames and weather conditions favorable for germination and growth. Topsoil may be stockpiled for replacement after project completion. Mitigation in the form of a conservation easement or land acquisition for permanent protection may further reduce impacts to these species.

Final mitigation measures on endangered or threatened species (San Joaquin kit fox and California red-legged frog) would be mitigated by implementation of the measures specified in each of the Biological Opinions rendered by the U.S. Fish and Wildlife Service, the Federal Highway Administration and Caltrans. The Biological Opinion for the Kern County portion was received on September 22, 2003, and the Biological Opinion for the San Luis Obispo portion was received on April 25, 2005.

Kern County Project Biological Opinion

After reviewing the current status of the San Joaquin kit fox, Tipton kangaroo rat, giant kangaroo rat, blunt-nosed leopard lizard, Buena Vista shrew, California jewelflower, San Joaquin woolly-threads, and the Hoover's woolly-star, the U.S. Fish and Wildlife Service determined in the Kern County Biological Opinion, dated September 22, 2003, that the project is not likely to jeopardize the continued existence of these 8 listed species. Critical habitat for these listed species has not been designated or proposed; therefore none would be adversely modified or destroyed.

The major mitigation measures outlined in the Kern County Biological Opinion would be implemented to avoid, minimize and compensate for effects to listed species. These mitigation measures include:

- A Caltrans biologist or other qualified biologist would conduct an employee education program regarding listed species in the pre-construction meeting and monitor periodically or on occasion the construction of the project.

- Pre-construction surveys would occur within 30 days prior to construction. If it is during the flowering period of the San Joaquin woolly-threads, surveys would be surveyed on foot 60 days prior to construction.

- Restoration and re-vegetation work would be completed for all areas of temporary disturbance.

- All pipe culverts to be extended or replaced would be done so with 60.9 to 91.4-centimeter (24 to 36-inch) pipe culverts. All construction pipe, culverts or similar structures stored at the construction site would be inspected for kit foxes, blunt-nosed leopard lizards, and kangaroo rats before is moved, buried or capped.

- In considering site selection for land acquisition for the 448.6 hectares (1108.59 acres) of compensation lands, (see Chapter 3, Table 3.2 Mitigation Ratios), the mitigation site(s) would be of equal or superior habitat to the disturbed habitat. The mitigation site(s) would also contain the aspects vital to the continued existence of San Joaquin kit foxes, giant kangaroo rats, Tipton kangaroo rats, blunt-nosed leopard lizards, and San Joaquin antelope squirrels. The mitigation site(s) would be 7.2 kilometers (4.5 miles) from the centerline of State Route 46 between Interstate 5 and the Kern and San Luis Obispo County Line. The mitigation site(s) would maintain a north-south corridor for listed species, especially the San Joaquin kit fox, delineated as Figure 1 of the Kern County Biological Opinion. Caltrans would provide the U.S. Fish and Wildlife Service a true copy of the recorded conservation easements within 30 calendar days of its recordation.

- The U.S. Fish and Wildlife Service and the California Department of Fish and Game would be notified within one working day of the death or injury to listed species occurring due to project related activities or is observed at the project site.

- Formal consultation would be reinitiated with the U.S. Fish and Wildlife Service for listed species if the initial ground breaking for the project is greater than two calendar years from the issuance of the Kern county projects Biological Opinion. Caltrans would provide the U.S. Fish and Wildlife Service annual written reports of the implementation of terms of conditions. The first report would be prepared by December 31 following the ground breaking of the project and annually thereafter on December 31 until the terms and conditions are completed. In addition, a post-construction compliance report would be prepared by the on-site biologist to the U.S. Fish and Wildlife Service within 60 calendar days of the completion of construction.

Reinitiating formal consultation is required where discretional Federal agency involvement or control over the action has been maintained and if: 1) the actual date of initial ground breaking is two calendar years or more from the date of the biological opinion; 2) the amount or extent of incidental take is exceeded; 3) new information reveals effects of the agency action that may affected listed species or critical habitat in a manner or to an extent not considered in this opinion; (4) the agency action is subsequently modified in a manner that

causes an effect to the listed species or critical habitat that was not considered in this opinion; or 5) a new species is listed or critical habitat designated that may be affected by the action.

San Luis Obispo County Project Biological Opinion

The Biological Opinion for the San Luis Obispo County portion of the project was received on April 25, 2005. Three reasonable and prudent measures were documented within the Biological Opinion by the U.S. Fish and Wildlife Service: 1) Caltrans must reduce the potential for injury or mortality of San Joaquin kit foxes and California red-legged frogs during construction. 2) Only personnel authorized under the Biological Opinion may conduct the activities described in the proposed avoidance and minimization measures given in the Description of the Proposed Action portion of the Biological Opinion and in the terms and conditions. 3) Biologists who handle California red-legged frogs must ensure that their activities do not transmit diseases.

Caltrans, under the direction of the Federal Highway Administration, must comply with Section 9 of the Endangered Species Act. The non-discretionary terms and conditions below are contained in the Biological Opinion to support the reasonable and prudent measures described above:

- At least 30 days prior to construction, Caltrans must submit the names and credentials of the biologist(s) who would perform biological duties to minimize the take of the San Joaquin kit fox and the California red-legged frog. Construction would not begin until Caltrans has received the U.S. Fish and Wildlife Service approval of the biologist(s) they intend to use. Before construction, the biologist(s) must identify appropriate areas to relocate California red-legged frogs in the construction area. Appropriate areas include near the capture site, or another site approved by the U.S. Fish and Wildlife Service. The relocation area must support suitable vegetation and be free of exotic predatory species (e.g., bullfrogs). The approved biologist(s) must be on-site: 1) when construction occurs on rainy nights; 2) when project activities would occur within 30 meters (100 feet) of aquatic California red-legged frog habitat; and 3) for 72 hours following the sighting of a San Joaquin kit fox in the area. The biologist(s) must be given the authority to stop any work that may result in the take of these species. If the biologist uses this authority, the U.S. Fish and Wildlife Service must be notified by telephone and electronic mail within one working day.

- If one or more San Joaquin kit foxes are found injured or dead during proposed action in any calendar year, Caltrans must contact the U.S. Fish and Wildlife Service office immediately to review the project activities to determine if additional protective measures are needed. Project activities may continue during this review period, provided that all protective measures proposed by Caltrans the terms and conditions of the Biological Opinion have been and continue to be implemented.

- If more than 15 adult California red-legged frogs or 100 metamorphs are found injured or dead during the proposed action in any calendar year, Caltrans must contact the U.S. Fish and Wildlife Service office immediately to determine if more protective measures are needed. Project activities may continue during this review period, provided that all protective measures proposed by Caltrans the terms and conditions of the Biological Opinion have been and continue to be implemented.

- Caltrans must: enforce a maximum speed of 32 kilometers per hour (20 miles per hour) on unpaved roads within the project area; and ensure that project-related vehicles do not leak anti-freeze/hazardous materials. No fences would be placed that would act as barriers to the movements of California red-legged frogs within or along the boundary of the project site.

- If California red-legged frogs are captured, they would be placed in a plastic bucket, kept shaded and moist until released at the new site. If they would be relocated immediately after capture, they would be held in moist cloth bags or plastic bucket until released. The relocation process shall be implemented as quickly as possible. To avoid tranferring disease or pathogens between aquatic habitats during the course of surveys and handling of California red-legged frogs, the approved biologist shall follow the Declining Amphibian Population Task Force's Code of Practice. A copy of this Code is in the care of the Caltrans offices.

The San Luis Obispo County Biological Opinion indicates that Caltrans would mitigate for 10.5 hectares (26 acres) of non-native grassland permanently lost and 22.3 (55 acres) temporarily affected. See Chapter 3 for Table 3.2 Mitigation Ratios.

3.10 Floodplain

In accordance with Title 23, Part 650, of the Code of Federal Regulations, a Location Hydraulic Study using National Flood Insurance Program maps was performed in the proposed project area to analyze potential impacts to the floodplain.

3.10.1 Affected Environment

According to the Federal Emergency Management Agency Flood Insurance Rate Map, the San Luis Obispo segment of the proposed project encroaches into the floodplain for Cholame Creek and is designated Zone A, meaning it is within the area of the 100-year floodplain.

The portion of the project between the San Luis Obispo County line to Kecks Road in Kern County lies in the Temblor Range, which is part of the Coast Range that borders the western

edge of Kern County. This area has many small streams that cause flooding problems in this region. These streams are confined and distinct in upland areas, but tend to spread out into a number of poorly defined drainages on the valley floor. Poorly defined channels, inadequate culverts and drains or even low-intensity rainfall, can lead to shallow flooding. The Federal Emergency Management Agency Flood Insurance Rate Maps indicate that this portion of the proposed project passes through and by areas designated as Zone A.

Review of Federal Emergency Management Agency Flood Insurance Rate Maps indicates the portion of the project located from the intersection of Kecks Road to the Interstate 5 interchange lies in the Antelope Plain and the Lost Hills area. The Antelope Plain lies just north of the Coast Range in an area known as the Temblor Range. In the Lost Hills area, the topography is hillier than the western sections, although it still generally slopes down to the northeast. Small streams in this area have caused flooding problems in the vicinity of the project when they discharge runoff from steep canyons in the Temblor Range. These streams are confined and distinct in upland areas, but tend to spread out into a number of poorly defined drainage areas on the valley floor. Flow patterns have also been disrupted by cultivation in areas such as near Blackwells Corner.

The major waterway in this area is the Kern River, which flows into the West Side Canal after passing under the bridge on State Route 46. Levees along Kern River provide flood protection for the surrounding areas. The Flood Insurance Rate Map for this area indicates that sections of the proposed project would cross through the areas identified as Zone A.

3.10.2 Impacts

Because of the rural nature of the San Luis Obispo portion of the project, there are no risks associated with this encroachment. The impacts on natural and beneficial floodplain values are minor because of the small size of the encroachment within this portion of the project.

Based on field investigation and engineering judgment, the portion of the project located within Kern County was determined not to constitute a significant floodplain encroachment. There would be no longitudinal encroachment on the floodplain, and the project would not support probable incompatible floodplain development. The proposed four-lane roadway would encroach on the 100-year floodplain via a number of streams that cross the proposed alignment. These stream crossings of the floodplain would be similar to the existing encroachment now made by the two-lane highway. The effects of the proposed widening would be a minor volume displacement as long as the existing flow patterns are maintained.

3.10.3 Mitigation

Encroachment into the floodplain in the proposed project area would not be significant enough to alter the existing drainage patterns present in the area. No mitigation would be required.

3.11 Historic and Archaeological Preservation

Historic and archaeological studies have identified three historic properties—the Lost Hills School, the Tosco Antelope Pumping Station, and prehistoric site CA-SLO-1355—that are eligible for listing on the National Register of Historic Places. These were identified through the evaluation of 47 resources (one prehistoric archaeological site and 46 architectural resources) that are located within or immediately adjacent to the Area of Potential Effects of the three segments of the project. Federal agencies are required to take into account the effects of their undertakings on such historic properties by Section 106 of the National Historic Preservation Act of 1966 as implemented through its regulations at 36 CFR 800.

Consultation for the study of Native American resources has been maintained with the Salinan Nation Cultural Preservation Association and the Santa Rosa Rancheria through letters, phone conversations, and monitoring of field investigations. Representatives of these groups have been provided with copies of all cultural resources reports. Personal contact has been maintained with members of the Salinan community for concerns about CA-SLO-1355, while contact with the Santa Rosa Rancheria has been limited due to the absence of resources within project corridor through their traditional territory

3.11.1 Affected Environment

Information about resources within the affected environment was gathered from a variety of archival and field sources. The record search conducted at the Southern San Joaquin Valley Information Center in Bakersfield examined the National Register of Historic Places, California Register of Historic Resources, Determinations of Eligibility, Historic Property Data File, and other site records, maps, and manuscripts to identify previous archaeological investigations and previously recorded sites within and adjacent to the project area. The Caltrans project files in the District 5 San Luis Obispo office were also examined. The architectural historian conducted general and property-specific historical and archival research at the Beale Memorial Kern County Library in Bakersfield, the Kern County Museum in Bakersfield, the West Kern Oil Museum in Taft, the Walter W. Stiern Memorial Library at California State University, Bakersfield, and the Kern County Assessor's Office in Bakersfield.

Archival and documentary sources as well as inquiries to modern Native American groups show that the project corridor lies within the territories of two Native American groups. The project's western end is within the territory of the Salinan Nation and the eastern portion is used by several groups of the Southern Yokuts. The corridor passes through areas of relatively low population density for both groups; they preferred to locate their villages within the larger intermountain valleys or along the larger streams. Despite the more than 10,000 years of human occupation documented for the coast, few archaeological investigations have been conducted to detail the prehistoric uses of the interior South Coast Ranges. Those surveys have identified very few archaeological sites in the region. Field investigations conducted for the current project found only one archaeological site—CA-SLO-1355—within the project area, and it is eligible for listing on the National Register.

The historical development along the project corridor traces its origins to early 20th century ranching and transportation land uses and to commercial oil development. The main commercial and residential center within the project area is the small community of Lost Hills. Its settlement was precipitated by the discovery of the Lost Hills oil field in 1910. But much of the land along this corridor is composed of expanses of undeveloped open land, cultivated agricultural parcels, public utility substations and public utility easements for power and water lines that serve the region's rural enterprises. Identification and evaluation efforts found 40 residential and commercial structures, four bridges, and two culverts. Only two of these—the Lost Hills School and Tosco Antelope Pumping Station—are eligible for listing on the National Register of Historic Places.

CA-SLO-1355

Prehistoric site CA-SLO-1355 is a sparse surface scatter of flaked stone tool manufacturing debris and a single bedrock mortar. Test excavations revealed a roughly 30-meter (98.4-foot) diameter and 80-centimeter (31.4-inch) deep deposit in the central portion of the creek terrace that contains a high proportion of formed artifacts as well as fire-altered stone and locally darkened soil with burned dietary refuse. The site retains integrity and contains materials that have the potential to yield information important in prehistory concerning cultural chronology, lithic technology, subsistence and settlement systems, and external and internal social relations, particularly as an example of early-specialized use of inland/upland environments. CA-SLO-1355 was therefore determined to be eligible for listing in the National Register under criterion D since it bears or maybe likely to bear important information in prehistory or history.

Lost Hills School

The Lost Hills School's classrooms and auditorium are laid out in an "L" shape. The structure has strong architectural values, representing an interpretation of the Spanish Revival style in rural Kern County. It is distinguised as well in a broader context of comparable

westside school facilities. The property represents a type (rural school), period (pre-World War II/Depression Era) and method of construction (board-framed reinforced concrete).

The facility has been maintained for nearly six decades. Its combined structural, material, and design integrity is substantially intact. It is architecturally exceptional within the community of Lost Hills and the westside of Kern County. The structure is the work of regionally prominent building contractor Harris Construction, influential civil engineer and seismic expert John Paxton Perrine, and architect of the academic tradition Herbert E. Mackie. Setting is not a consideration in defining significance because it has changed a great deal since the time of construction. Substantially unaltered since 1938, except for a classroom addition designed in 1951, this property has been determined individually eligible for inclusion in the National Register under criterion C. Criterion C represents "distictive characteristics of a type period, method, or method of construction, work of a master, high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction."

Tosco Antelope Pumping Station (CA-KER-3814H)

The Tosco Antelope crude oil pumping station was originally constructed in 1910 and continues to operate today. Its period of significance, however, is tied to the modernization of the pumping station in 1951. The modernized station represents the application of an important new technology to increase the self-sufficiency of crude oil pipeline operations. It introduced two entirely new types of diesel engines and pumps, and by making possible the burning of heavy crude oil in the modern, diesel engines needed for the efficient pumping of crude oil, it represents a significant engineering innovation. Only the operating pump-house (containing three diesel engines, three pumps, and control room) and three adjacent tanks (diesel fuel tank, crude fuel tank, and surge tank) relate to the 1951 modernization. The station has been found eligible for listing on the National Register under criterion A for its association with the modernization and expansion of the petroleum industry in the post-World War II economy and under criterion C for an important engineering innovation reflected in the facility.

3.11.2 Impacts

The project would result in impacts to CA-SLO-1355. The project has the potential to affect the Tosco Antelope Pumping Station, but would not affect the Lost Hills School.

Impacts to CA-SLO-1355

The project would have an adverse effect on CA-SLO-1355 through the destruction of the deposit and its artifact content. To achieve a consistent and safe vehicle speed along this highway segment, the proposed highway design requires a lessening in the severity of the

highway curve at the location of the historic property. The design requires the centerline of the highway to be shifted about 60 meters (197 feet) south of the present highway centerline. This new four-lane alignment would require placing earth fill approximately 8 meters (26 feet) in height above the original ground surface with a basal width of approximately 120 meters (394 feet). The earth fill would cover virtually all of CA-SLO-1355. Preparation for this construction would require the removal of all vegetation from the original ground surface and excavation of a trench through the central portion of the historic property to extend the existing culvert through the area of new construction. Due to the confining topography of the narrow valley and the need to keep the highway open during construction, large earth-moving machinery and other equipment would travel across the terrace and historic property. All of these activities would severely alter the structure of the archaeological deposit and damage its contents.

Impacts to the Tosco Antelope Pumping Station

The project would have no direct effect on this historic property, but has the potential for indirect effects during implementation of the project. The pump house and three adjacent tanks that are associated with the property's period of significance are contained within a relatively small area positioned between the areas of direct impact for these two alternative highway corridors. The split alignment would not directly effect the property's integrity of location, design, materials, or workmanship. The operating processes and functions of the station would still be evident to an informed observer, so the property would retain its integrity of feeling and association. Construction of the split alignment would alter the property's setting that has changed little in the past 50 years. However, since the property has always been situated adjacent to a major transportation route, the additional lanes would not be an intrusion on the qualities of the engineering innovation or associated events that distinguish this historic property. The split alignment would not directly affect the characteristics that contribute to the property's National Register eligibility.

While the split alignment is designed to avoid direct effects to the historic property and such effects to an active pumping facility are remote, the project still has the potential to adversely affect the historic property through inadvertent damage to the pump-house or tanks. Such inadvertent effects might result from use of this portion of the Area of Potential Effects for such activities as equipment staging and maintenance. Conditions would be imposed to exclude such activities from taking place at or near the historic property, therefore avoiding any adverse effects.

Impacts to the Lost Hills School

The project would have no effect upon the Lost Hills School. The historic property has been determined eligible for the National Register under criterion C based on its architectural values. After this historic property was identified within the Area of Potential Effects, the

project was re-designed in this locale to widen the highway to the north, so no additional right-of-way would have to be acquired from the parcel containing the historic property. All construction activities in the vicinity of the school would be contained within the existing right-of-way. The view to the north is not a contributing portion of the property's setting. Because the structure is largely screened from view of State Route 46 by existing landscaped vegetation, there would be no effect to the setting from new highway construction. Therefore, the project would not alter the characteristics that contribute to the property's National Register eligibility.

3.11.3 Mitigation

Mitigation of the effects to CA-SLO-1355 and avoidance procedures for the Tosco Antelope Pumping Station would be conducted under the terms set out in the Memorandum of Agreement provided in Appendix E.

Mitigation of Impacts to CA-SLO-1355

Mitigation of the adverse effects to CA-SLO-1355 would be conducted through the recovery of the property's important information and the dissemination of that information to scientific and public audiences. Manual archaeological excavations would be done in accordance with provisions stipulated in an approved Data Recovery Plan that defines important research issues, their data requirements, and the investigation techniques necessary to recover that data. All archaeological materials would be collected and analyzed according to current scientific standards. Reports of the data recovery operations would be prepared and submitted to the State Historic Preservation Officer, the Advisory Council on Historic Preservation, which promotes preservation at a national level, Native American groups, and interested members of the public. In cooperation with the local Native American community, a display exhibit of this information would be prepared for the Native American community and for the general public.

Mitigation of Impacts to the Tosco Antelope Pumping Station

During project construction, an Environmental Sensitive Area would be established to protect the portions of the Tosco Antelope Pumping Station that contribute to the site's eligibility for the National Register. This active facility is currently surrounded by an approximately 7-foot-high (2.1-meter-high) cyclone fence that encloses an area roughly 50 x 50 meters (164 x 164 feet) in size. This fence would be established as the Environmental Sensitive Area boundary and would be included in the project's Plans, Specifications, and Estimates. Caltrans Environmental Planning staff would periodically monitor the Environmental Sensitive Area during construction to ensure the integrity of the fenced boundary and the absence of any construction activities.

Mitigation of Impacts to the Lost Hills School

Redesign of the project in the vicinity of the Lost Hills School has resulted in the avoidance of all effects to qualifying characteristics of this historic property. No mitigation measures are required.

Concurrence

The State Historic Preservation Officer reviewed and concurred on June 28, 2002 with the findings reported in the Historic Property Survey Report (see Appendix E for the concurrence letter). The State Historic Preservation Officer reviewed and concurred on December 1, 2003 on the Finding of Adverse Effect and the Memorandum of Agreement (Appendix E) for CA-SLO-1355 on February 10, 2004.

3.12 Paleontology

A paleontology study was conducted for the proposed project. The objectives of the study were to identify specific fossil sites and sensitive geologic formations within a 1.6-kilometer (1-mile) corridor along the proposed route.

3.12.1 Affected Environment

A record search for fossil sites within the project area was conducted at the Los Angeles County Museum of Natural History and the University of California Museum of Paleontology at Berkeley. No vertebrate fossil sites have been previously recorded within the project area. However, both the Los Angeles County Museum of Natural History and the University of California museum house vertebrate material from the same geologic formations that crop out along State Route 46. Sedimentary rock exposed along the roadway has produced vertebrate fossils elsewhere in the region.

The paleontology study concluded that the project lies within a paleontologically sensitive area. The west end of the project—the Antelope Grade and Polonio Pass areas—was the greatest concern because of the potential for uncovering scientifically important vertebrate remains during excavation in that area. State Route 46 cuts through exposures of the highly sensitive Plio-Pleistocene Paso Robles Formation (non-marine), Miocene Monterey Formation and Temblor Formation (marine). These units often yield valuable vertebrate remains.

3.12.2 Impacts

Scientifically important and unique fossils could be encountered during the excavation and road-widening phases of construction. Any substantial subsurface excavation in the proposed

project area as well as roadbed widening in the Cholame Valley, Antelope Grade, and Lost Hills areas could uncover valuable fossil vertebrate remains. Shallow excavations in the current roadbed of State Route 46 in the Cholame Valley as well as in the Antelope Valley and eastward to the intersection with Interstate 5 are not likely to produce important vertebrate fossil remains.

3.12.3 Mitigation

Because of the potential for uncovering scientifically important vertebrate remains during excavation in the project area, paleontological monitoring is warranted. Before construction, a qualified professional paleontologist would be retained to provide monitoring and salvage services. The paleontologist would develop a mitigation plan that addresses in detail the procedures for collecting vertebrate and other scientifically unique fossils. The plan would include the recording of pertinent geographic and stratigraphic information and stabilization (preservation) methods for the specimens. The paleontologist would also make provisions for the remains to be turned over to the collections of an appropriate repository and catalogued for future scientific study.

Monitoring with California funding only for sensitive fossils would be conducted where excavation or road cuts would disturb *in situ* (in place) sedimentary rock of the Temblor, Monterey, or Paso Robles formations. Monitoring would also be conducted where excavation deeper than 2 meters (6 feet) would disturb Quaternary sediments. Scientifically important fossils would be recovered and preserved, and vertebrate microfossils would be recovered by bulk sediment sampling. To avoid delays, bulk sampling could be completed before construction excavation. When the monitoring, collection and specimen processing are done, the paleontologist would produce a final report detailing the findings of the mitigation program. Paleontological monitoring is not eligible for federal funding.

3.13 Hazardous Waste Sites

An Initial Site Assessment was conducted of the properties within kilometer posts 45.0 to 52.3 (post miles 28.0 to 32.5) in Kern County. Also investigated were properties between kilometer posts 0.0/45.0 in Kern County and 34.7/37.8 in San Luis Obispo County (post miles KER 0.0/28.0 and SLO 55.9/60.9) that are located within the 60-meter boundary (196 feet).

3.13.1 Affected Environment

Below is a list of properties within the kilometer posts and post miles noted above that pose significant potential for hazardous waste/hazardous material:

- Tosco Antelope Pumping Station
- Arco Service Station/Burns Brothers Truck Stop
- Chevron Service Station/Market
- Fast 5 Service Station/Market
- 76 Service Station
- Beacon Service Station
- Taylor Automated Fuel Station
- Sonny's Deli Market/Service Station
- Palomino Pass Pumping Plant
- Oilfield and Petroleum Product Pipelines
- Kecks Corner
- Labor Camp, telephone substation, aboveground fuel tanks and airstrip
- Pacific Gas & Electric substation
- Northeast corner of Holloway Road

3.13.1.1 Aerially Deposited Lead

An aerially deposited lead investigation of State Route 46 was conducted from kilometer posts 45.0 to 52.3 (post miles of 28.0 to 32.5) in Kern County and from kilometer posts 34.7 to 37.8 (post miles of 55.9 to 60.9) in San Luis Obispo County. The results of investigation indicated that:

- Overall lead concentration in soil within the project limits does not exceed the regulatory threshold for lead outlined in the Title 22, California Code of Regulations.
- The soils excavated within the kilometer posts (post miles) of the project could be used and managed onsite and/or offsite without restrictions.

3.13.1.2 Asbestos and Lead Paint

The proposed project requires constructing two new bridges and widening three existing bridges—the State Route 46/5 Separation Bridge, Main Flood Canal Bridge, and West Side Canal Bridge. The new bridges include a new structure to the north of the California Aqueduct Bridge and a new structure next to the existing Bitterwater Creek Bridge. Bridges must be inspected to ensure that soil excavations or structural changes do not result in an unnecessary release of hazardous concentrations of lead or asbestos.

3.13.2 Impacts

Results of the Initial Site Assessment indicated that the following environmental conditions exist within the project area:

Tosco Antelope Pumping Station

Soils may be affected by petroleum hydrocarbons from historical use at the site.

Arco Service Station/Burns Brothers Truck Stop

Total petroleum hydrocarbons, reported as diesel (TPH-d) have been detected in shallow groundwater. If the property is affected by the project, the current status of this site must be re-evaluated.

Chevron Service Station/Market

Petroleum hydrocarbons have been detected in shallow groundwater. If the property is affected by the project, the current status of this site must be re-evaluated.

Fast 5 Service Station/Market

Petroleum hydrocarbons have been detected in shallow groundwater. If the property is affected by the project, the current status of this site must be re-evaluated.

76 Service Station/Market

Petroleum hydrocarbons have been detected in shallow groundwater. If the property is affected by the project, the current status of this site must be re-evaluated.

Beacon Service Station

A single soil sample from one boring detected gasoline additive methyl tert-butyl ether (MTBE) at a low concentration. In another boring, petroleum hydrocarbons were detected in soil. If the property is affected by the project, the current status of this site must be re-evaluated.

Taylor Automated Fuel Station

Subsurface investigations at the site have detected the presence of petroleum hydrocarbons in the soil and groundwater.

Sonny's Deli Market/Service Station

Five underground fuel storage tanks exist here. Minor hydrocarbon contamination was reported at the site, but Kern County requested no corrective action. If the property is affected by the project, the current status of this site must be re-evaluated.

Palomino Pass Pumping Plant

Soils may be affected by petroleum hydrocarbons from historical use at the site.

Oilfield and Petroleum Product Pipelines

Petroleum products may be affecting part of the study area along the pipeline.

Kecks Corner

Site soils may be affected by petroleum hydrocarbons from historical use at the site.

Labor Camp, Telephone Substation, Aboveground Fuel Tanks, and Airstrip

Petroleum hydrocarbons, fertilizers, pesticides, and herbicides from historical use at the site may affect soils.

Pacific Gas & Electric Substation

Polychlorinated biphenyls (commonly known as PCBs) may affect site soils from historical use.

Northeast Corner of Holloway Road

Former use of this property is unknown; soils may be affected by historical use.

