

# EMERGENCY STORM DAMAGE REPAIRS ON ARROYO SECO ROAD MP 2.5

FEDERAL PROJECT No. XXX

	SHEET No.	<u>TITLE</u>
T-1	1	TITLE SHEET
X-1	2	TYPICAL CROSS SECTIONS
K-1	3	LINE INDEX
L-1	4	LAYOUT
P-1	5	PROFILE
C-1	6-7	CONSTRUCTION DETAILS
EC-1	8	EROSION CONTROL PLAN
G-1	9	CONTOUR GRADING
G-2	10	CONCEPTUAL EXCAVATION PLAN
D-1	11-12	DRAINAGE PLAN
CS-1	13	CONSTRUCTION AREA SIGNS
SC-1	14-16	STAGE CONSTRUCTION
Q-1	17	SUMMARY OF QUANTITIES

#### WALL INDEX:

Know what's below.

	SHEET No.	<u>TITLE</u>
S-1	18	General Plan
S-2	19	MSE Wall Details No. 1
S-3	20	MSE Wall Details No. 2
S-4	21	Headwall Details No. 1

CONTRACTOR SHALL VERIFY ACTUAL DEPTH AND LOCATION OF ALL EXISTING UTLIITIES PRIOR TO CONSTRUCTION...CALL "UNDERGROUND SERVICE ALERT" (U.S.A), (TOLL FREE 811) PRIOR TO TRENCHING, GRADING, EXCAVATION, DRILLING, PIPE PUSHING, PLANTING TREES, DIGGING POST HOLES FOR

FENCE, ETC.(U.S.A) WILL SUPPLY INFORMATION OR LOCATE

AND MARK ANY UNDERGROUND FACILITIES.

NO SCALE

PROJECT SITE

PACIFIC GROVE

MONTEREY

CARMEL BY-THE-SEA

**LOCATION MAP** 

PROJECT SITE

GONZALES

SOLEDAD

GREENFIELD

BEKING CITY

ARROYO SECO ROAD

### **GENERAL NOTES:**

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

21

- 2. TO BE SUPPLEMENTED BY PROJECT SPECIFIC SPECIAL PROVISIONS, CALTRANS STANDARD SPECIFICATIONS AND STANDARD PLANS DATED 2022, INCLUDING ISSUED ADDENDA.
- 3. CONTRACTOR SHALL NOTIFY THE COUNTY OF MONTEREY OF ANY AND ALL CONFLICTS BETWEEN THIS SET OF CONSTRUCTION DRAWINGS AND THE ACTUAL SITE CONDITIONS PRIOR TO COMMENCING WORK. CONTACT ENGINEER AT (831) 755-8970.
- 4. CONTRACTOR SHALL NOTIFY THE COUNTY OF MONTEREY (ENGINEER) AT LEAST 8 DAYS PRIOR TO COMMENCING WORK SO THAT THE COUNTY MAY PRESERVE MONUMENTS AND BENCHMARKS, WHICH SHALL NOT BE DISTURBED WITHOUT THE COUNTY'S CONSENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING DESTROYED BENCHMARKS.
- 5. CONTRACTOR SHALL EXPOSE ALL EXISTING UNDERGROUND PIPELINES OR OTHER UNDERGROUND OBSTRUCTIONS TO VERIFY THAT THERE ARE NO GRADE CONFLICTS PRIOR TO LAYING ANY GRAVITY PIPELINES OR INSTALLING
- 6. WHERE UNDERGROUND AND SURFACE STRUCTURES ARE SHOWN ON THIS SET OF DRAWINGS, THE LOCATIONS, DEPTH, AND DIMENSIONS OF STRUCTURES ARE BELIEVED TO BE REASONABLY CORRECT, BUT ARE NOT GUARANTEED. THE INFORMATION SO GIVEN IS NOT TO BE CONSTRUED AS A REPRESENTATION THAT SUCH STRUCTURES WILL, IN ALL CASES, BE FOUND WHERE SHOWN, OR THAT THEY ARE REPRESENT ALL THE STRUCTURES WHICH MAY BE ENCOUNTERED.
- 7. CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING CONSTRUCTION, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

**VICINITY MAP** 

T-1

d219	Submitted by: Robert Ferguson	
è	Project Engineer C.E. No. C.	77731
Aonte	DESIGN BY: M. Dambacher	снко ву: I.K./C.D.
S:\Client\Monterey\d219.		CHKD BY: I.K./C.D.
name: S:\(	SPECIFICATIONS WRITTEN BY: J. WILSON	снко ву: D. Morgan
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Chief of Public Works and Facilities

consor 11017 COBBLEROCK DRIVE, SUITE 100 RANCHO CORDOVA, CA 95670 P: 916.368.9181 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

<sub>ю.</sub> <u>С71495</u> 12/31/23

NO.	DATE	REVISION DESCRIPTION	APPROVED
$\nabla$	8/18/23	UPDATED QUANTITIES ON SHEET 17	
$\nabla$	8/23/23	VARIOUS CLOUDED PLAN CHANGES	
$\nabla$			
	$\overline{\mathbb{V}}$	8/18/23	√ 8/18/23 UPDATED QUANTITIES ON SHEET 17



**COUNTY OF MONTEREY** PUBLIC WORKS, **FACILITIES AND PARKS** 

**PUBLIC WORKS** 

1441 SCHILLING PLACE, 2nd FLOOR SALINAS, CALIFORNIA 93901

**ARROYO SECO ROAD MP 2.5** STORM DAMAGE REPAIR PROJECT **TITLE SHEET** 

DATE	FILE	PROJECT NO.	SHEET
8/24/23	21-9302_RAB_001.DWG	723205	1
SCALE HORIZ: NTS	CONTRACT NO.		'
VERT: NTS	CONTRACT		of 2 1shee

TOTAL SHEETS NUMBER NOTES: **DESIGN DESIGNATION:** MINOR COLLECTOR 2 MINOR COLLECTION

2020 ADT = 540

2039 ADT = 540

V = 35 mph 1. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS. 2. RIGHT OF WAY IS APPROXIMATE. FOR ACCURATE RIGHT OF WAY ACCESS = 6.0 DATA, CONTACT RIGHT OF WAY ENGINEERS AT THE DISTRICT OFFICE. 30 3. SHOULDERS VARY TO CONFORM TO EXISTING ROAD. "A" LINE R/W R/W 30.0' 30.0 ETW EP Var 2.2' ΕP ETW Var 1.5' 7.1 11.0' 11.0' -CURB TYPE A1-6 Var 3.8' TOP OF WALL 2.0% 2.0% FG--CURB TYPE A1-6

0.40' HMA (TYPE A)

Exist STRUCTURAL SECTION

0.29'± AC

0.50'± BASE

-3 X 48" CSP (SEE DRAINAGE PLAN)

0.60' CL II AB

ARROYO SECO ROAD

STA "A" 16+59.13 TO STA "A" 17+65.88

"A" LINE R/W R/W 30.0' 30.0' ETW ETW Var 1.5' 11.0' 11.0' Var 1.5' OG 2.0% 2.0% -CURB TYPE A1-6 CURB TYPE A1-6-Exist STRUCTURAL SECTION 0.40' HMA (TYPE A) 0.29'± AC 0.60' CL II AB 0.50'± BASE

#### ARROYO SECO ROAD

Sta "A" 16+15.00 TO Sta "A" 16+59.13 Sta "A" 17+65.88 TO Sta "A" 18+25.00

Submitted by: Robert Ferguson Project Engineer C.E. No. C7773 СНКО ВY: I.K./C.D. DESIGN BY: M. Dambacher :HKD BY: I.K./C.D. DRAWN BY: M. Dambacher SPECIFICATIONS WRITTEN BY: J. WILSON снко ву: D. Morgan

Chief of Public Works and Facilities

CONCRETE HEADWALL -

(SEE STRUCTURE PLANS)

CONCRETE APRON (SEE-

DEBRIS BOLLARDS (SEE-

STRUCTURE PLANS)

STRUCTURE PLANS)

11017 COBBLEROCK DRIVE, SUITE 100 RANCHO CORDOVA, CA 95670 P: 916.368.9181 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

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Robert Ferguson	abla	8/23/23	
No. <u>C77731</u> ] ]]	$\nabla$		L
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	NO.	DATE	REVISION DESCRIPTION	APPROVED	
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#### **COUNTY OF MONTEREY** PUBLIC WORKS, **FACILITIES AND PARKS**

PUBLIC WORKS

-MECHANICALLY STABILIZED

(SEE STRUCTURE PLANS)

ROCK SLOPE PROTECTION

GRADING PLAN

NOT SHOWN, SEE CONTOUR

EARTH WALL

-FG (LEAN

CONCRETE

BACKFILL)

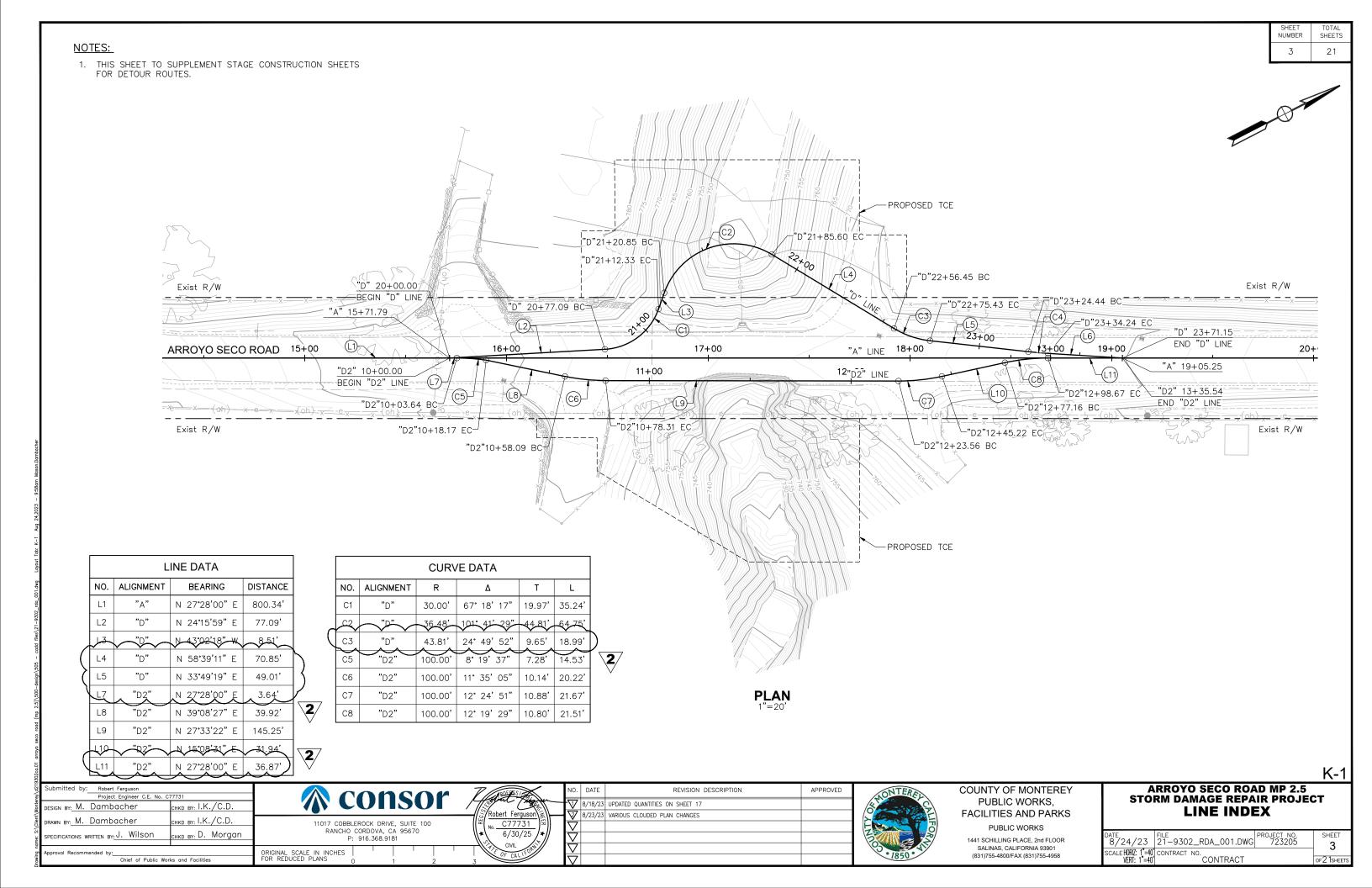
1441 SCHILLING PLACE, 2nd FLOOR SALINAS, CALIFORNIA 93901 (831)755-4800/FAX (831)755-4958

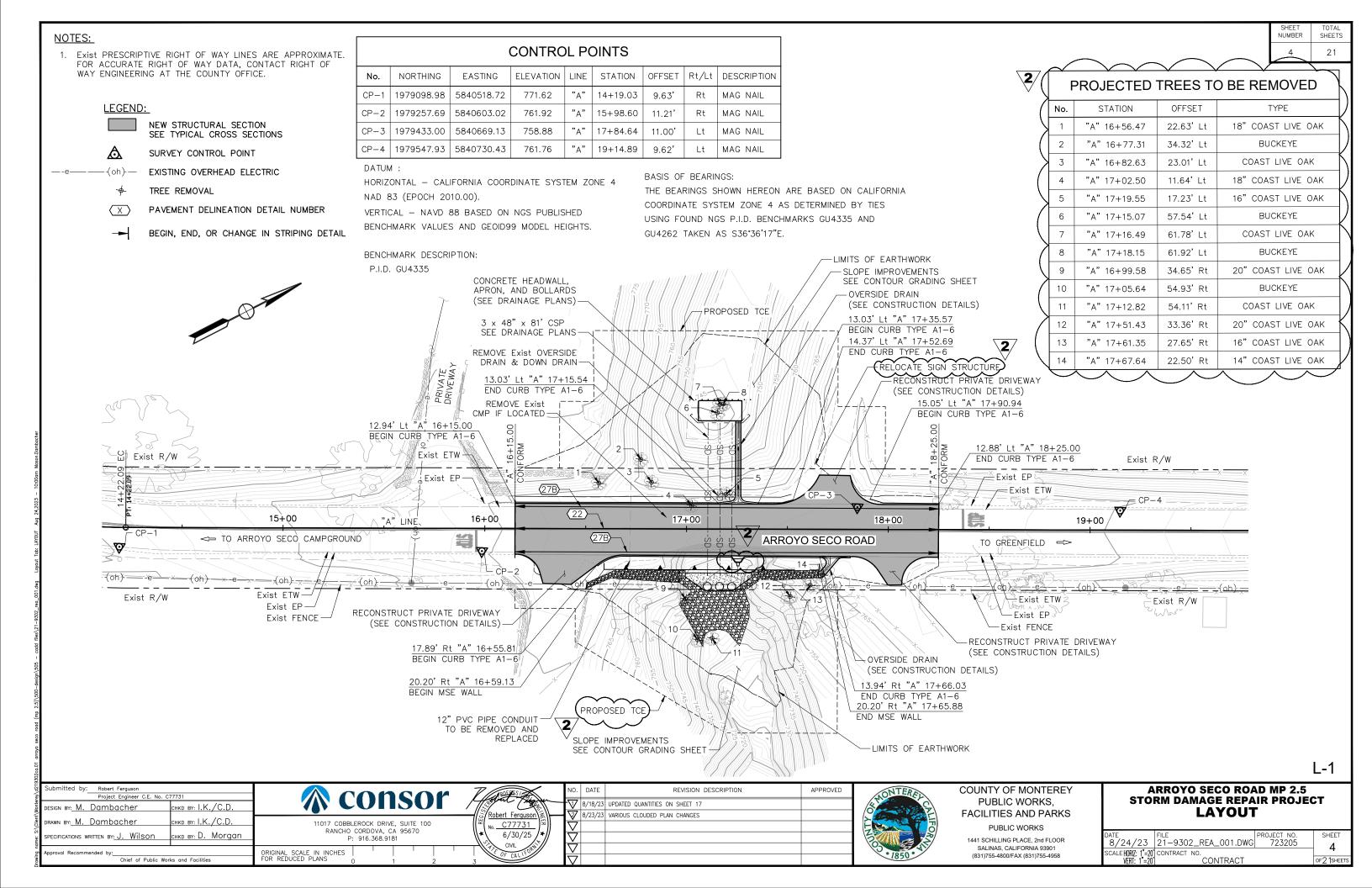
#### ARROYO SECO ROAD MP 2.5 **STORM DAMAGE REPAIR PROJECT TYPICAL CROSS SECTIONS**