Bridges

Caltrans as-built plans and bridge reports refer to the use of lead-based paint and asbestos for those bridges proposed for widening within the project limits. These structures would require an inspection to determine if any hazardous concentration of lead-based paint is present in soil under the bridges due to painting maintenance from sandblasting practices. Evaluation for the presence of any asbestos-containing material in the bridge structures is also required.

3.13.3 Mitigation

It was recommended that, before purchasing or developing any of the properties identified, additional hazardous waste studies be conducted. In addition, inspection for presence of lead-based paint and asbestos for affected bridges would be completed during a Preliminary Site Investigation. The inspection report would document the proper health and safety procedures and regulatory standards that must be followed to reduce hazardous exposure during demolition of such structures.

3.14 Visual

A Scenic Resource Evaluation and a Visual Impact Assessment were prepared for the project limits. These studies define the visual environment of State Route 46, quantify the visual resources of the project area, and identify viewer response to those resources. The studies assess the change that would be introduced by the project and the corresponding viewer response to that change. The perceived change is analyzed and used to determine the degree of potential impacts.

3.14.1 Affected Environment

State Route 46 in Kern County is the east/west connector to Interstate 5 and State Routes 33, 41, 43, and 99. Currently, this portion of the project is a two-lane highway in rural agricultural land. Population in this area is sparse. From the Kern county line, expansive pastures and grasslands and cultivated pistachio orchards alternate on the south and north sides of the road to Kecks Corner. Other development includes a general store at Kecks Corner (south/west quadrant) and numerous water wells along the north side of the road on to the west. Except in the community of Lost Hills, extensive views exist from almost every location in almost any direction.

The existing visual quality of State Route 46 throughout the length of the project area is high. The visual quality is due primarily to the overall rural character, the scenery along the western end of the project, agricultural vegetative patterns and the minimal visibility of built elements. Views along State Route 46 through the project area range from the immediate roadside environment to long-distance horizons.

3.14.2 Impacts

Because the existing setting is primarily a sparsely developed landscape, the widened scale of the roadway, associated cut slopes and possible vegetation loss would result in a minor reduction of the visual intactness and unity. The project generally does not propose elements that appreciably add or subtract from the memorability of the viewing experience. The changes proposed by this project would add more concrete to the existing highway corridor, but the appearance of the new highway lanes would still be within the viewer's expectations for the route. Only highway users familiar with the route would perceive that the scale of the highway has been changed. Highway lanes and moderate cut slopes are expected visual features within this highway environment and would likely be accepted as a necessary visual component of the route. Most of the proposed changes would be visually absorbed into the "viewshed" and would remain subordinated to the overall rural character of the landscape.

Two existing trees appear to be on the new right-of-way line. If they are outside the new right-of-way, they would be unaffected by the project; if they lie within the new right-of-way, they would be evaluated under current design standards. West of Kecks Corner, two rows of pistachio trees would be acquired with the new right-of-way north of the existing route. The proposed widening would expose soil for great lengths, but would not disturb the visual quality. Minor relief from the existing grade would not adversely affect the sight distance for motorists.

Post-construction short-term adverse visual impacts would occur as part of the project. These impacts are expected to diminish as the project site weathers and mitigation components become established.

Cumulatively, this project would not substantially detract from the total visual experience for motorists along this route. The regional landscape can accommodate the proposed additional lanes, pavement width, and earthwork associated with this project without losing any substantial degree of visual quality.

3.14.3 Mitigation

With the proposed mitigation, the landscape and the factors that contribute to the area's existing view quality would "absorb" much of the visual changes brought on by this project.

For mitigation, the cut and fill slopes along State Route 46 within the project limits would be rounded. Rounding edges at the top of cuts would naturalize the look of the cut. To reduce the amount of erosion, slopes would be permanently stabilized after grading work. Slopes would be cut or filled at a 2-to-1 ratio or flatter to help stabilize slopes and create visual cohesion with the existing landscape. Slopes flatter than 4-to-1 would allow maintenance personnel to access the right-of-way with heavy equipment to mow weeds, remove trash and keep the right-of-way clean. It is recommended that topsoil be saved and applied to cut slopes and other disturbed areas to enhance re-vegetation. The areas within the right-of-way would have the top six inches of soil and existing organic material bladed off and stockpiled to be reapplied over all disturbed areas at the conclusion of construction.

Native trees would be replaced at a 3-to-1 ratio. State Senate Concurrent Resolution No.17 - Oak Woodlands, passed in September 1989, requires that Caltrans preserve and protect native oak woodlands to the maximum extent feasible or provide replacement plantings where oak species are removed. Affected property owners would be compensated for the loss of landscaping and encouraged to replant and establish landscaping. Colorful vegetative growth would soften the visual impacts to the newly constructed highway. Seed mixes would as closely as possible resemble and blend in with existing vegetation. All disturbed areas of the new alignments of State Route 46 would receive erosion control and storm water runoff control measures.

The project is subject to Executive Order 13112 because of the mitigation proposed on the project. The order directs federal agencies to promote public education and awareness on invasive species as well as actions to minimize their impacts. Caltrans requires material sites to be inspected and certified free of noxious weeds before materials can be moved onto a project. Earthmoving equipment would be cleaned before being moved onto the project site. Only native seed certified free of weeds would be used for erosion control, and Caltrans has

in place procedures for certifying and identifying weed-free straw for temporary erosion control. These measures, along with the planting of native vegetation species, would ensure that the provisions of Executive Order 13112 are maintained on this project.

3.15 Construction

Deputy Directive No. 60 requires that a Transportation Management Plan be prepared for all projects on the state highway system. The purpose of the plan is to create a set of strategies to reduce traffic delay and congestion associated with construction activities for a proposed project. The goal of the plan is to manage traffic flow through the construction area.

Implementation of the Transportation Management Plan would require coordination with the Caltrans Public Information Office, the Transportation Management Center, the Caltrans resident engineer, Caltrans Maintenance, district traffic manager, and the contractor.

3.15.1 Affected Environment

Construction activities would occur on State Route 46 in San Luis Obispo and Kern counties. The alignment would shift from the north to the south, with a split alignment proposed within the Tosco Antelope Pumping Station area.

3.15.2 Impacts

During construction of the project, various short-term traffic circulation, noise, air quality and water quality impacts would occur. The public would be informed of the construction project and its effects on the community. Notice would be given of various alternate routes commuters could take to avoid the expected congestion. When a portion of the two-lane conventional highway is occupied for construction, a lane would be assigned a reversible role to accommodate the flow of traffic in both directions. A flagging operation (flagging traffic to stop or go in either direction) would not stop traffic longer than 20 minutes (10 minutes in each direction).

3.15.3 Mitigation

Impacts that occur as a result of construction of the project would be mitigated through the Transportation Management Plan and lane closure recommendations, along with standard Caltrans construction practices.



Chapter 4 Cumulative Impacts

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions combined with the potential impacts of this project. A cumulative effect assessment looks collectively at the impacts posed by individual land-use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial, actions taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development. These land-use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and population, alteration of hydrology, contamination (pesticides), erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators.

Besides the proposed highway project, no new development is proposed within the project area. The highway project itself conforms to the circulation elements of the counties of San Luis Obispo and Kern General Plans, which envision State Route 46 as being a four-lane highway through both counties.

Construction of this project is not expected to shift growth from one area to another. The proposed improvements would accommodate planned and existing growth in the study area. No growth-inducing impacts are expected from the project. Due to existing constraints created by endangered species, San Luis Obispo and Kern County General Plan land use policies and underlying zoning and the lack of adequate existing infrastructure (such as water and sewer lines to undeveloped properties), the project is not expected to measurably accelerate growth in the study area.



Chapter 5 List of Preparers

The Central Region of the California Department of Transportation prepared this Environmental Assessment with Finding of No Significant Impact and Initial Study with Negative Declaration. The following individuals were involved in its preparation:

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USFWS 1998 U.S. Fish and Wildlife Service. *Recovery Plan for Upland Species of the San Joaquin Valley, California Region 1.* Portland, Oregon. 1998. 319 pp.



Appendix A Environmental Checklist

Determining Significance Under CEQA

The words "significant" and "significance" used throughout the checklist are related to the California Environmental Quality Act (CEQA), not the National Environmental Policy Act (NEPA), impacts. CEQA requires that environmental documents determine significant or potentially significant impacts, NEPA does not. Addressing significant or potentially significant impacts in joint CEQA and NEPA environmental documents can be confusing, especially in those instances where the two laws and implementing regulations have different thresholds of significance. Under NEPA, the degree to which a resource is impacted is only used to determine which NEPA document is necessary. Once the federal agency has determined the magnitude of a project's impacts and the level of documentation required, it is the magnitude of the impact that is evaluated in the environmental document, not the degree of significance. For the purpose of the impact discussion in this document, determination of significant or potentially significant impacts is made only in the context of CEQA.

CEQA Environmental Checklist

The following checklist identifies physical, biological, social, and economic factors that might be affected by the proposed project. The CEQA impact levels include "potentially significant impact," "less than significant impact with mitigation," "less than significant impact," and "no impact." Please refer to the following for detailed discussions regarding impacts:

CEQA:

- Guidance: Title 14, Chapter 3, California Code of Regulations, Sections 15000 et seq. (http://www.ceres.ca.gov/topic/env_law/ceqa/guidelines/)
- Statutes: Division 13, California Public Resource Code, Sections 21000-21178.1 (http://www.ceres.ca.gov/topic/env_law/ceqa/stat/)

CEQA requires that environmental documents determine significant or potentially significant impacts. In many cases, background studies performed in connection with the project indicate no impacts. An "X" in the "No impact" column of the checklist reflects this determination.

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
AESTHETICS - Would the project:				
a) Have a substantial adverse effect on a scenic vista?		X		
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?		X		
c) Substantially degrade the existing visual character or quality of the site and its surroundings?		X		
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X
AGRICULTURE RESOURCES - In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?			X	
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				X
AIR QUALITY - Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?				X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	X
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	X
d) Expose sensitive receptors to substantial pollutant concentration?	☐	☐	☐	X
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	X
BIOLOGICAL RESOURCES - Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	X	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	X	☐	☐
C) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	X	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
COMMUNITY RESOURCES - Would the project:				
a) Cause disruption of orderly planned development?				X
b) Be inconsistent with a Coastal Zone Management Plan?				X
c) Affect life-styles, or neighborhood character or stability?				X
d) Physically divide an established community?				X
e) Affect minority, low-income, elderly, disabled, transit-dependent, or other specific interest group?				X
f) Affect employment, industry, or commerce, or require the displacement of businesses or farms?				X
g) Affect property values or the local tax base?				X
h) Affect any community facilities (including medical, educational, scientific, or religious institutions, ceremonial sites or sacred shrines?				X
i) Result in alterations to waterborne, rail, or air traffic?				X
j) Support large commercial or residential development?				X
k) Affect wild or scenic rivers or natural landmarks?				X
l) Result in substantial impacts associated with construction activities (e.g., noise, dust, temporary drainage, traffic detours, and temporary access, etc.)?			X	
CULTURAL RESOURCES - Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?			X	

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	
d) Disturb any human remains, including those interred outside of formal cemeteries?				X
GEOLOGY AND SOILS - Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				X
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?				X
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
HAZARDS AND HAZARDOUS MATERIALS - Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	X
c) Emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	X
HYDROLOGY AND WATER QUALITY - Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	X	☐

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

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
MINERAL RESOURCES - Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	X
NOISE - Would the project:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	X
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	X
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	X
POPULATION AND HOUSING - Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	X
PUBLIC SERVICES -				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	X
Police protection?	☐	☐	☐	X
Schools?	☐	☐	☐	X
Parks?	☐	☐	☐	X
Other public facilities?	☐	☐	☐	X
RECREATION -				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	X
TRANSPORTATION/TRAFFIC - Would the project:				
a) Cause an increase in traffic which his substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☐	☐	X
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
c) Result in a change in air traffic patters, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incomplete uses (e.g., farm equipment)?	☐	☐	☐	X
e) Result in inadequate emergency access?	☐	☐	☐	X
f) Result in inadequate parking capacity?	☐	☐	☐	X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	X
UTILITY AND SERVICE SYSTEMS - Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	X
e) Result in determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	X

	Potentially significant impact	Less than significant impact with mitigation	Less than significant impact	No impact
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	X

MANDATORY FINDINGS OF SIGNIFICANCE -

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, or cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	X
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	X
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	X



Appendix B Coordination and Consultation

For this project, Caltrans consulted with the following:

U.S. Fish and Wildlife Service and Department of Fish and Game

- From July 1999 through May 2000, Caltrans requested species lists from the U.S. Fish and Wildlife Service offices in Ventura and Sacramento for the following locales: Cholame, Orchard Peak, Sawtooth Ridge, Kern County, San Luis Obispo County, Lost Hills, Emigrant Hill, Shale Point, and Blackwells Corner.
- On June 7, 2000, Caltrans met at the project site with Mr. White from the U.S. Fish and Wildlife Service Sacramento office to discuss the project and potential mitigation. Mr. White suggested initial mitigation ratios of 3 to 1 for natural habitat and 1.1 to 1 for agricultural habitat and temporary disturbances.
- In May 2000, Caltrans had an informal consultation with the U.S. Fish and Wildlife Service and California Department of Fish and Game.
- In December 2001, Caltrans requested informal consultation with the U.S. Fish and Wildlife Service Ventura office regarding California red-legged frog critical habitat.
- In January 2001, Caltrans contacted Curt McCasland with the Ventura office to discuss the proposed red-legged frog critical habitat.
- In March 2001, Caltrans met with Department of Fish and Game representative Mr. Mulligan and was instructed to seek, under Title 14, a Section 2081.1 state take permit for potential take of state listed species.
- On September 7, 2001, the Federal Highway Administration sent the Biological Assessment for the Kern portions of the project to the U.S. Fish and Wildlife.
- On March 3, 2003, the Federal Highway Administration initiated formal consultation with the U.S. Fish and Wildlife Service by submitting the Biological Assessment for the San Luis Obispo portion of the project.
- On September 22, 2003, the Biological Opinion for the Kern County portion of the project was received.
- On April 25, 2005, the Biological Opinion for the San Luis Obispo portion of the project was received.

State Historic Preservation Office

Cultural studies were performed for each project and were documented into one Historic Property Survey Report. A letter, dated June 28, 2002, was received from the State Historic Preservation Officer concurring on the Area of Potential Effects boundaries and the methodologies used for the inventory of properties (see Appendix E). The eligibility of resources within the Area of Potential Effects was also sought for two properties for inclusion

on the National Register of Historic Places. In the same letter, the State Historic Preservation Officer concurred that the Antelope Pumping Station in Kern County and prehistoric archaeological site CA-SLO-1355 in San Luis Obispo County be included in the National Register of Historic Places.

Caltrans modified the proposed design at the intersection of State Routes 46 and 33 in August 2003. A Supplemental Historic Property Survey Report was prepared citing that there were no cultural resources within the new Area of Potential Effects. On August 28, 2003, the Federal Highway Administration forwarded the Supplemental Historic Property Survey Report to the State Historic Preservation Officer. A letter dated December 1, 2003 was received from the State Historic Preservation Officer approving the new Area of Potential Effects, concurrence of no cultural resources within the new Area of Potential Effects, and also the Finding of Effect/Memorandum of Agreement on the previous two eligible sites (see Appendix E).

Native American Consultation

Native American involvement has been active in the San Luis Obispo segment due to the presence of a prehistoric archaeological site. Native American consultation for this segment was initiated by former Caltrans District 5 Native American Coordinator Dr. Valerie Levulett, who contacted members of the Salinan Nation by letter in August 2000.

Involvement in the Kern County segments has been limited due to the apparent absence of Native American cultural resources in these portions of the project area. Caltrans Central Region Archaeologist John Sharp sent letters to the Native American Heritage Commission and Santa Rosa Rancheria Chairman Michael Sisco in January 2001.

More involvement was initiated for the modifications to the proposed design at the intersection of State Routes 46 and 33 in August 2003. The Supplemental Historic Property Survey Report was forwarded to the Salinan National Cultural Preservation Association, the Salinan Tribe, and the Santa Rosa Rancheria upon approval from the Federal Highway Administration. Tribes have expressed no concerns regarding the proposed modifications to this intersection.

U.S. Army Corps of Engineers

In August 2002, Caltrans initiated informal consultation with the U.S. Army Corps of Engineers regarding the potential jurisdictional wetlands and waters of the U.S. that are located within the project limits. The potential jurisdictional wetlands are very small - .082 hectares (0.71 acres) and project "Other Waters of the U.S." total .285 hectares (.701 acres).

Kern Council of Governments and the Kern County Planning Department

Both the Council of Governments and the Kern County Planning Department have attended Project Team Development meetings as local contacts to discuss project scope, project alternatives and project cost.

Public Participation

A Public Information Meeting was held on April 19, 2001 from 4:00 p.m. to 7:00 p.m. in the cafeteria at the Lost Hills Elementary/Middle School at 21109 Paso Robles Highway in Lost Hills, California. The information meeting conformed to the procedural requirements of the Federal Highway Administration 23 U.S.C. 771 and the Department of Transportation Project Development Procedure Manual, Chapter 11, Article 1. A Public Notice was published in the following publications: *Bakersfield Californian* on April 6 and 11; the *Wasco* and *Shafter* papers on April 4 and 11; and the *El Popular* on March 30 to April 5 and again on April 13 to April 19. In addition, property owners along the proposed alignments were sent invitations directly.

The meeting followed an open house format. The program schedule was unstructured; members of the public were free to come and go as they wished. At the entrance to the cafeteria, staff at a registration table greeted the public, distributed handouts and encouraged attendees to sign in. Displays depicting the project and the environmental process were placed around the room. Displays also showed cross-sections, the project schedule and the input opportunity of the public. The proposed alignments were presented in aerial photos. Caltrans staff were stationed at various displays to answer questions. A representative from Caltrans Right-of-Way was also available to address questions from the public.

A total of 26 visitors signed the attendance sheet of the public information meeting. Some residents of Lost Hills expressed concerns regarding the installation of a traffic signal or pedestrian crossing for the children who have to cross State Route 46 from the south side. All comments are recorded in the Executive Summary Record of Public Information Meeting, which is available for review at the Caltrans District 6 Environmental Offices at 2015 E. Shields, Suite 100, Fresno, California 93726. To date, no additional comment cards, emails, or telephone calls have been received regarding the open house.

A Public Hearing/Information Meeting was held on May 7, 2003 at the Lost Hills Middle/Elementary School at 21109 Paso Robles Highway in Lost Hills, California. The hearing began at 4:00 p.m. and ended at 7:00 p.m. This Public Hearing/Information Meeting conformed to the procedural requirements of the Federal Highway Administration 23 U.S.C. 771 and the Department of Transportation Project Development Procedure Manual, Chapter 11, Article 1. A Public Notice was published in *The Bakersfield Californian* on April 7 and 30, 2003. The *San Luis Obispo Tribune* published the Public Notice on April 10 and April

30, 2003. Invitations were mailed to affected politicians and property owners adjacent to the proposed project. Caltrans staff greeted 36 visitors, who were directed to sign-in and take a handout and comment card. Caltrans staff were stationed around the room to answer any questions about the project maps and display boards. Two Caltrans Right-of-Way Agents distributed pamphlets and answered questions. Caltrans staff encouraged visitors to complete a comment card or voice their comments to the onsite court reporter for the record.

Some residents of Lost Hills were concerned about pedestrians crossing State Route 46 at the Lost Hills Elementary/Middle School and requested a pedestrian overpass. Attendees requested traffic lights and lowering the speed limit through town. Farmers were concerned about access to their properties, farming employees crossing the expressway with equipment and large trucks, and the acquisition of right-of-way. All comments and responses to the Public Hearing are incorporated into this document in Appendix H. In addition, all comments are recorded in the Executive Summary/Record of Public Hearing available for review at the Caltrans District 6 Environmental Offices at 2015 E. Shields, Suite 100, in Fresno, California.

Appendix C Farmland Conversion Impact Rating

Farmland Conversion Impact Rating for Project 1 – San Luis Obispo County

Aug 13 20 04:56p California (0005773337) (805) 434-0284 p.2

U.S. DEPARTMENT OF AGRICULTURE — Form AD-1006

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	1. Date of Land Evaluation Request: July 24, 2002	2. Sheet 1 of 1
3. Name of Project: EA 0C6500 SR 46 Corridor Improvements (Antelope) PM 55.1/60.9	4. Federal Agency Involved: Federal Highway Administration	
5. Proposed Land Use: Highway Improvements 2 to 4 lane widening	6. County and State: San Luis Obispo, Ca	7. Type of Project: Corridor ✓ Other ☐
PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS: 8/2/2002	2. Person Completing the NRCS parts of this form: TINA VANDER HOEK
3. Does the site or corridor contain prime, unique, statewide or local important farmland? Yes ☒ No ☐ (If no, the FPPA does not apply - Do not complete additional parts of this form)		4. Acres Irrigated: NONE; 5. Average Farm Size: 704
6. Major Crop(s): WINE GRAPES, HAY, SMALL GRAIN	7. Farmable Land in Government Jurisdiction: Acres: 304,740 % 13.2	8. Amount of Farmland As Defined in FPPA: Acres: 358,025 % 15.5
9. Name of Land Evaluation System Used: CALIFORNIA STORIE INDEX	10. Name of Local Site Assessment System: NONE	11. Date Land Evaluation Returned by NRCS: 8/13/2002

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	75			
B. Total Acres To Be Converted Indirectly, Or To Receive Services				
C. Total Acres in Site	75			
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime and Unique Farmland	7.7Ac			
B. Total Acres Statewide and Local Important Farmland	2.9Ac			
C. Percentage of Farmland in County or Local Govt. Unit to be Converted	.0000348			
D. Percentage of Farmland in Govt. Jurisdiction with Same or Higher Relative Value	NOT AVAILABLE			
PART V *(To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland to be Serviced or Converted (Scale of 0 - 100 Points)*	72.6			
PART VI *(To be completed by Federal Agency) Corridor or Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b & c))*	Max. Points Corridor / Other			
1. Area in Nonurban Use	15 / 15	15		
2. Perimeter in Nonurban Use	10 / 10	10		
3. Percent of Site Being Farmed	20 / 20	6		
4. Protection Provided by State and Local Government	20 / 20	20		
5. Distance from Urban Built-up area	0 / 15	—		
6. Distance to Urban Support Services	0 / 15	—		
7. Size of Present Farm Unit Compared to Average	10 / 10	5		
8. Creation of Non-Farmable Farmland	25 / 10	3		
9. Availability of Farm Support Services	5 / 5	3		
10. On-Farm Investments	20 / 20	10		
11. Effects of Conversion on Farm Support Services	25 / 10	0		
12. Compatibility with Existing Agricultural Use	10 / 10	7		
TOTAL CORRIDOR OR SITE ASSESSMENT POINTS	160	72		
PART VII *(To be completed by Federal Agency)*				
Relative Value of Farmland (from Part V above)	100	72.6		
Total Corridor or Site Assessment (From Part VI above or a local site assessment)	160	72		
TOTAL POINTS *(Total of above 2 lines)*	260	144.6		

PART VIII *(To be completed by Federal Agency after final alternative is chosen)*

1. Corridor or Site Selected:	2. Date of Selection:	3. Was A Local Site Assessment Used? Yes ☐ No ☐

4. Reason For Selection:

Signature of person completing the Federal Agency parts of this form: DATE

Wisconsin substitute form AD-1006 8-9-97 Completion instructions: http://www.wi.nrcs.usda.gov/soil/prime/pdnotes.html

Farmland Conversion Impact Rating for Project 2 - Kern County

U.S. DEPARTMENT OF AGRICULTURE — Form AD-1006

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	1. Date of Land Evaluation Request: July 24, 2002	2. Sheet 1 of 1
3. Name of Project: EA 353410 RTE 46 Expressway Conversion PM 0.0/7.3	4. Federal Agency Involved: Federal Highway Administration	
5. Proposed Land Use: Highway Improvements 2 to 4 lane widening	6. County and State: Kern Cty , CA	7. Type of Project: Corridor ✓ Other ☐
PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS: 7-25-02	2. Person Completing the NRCS parts of this form: MARK DAVIS
3. Does the site or corridor contain prime, unique ,statewide or local important farmland? Yes ☒ No ☐ (If no, the FPPA does not apply - Do not complete additional parts of this form)		4. Acres Irrigated: 972400 — 5. Average Farm Size: 1,493
6. Major Crop(s): cotton, grapes, almonds, alfalfa, carrots	7. Farmable Land In Government Jurisdiction: Acres: F, 044, 200 %	8. Amount of Farmland As Defined in FPPA: Acres: Not Available %
9. Name of Land Evaluation System Used: CA Storie Index System	10. Name of Local Site Assessment System: None	11. Date Land Evaluation Returned by NRCS: 7-29-02

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	100.24			
B. Total Acres To Be Converted Indirectly, Or To Receive Services				
C. Total Acres in Site	100.24			
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime and Unique Farmland	8.53			
B. Total Acres Statewide and Local Important Farmland	0			
C. Percentage of Farmland in County or Local Govt. Unit to be Converted	Data Not Available			
D. Percentage of Farmland in Govt. Jurisdiction with Same or Higher Relative Value	Data Not Available			
PART V *(To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland to be Serviced or Converted (Scale of 0 - 100 Points)*	90			

PART VI *(To be completed by Federal Agency) Corridor or Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b & c))*	Max. Points Corridor	Max. Points Other				
1. Area in Nonurban Use	15	15	15			
2. Perimeter in Nonurban Use	10	10	10			
3. Percent of Site Being Farmed	20	20	8			
4. Protection Provided by State and Local Government	20	20	20			
5. Distance from Urban Built-up area	0	15	-			
6. Distance to Urban Support Services	0	15	-			
7. Size of Present Farm Unit Compared to Average	10	10	5			
8. Creation of Non-Farmable Farmland	25	10	10			
9. Availability of Farm Support Services	5	5	2			
10. On-Farm Investments	20	20	5			
11. Effects of Conversion on Farm Support Services	25	10	0			
12. Compatibility with Existing Agricultural Use	10	10	0			
TOTAL CORRIDOR OR SITE ASSESSMENT POINTS		160	75			
PART VII *(To be completed by Federal Agency)*						
Relative Value of Farmland (from Part V above)		100	90			
Total Corridor or Site Assessment (From Part VI above or a local site assessment)		160	75			
TOTAL POINTS *(Total of above 2 lines)*		260	165			

PART VIII *(To be completed by Federal Agency after final alternative is chosen)*

1. Corridor or Site Selected:	2. Date of Selection:	3. Was A Local Site Assessment Used? Yes ☐ No ☐

4. Reason For Selection:

Signature of person completing the Federal Agency parts of this form:	DATE

Wisconsin substitute form AD-1006 6-9-97 Completion instructions: http://www.wi.nrcs.usda.gov/soil/prime/prinotes.html

Farmland Conversion Impact Rating for Project 3 – Kern County

U.S. DEPARTMENT OF AGRICULTURE — Form AD-1006

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	1. Date of Land Evaluation Request: July 24, 2002	2. Sheet 1 of 1
3. Name of Project: EA 442500 Keck's Road 4-Lane PM 7.3/33.5	4. Federal Agency Involved: Federal Highway Administration	
5. Proposed Land Use: Highway Improvements 2 to 4 lane widening	6. County and State: Kern Cty, CA	7. Type of Project: Corridor ✓ Other ☐
PART II *(To be completed by NRCS)*	1. Date Request Received by NRCS: 7-25-02	2. Person Completing the NRCS parts of this form: MARK DAVIS
3. Does the site or corridor contain prime, unique, statewide or local important farmland? Yes ☒ No ☐ (If no, the FPPA does not apply - Do not complete additional parts of this form)	4. Acres Irrigated: 942,400	5. Average Farm Size: 1,473
6. Major Crop(s): Cotton, grapes, almonds, alfalfa, carrots	7. Farmable Land in Government Jurisdiction Acres: 1,044,360 %	8. Amount of Farmland As Defined in FPPA Acres: Not Available %
9. Name of Land Evaluation System Used: CA. Storie Index System	10. Name of Local Site Assessment System: None	11. Date Land Evaluation Returned by NRCS: 7-29-02

PART III *(To be completed by Federal Agency)*	Alternative Site Rating: Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	127.9			
B. Total Acres To Be Converted Indirectly, Or To Receive Services				
C. Total Acres In Site	127.9			
PART IV *(To be completed by NRCS) Land Evaluation Information*				
A. Total Acres Prime and Unique Farmland	89.4			
B. Total Acres Statewide and Local Important Farmland	0			
C. Percentage of Farmland in County or Local Govt. Unit to be Converted	DATA NOT AVAILABLE			
D. Percentage of Farmland in Govt. Jurisdiction with Same or Higher Relative Value	DATA NOT AVAILABLE			
PART V *(To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland to be Serviced or Converted (Scale of 0 - 100 Points)*	77			

PART VI *(To be completed by Federal Agency) Corridor or Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b & c))*	Max. Points Corridor	Max. Points Other				
1. Area in Nonurban Use	15	15	14			
2. Perimeter in Nonurban Use	10	10	9			
3. Percent of Site Being Farmed	20	20	14			
4. Protection Provided by State and Local Government	20	20	20			
5. Distance from Urban Built-up Area	0	15	-			
6. Distance to Urban Support Services	0	15	-			
7. Size of Present Farm Unit Compared to Average	10	10	8			
8. Creation of Non-Farmable Farmland	25	10	5			
9. Availability of Farm Support Services	5	5	4			
10. On-Farm Investments	20	20	10			
11. Effects of Conversion on Farm Support Services	25	10	0			
12. Compatibility with Existing Agricultural Use	10	10	0			
TOTAL CORRIDOR OR SITE ASSESSMENT POINTS		160	71			
PART VII *(To be completed by Federal Agency)*						
Relative Value of Farmland (from Part V above)		100	77			
Total Corridor or Site Assessment (From Part VI above or a local site assessment)		160	71			
TOTAL POINTS *(Total of above 2 lines)*		260	148			

PART VIII *(To be completed by Federal Agency after final alternative is chosen)*		
1. Corridor or Site Selected:	2. Date of Selection:	3. Was A Local Site Assessment Used? Yes ☐ No ☐
4. Reason For Selection:		

Signature of person completing the Federal Agency parts of this form: DATE

Wisconsin substitute form AD-1006 6-9-97 Completion Instructions: http://www.wi.nrcs.usda.gov/soil/prime/prinotes.html



Appendix D Title VI Policy Statement

California Department of Transportation highway projects comply with all Title VI regulations.