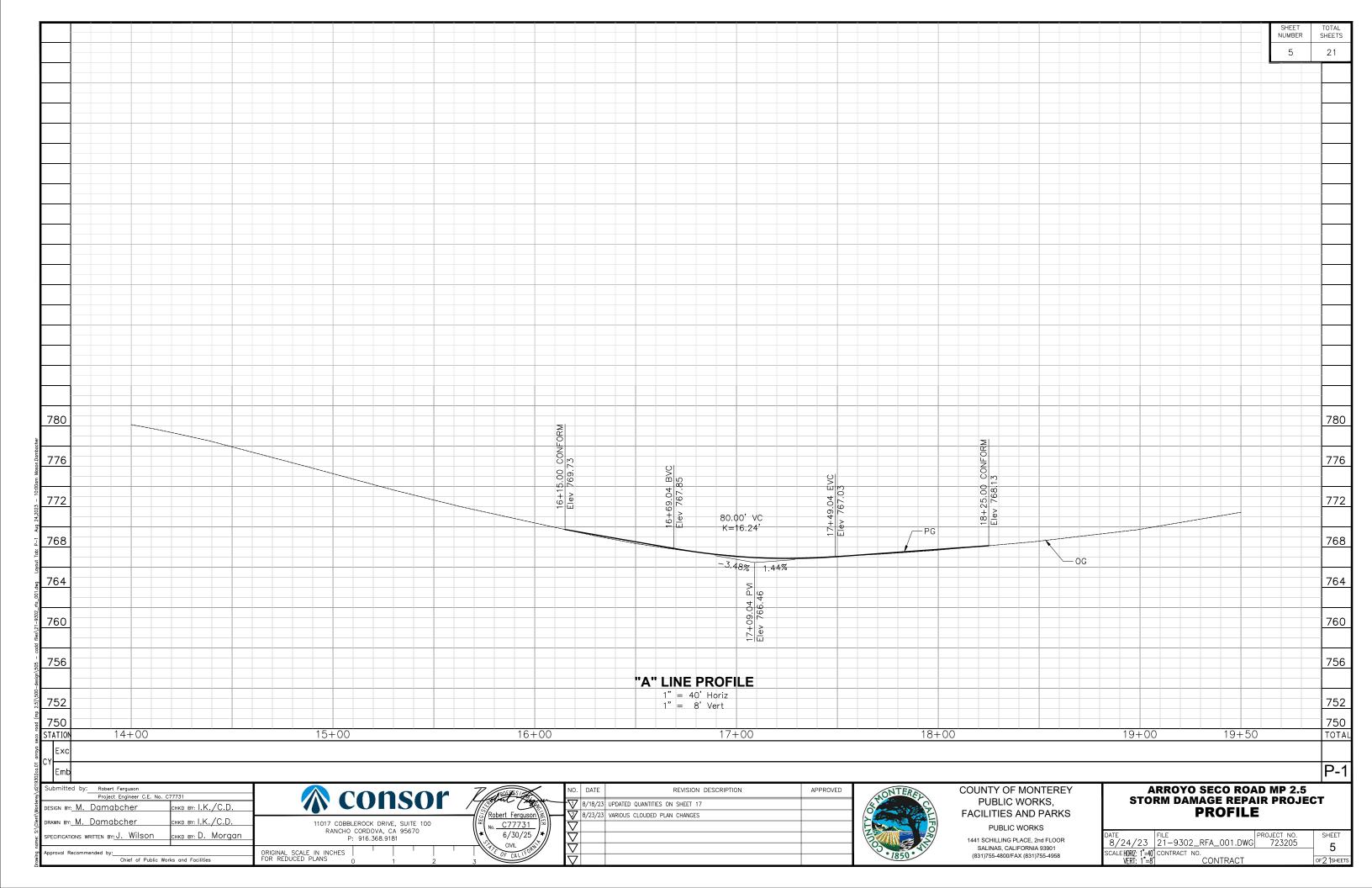
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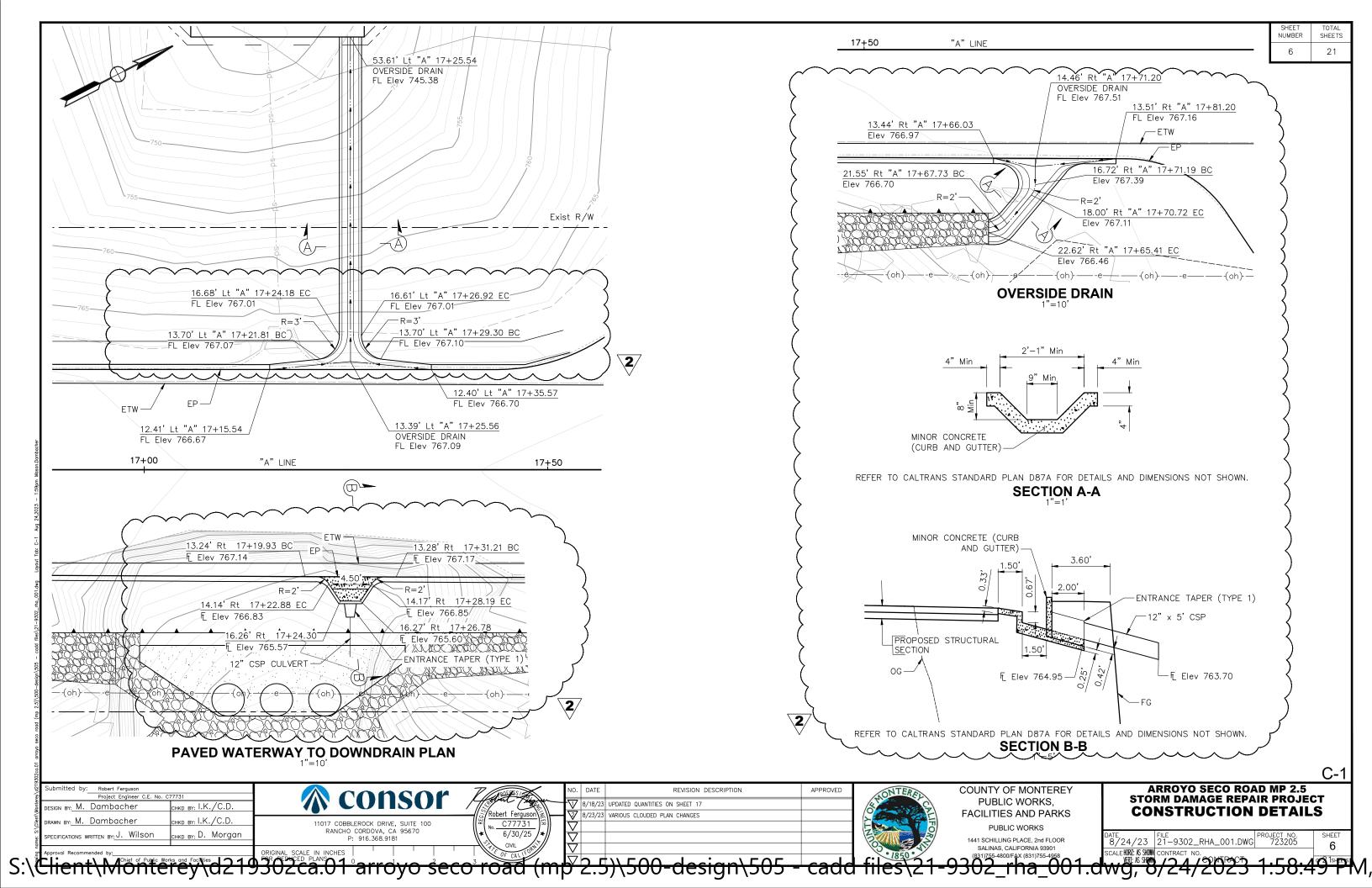
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