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
1120 N STREET
P. O. BOX 942873
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
FAX (916) 654-6608
TTY (916) 653-4086

Flex your power!
Be energy efficient!

January 14, 2005

TITLE VI
POLICY STATEMENT

The California Department of Transportation under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, and age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

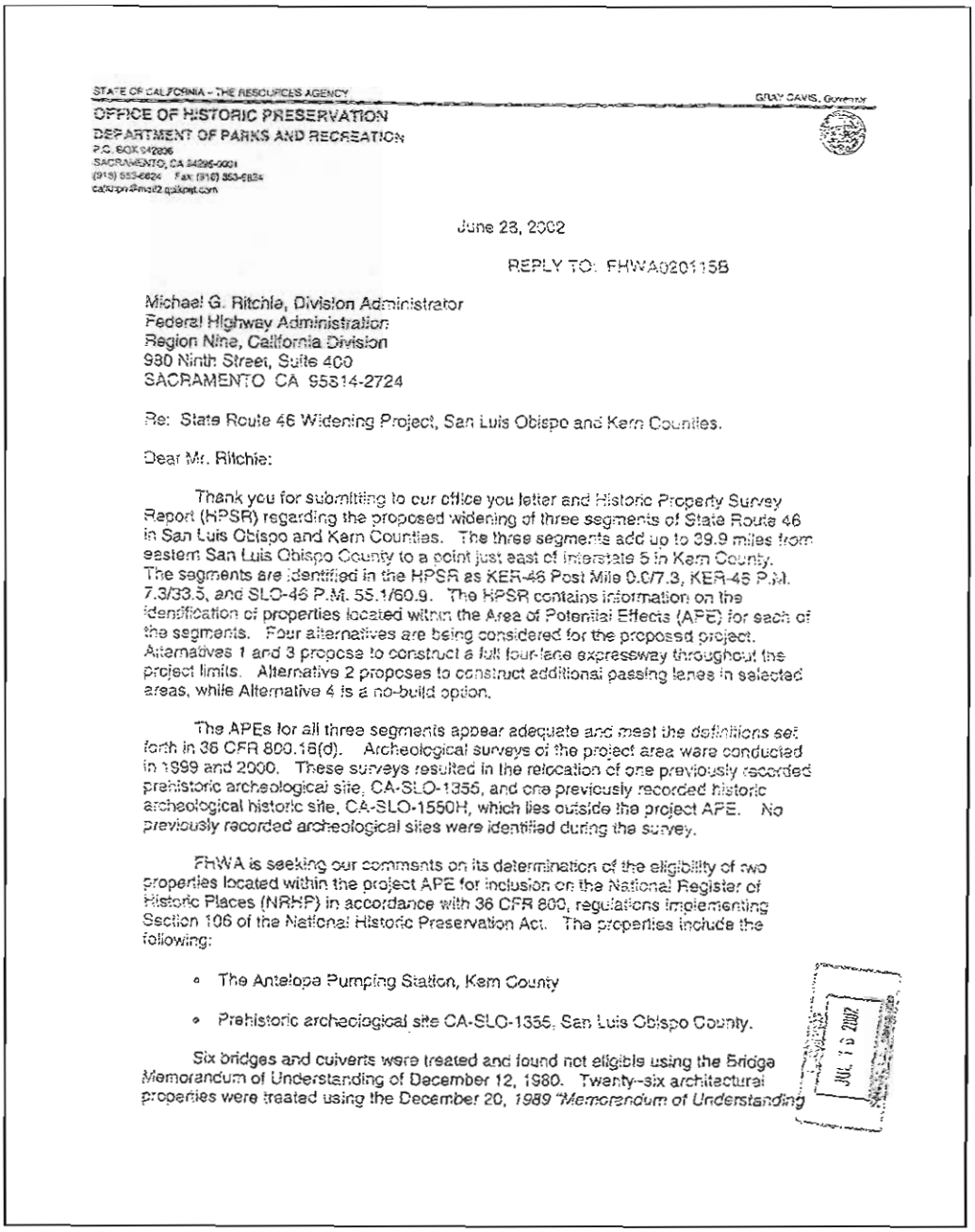
WILL KEMPTON
Director

"Caltrans improves mobility across California"



Appendix E State Historic Preservation Officer Concurrence Letters

A confirmation letter sent by the State Historic Preservation Officer was received by the Federal Highway Administration on July 10, 2002.



STATE OF CALIFORNIA - THE RESOURCES AGENCY GRAY DAVIS, Governor

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO, CA 94296-0001
(916) 653-6624 Fax: (916) 653-6824
calshpo@mail2.quiknet.com

June 28, 2002

REPLY TO: FHWA020115B

Michael G. Ritchie, Division Administrator
Federal Highway Administration
Region Nine, California Division
980 Ninth Street, Suite 400
SACRAMENTO CA 95814-2724

Re: State Route 46 Widening Project, San Luis Obispo and Kern Counties.

Dear Mr. Ritchie:

Thank you for submitting to our office you letter and Historic Property Survey Report (HPSR) regarding the proposed widening of three segments of State Route 46 in San Luis Obispo and Kern Counties. The three segments add up to 39.9 miles from eastern San Luis Obispo County to a point just east of Interstate 5 in Kern County. The segments are identified in the HPSR as KER-46 Post Mile 0.0/7.3, KER-46 P.M. 7.3/33.5, and SLO-46 P.M. 55.1/60.9. The HPSR contains information on the identification of properties located within the Area of Potential Effects (APE) for each of the segments. Four alternatives are being considered for the proposed project. Alternatives 1 and 3 propose to construct a full four-lane expressway throughout the project limits. Alternative 2 proposes to construct additional passing lanes in selected areas, while Alternative 4 is a no-build option.

The APEs for all three segments appear adequate and meet the definitions set forth in 36 CFR 800.16(d). Archeological surveys of the project area were conducted in 1999 and 2000. These surveys resulted in the relocation of one previously recorded prehistoric archeological site, CA-SLO-1355, and one previously recorded historic archeological historic site, CA-SLO-1550H, which lies outside the project APE. No previously recorded archeological sites were identified during the survey.

FHWA is seeking our comments on its determination of the eligibility of two properties located within the project APE for inclusion on the National Register of Historic Places (NRHP) in accordance with 36 CFR 800, regulations implementing Section 106 of the National Historic Preservation Act. The properties include the following:

- The Antelope Pumping Station, Kern County
- Prehistoric archeological site CA-SLO-1355, San Luis Obispo County.

Six bridges and culverts were treated and found not eligible using the Bridge Memorandum of Understanding of December 12, 1980. Twenty-six architectural properties were treated using the December 20, 1989 "Memorandum of Understanding

JUL 15 2002

Regarding Evaluation of Post-1945 Buildings, Moved Pre-1945 Buildings, and Altered Pre-1945 Buildings" and the *"Interim Guidelines – Post-1945 MOU"* (July 1997).

Our review of the submitted HPSR leads us to concur with FHWA's determination that the Antelope Pumping Station is eligible for inclusion on the NRHP under Criteria A and C as defined in 36 CFR 60.4. The property has strong associations with the introduction of new technologies associated with increasing the self-sufficiency of crude oil pipeline operations on the Pacific Coast after World War II. The Antelope Station was the first facility to incorporate this technology and was the prototype for other facilities that were modernized during the 1950s. The property appears to retain sufficient integrity of engineering design, materials, and setting to qualify it for inclusion on the NRHP. We also concur with FHWA's determination that archeological site CA-SLO-1355 is eligible for inclusion on the NRHP under Criterion D as defined in 36 CFR 60.4. The property's features have yielded or are likely to yield information important to history or prehistory.

FHWA is also seeking our comments on its determination of the effects the proposed project will have on historic properties in accordance with 36 CFR 800. FHWA has indicated in its letter that a Finding of Effects document for this project will be forwarded to our office at a later date. We look forward to reviewing this document and providing comments on its finding of the effect the proposed project will have on historic properties within the project APE.

Thank you again for seeking our comments on your project. If you have any questions, please contact staff historian Clarence Caesar at (916) 653-8902.

Sincerely,

Dr. Knox Mellon
State Historic Preservation Officer

STATE OF CALIFORNIA – THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, Governor

OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
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(916) 653-6624 Fax: (916) 653-9824
calshpo@ohp.parks.ca.gov
www.ohp.parks.ca.gov

1 December 2003

In Reply Refer To
FHWA020115B

Gary N. Hamby
Division Administrator
California Division
Federal Highway Administration
650 Capitol Mall, Suite 4-100
Sacramento, California 95814

RE: HDA-CA, FILE NO. 05-SLO-46, PM 55.1/60.9, 06-KER-46, PM 0.0/7.3, 06-KER-46, PM 7.3/33.5, DOCUMENT NOS. P45084 AND P46342 [Further Section 106 Consultation on the Widening and Rehabilitation of Portions of State Route 46, Kern and San Luis Obispo Counties, California]

Dear Mr. Hamby,

This letter is a response to your submissions of the February 2003 *Finding of Effect, Highway 46 Four-Lane Projects, San Luis Obispo and Kern Counties, California* (Finding of Effect), an undated draft *Memorandum of Agreement between the Federal Highway Administration and the California State Historic Preservation Officer Regarding the Highway 46 Four-Lane Project, San Luis Obispo and Kern Counties, California* (draft MOA), the February 2003 draft *Data Recovery Plan for CA-SLO-1355, a Prehistoric Archaeological Site on the SLO/KER Four-Lane Project, San Luis Obispo County, California* (draft Data Recovery Plan), and an undated Supplemental Historic Property Survey Report (Supplemental HPSR).

You request in your letters of 12 June and 18 August 2003 that I concur that

(1) the Federal Highway Administration's (FHWA) revision to the undertaking's area of potential effects (APE) is appropriate to the recent redesign of the intersection of State Routes 46 and 33,
(2) the FHWA's efforts to "involve the public, including Native Americans, are sufficient,"
(3) the FHWA's efforts to "identify historic properties in the enlarged portion of the APE are adequate,"
(4) the undertaking will adversely affect historic properties,
(5) the undertaking will not adversely affect the Lost Hills School and the Antelope Pumping Station, and
(6) the implementation of the draft Data Recovery Plan under the terms of the draft MOA will mitigate the undertaking's "adverse impacts" on archaeological site CA-SLO-1355.

I concur, on the basis of my review of the Supplemental HPSR, that the FHWA's revision to the undertaking's original APE to accommodate the recent redesign of the intersection of State Routes 46 and 33 is adequate pursuant to 36 CFR § 800.4(a)(1). I understand the APE to be the area that the FHWA delimits with a bold dashed line, but does not label, in Figures 3a and 3b (*Revision to Area of Potential Effects Route, 33/46 Intersection Realignment, Kern 46 Four-Lane Project*) of the Supplemental HPSR.

I concur that the FHWA's efforts to involve the public and to identify other consulting parties, pursuant to 36 CFR § 800.3(e) and (f), with regard to the redesign of the subject intersection is appropriate to the scale of the modification to the undertaking.

I concur that the FHWA's effort to identify historic properties in the new addition to the undertaking's APE that accommodates the redesign of the subject intersection is adequate pursuant to 36 CFR § 800.4(b).

I concur with the FHWA's finding that the undertaking, as presently proposed, will adversely affect historic properties pursuant to 36 CFR § 800.5(d)(2).

I concur that the implementation and completion of the draft Data Recovery Plan with the FHWA's 9 September 2003 revisions to that document (email transmittal from Brian Wickstrom, California Department of Transportation Central Region Associate Environmental Planner, Archaeology, to Mike McGuirt of my staff) will in part resolve the undertaking's adverse effect on archaeological site CA-SLO-1355.

The draft MOA is presently in review. I anticipate that the executed document will include a stipulation to implement measures for the protection of the Antelope Pumping Station.

Please direct any questions or concerns that you may have to Project Review Unit archaeologist Mike McGuirt at 916.653.8920 or at mmcguirt@ohp.parks.ca.gov, or historian Clarence Caesar at 916.653.8902 or at ccaes@ohp.parks.ca.gov.

Sincerely,

Dr. Knox Mellon
State Historic Preservation Officer

WKM:mdm

MEMORANDUM OF AGREEMENT
BETWEEN THE FEDERAL HIGHWAY ADMINISTRATION AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING THE HIGHWAY 46 FOUR-LANE PROJECT,
SAN LUIS OBISPO AND KERN COUNTIES, CALIFORNIA

WHEREAS, the Federal Highway Administration (FHWA) has determined that the Highway 46 Four-Lane Project (Undertaking), on State Route 46 (05-SLO-46, PM 55.1/60.9; 06-KER-46, 0.0/33.5) through San Luis Obispo and Kern Counties, California, will have an adverse effect on archaeological site CA-SLO-1355 and may have an adverse effect on the Antelope Pumping Station, properties determined eligible for inclusion in the National Register of Historic Places (National Register) (historic properties); and

WHEREAS, the FHWA has consulted with the California State Historic Preservation Officer (SHPO) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 USC 470f) (Act), and notified the Advisory Council on Historic Preservation (ACHP) of the adverse effect finding in accordance with 36 CFR § 800.6(a)(1); and

WHEREAS, the FHWA in consultation with the SHPO, has determined that the potentially adverse effect of the Undertaking on the Antelope Pumping Station will be avoided by implementing the measures set forth in Stipulation I. A., below, of this Memorandum of Agreement (MOA); and

WHEREAS, the FHWA, in consultation with the SHPO, has thoroughly considered alternatives, has determined that the adverse effect of the Undertaking on archaeological site CA-SLO-1355 cannot be avoided, and has further determined that it will resolve the adverse effect of the Undertaking on this historic property by executing and implementing this MOA; and

WHEREAS, the FHWA has consulted with the Salinan Nation Cultural Preservation Association (SNCPA) regarding the proposed Undertaking and its effects on the historic property, and has invited the SNCPA to concur in this MOA; and

WHEREAS, the California Department of Transportation (Caltrans) has participated in the consultation and has been invited to concur in this MOA;

NOW, THEREFORE, the FHWA and the SHPO agree that the Undertaking shall be implemented in accordance with the following stipulations in order to take into account the effects of the Undertaking on historic properties, and that these stipulations shall govern the Undertaking and all of its parts until this MOA expires or is terminated.

STIPULATIONS

The FHWA shall ensure that the following stipulations are implemented:

I. TREATMENT OF CA-SLO-1355 AND THE ANTELOPE PUMPING STATION

A. Antelope Pumping Station

The FHWA will ensure that the prospectively adverse effects of the Undertaking on the Antelope Pumping Station will be avoided by requiring Caltrans to place this historic property within a temporary Environmentally Sensitive Area (ESA) for the duration of construction. The ESA boundary shall be established as the existing 7-ft high cyclone fence around the 50 x 50 m area of the pump house and storage tanks. Caltrans shall ensure the integrity of the ESA and protection of the Antelope Pumping Station by clearly describing and illustrating this ESA on plans specifications, and estimates prepared to guide construction of the Undertaking; by notifying the contractor that no Undertaking- related work shall be conducted within the ESA; and by including in appropriate construction contracts a clause that imposes both a suitable penalty for any intrusion into the ESA by the contractor, and that requires the contractor to pay for repair of any damage to the Antelope Pumping Station caused by such intrusion or for its reconstruction, whichever condition may apply. Caltrans shall ensure that a member of its Environmental Planning staff (monitor) periodically inspects the construction area for the duration of construction to ensure that the ESA has not been breached. The monitor shall immediately report any breach of the ESA by the contractor to the designated Resident Engineer, and within 48 hours following any breach, to the FHWA and the SHPO. The parties to this MOA acknowledge that any breach of the ESA herein prescribed may result in termination of the MOA.

B. Treatment of CA-SLO-1355

1. The FHWA shall ensure that the adverse effect of the Undertaking on CA-SLO-1355 is resolved in part by implementing and completing the "Data Recovery Plan for CA-SLO-1355, a Prehistoric Archaeological Site on the SLO/KER Four-Lane Project, San Luis Obispo County, California" (Tiley and Basgall 2003), as revised and supplemented by documentation submitted to the SHPO by Caltrans on 9 September, 2003 (DRP). This DRP appears as Attachment 1 to this MOA.

2. The FHWA will not authorize any Undertaking-related activity that it determines could result in an adverse effect to the historic property to proceed until all fieldwork specified in the DRP has been completed.

3. If at any time following execution of this MOA by the FHWA and the SHPO, the FHWA, or Caltrans through the FHWA, proposes to modify the DRP, the FHWA will promptly notify the SHPO and SNCPA concurrently in writing about the proposed modifications and request each party to comment on the proposal. The SHPO and the SNCPA will have 15 days from receipt of the FHWA notification to comment in writing to the FHWA. Failure of these parties to respond

within this time frame shall not preclude the FHWA from modifying the DRP as proposed. The FHWA will provide SHPO and the SNCPA with written documentation indicating whether and how the DRP will be modified in accordance with any SHPO and SNCPA comments. Unless SHPO or the SNCPA object to this documentation in writing to the FHWA within 10 days following receipt, the FHWA may modify the DRP as the FHWA deems appropriate, and proceed to implement the modified DRP.

II. REPORTING REQUIREMENTS

A. Within 12 months after the FHWA has determined that all fieldwork conducted pursuant to stipulation I. has been satisfactorily completed, the FHWA will ensure preparation, and concurrent distribution to the SHPO and to the SNCPA, should the SNCPA so request, of a written draft technical report that documents the results of implementing the DRP. The reviewing parties will be afforded 30 days following receipt of the draft technical report to submit any written comments to the FHWA. Failure of these parties to respond within this time frame shall not preclude the FHWA from authorizing revisions to the draft technical report as the FHWA may deem appropriate. The FHWA will provide the reviewing parties with written documentation indicating whether and how the draft technical report will be modified in accordance with any reviewing party comments. Unless the reviewing parties object to this documentation in writing to the FHWA within 30 days following receipt, the FHWA may modify the draft technical report as the FHWA may deem appropriate. Thereafter, the FHWA may issue the technical report in final form and distribute this document in accordance with paragraph B. of this stipulation.

B. Copies of the final technical report documenting the results of DRP implementation will be distributed by the FHWA to the SHPO, to the SNCPA, should the SCNPA so request, and to the appropriate California Historic Resources Information Survey (CHRIS) Regional Information Center, subject to the terms of stipulation VI.B.

C. The FHWA will ensure that, subject to the terms of stipulation VI.B., an exhibit and non-technical pamphlet are prepared in order to provide the Native American community and the general public with the findings presented in the technical report. The pamphlet will be written for the general public and Grades 4 to 6 and will accompany the exhibit. FHWA will invite the SCNPA to participate in the development and presentation of the exhibit and pamphlet.

III. DISCOVERIES AND UNANTICIPATED EFFECTS

The FHWA shall notify the SHPO and the SNCPA as soon as practicable if it appears that either implementation of the DRP or the Undertaking will affect a previously unidentified property that may be eligible for the National Register, or affect a known historic property in an unanticipated manner. The FHWA will suspend DRP implementation or construction of the Undertaking, as applicable, in the vicinity of the discovery, and will take all reasonable measures to avoid or minimize harm to the property until the FHWA concludes its compliance with either 36 CFR § 800.13(b)(1) or 36 CFR § 800.13(b)(3), as applicable. The FHWA may assume that the affected property is eligible for the National Register, for purposes of this MOA.

IV. NATIVE AMERICAN CONSULTATION

The FHWA has consulted with the SNCPA regarding the proposed Undertaking and its effect on the historic property, will continue to consult with the SNCPA, and will afford the SNCPA, should the SNCPA so desire, the opportunity to participate in the implementation of this MOA and of the Undertaking. The FHWA will proceed in this manner even if the SNCPA declines to concur in this MOA. Such participation by the SNCPA may include, but is not necessarily limited to, monitoring during the archaeological data recovery field work prescribed in stipulation I., and during implementation of the Undertaking. Should the SNCPA agree to participate as herein set forth, the FHWA, in cooperation with Caltrans, will make an effort to reach a mutually acceptable agreement with the SNCPA regarding the manner in which the SNCPA will participate in the implementation of this MOA and the Undertaking, and regarding any time frames or other matters that may govern the nature, scope and frequency of such participation.

V. TREATMENT OF HUMAN REMAINS OF NATIVE AMERICAN ORIGIN

The parties to this MOA agree that Native American burials and related items discovered during implementation of the terms of this MOA and of the Undertaking will be treated in accordance with the requirements of § 7050.5(b) of the California Health and Safety Code. If, pursuant to § 7050.5(c) of the California Health and Safety Code, the county coroner/medical examiner determines that the human remains are or may be of Native American origin, then the discovery shall be treated in accordance with the provisions of §§ 5097.98 (a) - (d) of the California Public Resources Code. FHWA will ensure that to the extent permitted by applicable law and regulation, the views of the SNCPA and the Most Likely Descendant(s) are taken into consideration when decisions are made about the disposition of other Native American archaeological materials and records.

VI. ADMINISTRATIVE PROVISIONS

A. Standards

1. Professional Qualifications Standards. All activities prescribed by stipulations I.B., III, IV, and V of this MOA shall be carried out under the authority of FHWA by or under the direct supervision of a person or persons meeting at a minimum the Secretary of Interior's *Professional Qualifications Standards* (48 FR 44738-39) (PQS) in the appropriate disciplines. However, nothing in this stipulation may be interpreted to preclude FHWA or any agent or contractor thereof from using the properly supervised services of persons who do not meet the PQS.

2. Documentation Standards. All activities prescribed by stipulations I.B., III., IV. and V. of this MOA shall reasonably conform to *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716-44740) and to applicable standards and guidelines established by SHPO.

3. Curation and Curation Standards. The FHWA shall ensure that, to the extent permitted under §§ 5097.98. and 5097.991. of the California Public Resources Code, the materials and records resulting from the activities prescribed by stipulations I.B., III., IV., and V. of this MOA are curated in accordance with 36 CFR Part 79.

B. Confidentiality

The parties to this MOA acknowledge that the historic property covered by this MOA is subject to the provisions of § 304 of the National Historic Preservation Act of 1966 and § 6254.10 of the California Government Code (Public Records Act), relating to the disclosure of archeological site information and, having so acknowledged, will ensure that all actions and documentation prescribed by this MOA are consistent with § 304 of the National Historic Preservation Act of 1966 and § 6254.10 of the California Government Code.

C. Resolving Objections

1. Should any party to this MOA, or the SNCPA if the SNCPA is not a concurring party, object to the manner in which the terms of this MOA are implemented, or to any documentation prepared in accordance with and subject to the terms of this MOA, the FHWA shall immediately notify the other parties to this MOA of the objection, and consult with the objecting party and with the other parties to this MOA for no more than 30 days to resolve the objection. The FHWA shall reasonably determine when this consultation will commence.

2. If the objection is resolved during the 30 day consultation period, the FHWA may proceed with the disputed action in accordance with the terms of such resolution.

3. If, after initiating such consultation, the FHWA determines that the objection cannot be resolved through consultation, the FHWA shall forward all documentation relevant to the objection to the ACHP, including the FHWA's proposed response to the objection, with the expectation that the ACHP will within thirty (30) days after receipt of such documentation:

a. advise the FHWA that the ACHP concurs in the FHWA's proposed response to the objection, whereupon the FHWA will respond to the objection accordingly; or

b. provide the FHWA with recommendations, which the FHWA will take into account in reaching a final decision regarding its response to the objection; or

c. notify the FHWA that the objection will be referred for comment pursuant to 36 CFR § 800.7(c), and proceed to refer the objection and comment. The FHWA shall take the resulting comment into account in accordance with 36 CFR 800.7(c)(4) and Section 110(l) of the NHPA.

4. Should the ACHP not exercise one of the foregoing options within 30 days after receipt of all pertinent documentation, the FHWA may assume the ACHP's concurrence in its proposed response to the objection.

5. The FHWA shall take into account hereunder any ACHP recommendation or comment, any comments or recommendations from the parties to the MOA, and any comments or recommendations from the SNCPA if the SNCPA is not a concurring party to this MOA, in reaching a final decision regarding the objection. The FHWA's responsibility to carry out all actions under this MOA that are not the subjects of the objection shall remain unchanged.

6. The FHWA shall provide all parties to this MOA, to the ACHP when ACHP comments have been issued hereunder, and to the SNCPA if the SNCPA is not a concurring party to this MOA, with a copy of its final written decision regarding any objection addressed pursuant to this section of stipulation VI.

7. The FHWA may authorize any action subject to objection under this stipulation to proceed after the objection has been resolved in accordance with the terms of this section of stipulation VI.

D. Public Objection

At any time during implementation of the terms of this MOA, should a member of the public raise an objection pertaining to the manner of such implementation, the FHWA shall immediately notify the other MOA parties, and the SNCPA if the SNCPA is not a concurring party to the MOA, in writing of the objection and take the objection into consideration. The FHWA shall consult with the objecting party and, if the objecting party so requests, with the other parties to this MOA, for no more than 15 days. Within 15 days following closure of this consultation period, the FHWA will render a decision regarding the objection, and notify the other parties of its decision in writing. In reaching its decision, the FHWA will take all comments from the other parties into consideration. The FHWA's decision regarding resolution of the objection will be final.

E. Amendments

1. Any party to this MOA, or the SNCPA if the SNCPA is not a concurring party, may propose that this MOA be amended, whereupon the parties to this MOA and the SNCPA if it is not a concurring party, will consult for no more than 30 days to consider such amendment. The amendment process shall comply with 36 CFR §§ 800.6(c)(1) and 800.6(c)(7). This MOA may be amended only upon the written agreement of the signatory parties. If it is not amended, this MOA may be terminated by either signatory party in accordance with section F, below, of this stipulation.

2. The DRP may be amended through consultation of the parties to this MOA and the SNCPA, if the SNCPA is not a concurring party to this MOA, without amending the MOA proper.