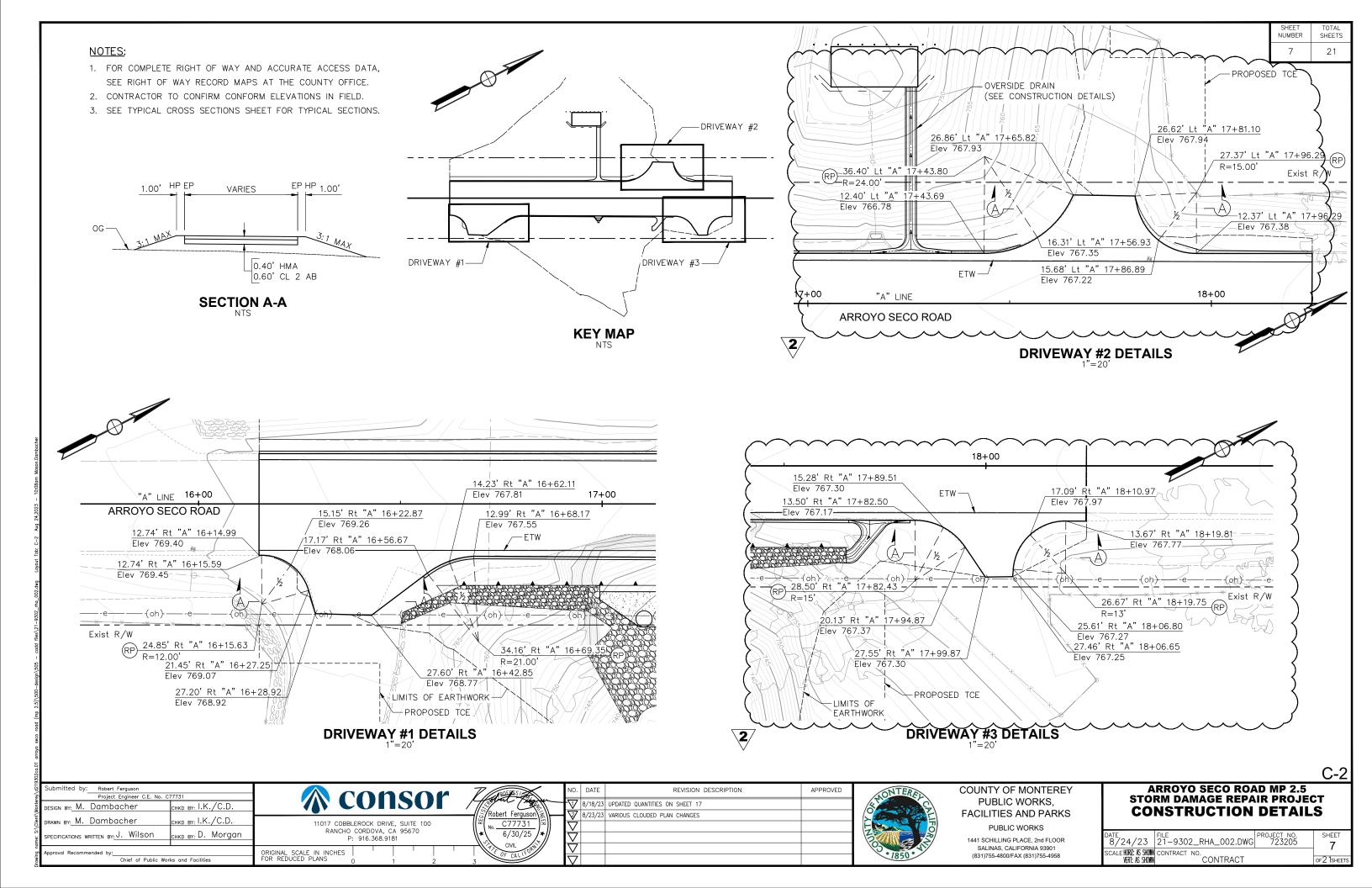
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8/24/23	21-9302_RCA_001.DWG	723205	2
CALE HORIZ: NTS	CONTRACT NO.		
VERT: NTS			of 2 1sheets