F. Termination

1. If this MOA is not amended as provided for in Section E., above, of this stipulation, or if either signatory party proposes termination of this MOA for other reasons, the signatory party proposing termination shall, in writing, notify the other parties to this MOA and the SNCPA, if the SNCPA is not a concurring party to this MOA, explain the reasons for proposing termination, and consult with the other parties for at least 30 days to seek alternatives to termination.

2. Should such consultation result in an agreement on an alternative to termination, then the parties shall proceed in accordance with the terms of that agreement.

3. Should such consultation fail, the signatory party proposing termination may terminate this MOA by promptly notifying the other parties to this MOA, and the SNCPA, if the SNCPA is not a concurring party, in writing. Termination hereunder shall render this MOA without further force or effect.

4. If this MOA is terminated hereunder, and if the FHWA determines that the Undertaking will nonetheless proceed, then the FHWA shall either consult in accordance with 36 CFR § 800.6 to develop a new MOA or request the comments of the ACHP pursuant to 36 CFR Part 800.

G. Duration of the MOA

1. Unless terminated pursuant to paragraph F., above, of this stipulation, or unless it is superseded by an amended MOA, this MOA will be in effect following execution by the signatory parties until the FHWA, in consultation with the other parties to this MOA and the SNCPA if the SNCPA is not a concurring party, determines that all of its stipulations have been satisfactorily fulfilled. This MOA will terminate and have no further force or effect on the day that the FHWA notifies the other parties to this MOA and the SNCPA if the SNCAP is not a concurring party, in writing of its determination that all stipulations of this MOA have been satisfactorily fulfilled.

2. The terms of this MOA shall be satisfactorily fulfilled within 10 years following the date of execution by the signatory partiers. If the FHWA determines that this requirement cannot be met, the parties to this MOA and the SNCPA if the SNCPA is not a concurring party, will consult to reconsider its terms. Reconsideration may include continuation of the MOA as originally executed, amendment, or termination. In the event of termination, the FHWA will comply with Stipulation VI.F.4. if it determines that the Undertaking will proceed notwithstanding termination of this MOA.

3. If this Undertaking has not been implemented within 4 years following execution of this MOA by the signatory parties, this MOA shall automatically terminate and have no further force or effect. In such event, the FHWA shall notify the other parties to this MOA and the SNCPA, if the SNCPA is not a concurring party, in writing, and if the FHWA chooses to continue with the Undertaking, it shall reinitiate review of the Undertaking in accordance with 36 CFR Part 800.

H. Effective Date of this MOA. This MOA will take effect immediately upon execution by both signatory parties.

EXECUTION of this MOA by the FHWA and the SHPO, its transmittal by the FHWA to the ACHP in accordance with 36 CFR § 800.6(b)(1)(iv), and subsequent implementation of its terms, shall evidence, pursuant to 36 CFR § 800.6(c), that this MOA is an agreement with the ACHP for purposes of Section 110(l) of the NHPA, and shall further evidence that the FHWA has afforded the ACHP an opportunity to comment on the Undertaking and its effects on historic properties, and that the FHWA has taken into account the effects of the Undertaking on historic properties.

SIGNATORY PARTIES:

For David A. Nicol, Acting Division Administrator — Date 2/05/04
FHWA California Division

Dr. Knox Mellon — Date 2/18/04
California State Historic Preservation Officer

CONCURRING PARTY:

Mike Leonardo — Date 12/31/03
Caltrans District 6 Director, Fresno

CONSULTING PARTY:

Jose Freeman, President — Date
Salinan Nation Cultural Preservation Association

Memorandum of Agreement Between the Federal Highway Administration and the California State Historic Preservation Officer Regarding the Highway 46 Four-Lane Projects, San Luis Obispo and Kern Counties, California.
December 2003

8

TOTAL P.10

Wetlands

Minor impacts to wetlands and "Other Waters of the U.S." would be mitigated via wetland creation and/or purchase of wetland acres approved by the U.S. Army Corps of Engineers. Minor impacts to wetland and "Other Waters of the U.S." crossings are expected to be within the thresholds covered under Nationwide Permit #14. A California Department of Fish and Game Streambed Alteration Agreement would be obtained for small streams.

Vegetation and Wildlife

Land acquisition, which would be required as compensation for the loss of habitat, would apply only to newly disturbed habitat and not to previously paved or disturbed areas within the roadway, shoulder areas, or right-of-way.

Priorities in considering site selection for land acquisition and other recommended actions are as follows:

1. The proposed mitigation site would be of equal or superior habitat to that of the disturbed habitat.

2. The proposed mitigation site would contain the aspects vital to the continued existence of the San Joaquin kit fox, giant kangaroo rat, Tipton kangaroo rat, blunt-nosed leopard lizard, and San Joaquin antelope squirrel.

3. The proposed mitigation site would be of similar habitat type and would attempt to include saltbush scrub, valley and foothill grasslands, and non-native grasslands.

4. The proposed mitigation site would maintain close geographical connection to disturbed areas. The proposed mitigation site would be natural land in the vicinity of western Kern County or eastern San Luis Obispo County.

5. The proposed mitigation site would attempt to enhance movement corridors, link natural lands, and protect existing listed species habitat.

Threatened and Endangered Species

Habitat mitigation for threatened and endangered species in San Luis Obispo and Kern counties is proposed to reduce project effects on the California red-legged frog and the San Joaquin kit fox. Wildlife pre-construction surveys in appropriate habitats would also be conducted to identify listed species presence or important habitat features for listed species.

Impacts to the California red-legged frog would be mitigated onsite or close to the project via habitat preservation or habitat creation.

If populations of San Joaquin woolly-threads are identified within the project area, their locations would be avoided with temporary fencing or prominently flagged to prevent inadvertent encroachment by vehicles and equipment during construction. If the populations cannot be avoided, surface disturbance should be scheduled after seed set and before germination. Collection of seeds may also be required, with reseeding at the site after construction activity during seasonal time frames and weather conditions favorable for germination and growth. Topsoil may be stockpiled and replaced after project completion. Mitigation in the form of a conservation easement or land acquisition for permanent protection may further reduce impacts to these species.

Final mitigation measures on endangered or threatened species would be mitigated by implementation of the measures specified in the Biological Opinions rendered by the U.S. Fish and Wildlife Service and the California Department of Fish and Game and agreed upon by both the Federal Highway Administration and Caltrans.

Historic and Archaeological Preservation

During project construction, an Environmental Sensitive Area would be established to protect the portions of the Tosco Antelope Pumping Station that contributes to the eligibility of the site for the National Register of Historic Places. The Environmental Sensitive Area would encompass the eligibility elements of the site (the pump station and adjacent tanks) as well as a buffer area extending about 7.62 meters (25 feet) to the southeast and southwest and 15 meters (50 feet) to the northwest and northeast. Establishment of an Environmental Sensitive Area would be incorporated into project planning and would be included in the project's Plans, Specifications, and Estimates. The Environmental Sensitive Area would be sectioned off with orange fencing to exclude all construction activities from that area. The area would also be monitored by Caltrans cultural resources staff during construction to ensure the integrity of the fenced boundary and the absence of any construction activities.

Paleontology

Because of the potential for uncovering scientifically important vertebrate remains during excavation in the project area, paleontological monitoring is warranted using California funds only. Before construction, a qualified professional paleontologist would be retained to provide monitoring and salvage services. The paleontologist would develop a mitigation plan that addresses in detail the procedures for collecting vertebrate and other scientifically unique fossils, including recording pertinent geographic and stratigraphic information, and stabilization (preservation) methods for the specimens. The

paleontologist would also make provisions for the remains to be turned over to the collections of an appropriate repository and catalogued for future scientific study.

Monitoring for sensitive fossils would be conducted where excavation or road cuts would disturb *in situ* (in place) sedimentary rock of the Temblor, Monterey, or Paso Robles formations. Monitoring would also be conducted where excavation deeper than 2 meters (6 feet) would disturb Quaternary sediments. Scientifically important fossils would be recovered and preserved, and vertebrate microfossils would be recovered by bulk sediment sampling. To avoid delays, bulk sampling could be completed before construction excavation. When the monitoring, collection and specimen processing are done, the paleontologist would produce a final report detailing the findings of the mitigation program.

Hazardous Waste Sites

It was recommended that, before purchasing of right-of-way for sites identified as having recognized environmental concerns, Caltrans conduct a phase II assessment of the subsurface soil and groundwater if appropriate. Inspection for presence of lead-based paint and asbestos would be completed during a Preliminary Site Investigation. The inspection report would document the proper health and safety procedures and regulatory standards that must be followed to reduce hazardous exposure during demolition of such structures.

Visual

With the proposed mitigation, the landscape and the factors that contribute to the area's existing view quality would "absorb" much of the visual changes brought on by this project. For mitigation, cut and fill slopes along State Route 46 within the project limits would receive slope rounding. Rounding edges at the top of cuts would naturalize the look of the cut. Caltrans recommends that slopes be permanently stabilized after grading work to reduce the amount of erosion. Slopes would be cut or filled at a 2-to-1 ratio or flatter to help stabilize slopes and create visual cohesion with the existing landscape. Slopes flatter than 4-to-1 would allow maintenance personnel to access the right-of-way with heavy equipment to mow weeds, remove trash and keep the right-of-way clean. Caltrans also recommends saving topsoil and applying it to cut slopes and other disturbed areas to enhance re-vegetation. The areas within the right-of-way would have the top 15.2 centimeters (6 inches) of soil and existing organic material bladed off and stockpiled to be reapplied over all disturbed areas at the conclusion of construction.

Native trees would be replaced at a 3-to-1 ratio. Affected property owners would be compensated for the loss of landscaping and encouraged to replant and establish landscaping. Colorful vegetative growth would soften the visual impacts to the newly

constructed highway. Seed mixes would, as closely as possible, resemble and blend in with existing vegetation. All disturbed areas of the new alignments of State Route 46 would receive erosion control and storm water runoff control measures.

The project is subject to Executive Order 13112, which prevents the introduction and spread of plants and animals not native to the United States. FHWA implements Executive Order 13112 on highway rights of way. Caltrans require material sites to be inspected and certified free of noxious weeds before materials can be moved onto a project. Earthmoving equipment would be cleaned before being moved onto the project site. Only native seed certified free of weeds would be used for erosion control, and Caltrans has in place procedures for certifying and identifying weed-free straw for temporary erosion control. These measures along with the planting of native vegetation species would ensure that the provisions of Executive Order 13112 are maintained on this project.

Appendix G U.S. Fish and Wildlife Service Species Lists

Federal Endangered and Threatened Species that may be Affected by Projects in the LOST HILLS 7 1/2 Minute Quad

Database Last Updated: March 1, 2004
Today's Date is: March 9, 2004

Listed Species

Invertebrates
Branchinecta lynchi - vernal pool fairy shrimp (T)
Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)
Fish
Hypomesus transpacificus - delta smelt (T)
Amphibians
Rana aurora draytonii - California red-legged frog (T)
Reptiles
Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)
Thamnophis gigas - giant garter snake (T)
Birds
Haliaeetus leucocephalus - bald eagle (T)
Mammals
Dipodomys ingens - giant kangaroo rat (E)
Dipodomys nitratoides nitratoides - Tipton kangaroo rat (E)
Vulpes macrotis mutica - San Joaquin kit fox (E)
Plants
Caulanthus californicus - California jewelflower (E)
Monolopia congdonii (=Lembertia congdonii) - San Joaquin woolly-threads (E)

Species of Concern

Invertebrates
Linderiella occidentalis - California linderiella fairy shrimp (SC)
Lytta molesta - molestan blister beetle (SC)
Fish
Pogonichthys macrolepidotus - Sacramento splittail (SC)
Spirinchus thaleichthys - longfin smelt (SC)
Amphibians
Spea hammondii - western spadefoot toad (SC)
Reptiles
Clemmys marmorata marmorata - northwestern pond turtle (SC)
Clemmys marmorata pallida - southwestern pond turtle (SC)
Masticophis flagellum ruddocki - San Joaquin coachwhip (=whipsnake) (SC)
Phrynosoma coronatum frontale - California horned lizard (SC)
Birds
Agelaius tricolor - tricolored blackbird (SC)
Athene cunicularia hypugaea - western burrowing owl (SC)

Branta canadensis leucopareia - Aleutian Canada goose (D)
Buteo regalis - ferruginous hawk (SC)
Calypte costae - Costa's hummingbird (SC)
Carduelis lawrencei - Lawrence's goldfinch (SC)
Chaetura vauxi - Vaux's swift (SC)
Charadrius montanus - mountain plover (SC)
Elanus leucurus - white-tailed (=black shouldered) kite (SC)
Empidonax traillii brewsteri - little willow flycatcher (CA)
Falco peregrinus anatum - American peregrine falcon (D)
Lanius ludovicianus - loggerhead shrike (SC)
Melanerpes lewis - Lewis' woodpecker (SC)
Numenius americanus - long-billed curlew (SC)
Plegadis chihi - white-faced ibis (SC)
Selasphorus rufus - rufous hummingbird (SC)
Toxostoma redivivum - California thrasher (SC)

Mammals

Ammospermophilus nelsoni - San Joaquin (=Nelson's) antelope squirrel (CA)
Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)
Dipodomys nitratoides brevinasus - short-nosed kangaroo rat (SC)
Eumops perotis californicus - greater western mastiff-bat (SC)
Myotis ciliolabrum - small-footed myotis bat (SC)
Myotis volans - long-legged myotis bat (SC)
Myotis yumanensis - Yuma myotis bat (SC)
Onychomys torridus ramona - Southern grasshopper mouse (SC)
Onychomys torridus tularensis - Tulare grasshopper mouse (SC)
Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Eriastrum hooveri - Hoover's eriastrum (= woolly-star) (D)
Layia munzii - Munz's tidy-tips (SC)

Species with Critical Habitat Proposed or Designated in this Quad

None

Federal Endangered and Threatened Species that may be Affected by Projects in the SHALE POINT 7 1/2 Minute Quad

Database Last Updated: March 1, 2004
Today's Date is: March 9, 2004

Listed Species

Invertebrates
Branchinecta lynchi - vernal pool fairy shrimp (T)
Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)
Fish
Hypomesus transpacificus - delta smelt (T)
Amphibians
Rana aurora draytonii - California red-legged frog (T)
Reptiles
Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)
Thamnophis gigas - giant garter snake (T)
Birds
Gymnogyps californianus - California condor (E)
Haliaeetus leucocephalus - bald eagle (T)
Mammals
Dipodomys ingens - giant kangaroo rat (E)
Dipodomys nitratoides nitratoides - Tipton kangaroo rat (E)
Vulpes macrotis mutica - San Joaquin kit fox (E)

Proposed Species

Amphibians
Ambystoma californiense - California tiger salamander (PT)

Species of Concern

Invertebrates
Linderiella occidentalis - California linderiella fairy shrimp (SC)
Lytta molesta - molestan blister beetle (SC)
Fish
Pogonichthys macrolepidotus - Sacramento splittail (SC)
Spirinchus thaleichthys - longfin smelt (SC)
Amphibians
Spea hammondii - western spadefoot toad (SC)
Reptiles
Anniella pulchra pulchra - silvery legless lizard (SC)
Clemmys marmorata marmorata - northwestern pond turtle (SC)
Clemmys marmorata pallida - southwestern pond turtle (SC)
Masticophis flagellum ruddocki - San Joaquin coachwhip (=whipsnake) (SC)
Phrynosoma coronatum frontale - California horned lizard (SC)
Birds
Agelaius tricolor - tricolored blackbird (SC)
Athene cunicularia hypugaea - western burrowing owl (SC)
Baeolophus inornatus - oak titmouse (SLC)
Buteo regalis - ferruginous hawk (SC)

Calypte costae - Costa's hummingbird (SC)
Carduelis lawrencei - Lawrence's goldfinch (SC)
Chaetura vauxi - Vaux's swift (SC)
Charadrius montanus - mountain plover (SC)
Elanus leucurus - white-tailed (=black shouldered) kite (SC)
Empidonax traillii brewsteri - little willow flycatcher (CA)
Falco peregrinus anatum - American peregrine falcon (D)
Lanius ludovicianus - loggerhead shrike (SC)
Melanerpes lewis - Lewis' woodpecker (SC)
Numenius americanus - long-billed curlew (SC)
Plegadis chihi - white-faced ibis (SC)
Selasphorus rufus - rufous hummingbird (SC)
Toxostoma lecontei macmillanorum - San Joaquin LeConte's thrasher (SC)
Toxostoma redivivum - California thrasher (SC)

Mammals

Ammospermophilus nelsoni - San Joaquin (=Nelson's) antelope squirrel (CA)
Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)
Dipodomys nitratoides brevinasus - short-nosed kangaroo rat (SC)
Eumops perotis californicus - greater western mastiff-bat (SC)
Myotis ciliolabrum - small-footed myotis bat (SC)
Myotis evotis - long-eared myotis bat (SC)
Myotis thysanodes - fringed myotis bat (SC)
Myotis volans - long-legged myotis bat (SC)
Myotis yumanensis - Yuma myotis bat (SC)
Onychomys torridus ramona - Southern grasshopper mouse (SC)
Onychomys torridus tularensis - Tulare grasshopper mouse (SC)
Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Eriogonum temblorense - Temblor buckwheat (SC)

Federal Endangered and Threatened Species that may be Affected by Projects in the EMIGRANT HILL 7 1/2 Minute Quad

Database Last Updated: March 1, 2004
Today's Date is: March 9, 2004

Listed Species

Invertebrates
Branchinecta lynchi - vernal pool fairy shrimp (T)
Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)
Fish
Hypomesus transpacificus - delta smelt (T)
Amphibians
Rana aurora draytonii - California red-legged frog (T)
Reptiles
Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)
Thamnophis gigas - giant garter snake (T)
Birds
Gymnogyps californianus - California condor (E)
Haliaeetus leucocephalus - bald eagle (T)
Mammals
Dipodomys ingens - giant kangaroo rat (E)
Vulpes macrotis mutica - San Joaquin kit fox (E)
Plants
Caulanthus californicus - California jewelflower (E)

Proposed Species

Amphibians
Ambystoma californiense - California tiger salamander (PT)

Species of Concern

Invertebrates
Linderiella occidentalis - California linderiella fairy shrimp (SC)
Lytta molesta - molestan blister beetle (SC)
Fish
Pogonichthys macrolepidotus - Sacramento splittail (SC)
Spirinchus thaleichthys - longfin smelt (SC)
Amphibians
Spea hammondii - western spadefoot toad (SC)
Reptiles
Anniella pulchra pulchra - silvery legless lizard (SC)
Clemmys marmorata marmorata - northwestern pond turtle (SC)
Clemmys marmorata pallida - southwestern pond turtle (SC)
Masticophis flagellum ruddocki - San Joaquin coachwhip (=whipsnake) (SC)
Phrynosoma coronatum frontale - California horned lizard (SC)
Birds
Agelaius tricolor - tricolored blackbird (SC)
Athene cunicularia hypugaea - western burrowing owl (SC)
Baeolophus inornatus - oak titmouse (SLC)
Branta canadensis leucopareia - Aleutian Canada goose (D)

Buteo regalis - ferruginous hawk (SC)
Calypte costae - Costa's hummingbird (SC)
Carduelis lawrencei - Lawrence's goldfinch (SC)
Chaetura vauxi - Vaux's swift (SC)
Charadrius montanus - mountain plover (SC)
Elanus leucurus - white-tailed (=black shouldered) kite (SC)
Empidonax traillii brewsteri - little willow flycatcher (CA)
Falco peregrinus anatum - American peregrine falcon (D)
Lanius ludovicianus - loggerhead shrike (SC)
Melanerpes lewis - Lewis' woodpecker (SC)
Numenius americanus - long-billed curlew (SC)
Plegadis chihi - white-faced ibis (SC)
Selasphorus rufus - rufous hummingbird (SC)
Toxostoma lecontei macmillanorum - San Joaquin LeConte's thrasher (SC)
Toxostoma redivivum - California thrasher (SC)

Mammals

Ammospermophilus nelsoni - San Joaquin (=Nelson's) antelope squirrel (CA)
Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)
Dipodomys nitratoides brevinasus - short-nosed kangaroo rat (SC)
Eumops perotis californicus - greater western mastiff-bat (SC)
Myotis ciliolabrum - small-footed myotis bat (SC)
Myotis evotis - long-eared myotis bat (SC)
Myotis thysanodes - fringed myotis bat (SC)
Myotis volans - long-legged myotis bat (SC)
Myotis yumanensis - Yuma myotis bat (SC)
Onychomys torridus ramona - Southern grasshopper mouse (SC)
Onychomys torridus tularensis - Tulare grasshopper mouse (SC)
Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Eriogonum temblorense - Temblor buckwheat (SC)

Species with Critical Habitat Proposed or Designated in this Quad

None

Federal Endangered and Threatened Species that may be Affected by Projects in the SHALE POINT 7 1/2 Minute Quad

Database Last Updated: March 1, 2004
Today's Date is: March 9, 2004

Listed Species

Invertebrates
Branchinecta lynchi - vernal pool fairy shrimp (T)
Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)
Fish
Hypomesus transpacificus - delta smelt (T)
Amphibians
Rana aurora draytonii - California red-legged frog (T)
Reptiles
Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)
Thamnophis gigas - giant garter snake (T)
Birds
Gymnogyps californianus - California condor (E)
Haliaeetus leucocephalus - bald eagle (T)
Mammals
Dipodomys ingens - giant kangaroo rat (E)
Dipodomys nitratoides nitratoides - Tipton kangaroo rat (E)
Vulpes macrotis mutica - San Joaquin kit fox (E)

Proposed Species

Amphibians
Ambystoma californiense - California tiger salamander (PT)

Species of Concern

Invertebrates
Linderiella occidentalis - California linderiella fairy shrimp (SC)
Lytta molesta - molestan blister beetle (SC)
Fish
Pogonichthys macrolepidotus - Sacramento splittail (SC)
Spirinchus thaleichthys - longfin smelt (SC)
Amphibians
Spea hammondii - western spadefoot toad (SC)
Reptiles
Anniella pulchra pulchra - silvery legless lizard (SC)
Clemmys marmorata marmorata - northwestern pond turtle (SC)
Clemmys marmorata pallida - southwestern pond turtle (SC)
Masticophis flagellum ruddocki - San Joaquin coachwhip (=whipsnake) (SC)
Phrynosoma coronatum frontale - California horned lizard (SC)
Birds
Agelaius tricolor - tricolored blackbird (SC)
Athene cunicularia hypugaea - western burrowing owl (SC)
Baeolophus inornatus - oak titmouse (SLC)
Buteo regalis - ferruginous hawk (SC)
Calypte costae - Costa's hummingbird (SC)

Carduelis lawrencei - Lawrence's goldfinch (SC)
Chaetura vauxi - Vaux's swift (SC)
Charadrius montanus - mountain plover (SC)
Elanus leucurus - white-tailed (=black shouldered) kite (SC)
Empidonax traillii brewsteri - little willow flycatcher (CA)
Falco peregrinus anatum - American peregrine falcon (D)
Lanius ludovicianus - loggerhead shrike (SC)
Melanerpes lewis - Lewis' woodpecker (SC)
Numenius americanus - long-billed curlew (SC)
Plegadis chihi - white-faced ibis (SC)
Selasphorus rufus - rufous hummingbird (SC)
Toxostoma lecontei macmillanorum - San Joaquin LeConte's thrasher (SC)
Toxostoma redivivum - California thrasher (SC)

Mammals

Ammospermophilus nelsoni - San Joaquin (=Nelson's) antelope squirrel (CA)
Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)
Dipodomys nitratoides brevinasus - short-nosed kangaroo rat (SC)
Eumops perotis californicus - greater western mastiff-bat (SC)
Myotis ciliolabrum - small-footed myotis bat (SC)
Myotis evotis - long-eared myotis bat (SC)
Myotis thysanodes - fringed myotis bat (SC)
Myotis volans - long-legged myotis bat (SC)
Myotis yumanensis - Yuma myotis bat (SC)
Onychomys torridus ramona - Southern grasshopper mouse (SC)
Onychomys torridus tularensis - Tulare grasshopper mouse (SC)
Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Eriogonum temblorense - Temblor buckwheat (SC)

Species with Critical Habitat Proposed or Designated in this Quad

None

Federal Endangered and Threatened Species that may be Affected by Projects in the SAWTOOTH RIDGE 7 1/2 Minute Quad

Database Last Updated: March 1, 2004
Today's Date is: March 9, 2004

Listed Species

Invertebrates
Branchinecta lynchi - vernal pool fairy shrimp (T)
Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)
Fish
Hypomesus transpacificus - delta smelt (T)
Amphibians
Rana aurora draytonii - California red-legged frog (T)
Reptiles
Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)
Thamnophis gigas - giant garter snake (T)
Birds
Gymnogyps californianus - California condor (E)
Haliaeetus leucocephalus - bald eagle (T)
Mammals
Dipodomys ingens - giant kangaroo rat (E)
Dipodomys nitratoides nitratoides - Tipton kangaroo rat (E)
Vulpes macrotis mutica - San Joaquin kit fox (E)
Plants
Caulanthus californicus - California jewelflower (E)

Proposed Species

Amphibians
Ambystoma californiense - California tiger salamander (PT)

Species of Concern

Invertebrates
Linderiella occidentalis - California linderiella fairy shrimp (SC)
Lytta molesta - molestan blister beetle (SC)
Fish
Pogonichthys macrolepidotus - Sacramento splittail (SC)
Spirinchus thaleichthys - longfin smelt (SC)
Amphibians
Spea hammondii - western spadefoot toad (SC)
Reptiles
Anniella pulchra pulchra - silvery legless lizard (SC)
Clemmys marmorata marmorata - northwestern pond turtle (SC)
Clemmys marmorata pallida - southwestern pond turtle (SC)
Masticophis flagellum ruddocki - San Joaquin coachwhip (=whipsnake) (SC)
Phrynosoma coronatum frontale - California horned lizard (SC)
Birds
Agelaius tricolor - tricolored blackbird (SC)
Athene cunicularia hypugaea - western burrowing owl (SC)
Baeolophus inornatus - oak titmouse (SLC)

Buteo regalis - ferruginous hawk (SC)
Calypte costae - Costa's hummingbird (SC)
Carduelis lawrencei - Lawrence's goldfinch (SC)
Chaetura vauxi - Vaux's swift (SC)
Charadrius montanus - mountain plover (SC)
Elanus leucurus - white-tailed (=black shouldered) kite (SC)
Empidonax traillii brewsteri - little willow flycatcher (CA)
Falco peregrinus anatum - American peregrine falcon (D)
Lanius ludovicianus - loggerhead shrike (SC)
Melanerpes lewis - Lewis' woodpecker (SC)
Numenius americanus - long-billed curlew (SC)
Plegadis chihi - white-faced ibis (SC)
Selasphorus rufus - rufous hummingbird (SC)
Toxostoma lecontei macmillanorum - San Joaquin LeConte's thrasher (SC)
Toxostoma redivivum - California thrasher (SC)

Mammals

Ammospermophilus nelsoni - San Joaquin (=Nelson's) antelope squirrel (CA)
Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)
Dipodomys nitratoides brevinasus - short-nosed kangaroo rat (SC)
Eumops perotis californicus - greater western mastiff-bat (SC)
Myotis ciliolabrum - small-footed myotis bat (SC)
Myotis evotis - long-eared myotis bat (SC)
Myotis thysanodes - fringed myotis bat (SC)
Myotis volans - long-legged myotis bat (SC)
Myotis yumanensis - Yuma myotis bat (SC)
Onychomys torridus ramona - Southern grasshopper mouse (SC)
Onychomys torridus tularensis - Tulare grasshopper mouse (SC)
Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Caulanthus coulteri var lemmonii - Lemmon's jewelflower (SLC)
Delphinium recurvatum - recurved larkspur (SC)
Eriogonum temblorense - Temblor buckwheat (SC)
Lepidium jaredii var. jaredii - Carrizo (=Jared's) peppergrass (SC)

Species with Critical Habitat Proposed or Designated in this Quad

None

Federal Endangered and Threatened Species that may be Affected by Projects in the ORCHARD PEAK 7 1/2 Minute Quad