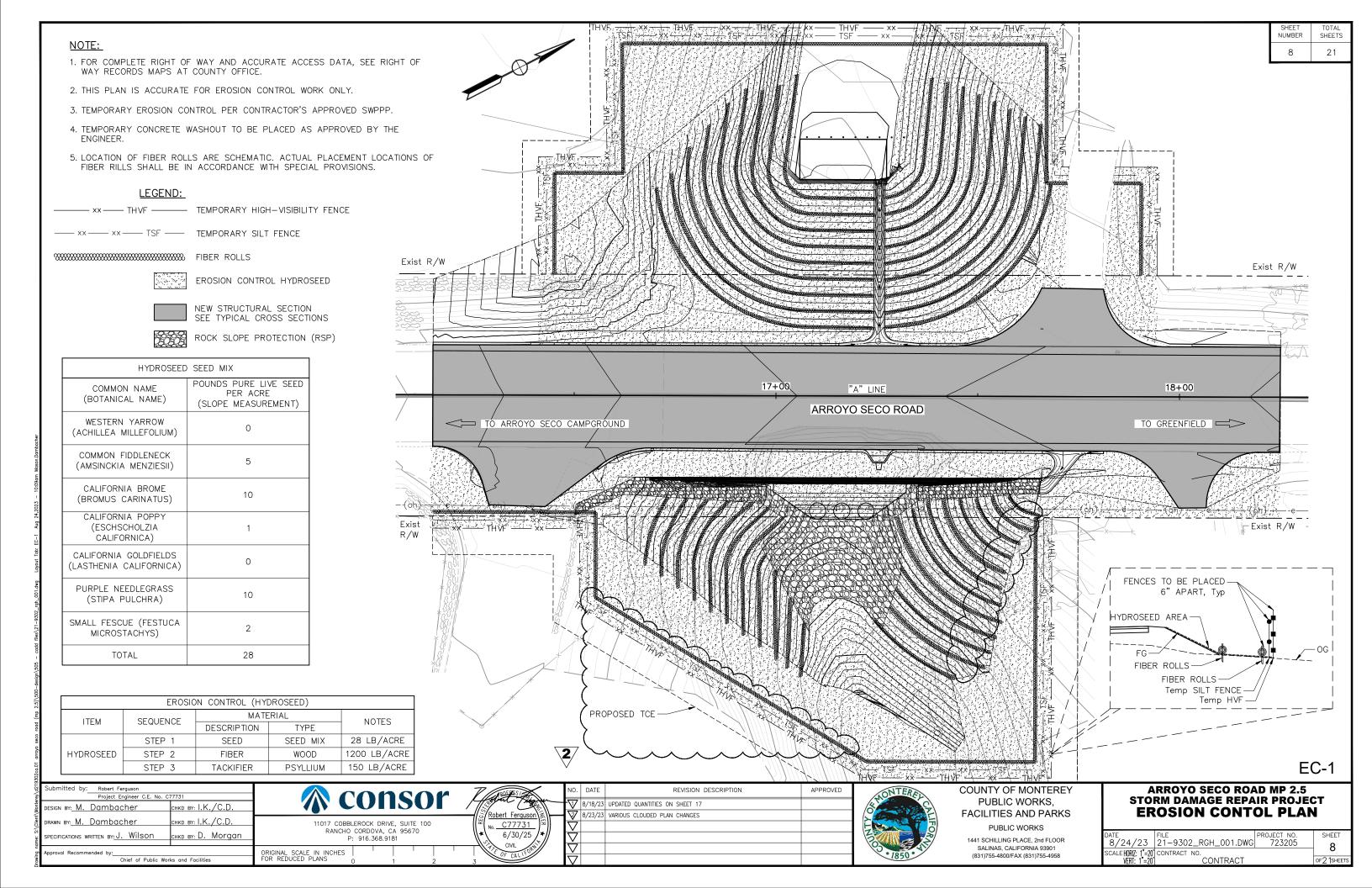


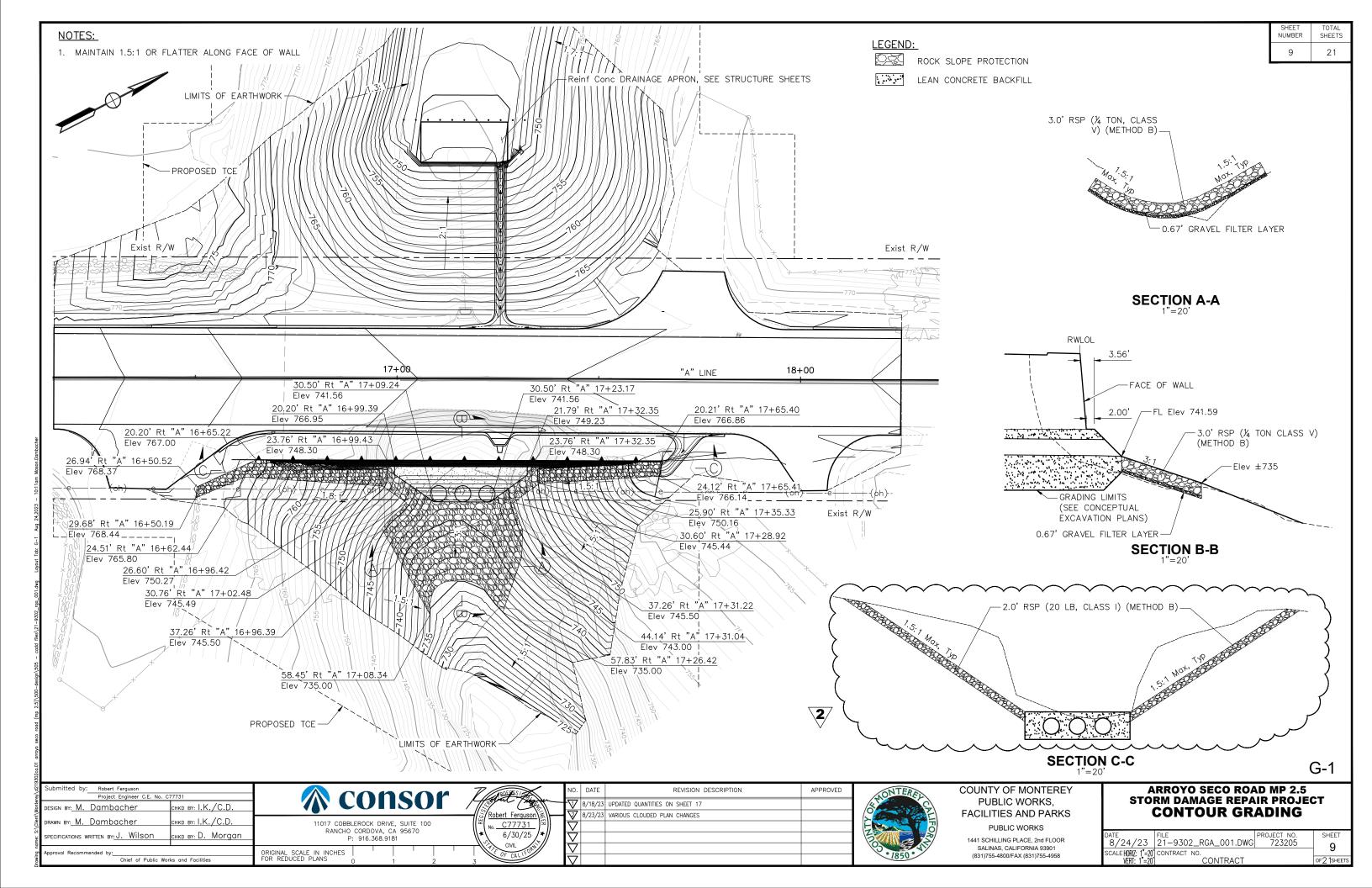


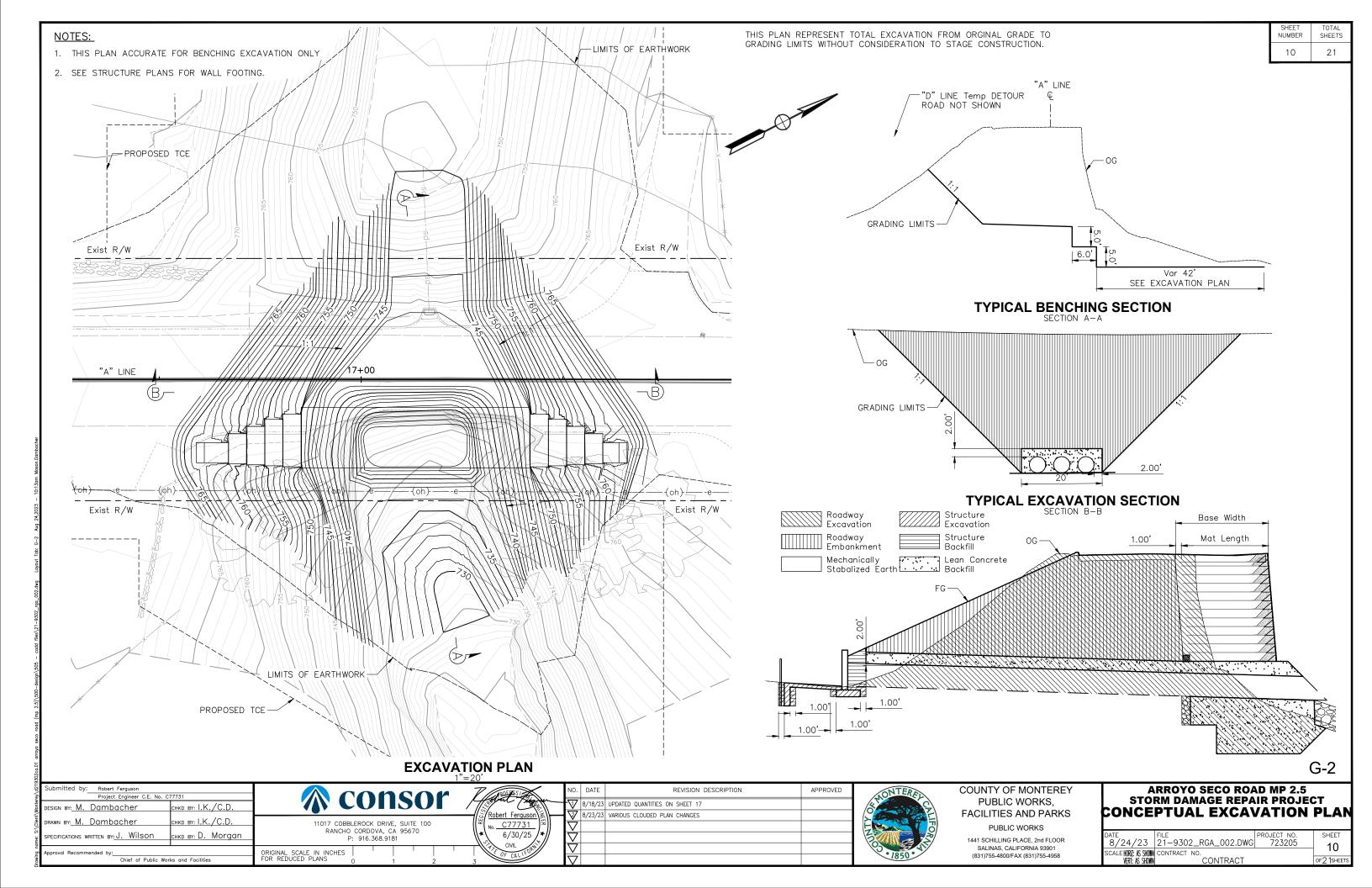


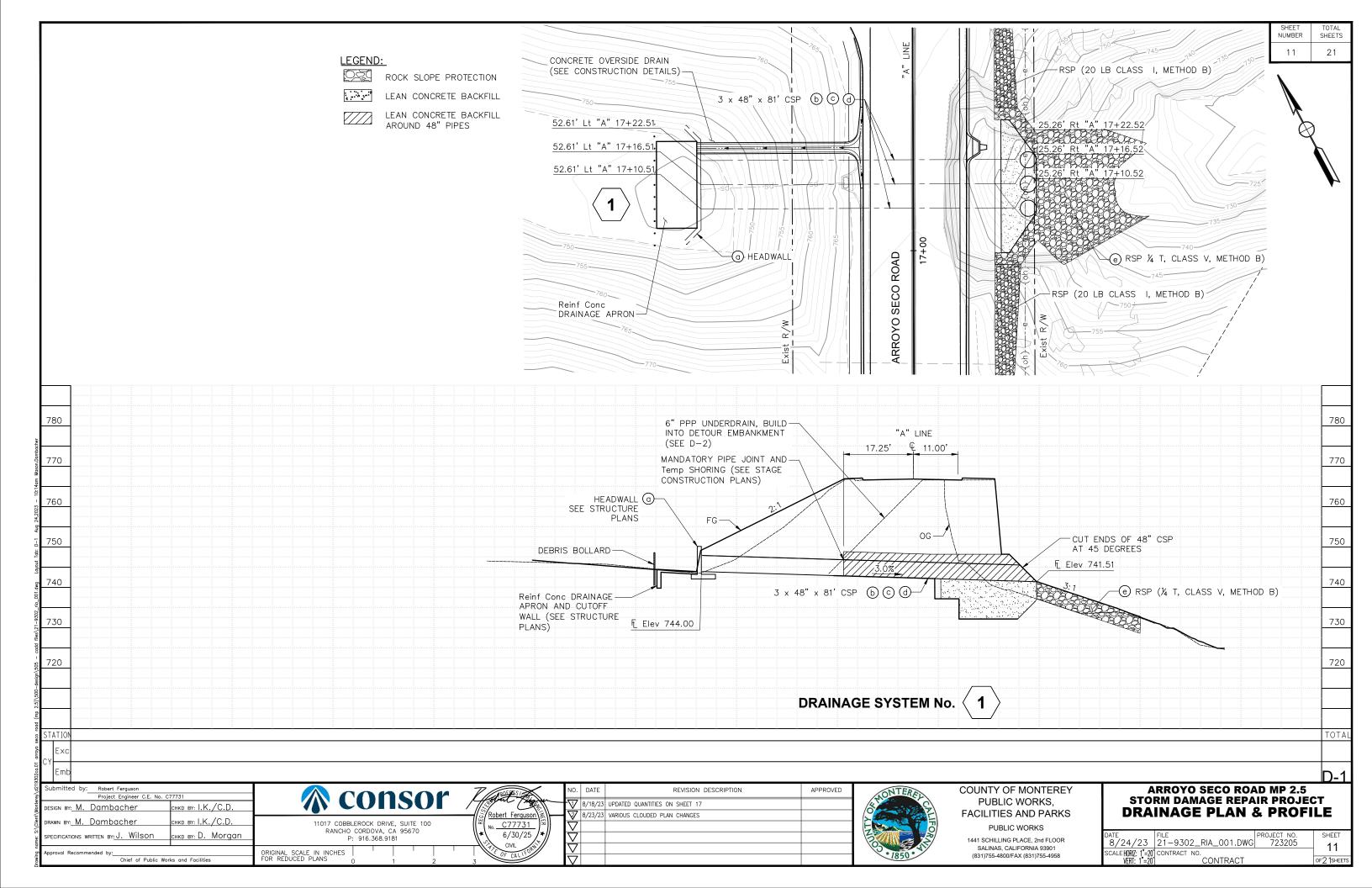


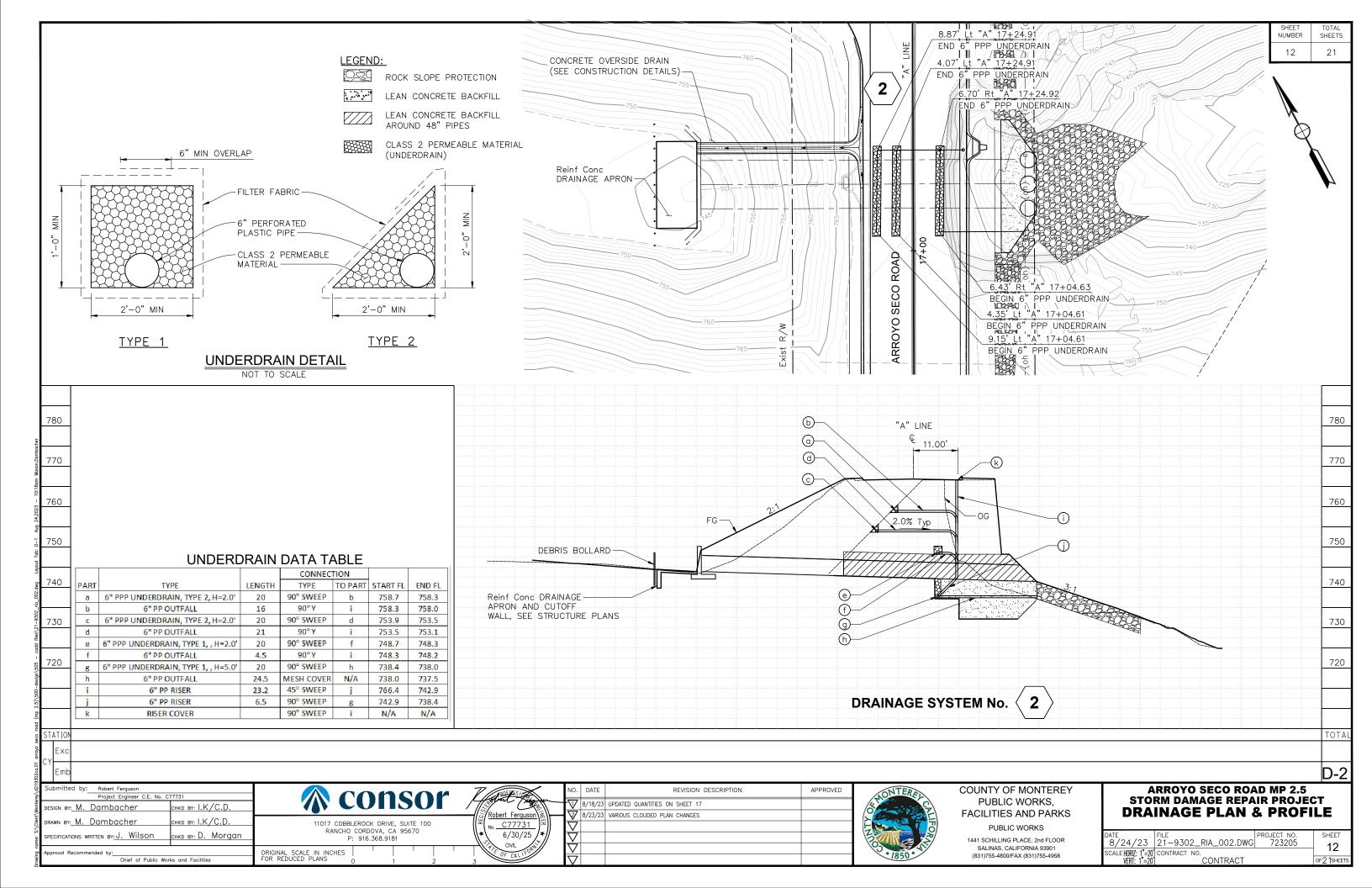












TOTAL SHEETS NUMBER 13 21

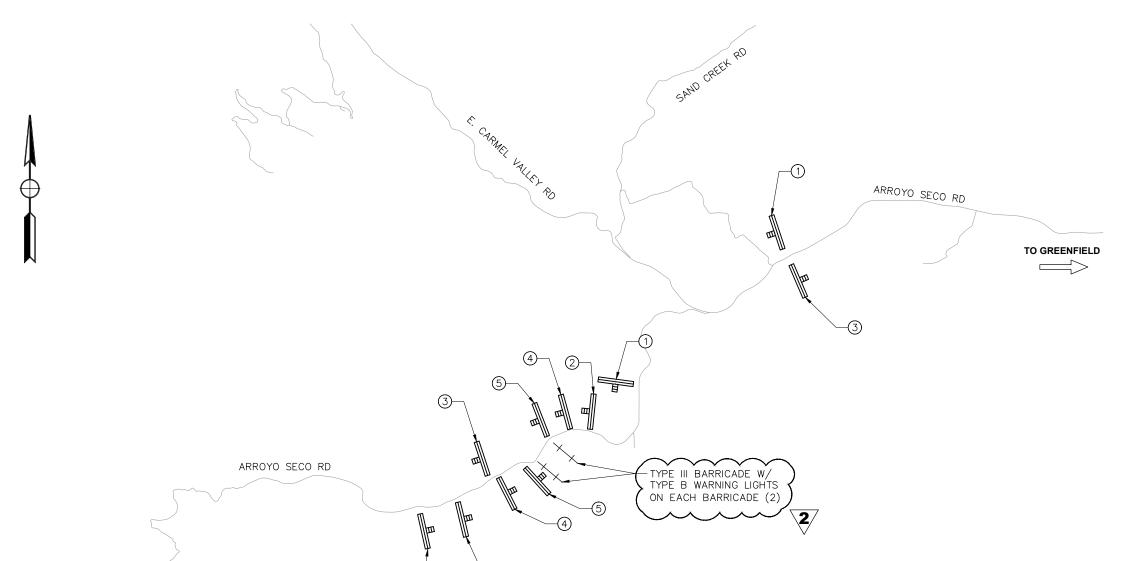


CONSTRUCTION AREA SIGN (CAS) NUMBER

TYPE III BARRICADE (2)

- NOTES:
  1. THIS PLAN ACCURATE FOR CONSTRUCTION AREA SIGNS ONLY.
- 2. SIGN LOCATIONS SHOWN ARE APPROXIMATE. EXACT LOCATIONS TO BE DETERMINED BY ENGINEER.
- 3. ACCESS TO DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.
- 4. Exist CONSTRUCTION AREA SIGNS, PAVEMENT MAKINGS AND STOP BAR ON SITE MAY BE RE-USED

	CONSTRUCTION AREA SIGNS					
SIGN NO.	SIGN CODE	SIGN MESSAGE	PANEL SIZE		ID SIZE POST	NO OF SIGNS
1	W20-1	"ROAD WORK AHEAD"	36" x 36"	1	4×4	3
2	W20-4	"ONE LANE ROAD AHEAD"	36" × 36"	1	4×4	2
3	G20-2	"END ROAD WORK"	36" x 18"	1	4X4	2
4	W3-1	"STOP AHEAD"	30" X 30"	1	4X4	2
5	R1-1	"STOP"	30" X 30"	1	4×4	2
	TOTAL 11					



BARRICADES	
BARRICADE	NO OF BARRICADES
TYPE III	4
TOTAL	4

WARNING LIGHTS		
WARNING LIGHTS	NO OF LIGHTS	
TYPE B	4	
TOTAL	4	

CS-1 COUNTY OF MONTEREY Submitted by: Robert Ferguson Project Engineer C.E. No. C7773

DESIGN BY: M. Dambacher снко ву: I.K./C.D :HKD BY: I.K./C.D. 11017 COBBLEROCK DRIVE, SUITE 100 RANCHO CORDOVA, CA 95670 P: 916.368.9181 DRAWN BY: M. Dambacher SPECIFICATIONS WRITTEN BY: J. WILSON <sub>снко ву:</sub> D. Morgan

Chief of Public Works and Facilities

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

Robert Ferguson ю. <u>С77731</u> 6/30/25

1)—

	NO.	DATE	REVISION DESCRIPTION	APPROVED	
_	$\overline{\nabla}$	8/18/23	UPDATED QUANTITIES ON SHEET 17		4
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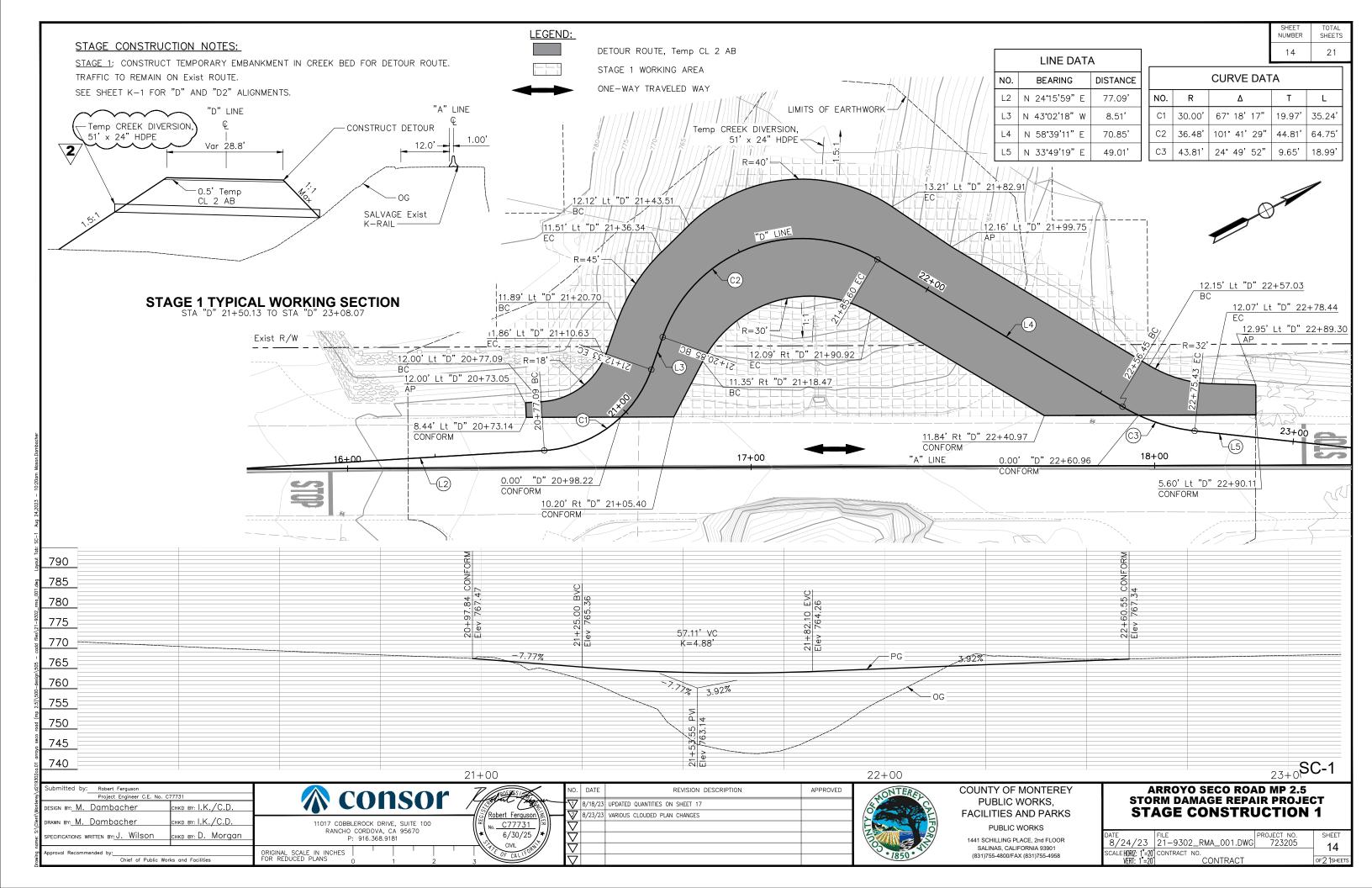
# PUBLIC WORKS, **FACILITIES AND PARKS**