Database Last Updated: March 1, 2004
Today's Date is: March 9, 2004

Listed Species

Invertebrates
Branchinecta lynchi - vernal pool fairy shrimp (T)
Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)
Fish
Hypomesus transpacificus - delta smelt (T)
Amphibians
Rana aurora draytonii - California red-legged frog (T)
Reptiles
Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)
Thamnophis gigas - giant garter snake (T)
Birds
Gymnogyps californianus - California condor (E)
Haliaeetus leucocephalus - bald eagle (T)
Mammals
Dipodomys ingens - giant kangaroo rat (E)
Vulpes macrotis mutica - San Joaquin kit fox (E)

Proposed Species

Amphibians
Ambystoma californiense - California tiger salamander (PT)

Species of Concern

Invertebrates
Linderiella occidentalis - California linderiella fairy shrimp (SC)
Fish
Pogonichthys macrolepidotus - Sacramento splittail (SC)
Spirinchus thaleichthys - longfin smelt (SC)
Amphibians
Spea hammondii - western spadefoot toad (SC)
Reptiles
Anniella pulchra pulchra - silvery legless lizard (SC)
Clemmys marmorata pallida - southwestern pond turtle (SC)
Masticophis flagellum ruddocki - San Joaquin coachwhip (=whipsnake) (SC)
Phrynosoma coronatum frontale - California horned lizard (SC)
Birds
Agelaius tricolor - tricolored blackbird (SC)
Athene cunicularia hypugaea - western burrowing owl (SC)
Baeolophus inornatus - oak titmouse (SLC)
Buteo regalis - ferruginous hawk (SC)
Calypte costae - Costa's hummingbird (SC)
Carduelis lawrencei - Lawrence's goldfinch (SC)
Chaetura vauxi - Vaux's swift (SC)
Charadrius montanus - mountain plover (SC)

Elanus leucurus - white-tailed (=black shouldered) kite (SC)
Empidonax traillii brewsteri - little willow flycatcher (CA)
Falco peregrinus anatum - American peregrine falcon (D)
Lanius ludovicianus - loggerhead shrike (SC)
Melanerpes lewis - Lewis' woodpecker (SC)
Numenius americanus - long-billed curlew (SC)
Selasphorus rufus - rufous hummingbird (SC)
Toxostoma lecontei macmillanorum - San Joaquin LeConte's thrasher (SC)
Toxostoma redivivum - California thrasher (SC)

Mammals

Ammospermophilus nelsoni - San Joaquin (=Nelson's) antelope squirrel (CA)
Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)
Dipodomys nitratoides brevinasus - short-nosed kangaroo rat (SC)
Eumops perotis californicus - greater western mastiff-bat (SC)
Myotis ciliolabrum - small-footed myotis bat (SC)
Myotis evotis - long-eared myotis bat (SC)
Myotis thysanodes - fringed myotis bat (SC)
Myotis volans - long-legged myotis bat (SC)
Myotis yumanensis - Yuma myotis bat (SC)
Onychomys torridus ramona - Southern grasshopper mouse (SC)
Onychomys torridus tularensis - Tulare grasshopper mouse (SC)
Perognathus inornatus - San Joaquin pocket mouse (SC)

Plants

Caulanthus coulteri var lemmonii - Lemmon's jewelflower (SLC)
Eriogonum temblorense - Temblor buckwheat (SC)
Layia heterotricha - pale-yellow layia (SC)
Lepidium jaredii var. album - Panoche peppergrass (SC)
Madia radiata - showy (=golden) madia (SC)

Species with Critical Habitat Proposed or Designated in this Quad

None

Federal Endangered and Threatened Species that may be affected by projects in San Luis Obispo County (Carrizo Plain only)

Database Last Updated: March 1, 2004
Today's Date is: March 9, 2004

Listed Species

Invertebrates
Branchinecta longiantenna - longhorn fairy shrimp (E)
Branchinecta lynchi - vernal pool fairy shrimp (T)
Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)
Amphibians
Rana aurora draytonii - California red-legged frog (T)
Reptiles
Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)
Thamnophis gigas - giant garter snake (T)
Birds
Gymnogyps californianus - California condor (E)
Haliaeetus leucocephalus - bald eagle (T)
Mammals
Dipodomys ingens - giant kangaroo rat (E)
Dipodomys nitratoides nitratoides - Tipton kangaroo rat (E)
Sorex ornatus relictus - Buena Vista Lake shrew (E)
Vulpes macrotis mutica - San Joaquin kit fox (E)
Plants
Caulanthus californicus - California jewelflower (E)
Eremalche kernensis - Kern mallow (E)
Monolopia congdonii (=Lembertia congdonii) - San Joaquin woolly-threads (E)

Proposed Species

Amphibians
Ambystoma californiense - California tiger salamander (PT)

Candidate Species

Plants
Sidalcea hickmanii ssp. parishii - Parish's sidalcea (C)

Species of Concern

Invertebrates
Linderiella occidentalis - California linderiella fairy shrimp (SC)
Lytta hoppingi - Hopping's blister beetle (SC)
Lytta molesta - molestan blister beetle (SC)
Fish
Spirinchus thaleichthys - longfin smelt (SC)
Amphibians
Rana boylii - foothill yellow-legged frog (SC)
Spea hammondii - western spadefoot toad (SC)
Reptiles
Anniella pulchra pulchra - silvery legless lizard (SC)
Charina bottae umbratica - southern rubber boa (CA)
Clemmys marmorata marmorata - northwestern pond turtle (SC)

Clemmys marmorata pallida - southwestern pond turtle (SC)
Masticophis flagellum ruddocki - San Joaquin coachwhip (=whipsnake) (SC)
Phrynosoma coronatum frontale - California horned lizard (SC)
Birds
Agelaius tricolor - tricolored blackbird (SC)
Athene cunicularia hypugaea - western burrowing owl (SC)
Baeolophus inornatus - oak titmouse (SLC)
Branta canadensis leucopareia - Aleutian Canada goose (D)
Buteo regalis - ferruginous hawk (SC)
Calypte costae - Costa's hummingbird (SC)
Carduelis lawrencei - Lawrence's goldfinch (SC)
Chaetura vauxi - Vaux's swift (SC)
Charadrius montanus - mountain plover (SC)
Elanus leucurus - white-tailed (=black shouldered) kite (SC)
Empidonax traillii brewsteri - little willow flycatcher (CA)
Falco peregrinus anatum - American peregrine falcon (D)
Lanius ludovicianus - loggerhead shrike (SC)
Melanerpes lewis - Lewis' woodpecker (SC)
Numenius americanus - long-billed curlew (SC)
Selasphorus rufus - rufous hummingbird (SC)
Strix occidentalis occidentalis - California spotted owl (SC)
Toxostoma lecontei macmillanorum - San Joaquin LeConte's thrasher (SC)
Toxostoma redivivum - California thrasher (SC)
Mammals
Ammospermophilus nelsoni - San Joaquin (=Nelson's) antelope squirrel (CA)
Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)
Dipodomys nitratoides brevinasus - short-nosed kangaroo rat (SC)
Eumops perotis californicus - greater western mastiff-bat (SC)
Myotis ciliolabrum - small-footed myotis bat (SC)
Myotis evotis - long-eared myotis bat (SC)
Myotis thysanodes - fringed myotis bat (SC)
Myotis volans - long-legged myotis bat (SC)
Myotis yumanensis - Yuma myotis bat (SC)
Onychomys torridus ramona - Southern grasshopper mouse (SC)
Onychomys torridus tularensis - Tulare grasshopper mouse (SC)
Perognathus inornatus - San Joaquin pocket mouse (SC)
Plants
Amsinckia vernicosa var. furcata - forked fiddleneck (SLC)
Atriplex cordulata - heartscale (SC)
Atriplex vallicola - Lost Hills saltbush (=crownscale) (SC)
Calycadenia villosa - dwarf calycadenia (SLC)
Caulanthus coulteri var lemmonii - Lemmon's jewelflower (SLC)
Deinandra halliana - Hall's tarplant (SC)
Delphinium californicum ssp. interius - interior California (Hospital Canyon) larkspur (SC)
Delphinium recurvatum - recurved larkspur (SC)
Eriastrum hooveri - Hoover's eriastrum (= woolly-star) (D)
Eriogonum temblorense - Temblor buckwheat (SC)
Eschscholzia lemmonii spp. kernensis - Tejon Poppy (SC)
Eschscholzia rhombipetala - diamond-petaled California poppy (SC)
Layia heterotricha - pale-yellow layia (SC)

Layia munzii - Munz's tidy-tips (SC)
Lepidium jaredii var. album - Panoche peppergrass (SC)
Lepidium jaredii var. jaredii - Carrizo (=Jared's) peppergrass (SC)
Madia radiata - showy (=golden) madia (SC)
Stylocline citroleum - oil neststraw (SC)
Stylocline masonii - Mason's nestraw (SC)

Species with Critical Habitat Proposed or Designated in this County

vernal pool invertebrates (X) vernal pool plants (X)

Federal Endangered and Threatened Species that may be affected by projects in Kern County (Central Valley only)

Database Last Updated: March 1, 2004
Today's Date is: March 9, 2004

Listed Species

Invertebrates
Branchinecta longiantenna - longhorn fairy shrimp (E)
Branchinecta lynchi - vernal pool fairy shrimp (T)
Desmocerus californicus dimorphus - valley elderberry longhorn beetle (T)
Euproserpinus euterpe - Kern primrose sphinx moth (T)
Amphibians
Rana aurora draytonii - California red-legged frog (T)
Reptiles
Gambelia (=Crotaphytus) sila - blunt-nosed leopard lizard (E)
Thamnophis gigas - giant garter snake (T)
Birds
Empidonax traillii extimus - southwestern willow flycatcher (E)
Gymnogyps californianus - California condor (E)
Haliaeetus leucocephalus - bald eagle (T)
Vireo bellii pusillus - Least Bell's vireo (E)
Mammals
Dipodomys ingens - giant kangaroo rat (E)
Dipodomys nitratoides nitratoides - Tipton kangaroo rat (E)
Ovis canadensis californiana - Sierra Nevada (=California) bighorn sheep (E)
Sorex ornatus relictus - Buena Vista Lake shrew (E)
Vulpes macrotis mutica - San Joaquin kit fox (E)
Plants
Caulanthus californicus - California jewelflower (E)
Eremalche kernensis - Kern mallow (E)
Monolopia congdonii (=Lembertia congdonii) - San Joaquin woolly-threads (E)
Opuntia treleasei - Bakersfield cactus (E)
Pseudobahia peirsonii - San Joaquin adobe sunburst (T)
Sidalcea keckii - Keck's checker-mallow (=checkerbloom) (E)

Proposed Species

Amphibians
Ambystoma californiense - California tiger salamander (PT)

Candidate Species

Amphibians
Rana muscosa - mountain yellow-legged frog (C)
Birds
Coccyzus americanus occidentalis - Western yellow-billed cuckoo (C)

Species of Concern

Invertebrates
Helminthoglypta callistoderma - Kern shoulderband snail (SC)
Linderiella occidentalis - California linderiella fairy shrimp (SC)
Lytta hoppingi - Hopping's blister beetle (SC)

Lytta moesta - moestan blister beetle (SC)
Lytta molesta - molestan blister beetle (SC)
Lytta morrisoni - Morrison's blister beetle (SC)
Plebulina emigdionis - San Emigdio blue butterfly (SC)
Speyeria egleis tehachapina - Tehachapi mountain silverspot butterfly (SC)
Fish
Lampetra hubbsi - Kern brook lamprey (SC)
Oncorhynchus (=Salmo) mykiss gilberti - Kern River rainbow trout (SC)
Spirinchus thaleichthys - longfin smelt (SC)
Amphibians
Batrachoseps relictus (=pacificus) - relictual slender salamander (SC)
Batrachoseps simatus - Kern Canyon slender salamander (CA)
Batrachoseps sp - Breckenridge Mt. slender salamander (SC)
Batrachoseps stebbinsi - Tehachapi slender salamander (CA)
Ensatina eschscholtzii croceator - yellow-blotched ensatina (SC)
Rana boylii - foothill yellow-legged frog (SC)
Spea hammondii - western spadefoot toad (SC)
Reptiles
Anniella pulchra pulchra - silvery legless lizard (SC)
Charina bottae umbratica - southern rubber boa (CA)
Clemmys marmorata marmorata - northwestern pond turtle (SC)
Clemmys marmorata pallida - southwestern pond turtle (SC)
Lichanura trivirgata - rosy boa (SC)
Masticophis flagellum ruddocki - San Joaquin coachwhip (=whipsnake) (SC)
Phrynosoma coronatum frontale - California horned lizard (SC)
Xantusia vigilis sierrae - Sierra night lizard (SC)
Birds
Accipiter gentilis - northern goshawk (SC)
Agelaius tricolor - tricolored blackbird (SC)
Athene cunicularia hypugaea - western burrowing owl (SC)
Baeolophus inornatus - oak titmouse (SLC)
Branta canadensis leucopareia - Aleutian Canada goose (D)
Buteo regalis - ferruginous hawk (SC)
Buteo Swainsoni - Swainson's hawk (CA)
Calypte costae - Costa's hummingbird (SC)
Carduelis lawrencei - Lawrence's goldfinch (SC)
Chaetura vauxi - Vaux's swift (SC)
Charadrius montanus - mountain plover (SC)
Cinclus mexicanus - American dipper (SLC)
Cypseloides niger - black swift (SC)
Elanus leucurus - white-tailed (=black shouldered) kite (SC)
Empidonax traillii brewsteri - little willow flycatcher (CA)
Falco peregrinus anatum - American peregrine falcon (D)
Grus canadensis tabida - greater sandhill crane (CA)
Lanius ludovicianus - loggerhead shrike (SC)
Melanerpes lewis - Lewis' woodpecker (SC)
Numenius americanus - long-billed curlew (SC)
Otus flammeolus - flammulated owl (SC)
Picoides albolarvatus - white-headed woodpecker (SC)
Picoides nuttallii - Nuttall's woodpecker (SLC)
Plegadis chihi - white-faced ibis (SC)

Selasphorus rufus - rufous hummingbird (SC)
Strix occidentalis occidentalis - California spotted owl (SC)
Toxostoma lecontei macmillanorum - San Joaquin LeConte's thrasher (SC)
Toxostoma redivivum - California thrasher (SC)
Mammals
Ammospermophilus nelsoni - San Joaquin (=Nelson's) antelope squirrel (CA)
Corynorhinus (=Plecotus) townsendii townsendii - Pacific western big-eared bat (SC)
Dipodomys nitratoides brevinasus - short-nosed kangaroo rat (SC)
Euderma maculatum - spotted bat (SC)
Eumops perotis californicus - greater western mastiff-bat (SC)
Martes pennanti - fisher (SC)
Myotis ciliolabrum - small-footed myotis bat (SC)
Myotis evotis - long-eared myotis bat (SC)
Myotis thysanodes - fringed myotis bat (SC)
Myotis volans - long-legged myotis bat (SC)
Myotis yumanensis - Yuma myotis bat (SC)
Onychomys torridus ramona - Southern grasshopper mouse (SC)
Onychomys torridus tularensis - Tulare grasshopper mouse (SC)
Perognathus alticola inexpectatus - Tehachapi white-eared pocket mouse (SC)
Perognathus inornatus - San Joaquin pocket mouse (SC)
Spermophilus mohavensis - Mohave ground squirrel (CA)
Vulpes vulpes necator - Sierra Nevada red fox (CA)
Plants
Amsinckia vernicosa var. furcata - forked fiddleneck (SLC)
Astragalus ertterae - Walker Pass (=Ertter's) milk-vetch (SC)
Atriplex cordulata - heartscale (SC)
Atriplex depressa - brittlescale (SC)
Atriplex erecticaulis - Earlimart orache (=erectstem saltbush) (SLC)
Atriplex minuscula - lesser saltscale (SC)
Atriplex subtilis - subtle orache (SLC)
Atriplex tularensis - Bakersfield saltbush (=smallscale) (CA)
Atriplex vallicola - Lost Hills saltbush (=crownscale) (SC)
Calochortus palmeri var. palmeri - Palmer's mariposa lily (SC)
Calochortus striatus - alkali mariposa lily (SC)
Calochortus westonii - Shirley Meadows mariposa lily (=star-tulip) (SC)
Calycadenia villosa - dwarf calycadenia (SLC)
Caulanthus coulteri var lemmonii - Lemmon's jewelflower (SLC)
Cirsium crassicaule - slough thistle (SC)
Clarkia tembloriensis ssp. calientensis - Caliente (=Vasek's) clarkia (SC)
Clarkia xantiana (=parviflora) - Kern Canyon clarkia (SLC)
Cordylanthus mollis ssp. hispidus - hispid bird's-beak (SC)
Cupressus nevadensis - Piute cypress (SC)
Deinandra halliana - Hall's tarplant (SC)
Delphinium californicum ssp. interius - interior California (Hospital Canyon) larkspur (SC)
Delphinium recurvatum - recurved larkspur (SC)
Eriastrum hooveri - Hoover's eriastrum (= woolly-star) (D)
Eriogonum breedlovei var. breedlovei - Piute (=Breedlove's) buckwheat (SC)
Eriogonum kennedyi var. pinicola - Cache Peak buckwheat (SC)
Eriogonum temblorense - Temblor buckwheat (SC)
Eriophyllum lanatum var. hallii - Ft. Tejon woolly-sunflower (SC)

Eschscholzia lemmonii spp. kernensis - Tejon Poppy (SC)
Eschscholzia minutiflora ssp. twisselmannii - red rock (=Twisselmann's dwarf) poppy (SC)
Eschscholzia procera - Kernville poppy (SC)
Eschscholzia rhombipetala - diamond-petaled California poppy (SC)
Fritillaria striata - Greenhorn adobe-lily (CA)
Layia heterotricha - pale-yellow layia (SC)
Layia leucopappa - Comanche layia (SC)
Layia munzii - Munz's tidy-tips (SC)
Lepidium jaredii var. album - Panoche peppergrass (SC)
Lepidium jaredii var. jaredii - Carrizo (=Jared's) peppergrass (SC)
Lewisia disepala - Yosemite lewisia (SC)
Linanthus serrulatus - Madera linanthus (SLC)
Lomatium shevockii - Owens Peak lomatium (SC)
Madia radiata - showy (=golden) madia (SC)
Mimulus pictus - calico monkeyflower (SC)
Mimulus shevockii - Kelso Creek monkeyflower (SC)
Monardella linoides ssp. oblonga - flax-like monardella (SC)
Navarretia setiloba - Piute Mountains navarretia (SC)
Nemacladus twisselmannii - Twisselmann's nemacladus (SC)
Perideridia gairdneri ssp. gairdneri - Gairdner's yampah (SC)
Phacelia nashiana - Charlotte's phacelia (SC)
Phacelia novenmillensis - Nine Mile Canyon phacelia (SC)
Pterygoneurum californicum - California pterygoneurum moss (SC)
Ribes menziesii var ixoderme - aromatic canyon gooseberry (SLC)
Streptanthus cordatus var. piutensis - Piute Mountains jewelflower (SC)
Stylocline citroleum - oil neststraw (SC)
Stylocline masonii - Mason's nestraw (SC)
Tortula californica - California tortula moss (SLC)
Twisselmannia californica - King's gold (SC)

Species with Critical Habitat Proposed or Designated in this County

California condor (E)
Keck's checker-mallow (PX)
southwestern willow flycatcher (E)
vernal pool invertebrates (X)
vernal pool plants (X)



Appendix H Comments and Responses

This appendix addresses the comments received on the Environmental Assessment/Initial Study. The Environmental Assessment/Initial Study was distributed for public review and comment from April 7, 2003 to June 9, 2003. A public hearing was held on May 7, 2003 to further solicit public comment on the document. This appendix of the presents all of the written comments received on the Environmental Assessment/Initial Study during the public review period and responses to those comments.

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse

Gray Davis
Governor

Tal Finney
Interim Director

June 17, 2003

Judith Lopez
Department of Transportation, District 6
2015 E. Shields, Suite 100
Fresno, CA 93726

Subject: State Route 46 4-Lane Widening Project
SCH#: 2003041036

Dear Judith Lopez:

The enclosed comment (s) on your Joint Document was (were) received by the State Clearinghouse after the end of the state review period, which closed on May 5, 2003. We are forwarding these comments to you because they provide information or raise issues that should be addressed in your final environmental document.

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

Please contact the State Clearinghouse at (916) 445-0613 if you have any questions concerning the environmental review process. If you have a question regarding the above-named project, please refer to the ten-digit State Clearinghouse number (2003041036) when contacting this office.

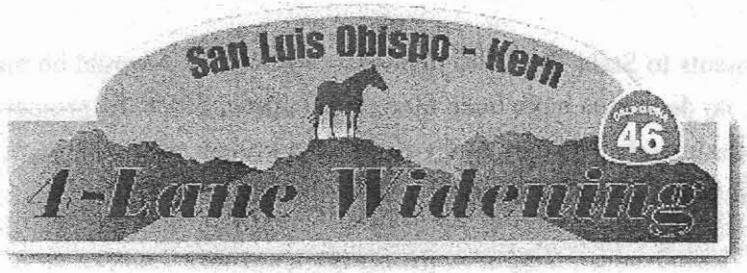
Sincerely,

Terry Roberts

Terry Roberts
Senior Planner, State Clearinghouse

Enclosures
cc: Resources Agency

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
(916)445-0613 FAX(916)323-3018 www.opr.ca.gov



Public Hearing/Informational Meeting
May 7, 2003

NAME: DOYLE GREEN

ADDRESS: 29449 STOCKDALE HIGHWAY **CITY:** BAKERSFIELD **ZIP:** 93312

REPRESENTING: CALIF HWY PATROL - 661-764-5580

Do you wish to be added to the project mailing list? ☒ **YES** ☐ **NO**

Please drop comments in the Comment Box or

Mail to: **CALTRANS CENTRAL REGION**
ATTN: Judith Lopez
2015 East Shields Avenue, Suite 100
Fresno, CA 93726
E-mail: judith_lopez@dot.ca.gov

I would like the following comments filed in the record (please print):

I TALKED TO SHAHIN MANSOUR, REGARDING THE BUSINESS ON 46 JUST W. OF I-5. (DENNY'S, BEACON, PILOT TRUCK STOP, ETC) NEW BUSINESSES SUCH AS LOVE'S TRUCK STOP HAVE OPENED. WHAT WILL BE PUT IN PLACE TO ASSIST TRAFFIC TO GET BACK TO I-5 SAFELY AFTER VISITING THE BUSINESSES ON THE NORTH SIDE OF 46? TRAFFIC LIGHT? A COLLECTOR ROAD? LIMITING ACCESS/RETURN FROM EACH BUSINESS? OR WILL ALL BE REQUIRED TO MAKE A RIGHT TURN AND THEN MAKE U-TURN TO HEAD BACK EAST TO I-5? THANKS D. Green, BUTTONWILLOW CHP

Closing response date is June 9, 2003

Caltrans

US Department of Transportation
Federal Highway Administration

5

Response to Doyle Green, California Highway Patrol

Improvements to State Route 46 just west of Interstate 5 would be made as warranted; however, no decisions have been made at this time. Since the project is scheduled to be built approximately 10 years in the future, the project would be re-examined to find out if additional work would be needed.

Winston H. Hickox
Secretary for
Environmental
Protection

California Regional Water Quality Control Board

Central Valley Region

Robert Schneider, Chair

Fresno Branch Office
Internet Address: http://www.swrcb.ca.gov/~rwqcb5
1685 E Street, Fresno, California 93706-2020
Phone (559) 445-5116 • FAX (559) 445-5910

Gray Davis
Governor

7 May 2003

Judith Lopez
Department of Transportation
District 6 Office
2015 East Shields, Suite 100
Fresno, CA 93726

COMMENTS ON ENVIRONMENTAL ASSESSMENT/INITIAL STUDY, STATE ROUTE 46 LANE WIDENING PROJECT, DEPARTMENT OF TRANSPORTATION, KERN AND SAN LUIS OBISPO COUNTIES, SCH NO. 2003041036

The subject Environmental Assessment/Initial Study for the subject project proposed by the Department of Transportation (Caltrans) was received on 7 April 2003. The project includes widening a 39.3-mile segment of State Route 46 from its junction with State Route 41 in San Luis Obispo County to just east of the West Side Canal in Kern County.

Construction associated with the project requires compliance with the National Pollutant Discharge Elimination System (NPDES) Permit For Storm Water Discharges From The State Of California, Department Of Transportation (Caltrans) Properties, Facilities, and Activities (Order No. 99-06-DWQ). Before construction begins, Caltrans must submit a Notification of Construction to this office, and a storm water pollution prevention plan must be prepared.

As the project will involve the discharge of dredged or fill material into navigable waters or wetlands (jurisdictional waters), Caltrans must obtain a permit pursuant to Section 404 of the Clean Water Act from the US Army Corps of Engineers and 401 Water Quality Certification (Certification) from this office. The Regional Board will review the Water Quality Certification application to ensure the discharge will not violate water quality standards. If aspects of the project will result in a discharge of dredged or fill material into waters, including wetlands, that are determined by the Corps to be non-jurisdictional, Caltrans will not be required to obtain a 401 Water Quality Certification, but may be required to submit a report of waste discharge (ROWD) pursuant to California Water Code, Section 13260. The Regional Board will then either prescribe waste discharge requirements (WDRs) or issue a waiver of waste discharge requirements. If WDRs are adopted, they will incorporate measures to mitigate potentially significant impacts to water quality and potential public nuisances.

Recycled Paper

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at http://www.swrcb.ca.gov/rwqcb5

Thank you for the opportunity to comment on this Environmental Assessment Initial Study. If you have any questions regarding our comments, please call me at (559) 445-6071.

BRIAN ERLANDSEN
Environmental Scientist

cc: State Clearinghouse

Response to Brian Erlandsen, California Regional Water Quality Control Board - Central Valley Region

Comment noted.

Your letter, dated May 7, 2003, was forwarded to the transportation engineer as well as to the Caltrans District 6 National Pollutant Discharge Elimination System Coordinator. The District National Pollutant Discharge Elimination System Coordinator is responsible for the day-to-day implementation of the permit and Storm Water Management Plan following the Caltrans *Storm Water Quality Handbooks - Construction Site Best Management Practices Manual.*

Caltrans would obtain a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers and the permit Section 401 Water Quality Certification from your office. A Report of Waste Discharge would not be required because the project involves jurisdictional waters subject to Section 404 permit.

STATE OF CALIFORNIA -- THE RESOURCES AGENCY GRAY DAVIS, Governor

DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

June 11, 2003

Mr. Michael Donahue
California Department of Transportation
Southern Sierra Environmental Analysis Branch
2015 E. Shields, Suite 100
Fresno, CA 93726

State Route 46 4-Lane Widening Project, San Luis Obispo and Kern Counties,
SCH 2003041036

Dear Mr. Donahue:

Thank you for the opportunity to review and comment on the Environmental Assessment/Initial Study for the Route 46 4-Lane Widening Project in San Luis Obispo and Kern counties. After reviewing the study, there are two portions of the State Water Project that will be affected. The first is the Coastal Aqueduct along the first Kern Segment near the Antelope Pumping Plant and the second is the California Aqueduct crossing on the second Kern Segment at Lost Hills.

The Department of Water Resources has reviewed preliminary plans for the widening of Highway 46 at the Antelope Pumping Plant. All three alternatives will affect the Coastal Aqueduct, with one alternative requiring the relocation of the pipeline. Cost estimates for the retrofit/relocation of the Coastal Aqueduct have been sent to Caltrans for review.

The second affected area will be the new bridge across the California Aqueduct at Lost Hills. Caltrans designers should consult with DWR engineers during the design phase so the required DWR criteria are met with respect to bridges crossing the aqueduct. The bridge should be a single span structure since new pier construction inside the canal prism is not allowed. Water deliveries during the summer require the aqueduct to remain fully operational, so any construction that would reduce flows is not permitted. Any construction within DWR's right of way will require an Encroachment Permit. For questions regarding a permit, please contact Cliff Winston, DWR Division of Land and Right of Way, at (916) 653-5361.

Mr. Mike Donahue
June 11, 2003
Page 2

If you have any questions, please call Elena Behnam, Chief of Maintenance Engineering Section, at (916) 653-0344 or Mark Herold at (916) 736-3557.

Sincerely,

Gary Gravier, Chief
Water and Plant Engineering Office
Division of Operations and Maintenance

cc: Elena Behnam/649-2
Jeff Said/San Joaquin Field Division
Cliff Winston/425

State Clearinghouse
Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, California 95814

Response to Gary Gravier, State of California Department of Water Resources

Comment noted. Department of Water Resources would be consulted during bridge design and acqueduct crossing in the final design stages of the project.

DEPARTMENT OF CONSERVATION
STATE OF CALIFORNIA

DIVISION OF
LAND RESOURCE
PROTECTION

801 K STREET
SACRAMENTO
CALIFORNIA
95814

PHONE
916/324-0850

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TDD
916/324-2555

INTERNET
conservation.ca.gov

GRAY DAVIS
GOVERNOR

May 9, 2003

VIA FACSIMILE (559) 445-6259
Mr. Mike Donahue, Branch Chief
Attention: Judith Lopez
Caltrans Southern Sierra Environmental Analysis Branch
2015 E. Shields, Suite 100
Fresno, CA 93726

Subject: State Route 46 4-Lane Widening Project Environmental Assessment/Initial Study Negative Declaration (ND) - SCH# 2003041036, San Luis Obispo and Kern Counties

Dear Mr. Donahue:

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the ND for the referenced project. The Division monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act and other agricultural land conservation programs. We offer the following comments with respect to the project's impacts on agricultural land and resources.

Project Description

The proposed project is the improvement by the California Department of Transportation (Caltrans) and the Federal Highway Administration of State Route 46 (SR 46) from a two-lane roadway to a four-lane expressway. It covers the route from just east of the junction of State Routes 41 and 46 (the "Wye") in San Luis Obispo County to just east of the West Side Canal near Interstate 5 in Kern County, a distance of 39.3 miles. The purpose is to improve safety and service, reduce congestion and provide route continuity. This project and others will provide a continuous four-lane expressway from Highway 101 in San Luis Obispo County to Interstate 5 in Kern County. The project has been designed in three segments. Land use in and around the project area is agricultural, commercial, residential and light industrial. The properties surrounding the highway are used primarily for agriculture.

According to the ND, the project area consists of Prime Farmland and Farmland of Local Importance as designated by the Division's Farmland Mapping and Monitoring Program. The project would require 494 acres of

right-of-way, of which 125.5 acres are agricultural lands, including 101.03 acres of Prime Farmland. The ND uses the federal Farmland Conversion Impact Rating (FCIR) to determine the significance of farmland loss. Ratings for the three segments are 125, 128 and 145, below the threshold of 160 that requires mitigation. The ND does not state whether Williamson Act contract land is affected by the project. However, the Environmental Checklist denotes "No Impact" regarding conflict with a Williamson Act contract. 1

The ND states that cumulative impacts were evaluated in the Counties General Plans' environmental documents, but does not state the results of the evaluations. Because of existing constraints involving endangered species, land use policies and underlying zoning and the lack of adequate existing infrastructure, the project is not expected to accelerate growth in the area. 2

Summary of Department Concerns and Recommendations

The Department is concerned about the accuracy and validity of the Farmland Conversion Impact Ratings for this project as well as the evaluation and significance determination of cumulative impacts. We recommend that Caltrans reevaluate farmland impacts and provide appropriate mitigation as part of a Mitigated Negative Declaration (MND) or circulate an Environmental Impact Report (EIR) for this project as has been done for that portion of SR 46 improvement from Paso Robles to Cholame (SCH# 2000011033). We also recommend that the appropriate agency provide the Department with required notification regarding any cancellation or public agency acquisition of land under Williamson Act contract required for this project. In this regard, we offer the following comments. 3

Project Impacts on Agricultural Land

As discussed below, the project appears to involve Williamson Act land, in which case the FCIR should be revised to account for protected land impacted. Under such revision, at lease one route segment would exceed the threshold rating of 160 and require mitigation. 4

In general, the FCIR does not appear to account for the amount of farmland loss. For example, if all other factors were equal, it appears that the rating would be the same for a conversion of five acres as for 500 acres. If, however, the size of farmland loss is accounted for in the FCIR, segmenting the project into three ratings would mathematically reduce its effect in comparison to one rating for the entire project. This project converts a total of 101 acres of Prime Farmland. The Department considers this a significant adverse impact requiring mitigation through a MND or evaluation in an EIR. We recommend that Caltrans explain how the FCIR adequately evaluates the project's 5

total amount of farmland loss or provide an evaluation that accounts for total loss rather than segmenting that loss.

Caltrans may want to utilize the California Land Evaluation and Site Assessment (LESA) Model as a measure of impact significance rather than the FCIR. The LESA appears to be a more comprehensive model, including the amount of acreage converted, Williamson Act land and surrounding agricultural land. It was developed for projects in California and is recommended by CEQA. The model may also be used to rate the relative value of alternative project sites. The LESA Model is available from the Division at the contact listed below. 6

As noted above, the ND states that cumulative impacts were evaluated in the Counties General Plans' (GP) environmental documents, but does not provide the results of the evaluations. The San Luis Obispo General Plan Transportation Element available on the County's website states that SR 46 from Cholame to Kern County is not recommended for widening to four lanes. This would appear to contradict the ND statement, but the Department has not been able to access the environmental documents in preparing these comments. The ND does not indicate that it is "tiered" from the GP environmental documents. Even if "tiering" is appropriate in this case, it is not clear that the ND's limited reference is sufficient to justify a ND for this project. Furthermore, the ND states that there are other SR 46 improvement projects in process, which indicates the potential for significant cumulative impacts. As noted above, Caltrans has circulated an EIR for the four-lane widening of SR 46 from Paso Robles to Cholame. These two projects convert as many as 134 acres of prime and important farmland. The Department considers this a significant cumulative impact requiring mitigation through a MND or evaluation in an EIR. The ND states that there are five projects affecting SR 46 route continuity. At some point, the cumulative loss of agricultural land must be considered significant. 7 8 9

In addition, a recent appeals court ruling in Communities for Better Environment, et al. v. California Resources Agency, et al. (2002) has invalidated CEQA Guideline §15152(f)(3)(c) regarding "tiered" environmental analyses and reliance upon a prior Statement of Overriding Consideration. 10

Finally, the use of an EIR for one portion of SR 46 improvement and a ND for another portion, in addition to segmenting the route within each project for the purpose of agricultural impact analysis, has the appearance of "piecemealing" to not only avoid circulating an EIR but to avoid a determination of significant agricultural impact and required mitigation. To eliminate this appearance and to adequately evaluate agricultural impacts as discussed above, the Department recommends mitigation through a MND or circulation of an EIR for this project. 11

Williamson Act Lands

As noted above, the ND text does not indicate whether the project involves Williamson Act land. The Environmental Checklist, however, denotes "No Impact" regarding conflict with a Williamson Act contract. In contradiction to this, the Williamson Act maps for San Luis Obispo and Kern Counties show SR 46 from the "Wye" to Interstate 5 traversing land that is predominantly under Williamson Act contract(s). Most of the contracted land is prime agricultural land according to Government Code Section 51201(c). Based on this map information and the presumed termination of contract(s) to accommodate the project, the Department considers the project to have potentially significant agricultural impacts requiring mitigation through a MND or analysis in an EIR. 12

Please note that some project analyses may refer to CEQA Guideline §15206(b)(3) in stating that a project's impacts are significant if they would "result in the cancellation of a Williamson Act contract for a parcel of 100 acres or more." However, this CEQA section actually provides one in a list of criteria for determining when a project is of greater than local significance such that it must be reviewed by state agencies. It is not a threshold criterion under which impacts are determined to be less than significant.

The MND or EIR should identify the Williamson Act parcels, contracts and preserves impacted by the project, as well as whether the land is prime or nonprime agricultural land according to §51201(c). In addition, it should provide a map showing the location of the Williamson Act land within the project study area. 13

The MND or EIR should also discuss the method planned for termination of the involved Williamson Act contracts. As a general rule, land can be withdrawn from Williamson Act contract only through the nine-year nonrenewal process. Immediate termination via cancellation is reserved for "extraordinary", unforeseen situations (See Sierra Club v. City of Hayward (1981) 28 Cal.3d 840, 852-855). Furthermore, it has been held that "cancellation is inconsistent with the purposes of the (Williamson) act if the objectives to be served by cancellation should have been predicted and served by nonrenewal at an earlier time, or if such objectives can be served by nonrenewal now" (Sierra Club v. City of Hayward).

Only the landowner may submit a petition for cancellation. If cancellation is proposed, the local entity must notify the Department prior to a board or council's consideration of the proposal for tentative cancellation (Government Code §51284.1). The board or council must consider the Department's comments prior to making a decision on the proposal. Required findings must be made by the board or council in order to approve tentative cancellation. We recommend that the MND or EIR include discussion of how cancellations involved in this project would meet required findings. However, notification must be submitted separately from the CEQA process and CEQA documentation (the notice should be mailed to Darryl Young, Director, Department of Conservation, c/o Division of Land Resource Protection, 801 K Street MS 13-71, Sacramento, CA 95814-3528).

Acquisition of Williamson Act land by a public agency for a public improvement, regardless of whether it involves an interest in fee or easement, requires the agency to notify the Department upon consideration of the acquisition (Government Code sections 51290 - 51292) and to make specific findings. The property must be acquired by eminent domain or in lieu of eminent domain in order to void the contract. The public agency must consider the Department's comments prior to taking action on the proposed acquisition. We recommend discussion in the MND or EIR of whether such action is envisioned by this project and how the acquisition will meet the required findings. However, notification must be submitted separately from the CEQA process and CEQA documentation to the address noted above. 14

Mitigation Measures

The Department encourages the purchase of agricultural conservation easements on land of at least equal quality and size as compensation for the direct loss of agricultural land. We also recommend this ratio if a Williamson Act contract is terminated or if growth inducing or cumulative agricultural impacts are involved and an increased ratio for projects involving a combination of these impacts. We highlight this measure because of its growing acceptance and use by lead agencies as mitigation under CEQA. **Caltrans District 11, for example, has utilized agricultural conservation easement mitigation.** It follows a rationale similar to that of wildlife habitat mitigation. The loss of agricultural land represents a permanent reduction in the State's agricultural land resources. Agricultural conservation easements will protect a portion of those remaining resources and lessen project impacts in accordance with CEQA Guideline §15370. 15

Mitigation using agricultural conservation easements can be implemented by at least two alternative approaches: the outright purchase of conservation easements or the donation of mitigation fees to a local, regional or statewide organization or agency, including land trusts and conservancies, whose purpose includes the acquisition and stewardship of agricultural conservation easements. The conversion of agricultural land should be deemed an impact of at least regional significance, and the search for mitigation lands conducted regionally or statewide and not limited strictly to lands within the project's surrounding area.

Information about agricultural conservation easements and the Williamson Act is available on the Department's website or by contacting the Division at the address and phone number listed below. The Department's website address is:

http://www.conservation.ca.gov/dlrp/Index.htm

Thank you for the opportunity to comment on this ND. The Department looks forward to receiving your response. If you have questions on our comments or require technical

assistance or information on agricultural land conservation, please contact Bob Blanford at 801 K Street, MS 13-71, Sacramento, California 95814; or, phone (916) 327-2145.

Sincerely,

Erik Vink
Assistant Director

cc: State Clearinghouse

Upper Salinas-Las Tablas Resource Conservation District
65 Main Street, Suite 108
Templeton, CA 93465

Western Kern Resource Conservation District
c/o Antelope Ranch-General Delivery
Cholame, CA 93431

Response to Erik Vink, Assistant Director, State of California, Department of Conservation

Comment #1:

The Negative Declaration does not state whether Williamson Act contract land is affected by the project. However, the Environmental Checklist denotes "No Impact regarding conflict with a Williamson Act contract."

Response: Approximately 84.5 hectares (211 acres) from 52 Williamson Act contracts would be needed for the project right-of-way. The remaining portions (average less than 5 acres) from the 52 large (contracts average over 120 acres) Williamson Act contracts would not result in the cancellation of the remaining lands under contract. The project would provide transportation improvements for the agricultural community. Therefore, there is no project conflict with Williamson Act contracts in the project area.

Comment #2:

The ND states that cumulative impacts were evaluated in the Counties General Plans' environmental documents, but does not state the results of the evaluations.

Response: The General Plans of Kern County and San Luis Obispo County designate 90% of the project area for agricultural use. The Kern County and San Luis Obispo County General Plans list existing constraints involving land use policies, topography, and infrastructure within the project area that limit the project's cumulative and growth-inducing impacts. The reference to the General Plan environmental documents was incorrect and was deleted from the text.

Comment #3:

We also recommend that the appropriate agency provide the Department with required notification regarding any cancellation or public agency acquisition of land under Williamson Act contract required for this project.

Response: The recommendations under "Summary of Department Concerns and Recommendations" are noted. The Farmland Conversion Impact Rating forms for the project have been re-evaluated and are discussed under Comment #4. Farmland impacts for California Environmental Quality Act purposes are not significant as discussed in Comment #4 also. A separate State Department of Conservation notification letter pursuant to Government Code Section 51291(b) would be sent.

Comment #4:

As discussed below, the project appears to involve Williamson Act land, in which case the FCIR should be revised to account for protected land impacted. Under such revision, at lease one route segment would exceed the threshold rating of 160 and require mitigation.

Response: The federal Farmland Conversion Impact Rating forms for each of the project segments has been modified. A 20-point score for Farmland Conversion Impact Rating Criteria 4 (Protection Provided by State and Local Government) has increased each project Farmland Conversion Impact Rating score in Appendix C. Overall, the three projects' overall Farmland Conversion Impact Rating score (150.6 score) remains below the threshold rating of 160. Ratings over 160 points would require mitigation consideration.

Farmland Conversion Impact Ratings

Project	Kilometers (Miles)	Project Score	Overall Score
Project 1 - San Luis Obispo	9.2 (5.8)	144.6	
Project 2 - Kern County (0.0/7.3)	11.7 (7.3)	165	150.6
Project 3 - Kern County (7.3/33.5)	42.1 (26.2)	148	

Comment #5:

If, however, the size of farmland loss is accounted for in the FCIR, segmenting the project into three ratings would mathematically reduce its effect in comparison to one rating for the entire project. This project converts a total of 101 acres of Prime Farmland. The Department considers this a significant adverse impact requiring mitigation through a MND or evaluation in an EIR. We recommend that Caltrans explain how the FCIR adequately evaluates the project's total amount of farmland loss or provide an evaluation that accounts for total loss rather than segmenting that loss.

Response: The Federal Farmland Conversion Impact Rating form information and analysis are the nationally accepted methodology to address project farmland impacts. The Farmland Conversion Impact Rating places emphasis on the quality of the farmland, farming infrastructure, urban pressures, and other factors. Parcel size is just one criterion in the Farmland Conversion Impact Rating score. As indicated in Comment #4, combining the three projects' Farmland Conversion Impact Rating scores results in an overall project score of 150.6. A Farmland Conversion Impact Rating score of 150.6 is still below the threshold ratio of 160 where consideration of mitigation is required.

Comment #6:

Caltrans may want to utilize the California Land Evaluation and Site Assessment (LESA) Model as a measure of impact significance rather than the FCIR. The LESA appears to be a more comprehensive model, including the amount of acreage converted, Williamson Act land and surrounding agricultural land. It was developed for projects in California and is recommended by CEQA. The model may also be used to rate the relative value of alternative project sites. The LESA Model is available from the Division at the contact listed below.

Response: Appendix G of *Guidelines for Implementation of the California Environmental Quality Act* notes that the "California Land Evaluation and Site Assessment Model is optional." This environmental analysis is a blended National Environmental Protection Act and California Environmental Quality Act document. Caltrans and the Federal Highway Administration have used the Farmland Conversion Impact Rating to determine impacts on farmland.

Comment #7:

The San Luis Obispo General Plan Transportation Element available on the County's website states that SR 46 from Cholame to Kern County is not recommended for widening to four lanes.

Response: The reference to General Plan environmental documents discussing the State Route 46 project cumulative impacts was incorrect and has been deleted from the text. The November 1996 San Luis Obispo General Plan Land Use and Circulation Framework for Planning recommends State Route 46 between Cholame (west of the State Routes 41/46 "Wye") and the San Luis Obispo/Kern county line be improved. The 1998 San Luis Obispo County Regional Transportation Plan lists four-lane improvements between the San Luis Obispo/Kern county line and Cholame.

Comment #8:

The ND does not indicate that it is "tiered" from the GP environmental documents.

Response: This environmental document is not a "tiered" environmental document for National Environmental Protection Act or California Environmental Quality Act purposes.

Comment #9:

These two projects convert as many as 134 acres of prime and important farmland. The Department considers this a significant cumulative impact requiring mitigation through a MND or evaluation in an EIR.

Response: The Kern County and San Luis Obispo County General Plans list existing constraints involving land use policies, zoning, topography, and infrastructure within the project areas that limit each of the project's cumulative and growth-inducing impacts.

Comment #10:

In addition, a recent appeals court ruling in Communities for Better Environment, et al. V. California Resources Agency, et al. (2002) has invalidated CEQA Guideline §15152 (f)(3) regarding "tiered" environmental analyses and reliance upon a prior Statement of Overriding Consideration.

Response: The legal case cited is not relevant because the project environmental document is not a "tiered" document.

Comment #11:

Finally, the use of an EIR for one portion of SR 46 improvement and a ND for another portion, in addition to segmenting the route within each project for the purpose of agricultural impact analysis, has the appearance of piecemealing" to not only avoid circulating an EIR but to avoid a determination of significant agricultural impact and required mitigation. To eliminate this appearance and to adequately evaluate agricultural impacts as discussed above, the Department recommends mitigation through a MND or circulation of an EIR for this project.

Response: The type of environmental document selected for each of the State Route 46 projects listed was not based on impacts to farmland or Williamson Act contracts. The State Route 46 project from U.S. Highway 101 to the State Routes 46/41 "Wye" had more potential for California Environmental Quality Act significant impacts than this State Route 46 project to the east; therefore, a draft environmental impact report for that adjacent project was prepared.

This project's Farmland Impact Conversion Rating score of 150.6 was below the 160 score threshold where consideration of mitigation would be required. The acquisition of small strips of Williamson Act farmland would not require the cancellation of the contracts. Likewise, the acquisition of small strips from large farmland properties would not compromise the economic viability of individual agricultural operations. The proposed transportation improvements would be beneficial to the farming community. Therefore, the project has no significant farmland impacts for California Environmental Quality Act purposes.

Comment #12:

Most of the contracted land is prime agricultural land according to Government Code Section 51201 (c). Based on this map information and the presumed termination of contract(s) to accommodate the project, the Department considers the project to have potentially significant agricultural impacts requiring mitigation through a MND or analysis in an EIR.

Response: The project does not have significant impacts on California Williamson Act properties. See response to Comment #11.

Comment #13:

The MND or EIR should identify the Williamson Act parcels, contracts and preserves impacted by the project, as well as whether the land is prime or nonprime agricultural land according to §51201 (c).

The MND or EIR should also discuss the method planned for termination of the involved Williamson Act contracts. As a general rule, land can be withdrawn from Williamson Act contract only through the nine-year nonrenewal process. Immediate termination via cancellation is reserved for extraordinary", unforeseen situations (See Sierra Club v. City of Hayward (1981) 28 Cal.3d 840, 852-855). Furthermore, it has been held that "cancellation is inconsistent with the purposes of the (Williamson) act if the objectives to be served by cancellation should have been predicted and served by nonrenewal at an earlier time, or if such objectives can be served by nonrenewal now" (Sierra Club v. City of Hayward).

Only the landlowner may submit a petition for cancellation. If cancellation is proposed, the local entity must notify the Department prior to a board of council's consideration of the proposal for tentative cancellation (Government Code §51284.1). The board or council must consider the Department's comments prior to making a decision on the proposal. Required findings must be made by the board or council in order to approve tentative cancellation. We recommend that the MND or EIR include discussion of how cancellations involved in this project would meet required findings.

Response: The Williamson Act Contracts/parcels have been identified in Figures H.1 and H.2. The Government Code Section 51284.1 procedure for cancellation laid out in your comment applies to individual property owners petitioning local governments to cancel their contracts and does not apply to state agencies. State agencies acquire Williamson Act contracts pursuant to Government Sections 51290-51295. State purchase of a property subject to Williamson Act contract property cancels the contract.

Comment #14:

The public agency must consider the Department's comments prior to taking action on the proposed acquisition. We recommend discussion in the MND or EIR of whether such action is envisioned by this project and how the acquisition will meet the required findings. However, notification must be submitted separately from the CEQA process and CEQA documentation to the address noted above.

Response: A separate State Department of Conservation notification letter pursuant to Government Code Section 51291(b) will be sent. State Route 46 highway improvements are exempt [see Government Code Section 51293(e)] from the conditions under which public improvement may not be located within a preserve pursuant to Section 51292 of the Government Code. Government Code Section 51292 does, however, prohibit public agencies from acquiring contract lands based on the lower cost and requires that non-Williamson Act contract lands be acquired instead of contract land if feasible. There are no feasible non-contracted lands available within the project area. The Williamson Act contracted land covers most of the project area (see H.1 and H.2.)

Comment #15:

The Department encourages the purchase of agricultural conservation easements on land of at least equal quality and size as compensation for the direct loss of agricultural land. We also recommend this ratio if a Williamson Act contract is terminated or if growth inducing or cumulative agricultural impacts are involved and an increased ratio for projects involving a combination of these impacts. We highlight this measure because of its growing acceptance and use by lead agencies as mitigation under CEQA. Caltrans District 11, for example, has utilized agricultural conservation easement mitigation. It follows a rationale similar to that of wildlife habitat mitigation.

Response: This project has no significant impact for California Environmental Quality Act purposes, as noted in the response to Comment #11; therefore, no mitigation is required. Additionally, the agricultural community receives transportation benefits from the project; therefore, no mitigation is required for project farmland impacts. Small portions of large Williamson Act contracts would be terminated, and no growth-inducing impacts are expected from the project.

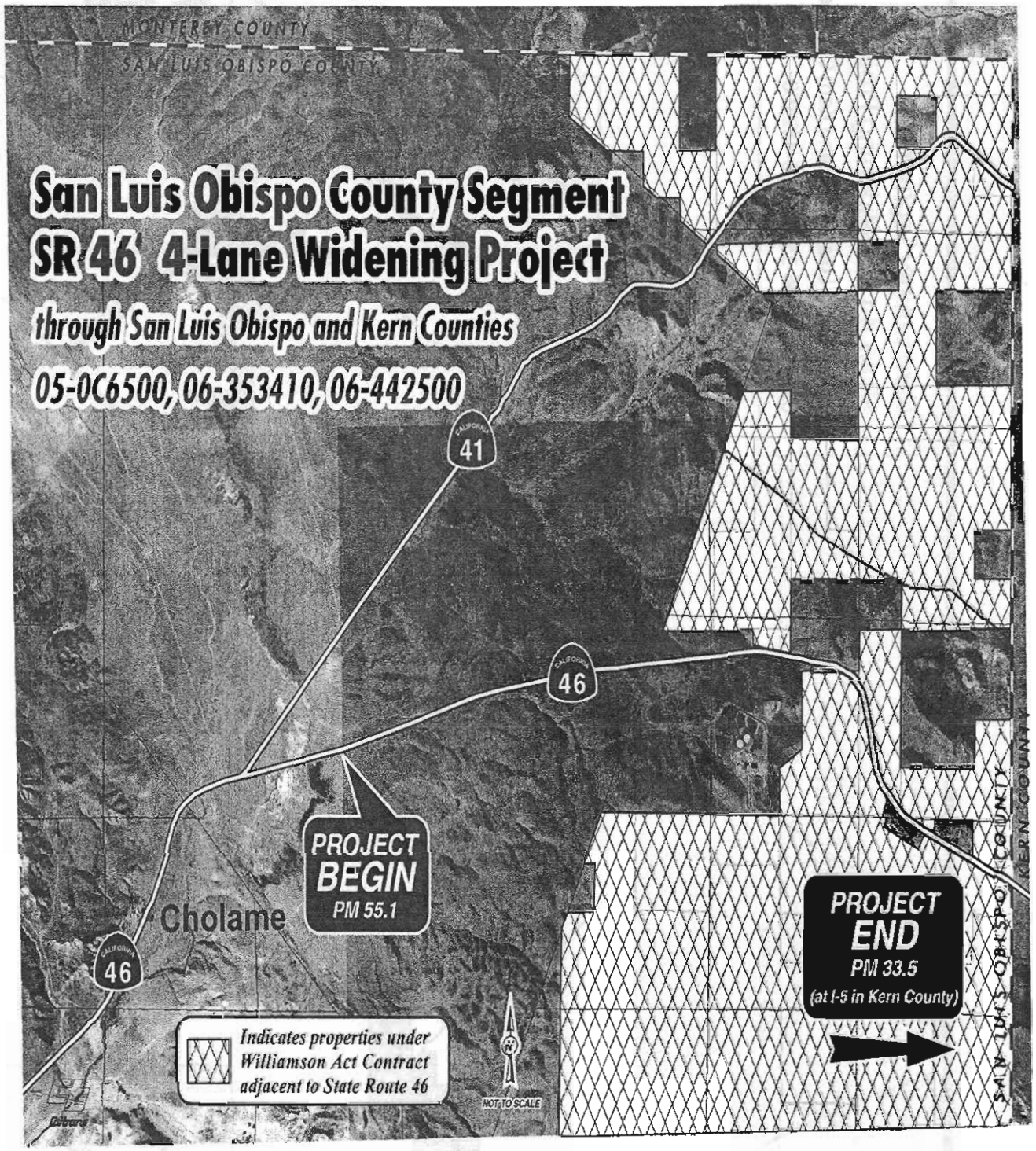


Figure H.1 Project 1 - Williamson Act Contract Properties in San Luis Obispo

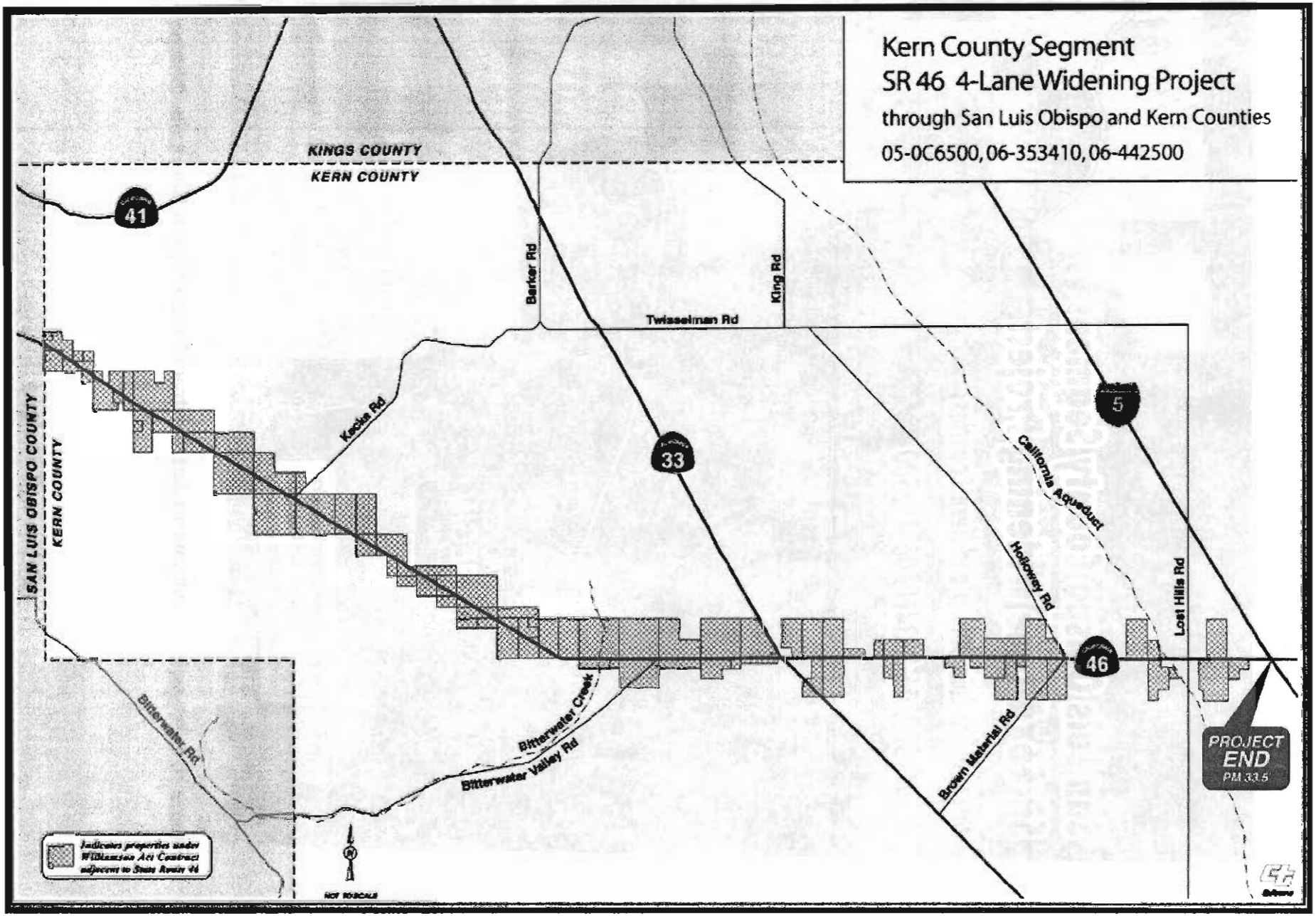


Figure H.2 Projects 2 and 3 – Williamson Act Properties in Kern County

Kern Council
of Governments

May 16, 2003

Ms. Judith Lopez,
Associate Environmental Planner
Caltrans District 6
2015 East Shields Avenue
Fresno, CA 93726

Reference: San Luis Obispo and Kern Counties State Route 46 Four-Lane Widening Project Environmental Assessment/Initial Study

Dear Ms. Lopez:

Thank you for the opportunity to comment on the above-referenced State Highway 46 widening project.

Kern Council of Governments is very much in support of this project and in adopting a mitigated negative declaration, which will allow the much-needed project to move forward in the most timely fashion.

Staff has reviewed the Environmental Assessment/Initial Study prepared by Caltrans and believes the document appropriately assesses the impacts of the proposed project. Staff offers the following comments for consideration and incorporation into the Final Environmental Assessment/Initial Study.

Page vi, paragraph 1, references the 2001 Federal Transportation Improvement Program. This should be the 2002 FTIP, which was adopted October 4, 2002. In addition, the FTIP and the RTP referenced on this page and subsequently should be included in Chapter 6. References.

Page 33, Section 3.1.1, refers to property adjacent to the highway as used mainly for agriculture. It could be pointed out that the petroleum industry has significant properties adjacent to the highway, as well.

Page 33, Section 3.1.2, references the "Regional Transportation Plan and Program" prepared by the metropolitan planning organization for Kern and San Luis Obispo Counties." Each county has its own MPO; Kern County's is the Kern Council of Governments while San Luis Obispo's is the San Luis Obispo Council of Governments. In Kern County, we prepare and publish a "Regional Transportation Plan" and no "program" *per se* is appended. The Congestion

Kern Council of Governments
1401 19th Street, Suite 300, Bakersfield, California 93301 (661) 861-2191 Facsimile (661) 324-8215 TTY (661) 832-7433 www.kerncog.org

Management Program is incorporated into the RTP; nevertheless, Kern COG refers to it simply as the "Regional Transportation Plan."

Also on page 33, last paragraph: reference is made to the Farmland Protection Policy Act; it might help to clarify that this is a federal act, under direction of the U.S. Dept. of Agriculture.

Page 34, Section 3.2.1, provides acreage figures that are a bit confusing. No combination of the figures provided seems to add up to the total 125.5 acres. Clarification would be helpful.

Page 35, first paragraph, fourth line, seems to be missing some words, i.e., "on the health or environmental (sic) of minority..."

Page 36, fourth paragraph, states, "As of April 2001, the Environmental Protection Agency has not issued quantitative particulate matter hot spot analysis guidance." Is this the most current information? Could it be safely said that "As of May 2003..."?

Page 37, third paragraph, references a 2001 FTIP adopted on July 25, 2001. The correct reference would be to the 2002 FTIP adopted October 4, 2002.

Page 37, fourth paragraph, states "This portion...is **not** (emphasis added by writer) subject to a maintenance plan," while in fact it **is** subject to a maintenance plan for 10 years.

Page 37, Section 3.4.2, third line: should be corrected to read "suspended particulate matter"

Page 65, third paragraph, discusses soil borings performed and samples taken. However, it does not indicate the findings from these tests and only states that "the investigation would indicate..." if lead is detected in the soil. More detailed findings should be included.

Page 71, third paragraph, refers to "the environmental document for the General Plans." This implies that only one environmental document (Environment Impact Report?) was prepared for both San Luis Obispo's and Kern's General Plans.

Referencing Chapter 6, References, additional information should be provided so that the reader will know with which agency or firm the authors are connected.

Kern COG staff notes that, within Appendix B, Kern Council of Governments and Kern County Planning department should be included as contacts.

Kern COG staff's primary concern with this EA/IS is focused on the proposed mitigation measures. Per CEQA, mitigation measures must be specific, must

state which agency will have responsibility for implementation, and must indicate the timeframe under which the mitigations will be carried out. Case law also holds that "future studies" are not valid mitigation measures, nor is it sufficient to state that a mitigation measure "should" be adopted. It would be safest to indicate that a mitigation measure "shall" be adopted.

Quoting pp. 8-9 of *Citizen's Guide to the California Environmental Quality Act* (J. William Yeates, Esq., Planning and Conservation League Foundation, March 1997): Mitigated negative declarations cannot be used when they rely upon the presumed success of future mitigation measures that have not been formulated at time of project approval [*Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 306-314]. Any proposed mitigation measure to reduce or avoid a significant adverse impact that a project may have on the environment must be made available for public review at the time the negative declaration is circulated for public review and comment prior to project approval. A mitigation measure cannot be left to be formulated in the future [*Gentry v. City of Murrieta* (1995) 36 Cal.App.4th at 1397].

However, *Sacramento Old City Association v. City Council of Sacramento* (1991) 229 Cal.App.3d 1011, 1028-1029, upheld a mitigation plan where "the agency can commit itself to eventually devising measures that will satisfy specific performance criteria articulated at the time of project approval".

Before publication of the final EA/IS, Kern COG respectfully requests that Caltrans review the proposed mitigation measures with the above information in mind.

Thank you again for the opportunity to comment on this document. With consideration of the above comments, Kern Council of Governments wholeheartedly supports adoption of the proposed mitigated negative declaration.

If you have any questions regarding the above, please do not hesitate to contact the undersigned at (661) 861-2191 or mbeardslee@kerncog.org.

Very truly yours,

Marilyn J. Beardslee

Marilyn J. Beardslee
Senior Planner
Transportation and Modal Planning

cc: Joe Stramaglia, Kern COG
Raquel Carabajal, Kern COG

3

Response to Marilyn Beardslee, Kern Council of Governments

Below are responses to the sections and paragraphs referenced in Marilyn Beardslee's letter dated May 16, 2003 (Note: These referenced pages could have shifted a page or two in this revised document as text has been added or changed from the earlier version. In the event that referenced pages have shifted, the new pages are found at the end of each response):

Page vi, paragraph 1 - Noted.

Page 33, Section 3.1.1 – Edited to include petroleum industry properties.

Page 33, Section 3.1.2 - Noted. Edits are reflected in the final Finding of No Significant Impact/Negative Declaration with Environmental Assessment/Initial Study environmental document.

Page 33, last paragraph – Noted and added to the Affected Environment paragraph 3.2.1.

Page 34, Section 3.2.1 - Edited for clarification. Writer has emphasized that only 44 hectares (108.7 acres) out of the total 196.5 hectares (485 acres) of right-of-way needed for the project are either Prime or Farmland of Local Importance land.

Page 35, first paragraph, fourth line - Paragraph has been corrected on page 36.

Page 36, fourth paragraph – The current information is that the Environmental Protection Agency has not issued quantitative particulate matter hot spot analysis guidance. Edited to the present date on page 38.

Page 37, third paragraph - Edited to October 4, 2002 on page 38.

Page 37, fourth paragraph – Edited to state that it *is* subject to a maintenance plan on page 39.

Page 37, Section 3.4.2 – Corrected on page 39.

Page 65, third paragraph - The results of the investigation have been added in paragraph 3.13.1.1.

Page 71, third paragraph - Edited for clarification.

Chapter 6, References - Noted.

Appendix B – Kern Council of Governments and the Kern County Planning Department were added to the Coordination and Consultation section on page 95.

Appendix F, Mitigation Monitoring Program - Ultimately, Caltrans, the California Department of Fish and Game, the Federal Highway Administration, and the U.S. Fish

and Wildlife Service must approve the Mitigation Monitoring Program proposed before project approval is in Appendix F of this environmental document.

PACIFIC ALMOND COMPANY
P. O. Box 7 • Lost Hills, California 93249 USA
Telephone: (661) 465-5661 ~ Fax: (661) 465-5663

Mehran Akhavan
Project Manager
State of California
Department of Transportation
2015 E Sheilds, Suite 100
Fresno, CA 93726

Monday, July 21, 2003

RE: STATE ROUTE 46 KERN COUNTY

Mr. Akhavan:

My name is Jeff Ferguson, manager for Pacific Almond Co., an almond hulling/shelling and processing company. We are located on HWY 46 approx. 8 miles west of HWY 33 outside Lost Hills, CA.

It has been brought to my attention that there are tentative plans to reconstruct HWY 46 into an expressway past our facility to the south of the BMWD canal. So far, no planning official has contacted our company for our input and concerns regarding the plans.

You will understand that we are first of all concerned about safety. Secondly, we worry about access to the expressway and where that access will be provided. During harvest season, August to November, we have many of trucks rolling on and off the premises via HWY 46. During the remainder of the year we have a steady traffic of trucks delivering product for further processing/packing and picking up finished product.

During the fog season that can start as early as late October, and last until early March, we are already seeing safety problems when trucks and employee vehicles have to turn off/on the HWY 46 to reach our facility.

We further understand that the plans call for building two new bridges over the BMWD canal. Moving the expressway to the south of the BMWD canal would seem the logical choice to avoid further cost to the taxpayer for expensive bridge building.

In our opinion turn pockets and third acceleration lanes should be considered in the planning stages as well.

California Almonds of the World
e-mail: pacalmnd@gte.net • URL: www.PACIFICALMOND.COM

All of the above is not only a concern to Pacific Almond Co. but is also shared by our neighbors such as Paramount Farming Co., Royal Farming Co., Roden Farms, and Blackwell Land Co. Throughout the year they have e.g. slow moving farm equipment that needs to cross HWY 46.

I will be available for appointment if you would like to discuss this matter any further. Thank you.

Sincerely,

Jeff Ferguson
Manager
Pacific Almond Company
A Tejon Ranch Company

CC: Dean Florez, State Senator 16th District
Nicole Parra, State Assembly 30th District
Ray Watson, Supervisor Kern County 4th District
Mike Donahue, Southern Sierra Environmental Analysis Branch
Harry O. Starkey, BMWD, Manger
Leon E. Elwell, Blackwell Land Company, Inc., Executive VP
Joe McIlvaine, Paramount Farming Company, President
Paul Sihota, Royal Farming Company, President
Sharon Roden, Roden Farms, Owner

California Almonds of the World
e-mail: pacalmnd@gte.net • URL: www.PACIFICALMOND.COM

Response to Jeff Ferguson, Pacific Almond Company

Caltrans met with Mr. Ferguson and other landowners and addressed their concerns. Please see response to Blackwells Land Company (later in this appendix).

BLACKWELLS CORNER
17191 HW. 46
LOST HILLS, VS 93249
MAY 14, 2003

Mike Donahue
Department of Transportation
2015. E. Sheilds Suite 100
Fresno, CA 93726-5428

Dear Sir:

As per our conversation on 5/13/03, I am voicing my concerns of the changes in route 33 & 46. If the intersection is moved to the east, as I was told, Blackwells would cease to exist. All trade from the east, north and south would no longer be available.

Blackwells Corner was established in 1904 and is a part of the history of Kern County.

At this time I have plans to build more housing and to enlarge the Blackwells store to accommodate our mail order business and demand for fuel. I would also like to include a motel and R.V. park to the west in the future.

Mike could we schedule a meeting with you and your engineers to address my concerns.

Sincerely Yours

Kossie L. Dethloff

Kossie Dethloff

Copy to Senator Dean Florez

Response to Kossie Dethloff, Blackwells Corner

Currently, Mr. Dethloff is provided access to his property through driveways on State Routes 46 and 33. The conversion of State Route 46 to a four-lane expressway requires eliminating access from State Route 46 but Mr. Dethloff would maintain access from Route 33. The realignment of State Route 33 was required because the existing intersection was skewed at an angle less than the minimum standard of 75 degrees. The new intersection was redesigned as a right angle intersection at its present location.

BLACKWELL LAND COMPANY, INC.

May 29, 2003

Mr. Mike Donahue
State of California
Department of Transportation
Southern Sierra Environmental Analysis Branch
2015 E. Shields, Suite 100
Fresno, CA 93726-5428

Re: Environmental Assessment/Initial Study - State Route 46 through Kern County

Dear Mr. Donahue:

We spoke about most of these matters at the May 7, 2003 hearing and again via phone yesterday. We have grave concerns about the design of this project from Bitterwater Creek west to the end of the Berrenda Mesa Water District (BMWD) which is somewhere near PM7.3 on Figure 1.2 of your Assessment. We cannot be more precise as the pictures we requested at the hearing have not arrived yet. We thank you in advance for reiterating again yesterday that you will get those out to us immediately.

Let me start by saying we were surprised to find that the entire project was designed without anyone from the project contacting our operation, which borders the project on both sides for many miles. Most importantly we were not consulted regarding the decision of where to put the additional lanes in relationship to the existing highway that has resulted in requiring two new bridges that could be avoided. We are however grateful that the project was not designed to go through our airstrip, office and housing complex, or citrus orchard.

The project should consider taking the opportunity to move the 4-lane expressway completely south of the BMWD canal. This alternative alignment will avoid two bridge crossings and some safety concerns related to the active farming that creates daily crossings of the highway, as well as, ingress and egress of semi-trucks laden with almonds, grapes and produce. 1

For example the existing highway could be used as a feeder road to both the Pacific Almond Company, Almond plant and the Blackwell Land Company office and scales used for produce and grape weighing. This would certainly help address the issue of Semi-Trucks slowing traffic and creating an unsafe environment for all. Alternatively a formal exit from the roadway or at least two turn pockets will be necessary to mitigate the situation.

4900 California Avenue, Suite 201-A, Bakersfield, CA 93309
(661) 397-2622 Fax (661) 397-2627

We further believe that the EIR is deficient in its lack of addressing the issue of the active farming businesses necessity to cross the highway numerous times daily with pick-up trucks, water trucks, tractors, 3 and 4-wheel ATC's and other farm implements. This is especially critical to the welfare of the employees of the farms, as well as, the citizens who use the expressway. Once the express way is complete and speeds of 70 mph or greater are seen this will not be safely compatible with farm-worker crossings. We are not sure a revised alignment will alleviate all of the issues, but there is strong evidence that this has not been considered or addressed in this EIR.

Lastly, the EIR is rather vague about how you intend to mitigate the noise created by the expressway as it impacts the residents living on Blackwell Property just North of the current highway. Again a movement of the alignment south of the current alignment will help minimize noise impacts to the residents living there and create a safer environment for ingress and egress to the highway. 2

Please review these matters and contact us for further consultation at (661) 397-2622 x223.

Very truly yours,

BLACKWELL LAND COMPANY INC.

Leon E. Elwell, CPA
Executive Vice President
Chief Financial Officer

C: Dean Florez, State Senator 16th District
Nicole Parra, State Assembly 30th District
Ray Watson, Supervisor Kern County
Harry A. Starkey, BMWD, Manager
Joe McIlvaine, Paramount Farming Company, President
Dennis Atkinson, Pacific Almond Company, Vice President
Paul Sihota, Royal Farming Company, President
Sharon Roden, Roden Farms, Owner

Response to Leon E. Elwell, Blackwell Land Company, Inc.

1. Moving the alignment south to avoid crossing the Berrenda Mesa Water District canal and constructing a four-lane expressway through an airstrip, an office and housing complex and a citrus orchard would not be appropriate or financially feasible. Caltrans chose the best alignment possible to mitigate as many impacts as possible.

   The Preferred Alternative proposes the Caltrans standard acceleration and deceleration lanes for large trucks moving on and off the highway. Also, intersections would be provided with appropriate median crossovers for semi-trucks entering and exiting farming operations.

2. No noise mitigation is required. A noise investigation was performed for this project, and only one area was sensitive to the four-lane expressway – the city of Lost Hills. According to the Noise Abatement Criteria set by the Federal Highway Administration, the noise level at homes in the area should not exceed 65 A-weighted decibels (dBA). Noise abatement is considered when the predicted traffic noise levels substantially exceed the existing noise levels. The existing noise level at this location is 60 dBA. The noise level does not exceed the Noise Abatement Criteria threshold where consideration is made for soundwalls.



Public Hearing/Informational Meeting
May 7, 2003

NAME: Tom Tully

ADDRESS: 15255 Lost Hills Rd **CITY:** Lost Hills **ZIP:** 93249

REPRESENTING: ChevronTexaco

Do you wish to be added to the project mailing list? ☑ **YES** ☐ **NO**

Please drop comments in the Comment Box or

Mail to: **CALTRANS CENTRAL REGION**
ATTN: Judith Lopez
2015 East Shields Avenue, Suite 100
Fresno, CA 93726
E-mail: judith_lopez@dot.ca.gov

I would like the following comments filed in the record (please print): We are currently working with CAL-Trans Representatives on this Project in an Effort to minimize the Impact on the State as well as ChevronTexaco. We feel this Effort is Going Very Well. Listed Below are a Few Considerations:

- Would it Be Possible to Have a narrow median in the Road From Post 27.9 to 29.2? this would minimize the Impact on our Operations and Hopefully, Be a Cost Savings For the Project.
- Would it Be Possible to not widen the Highway in the oilfield section and start the widening @ Brown material Road, going west. same Benefit as Above.

Closing response date is June 9, 2003

Very Concerned with the Travel of All of the Oilfield Heavy Equipment Crossing Hwy. 46. This Equipment is very Large & Slow. We would Be very Interested in an Overpass or Underpass Crossing Hwy. 46. We feel this would Improve safety for the Public as well as our Employees.

Response to Tom Tully, Chevron Texaco

Caltrans expressway design standards prevent narrowing the median throughout the Lost Hills Oil Fields.

Underpasses and overcrosses were considered because of requests from property owners. The construction of these structures would not be financially feasible given the limited traffic in the area. Any overcrosses may be constructed at the property owner's expense.

The Preferred Alternative proposes Caltrans standard acceleration and deceleration lanes for large trucks moving on and off the expressway. Also, intersections would be provided with the appropriate median crossovers for semi-trucks entering and exiting farming operations.

LAW OFFICES
LYON & CARMEL
1104 PALM STREET
POST OFFICE BOX 922
SAN LUIS OBISPO, CALIFORNIA 93406

ROGER LYON*
TIMOTHY J. CARMEL
*A LAW CORPORATION

TELEPHONE
(805) 541-2560
TELECOPIER
(805) 543-3857

June 9, 2003

VIA EMAIL, ORIGINAL BY MAIL

Caltrans
Attn: Mike Donahue, Southern Sierra Environmental Analysis Branch
2015 E. Shields, Suite 100
Fresno, CA 93726
E-mail: Mike_Donahue@dot.ca.gov

RE: **San Luis Obispo/Kern Counties State Route 46 4-Lane Widening Environmental Assessment/Initial Study**

Dear Mr. Donahue:

This office represents the Hearst Corporation ("Hearst") which owns the Jack Ranch, upon which a substantial portion of the above referenced project will be constructed. Hearst's primary areas of concern in the above referenced matter are as follows:

1. Hazardous Waste Sites – issues: additional assessment, mitigation and cleanup. The document identifies several potentially hazardous waste sites on the Jack Ranch property including the Antelope Pumping Plant, Tosco Crude Oil Pipeline and Chevron Crude Oil Pipeline;

2. Wetlands – issues: identification and mitigation. Most of the wetlands affected by the project are located on Jack Ranch property;

3. Farmland Conversion – issues: identification and mitigation. Based on the general description contained in the document, it would appear that a substantial amount of proposed farmland of local importance and prime farmland proposed for conversion are located on the Jack Ranch.

Mike Donahue
SR 46 Widening Project Environmental Assessment/Initial Study
June 9, 2003
Page 2

On behalf of Hearst Director of Real Estate, Martin Cepkauskas, this is to request a meeting between Cal Trans and Hearst representatives to obtain additional information with regard to the above issues as well as to discuss operational issues related to the project, including minimizing the project's impact on Hearst's ongoing cattle ranching and other commercial operations at the Jack Ranch.

Thank you and please call if you have any questions.

Sincerely,

LYON & CARMEL

Timothy J. Carmel

TJC:rjl
cc: Martin Cepkauskas

Response to Timothy J. Carmel, the Law Offices of Lyon & Carmel representing the Hearst Corporation

1. The Tosco Antelope Pumping Station, the Tosco crude oil pipeline, and the Chevron crude oil pipeline were identified only as areas of environmental concern. However, the properties that pose some potential for hazardous waste/hazardous material—the Lost Hills Oil Fields and petroleum product pipelines—lie between kilometers posts 44.9 to 45.9 (post miles 27.9 to 29.2), and a Preliminary Site Investigation was required. Soil found to exceed the regulatory threshold would be classified as hazardous waste and would be required to be disposed of at a permitted hazardous waste landfill. Other soil would be managed at the project location according to the conditions of a variance issued by the California Department of Toxic Substance Control. If the aerial-deposited lead in soil is below the regulatory standard threshold, it may be managed with no restrictions.

   The Preliminary Site Investigation results reflect the soils excavated within kilometer posts 44.9 to 45.9 (post miles 27.9 to 29.2), noting they could be used and managed onsite and/or offsite without restrictions. Statistical analysis of the data developed from the aerial-deposited lead investigation indicates that the overall lead concentration in soil within these project limits does not exceed the regulatory threshold for lead outlined in Title 22, California Code of Regulations.

2. Three potential jurisdictional wetlands and one jurisdictional waters of the U.S. were identified within the San Luis Obispo County portion of the project:

   Location 1 lies one mile east of the intersection of State Routes 46/41 at approximately kilometer post 89.46 (post mile 55.6). The site is a small drainage and was delineated as potential jurisdictional "Other Waters of the U.S." Pockets of wetland areas were delineated separately as potential jurisdictional wetlands. The jurisdictional wetland impacts for Location 1 are 0.005 hectare (0.013 acre).

   Location 2 lies at approximately kilometer post 95.4 (post mile 59.3). This drainage was delineated as a potential jurisdictional "Other Waters of the U.S." Wetland areas were delineated separately as jurisdictional wetlands. Impacts to potential jurisdictional wetlands are 0.022 hectare (0.055 acre).

   Location 3 is within the same drainage evaluated at Location 2, approximately 0.40 kilometers (0.25 mile) southeast of Location 2. The entire drainage in and around the project area was delineated as a potential jurisdictional "Other Waters of the U.S." The wetland areas were delineated separately as jurisdictional wetlands. Impacts to potential jurisdictional

"Other Waters of the U.S." are 0.064 hectare (0.16 acre). Impacts for potential jurisdictional wetlands are 0.0012 hectare (0.003 acre).

Minor project wetland impacts (0.029 hectare [0.071 acre]) would be mitigated via wetland creation or purchases of wetland areas. The project minor wetland and other waters impacts would be subject to a U.S. Army Corps of Engineers Nationwide #14 permit. A California Department of Fish and Game 1601 Streambed Alteration Agreement would be required for the small streambeds located in the project area.

3. For this project, approximately 12 hectares (30 acres) of farmland would be needed from the Hearst Corporation. The Department of Transportation Right-of-Way Division would consider the effects on the Jack Ranch existing property to determine an amount of just compensation. A staff appraiser from the Right-of-Way Division would meet with a representative of the Hearst Corporation to inspect the property. At that time, current maps would be available to indicate specifically what portion of the property is required for this project, as well as to know what points of access would be available. The appraiser would analyze the property and examine all of the features that contribute to its value. Information about the property, including present or planned farming operations or changes in use should be given to the appraiser by you to ensure a fair value is assigned to the property. Our goal is that you not suffer a financial loss as a result of a purchase of a portion of your property. Every effort would be made to measure any damage to the remainder of the property and compensate you for damages that cannot be reasonably mitigated.

San Luis Obispo - Kern 46 4-Lane Widening

Public Hearing/Informational Meeting
May 7, 2003

NAME: Rosaelena Alegre

ADDRESS: Po Box765 **CITY:** Lost Hills **ZIP:** 93249

REPRESENTING:

Do you wish to be added to the project mailing list? ☒ YES ☐ NO

Please drop comments in the Comment Box or

Mail to: **CALTRANS CENTRAL REGION**
ATTN: Judith Lopez
2015 East Shields Avenue, Suite 100
Fresno, CA 93726
E-mail: judith_lopez@dot.ca.gov

I would like the following comments filed in the record (please print):

I would like a signal light and a cross-over bridge.
There are many children crossing the road without parent supervision, without a cross-over bridge there may be an accident.
I would like traffic to come into town with a lower speed limite. (45 speed limite is allright)

Closing response date is June 9, 2003

Response to Rosaelena Alegre

Traffic studies reflect that a pedestrian overcrossing is not recommended. Presently, there are 560 students at Lost Hills School. There are 100 students that walk to school in the morning and approximately 30-40 students walk in the afternoon. Most students are bused to and from the school therefore, a pedestrian overcrossing is not recommended because of low projected use of such a structure.

According to the Lost Hills Union School District Transportation Director, the bussing operation may be halted due to funding. This may increase foot traffic in the future. A nearby post office also contributes to the foot traffic in the area. A marked crosswalk with a pedestrian-activated signal would be placed at Bruning Avenue and at Lost Hills/Woodward Street to allow pedestrians to cross safely. Raised medians would be built to provide a pedestrian refuge area.



<cloyd@pocketmail.com>

05/05/2003 10:50 AM

To: <judith_lopez@dot.ca.gov>
cc:
Subject: Hwy 46

Forget about the frogs etc.and dont waste the money like was done on the bridge in Morro Bay.An added cost of 380,000 dollars and when the rains came the frogs went out to the slue like they always did.Just think if hwy 46 from 101 to Shandon were built completely (4 lanes)for 5 miles each year it would have been done in 5-6 years.Instead it was peice mealed over 25 years and unnecessary deaths.Now between Shandon and 5 ,is that going to take another 25 years by widening it here then 5 miles farther then 2-3 miles and thin come back and widen it to 4 lanes.I worked the street dept.so I know where waste is,lets get more bang for the buck and do it right this time. 46 is still not done to Cal trans safety specs. sincerely cloyd myers

Response to Cloyd Myers

Comment noted.

San Luis Obispo - Kern 46

4-Lane Widening

Public Hearing/Informational Meeting
May 7, 2003

NAME: JAnice Deatherage

ADDRESS: ~~21116 Universal St~~ P.O. Box 1 **CITY:** LH **ZIP:** 93249

REPRESENTING: Community

Do you wish to be added to the project mailing list? ☑ **YES** ☐ **NO**

Please drop comments in the Comment Box or

Mail to: **CALTRANS CENTRAL REGION**
ATTN: Judith Lopez
2015 East Shields Avenue, Suite 100
Fresno, CA 93726
E-mail: judith_lopez@dot.ca.gov

I would like the following comments filed in the record (please print):

(1) Hwy 46 & Lost Hills Rd
At this intersection could there be a stoplight installed
High traffic accident area. As well as pedestrian
crossing hwy from Park to store & vs. versa.

(2) Pedestrian overpass at Hwy 46 & Browning Ave.
Crossing for students as well as families.
Safety issue.

Closing response date is June 9, 2003

Response to Janice Deatherage

1. Traffic signals would be installed at Bruning Avenue and at Lost Hills Road before the four-lane project would be constructed.

2. Traffic studies reflect that a pedestrian overcrossing is not recommended. Presently, there are 560 students at Lost Hills School. There are 100 students that walk to school in the morning and approximately 30-40 students walk in the afternoon. Most students are bused to and from the school therefore, a pedestrian overcrossing is not recommended because of low projected use of such a structure.

   According to the Lost Hills Union School District Transportation Director, the bussing operation may be halted due to funding. This may increase foot traffic in the future. A nearby post office also contributes to the foot traffic in the area. A marked crosswalk with a pedestrian-activated signal would be placed at Bruning Avenue and at Lost Hills/Woodward Street to allow pedestrians to cross safely. Raised medians would be built to provide a pedestrian refuge area.



Public Hearing/Informational Meeting
May 7, 2003

NAME: Estella Cortez 21102 Universal Street
ADDRESS: PO Box 283 CITY: Lost Hills ZIP: 93249
REPRESENTING: Property owner close to project
Do you wish to be added to the project mailing list? ☒ YES ☐ NO

Please drop comments in the Comment Box or

Mail to: **CALTRANS CENTRAL REGION**
ATTN: Judith Lopez
2015 East Shields Avenue, Suite 100
Fresno, CA 93726
E-mail: judith_lopez@dot.ca.gov

I would like the following comments filed in the record (please print):

1. Noise Level for 4-lane ! I would like to see a study.
2. Alternative Road to get into 46 once 4-lane is Developed (Traffic light)
3. No parking signs at any time on both sides.

Closing response date is June 9, 2003

Response to Estella Cortez

1. A copy of the noise study was sent to Ms. Cortez. No soundwalls would be constructed within the limits of Lost Hills. The centerline of the proposed highway is 91.4 meters (300

feet) south of Wallace Avenue and Universal Street. According to the Noise Abatement Criteria set by the Federal Highway Administration, the noise level at homes in the area should not exceed 65 A-weighted decibels (dBA). Noise abatement is considered when the predicted traffic noise levels substantially exceed the existing noise levels. The existing noise level at this location is 60 dBA. The noise level does not exceed the Noise Abatement Criteria threshold where consideration is made for soundwalls.

2. A traffic signal would be installed at Bruning Avenue and a traffic signal at Lost Hills Road would be installed before the four-lane project would be constructed.

3. An ordinance must be enforced that prohibits semi-trucks parking in unsafe locations. Any resident could contact the appropriate governing bodies of Lost Hills.

4232 Shadow Canyon Road
Templeton, CA 93465
May 14, 2003
Ph: 805-238-5246

John Luchetta
Environmental Planning Branch
Caltrans District 5
50 Higuera St.
San Luis Obispo, CA 93401

Judith Lopez
Caltrans District 6
2015 East Shields Ave.
Suite 100
Fresno, CA 93726

Dear Ms. Lopez and Mr. Luchetta:

We are delighted to know that major improvements in Highway 46 are now well in the works. We have not been able to attend the recent SLO and Kern County environmental impact public hearings. In any case, the impacts in SLO County described in The Tribune seem quite acceptable, and we cannot imagine any major problems in the more open Kern County. Our only comment is that it would be nice to design the new highway to retain whenever possible any major oak trees or groves, e.g., in a widened median strip. This would enhance the beauty of the highway and could improve safety, e.g., by reducing driving monotony. However, our primary purpose in writing now is to emphasize the importance of improving State Highways 46, 41, and 58 to connect US 101 with Interstates 5 and 40.Please refer this letter appropriately within Caltrans. 1

I-40 should have been terminated at US 101 in Paso Robles, connecting the eastern USA with US 99, I-5, and US 101,rather than in the middle of the Mojave Desert. Note that the transcontinental rail system does continue into the Central Valley. The Mojave freeway gap is now nearly filled by conversion to superhighway of Route 58. But the Central Coast in the 130-odd miles from Monterey and Salinas to Santa Maria has only four second-rate highways connecting with the Central Valley and points East, and no decent connections on from I-5 east to US 99. Coastal folks have a problem getting East, Valley residents in getting to the beaches. Both populations are growing rapidly. We on the coast are tired of being highway-deprived second class citizens, whose freeway travels are expected to be limited by a system designed to force through traffic into the congested LA and Bay areas. We use the present inadequate highways 46/41 to I-5 to escape some of this congestion when traveling to LA and points east or to Oregon. The route 58 superhighway needs to be extended to I-5, route 46 converted into superhighway from US 101 to I-5, and route 41 from route 46 to US 99. The need for superhighway connections from Bakersfield to the Central Coast is made more urgent by the current rapid adoption of containerized intermodal freight transport in the USA. The lack of any direct rail connections west from Bakersfield will lead to growing container transshipment there to trucks heading west, especially as route 46 is improved. It and a new route 58 west from Bakersfield must be designed to handle a massively growing heavy-truck traffic. 2

We also want to draw attention to the present extremely hazardous passing-lane design at the crest of Highway 46 near the County line. These very short lanes tempt drivers to pass when they cannot get back in the through lane soon enough. Several years ago Kathie was nearly killed one night on a trip from Arizona when she came over the crest and faced an eighteen-wheeler bearing down on her in her lane. Only her rapid response of braking and driving off onto the shoulder on her side saved her life. This hazard needs fixing NOW, e.g., by no-passing zones on both sides of the crest. 3

Sincerely yours,

Raymond C. Sangster

Dr. Raymond C. Sangster

Kathie B. Sangster

Mrs. Kathie B. Sangster

Response to Dr. Raymond C. Sangster and Mrs. Kathie B. Sangster

1. Native trees would be replaced at a 3-to-1 ratio. State Senate Concurrent Resolution No.17 - Oak Woodlands, passed in September 1989, requires that Caltrans preserve and protect native oak woodlands to the maximum extent feasible or provide replacement plantings where oak species are removed.

2. Interstate 40 is a major east-west freeway spanning eight states, from Barstow, California, to Wilmington, North Carolina. Built in the 1960s, the road generally follows the old U.S. Route 66 alignment. The interstate extension to U.S. Highway 101 potentially could ease traffic on Route 58, a heavy goods movement highway, and it would make access to the California coast much easier. There are no official plans or funding to extend Interstate 40 at this time.

   Caltrans is planning on phased improvements (two-lane conventional highway to four-lane expressway) for the section of State Route 46 from the San Luis Obispo/Kern county line to Interstate 5. The projects would be jointly funded by Caltrans and the Kern Council of Governments. The Caltrans ongoing maintenance activities for the corridor from 2001 to 2010 are estimated at $45 million. This cost includes asphalt cement overlay, shoulder widening, and signal installation at the Interstate 5 ramps.

   For State Route 41, Caltrans is planning to add two sets of passing lanes: the first at the Kern/Kings county line to State Route 33 (estimated construction by 2010) and the second from Utica Avenue to Interstate 5 by 2014.

   In addition, Caltrans is working with Kern and Kings counties to improve the State Routes 46 and 41 corridors. These corridors must compete for funds with State Route 99, which carries much more traffic. Likewise, the San Joaquin Valley must compete for funds with the heavily congested areas of the Bay Area and Southern California.

3. In addition to the project that is being planned and described in this environmental document, the Antelope Grade Project, a separate San Luis Obispo project, proposes lengthening the eastbound lane from the crest of the curve to near the San Luis Obispo and Kern county line. These improvements would give motorists ample sight distance when merging to the through-lane. This project is scheduled for construction in 2006, prior to the four-lane expressway project.

To: Judith Lopez, Environmental Planner, CalTrans District 6

From: Lynn S. Stafford, Resident of Pine Mountain Club, Kern County

Re: Highway 46 widening project – Hwy 41 to I5 section

Date: June 6, 2003

I acknowledge the need for the widening of Highway 46. There are some environmental features that will be affected by the project. The acreage mitigation for habitat as described in the assessment will help to overcome some of the negative environmental affects.

However, there is one major environmental affect that is not addressed by the assessment. Within Appendix A Environmental Check List (CEQA), Biological Resources b) asks if the project interferes substantially with the movement of any native resident of migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. The assessment's response to that question was to check the 'no impact' box. I believe that evaluation is incorrect. There is significantly more blockage of wildlife by a high-speed four-lane highway than by a 55 mph two-lane highway.

At present time, the southernmost 180+ mile section of the inner Coast Range has no cross sectional blockage to wildlife movement greater than a two-lane road (such as Highways 166, 33, 46, and 41 between I5 in the Grapevine/Gorman area and Highway 152 between Gilroy and Los Banos. Even the Coastal Branch of the California Aqueduct is underground as it parallels Highway 46 through the inner Coast Range. Wildlife corridors are being recognized increasingly by scientists as being crucial for migration, gene flow, etc. The southernmost section of the Coast Range has tremendous value for a wide variety of native animal life.

I request that a complete EIS be done for this project. Included in this study should be a thorough examination of the future, permanent affects of the project on wildlife movement. Also, alternatives for mitigation of these affects should be analyzed. The technology now exists and has been incorporated into projects similar to the current one in many locations throughout the world.

Thank you for your consideration of my comments,

Lynn S. Stafford
P.O. Box 6160,
Pine Mountain Club, CA 93222

Response to Lynn S. Stafford

1. Caltrans checked the "no impact" box of the Biological Resources section (d) of the CEQA Environmental Checklist because the project does not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

   Final mitigation measures for endangered or threatened species throughout eastern San Luis Obispo and western Kern counties would be mitigated by measures specified in the Biological Opinions prepared by the U.S. Fish and Wildlife Service and the California Department of Fish and Game. Both the Federal Highway Administration and Caltrans would agree upon these measures.

2. An Environmental Impact Statement will not be prepared for this project. Caltrans considered the proposed Negative Declaration together with any comments during the public review process. Studies were performed with the direction of the U.S. Fish and Wildlife guidelines with qualified staff onsite. A decision to adopt the proposed Negative Declaration was made because there is no substantial evidence that this project would have a significant effect on the environment.

KERN 46)
)
EA# 06-442500)
)

REPORTER'S TRANSCRIPT OF

CALTRANS PUBLIC HEARING/OPEN HOUSE

Wednesday, May 7, 2003

Lost Hills, California

Reported by: R. Pauline Angress, CSR No. 11450

Wood & Randall
Certified Shorthand Reporters
A Professional Corporation

COPY

423 Truxtun Avenue • Bakersfield, CA 93301 • (661) 395-1050
516 West Shaw Avenue, Suite 200 • Fresno, CA 93704 • (559) 224-2223

Lost Hills, California

Wednesday, May 7, 2003; 4:00 p.m.

Lost Hills School

MR. DONAHUE: My name is Mike Donahue, and I'm a senior environmental planner with Caltrans. Tonight this public hearing/open house meeting is for the Route 46 Project from the 46/41 Y in San Luis Obispo County to I-5 in Kern County. This hearing is for the circulation and comment of the environmental assessment, slash, environmental study for this project. We are soliciting comments from the public for this project about any of the issues that pertain to this project.

MR. DURAN: My name is Sam Duran, D-u-r-a-n, and I work for Chevron/Texaco here in Lost Hills. I appreciate the opportunity to come out to the public hearing, and I have looked at many of the posters that you have along with the environmental assessment of the initial study, and upon reviewing this, I have, I guess, two major concerns:

One concern is the hazards that would be imposed on the Chevron/Texaco operations just to the west of Lost Hills. We have operations that boarder Highway 46, both on the north and the south sides.

This particular widening of 46 would have a

1

considerable impact to the oil production operations that are adjacent to the highway.

The alignment that would appear to work best for us would be the so-called symmetrical alignment, since it appears that it would have less impact on our operations on the north side.

However, the concerns I have are primarily safety of our vehicles that cross the road. We have many large trucks, and these are semis -- of semi size, 40-footers, in size that cross the road. And I would be especially concerned for their safety, you know, especially over the wintertime when it's foggy or when there is limited visibility.

Accordingly, I would highly recommend that we look at the option of installing an overpass from the -- over the north -- from the north to the south -- either overpass or underpass from the north to the south side. This I think would mitigate some of the hazards that would be -- that would be, I guess, imposed by the widening of the project of the highway.

The other concern I have, of course, is in the City of Lost Hills. What safety precautions are being taken, you know, to protect children going from the residential areas on the north of the school, which is on the south side of the highway.

In addition, there is a park on the north side of Highway 46, and many of the residentials are on the south side and, of course, children travel between the park and their residences; so there would be hazards there that need to be considered.

I think those are my primary concerns with the project. I wholeheartedly support the overall project from the safety standpoint of travelers on 46 traveling from San Luis Obispo or Paso Robles to I-5. But we don't want to solve one problem and create others that may be just as significant from the safety standpoint as the other.

Okay. Thank you.

MS. CORTEZ: My name is Estella Cortez, C-o-r-t-e-z. I live at 21102 Universal Street. I'm concerned about the noise level. This is going to put the freeway approximately 150 feet away from my property. As it is right now, Saturday and Sunday I have really congested traffic, and the noise level is really high. So I really would like to see, you know, either barriers put up or some kind of study being done that they are going to put up a barrier. 150 feet is too close to the freeway, not only noise level, but speedwise.

2

My number two concern would be an alternative

road for us to get onto Highway 46. You know, we have to either travel east or west, and that means that we are going to have to try to get into 46, and it's hard enough to get into it right now just with the two lanes, with the four lanes --

If there is anyway they are going to put any kind of traffic light, that would help us at least to try and get in there. And if they are going to just put one traffic light, then we need to have access to that, you know, light. Because like I said, we are on the north side in the Universal tract, which would kind of separate us from the rest of the town.

Number three concern, I would like no parking signs put along both sides of the road, not only here in Lost Hills, but also at I-5. I had my son-in-law that just wrecked with all my grandchildren because we had semis parking along both sides of the road, and the visibility just to get on 46 was, you know, unbelievable, and he wrecked.

So if they can look into these concerns, I would appreciate it. Thank you.

MR. ORMONDE: My name is Steve Ormonde, O-r-m-o-n-d-e. I'm here representing California Trucking Association. And our concern in the Highway 46 corridor from Paso Robles to Interstate 5 is overpasses

3

over 46 for restricting oversized loads.

Today we can transport oversized loads across 46 to Interstate 5 in an east/west corridor from the coast to the valley and then go north and south without any height or width restrictions.

Overpass standards will be 16.4 inches, I understand, and that will restrict our over height loads if we have any overpasses over 46.

So that is our biggest concern on the design at this point.

Thank you.

MS. CHAMBERS: My name is Mary E. Chambers, Fix 46 Chairperson, Paso Robles, 1744 Ponderosa Lane. 4

I'm happy to see the process of Caltrans on Highway 46 to improve the safety and to widen the highway to increase the safety. I have been working with them since 1996 when we borrowed their call box program, and we have since incorporated that into San Luis Obispo County.

We are very happy to work with Kern COG -- Counsel of Governments is what it stands for -- and Caltrans to bring this project together from San Luis Obispo County and our supervisors and legislators.

And we have five people here from my Fix 46 committee one being California Truck Association, Steve

Ormonde.

Okay. Thank you.

MR. DONIAS: My name is Pedro Donias, D-o-n-i-a-s. P.O. Box 691, Lost Hills, 797-2285. What signal lights are going to be put for the safety of the children? 5

MR. DONAHUE: You are going to have to ask the engineers. She is a court reporter, and you have to have issues to make a statement about.

MR. DONIAS: The issue is the signal light and the crosswalk for the children at 46 and -- what's that first street crossing there at the post office?

MR. DONAHUE: Cross street near the post office? He is concerned about the child safety and the coming to school.

MR. DONIAS: Coming and going to school.

MR. DONAHUE: Coming and going to school.

MS. GARZA: My name is Oralia Garza. My address is 1725 Bay Meadow Drive in Wasco. And my concern is the Becon lights that they have off right here as you come in the town, I feel they should be on it all the time. And you probably didn't see them because they weren't on when you came in. I believe that's like a warning light for people that are coming from out of town to slow down. I'm aware of them 6

because I'm a bus driver, but lights catch your eyes and signs are distracting and you don't see them. That is my concern. Thank you.

MR. RIVERA: Sergio Rivera, 21171 Badger Street, P.O. Box 673; phone number, (661) 797-2850. This is very important. On Lost Hills Road, when the people are close, waiting maybe 15 or 20 minutes, but when the holidays, it's a lot of traffic. They need a light at Lost Hills Road and 46. 7

MS. ALEGRA: Rosa Alegra, A-l-e-g-r-a. I wrote mine, but I would like to say it out loud.

P.O. Box 765, 797-2059. My concern is a bridge for where children could cross over the street and a signal light for traffic, both. Because like he was saying, traffic -- there is cars wanting to come into 46, and if there is no signal lights during fog days, it's going to be hard to see traffic. 8

And then also I'm concerned about traffic coming fast into town, driving into -- I would like them to come in at a slower speed. I think that's all.

And lighting, I would like lighting to be put on Lost Hills inside of town.

MR. DONAHUE: In the town itself?

MS. ALGERA: Down both sides of the road.

MR. DONAHUE: Are you talking about the

intersection of the roads or the whole town?

MS. ALEGRA: If there could be lighting in the whole town, that would be fine.

MR. DONAHUE: Lighting around the intersections?

MS. ALEGRA: Yes. Because that way during the night, if people are crossing over, they could see them.

MR. DONAHUE: My name is Mike Donahue with Caltrans. It's a couple minutes before seven o'clock. The public hearing is now closed.

(6:58 p.m.)

--ooOoo-

STATE OF CALIFORNIA)
) ss.
COUNTY OF KERN)

I, R. Pauline Angress, a Certified Shorthand Reporter for the State of California, hereby certify that I was present and reported in stenotypy all the proceedings in the foregoing-entitled matter; and I further certify that the foregoing is a full, true, and correct statement of such proceedings and a full, true, and correct transcript of my stenotype notes thereof.

Dated at Bakersfield, California, on May 7, 2003.

R. Pauline Angress

R. Pauline Angress, CSR No. 11450

Response to Comments in Reporter's Transcript of Caltrans Public Hearing/Open House (May 7, 2003)

1. Response to Sam Duran, employee of Chevron/Texaco:

   The symmetrical alignment is the preferred alternative.

   Requests from property owners regarding underpasses and overcrosses were considered. The construction of these structures is not financially feasible given the limited traffic in the area. Any overcrosses or underpasses may be constructed at the property owner's expense. Caltrans has proposed wider intersections for large trucks and farming equipment. Acceleration and deceleration lanes would be in place for large vehicles to merge on and off the expressway.

   Traffic signals would be installed at Bruning Avenue and at Lost Hills Road/Woodward Street. The signal at Lost Hills Road/Woodward Street would be installed before this four-lane project would be constructed.

2. Response to Estella Cortez:

   Ms. Cortez commented on noise and signs and those responses are early in this appendix.

   Traffic signals would be installed at Bruning Avenue and at Lost Hills Road/Woodward Street. Raised medians would be placed to provide a pedestrian refuge area. The signal at Lost Hills Road/Woodward Street would be installed before this four-lane project would be constructed.

3. Response to Steve Ormonde, California Trucking Association:

   No overpasses would be constructed on this project. See comment 1 above.

4. Response to Mary E. Chambers, Fix 46 Chairperson:

   Comment noted.

5. Response to Pedro Donias:

   Traffic signals would be installed at Bruning Avenue and at Lost Hills Road/Woodward Street. Raised medians would be placed to provide a pedestrian refuge area. The signal at Lost Hills Road/Woodward Street would be installed before this four-lane project would be constructed.

6. Response to Oralia Garza:

There is an existing overhead flashing beacon for the school crossing. Consistent with Caltrans policy, the flashing beacon is controlled by the school and is operational right before and after school hours when school-age pedestrians are expected. Leaving the beacon on all the time would cause it to lose effectiveness and therefore would be inappropriate.

7. Response to Sergio Rivera:

See response 5 above.

8. Response to Rosa Alegre:

The Project Development Team recommended that a marked crosswalk with a pedestrian-activated signal be placed at Bruning Avenue and a signal at Lost Hills Road/Woodward Street to allow pedestrians to cross safely. Raised medians would be placed to provide a pedestrian refuge area. The signal at Lost Hills Road/Woodward Street would be installed before this four-lane project would be constructed.

Speed enforcement is a problem statewide and not unique to State Route 46. The State of California does not assign speed enforcement responsibilities to Caltrans. Caltrans performs the appropriate traffic measurements and analyzes accident records and, in turn, state and local authorities use that information to select the speed limit. The required speed limit and appropriate signs would be installed at the completion of the project. The California Highway Patrol would receive this environmental document for consideration.

Lighting would be provided at intersections with traffic signals. Kern County, not Caltrans, has the authority over any additional lighting for the unincorporated commmunity of Lost Hills.

Risk Register for 06-442561, SR 46 Segment 4C

Form v3.4 last modified April 2019

Risk Checkpoint:	PS&E
Date:	4/23/2021
Project Nickname:	SR 46 Segment 4C
EA:	06-442561
Co-Rt, Post Miles:	KER-046-26.4/29.9
Project Manager:	GILBERTO BACA
FY & Program (SHOPP or STIP):	STIP
Capital Costs:	$32,900k
Support Costs:	$8,200k
Total Costs:	$41,100k
RTL Target:	7/1/2022

Phase	Cost Contingency Range $k			Schedule Contingency Range (Wkg Days)		
	Optimistic	PERT	Pessimistic	Optimistic	PERT	Pessimistic
0-PA&ED	$55	$86	$131	20	28	44
1-PS&E	$19	$28	$44	32	58	100
2-RW Sup	$3	$8	$19	22	52	110
3-Con Sup	$7	$11	$17	10	62	120
Support Contingency	$85	$133	$211	84	200	374
9-RW Cap	$6	$18	$36	9	21	44
4-Con Cap	$40	$127	$320	32	46	66
Capital Contingency	$46	$145	$356	41	67	110
Total Contingency	$131	$278	$567	125	267	484

Risk Identification								Risk Assessment			Risk Response				Quantifying "Red" (High P & I) Level Risks			
Status	ID #	Type	Category	Title	Risk Statement	Current status / assumptions	Risk Trigger	Probability (P)	Cost Impact Schedule Impact (I)	Cost Score Schedule Score (PxI)	Strategy	Response Actions	Risk Owner	Updated	Impacted Phase	Support (Hrs) Capital Cost ($k)	Schedule (Days)	Calculated Contingency
Active	1	Threat	Geotechnical	Discovery of Paleontological Resources	Planned excavation for basin could extend into high sensitivity paleo resources.	Similar excavation into the same sediments occurred within proximity to this project. A high potential resources was not encountered and no fossils were discovered	Fossil discovery during excavation activities	2-Low (11-30%)	2 - Low (<$750k)	4	Accept	If fossils were discovered, a paleontological consultant would provide monitoring and mitigation during the excavation activities. Any discovered fossils would be protected, catalogued, and collected.	Environmental	4/14/2021	0-PA&ED Sup	O 460 hours ML 685 hours P 1,090 hours PERT 715 hours	O 20 ML 26 P 44 28 days	$86k
									2 - Low (<1 month)	4					1-PS&E Sup	O 150 hours ML 210 hours P 350 hours PERT 224 hours	O 32 ML 53 P 100 58 days	$28k 58
								100%										
Active	2	Threat	Utilities	Utility Agreement - PG&E	As a result of a utility agreement between Caltrans and PG&E not in place, the Utility Certification could be in jeopardy which would lead to missing the Right of Way Certification date and RTL losing $17.5 million in grant funding.	The current assumption is that some type of agreement or exception can be reached between PG&E and Caltrans.	Utility Agreement is not approved by 7/3/22	3-Moderate (31-50%)	4 - Moderate ($751k - $1,500k	12	Escalate	Utility Coordinator is working closely with PG&E to obtain an agreement.	RW/Design/PM		2-RW Sup	O 30 hours ML 60 hours P 180 hours PERT 75 hours	O 22 ML 44 P 110 52 days	$8k 52
									4 - Moderate (1-3 months)	12					3-Con Sup	O 60 hours ML 80 hours P 140 hours PERT 87 hours	O 10 ML 60 P 120 62 days	$11k 62
								100%										
Active	3	Threat	Right of Way	Chevron Driveways	As a result of Chevron agreement between Caltrans and Chevron no in place, the R/W Certification could be in jeopardy which would lead to missing the Right of Way Certification date and RTL losing $17.5 million in grant funding.	The current assumption is that some type of agreement can be reached between Chevron and Caltrans.	Agreement on driveways is not in place by 7/3/22	3-Moderate (31-50%)	4 - Moderate ($751k - $1,500k	12	Escalate	Caltrans is working closely with Chevron to obtain an agreement.	RW/Design/PM		4-Con Cap	O $100k ML $250k P $800k PERT $317k	80 days 110 days 165 days 115 days	$127k 46
									4 - Moderate (1-3 months)	12					9-RW Cap	O $15k ML $40k P $90k PERT $45k	O 22 ML 44 P 110 52 days	$18k 21
								40%										
Active	4	Threat	Environmental	Hazardous Waste	Discovery of oil and gas waste products, wells, and/or pipelines.	Ara is part of Ground Water Management Plan lease. No wells were identified on database search but the area is part of ground water monitoring plan.	Discovery of oil and gas waste products, well, and/or pipeline.	2-Low (11-30%)	2 - Low (<$2,060k)	4	Avoid	Caltrans has minimized ROW acquisition requirements to reduce potential impacts to unknown oil HW materials, wells, etc.	Design		9-RW Cap	O $1,000k ML $2,000k P $5,000k PERT $2,334k	O 120 ML 240 P 360 240 days	$467k 48
									2 - Low (<1 month)	4					4-Con Cap	O $1,000k ML $2,000k P $5,000k PERT $2,334k	O 120 ML 240 P 365 241 days	$467k 49
								20%										
Active	5	Threat	Environmental	Listed plant species identified	If listed species are found in the impact area, then additional analysis and avoidance/mitigation and consultation may be necessary, causing an increase to costs, and potentially delaying the project.	It is assumed that there will be no impact to listed plant species.	Discovery of listed plant species	2-Low (11-30%)	2 - Low (<$2,060k)	4	Mitigate	Monitoring, mitigation, and consultation would be required.	Biology					
									2 - Low (<1 month)	4								
								20%										
Active	6	Threat	Environmental	Migratory birds in project area	If nesting migratory birds are found nesting within the project limits then a biological monitor may be required.	Migratory birds will not be affected by the proposed project	Discovery of nesting migratory birds during surveys.	2-Low (11-30%)	2 - Low (<$2,060k)	4	Accept	Biological monitoring may be needed.	Biology					
									2 - Low (<1 month)	4								
								20%										
Active	7	Threat	Environmental	Special status species	If surveys reveal potential habitat or sign of additional special-status species, then additional surveys, consultation, e.g. ITP, and mitigation may be required, leading to an impact on cost and schedule.	No state or federally listed species or their habitat will be impacted	No state or federally listed species or their habitat will be impacted	2-Low (11-30%)	2 - Low (<$2,060k)	4	Avoid	If found appropriate after surveys, get an early ITP or for species that biology thinks may pop up in the project area. This will help avoid construction delays due to trying to get an ITP during construction. Construction can minimize this by avoiding sensitive areas discussed with biology and limiting area of ground disturbance	Biology					
									8 - High (3-6 months)	16								
								20%										
Active	8	Threat	Environmental	Change in scope	If scope of project changes, reinitiation with USFWS may be required.	Scope of project will not change	Scope of project does change	3-Moderate (31-50%)	4 - Moderate ($2,061k - $4,120k	12	Accept	Reinitiation consultation with USFWS will be required, additional mitigation could be required.						
									4 - Moderate (1-3 months)	12								
								40%										

ATTACHMENT J