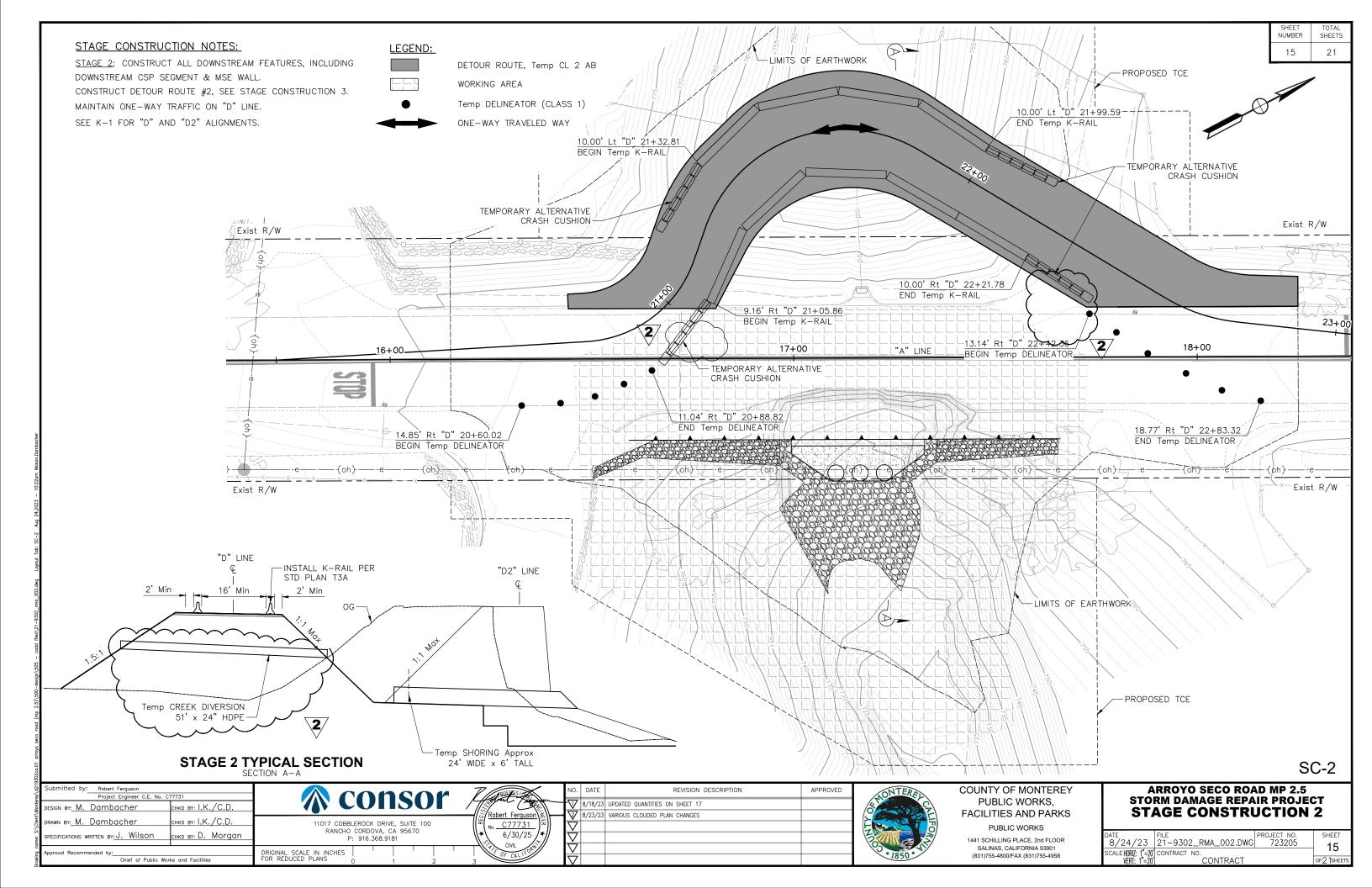
PUBLIC WORKS

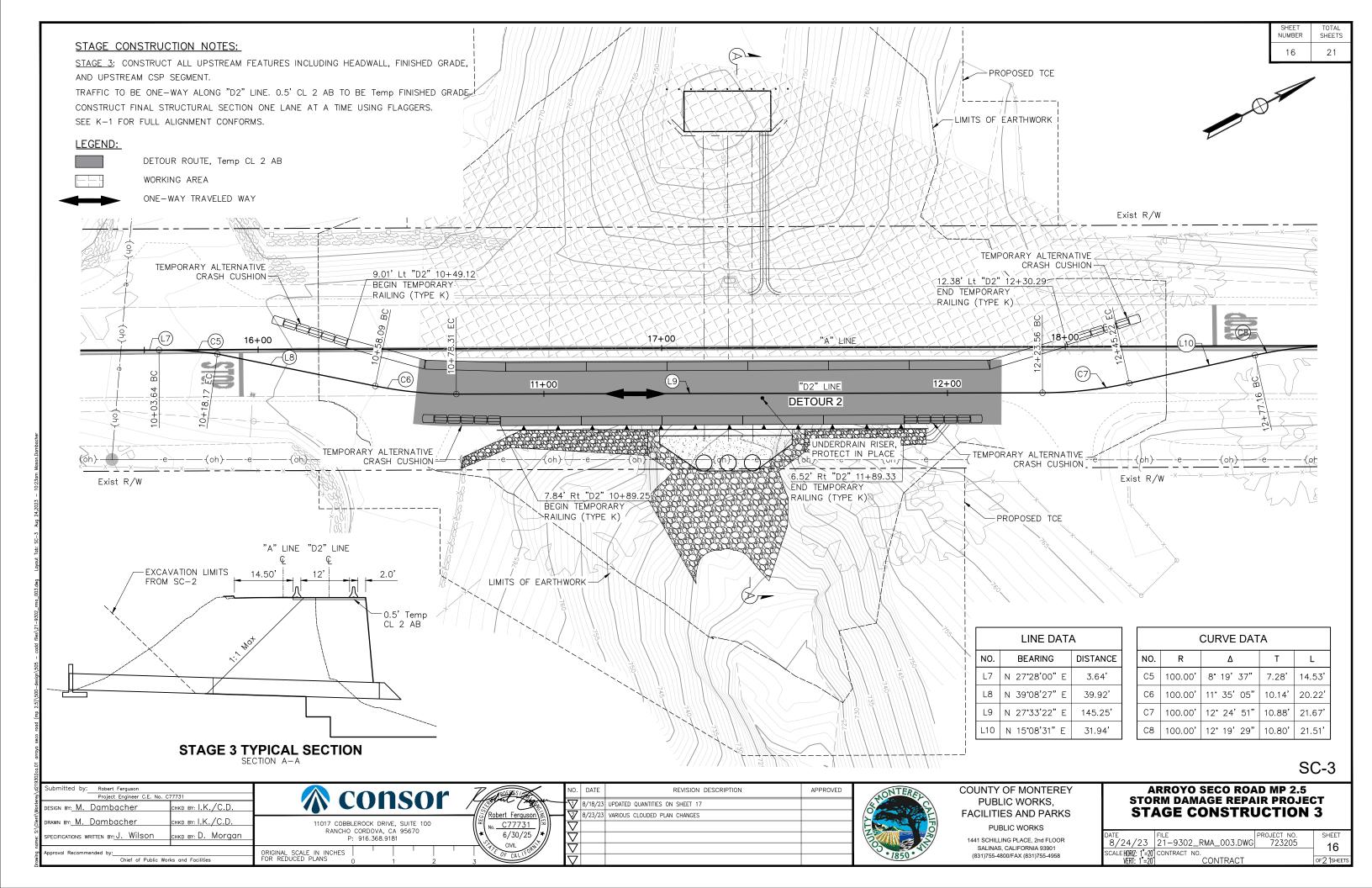
1441 SCHILLING PLACE, 2nd FLOOR SALINAS, CALIFORNIA 93901 (831)755-4800/FAX (831)755-4958

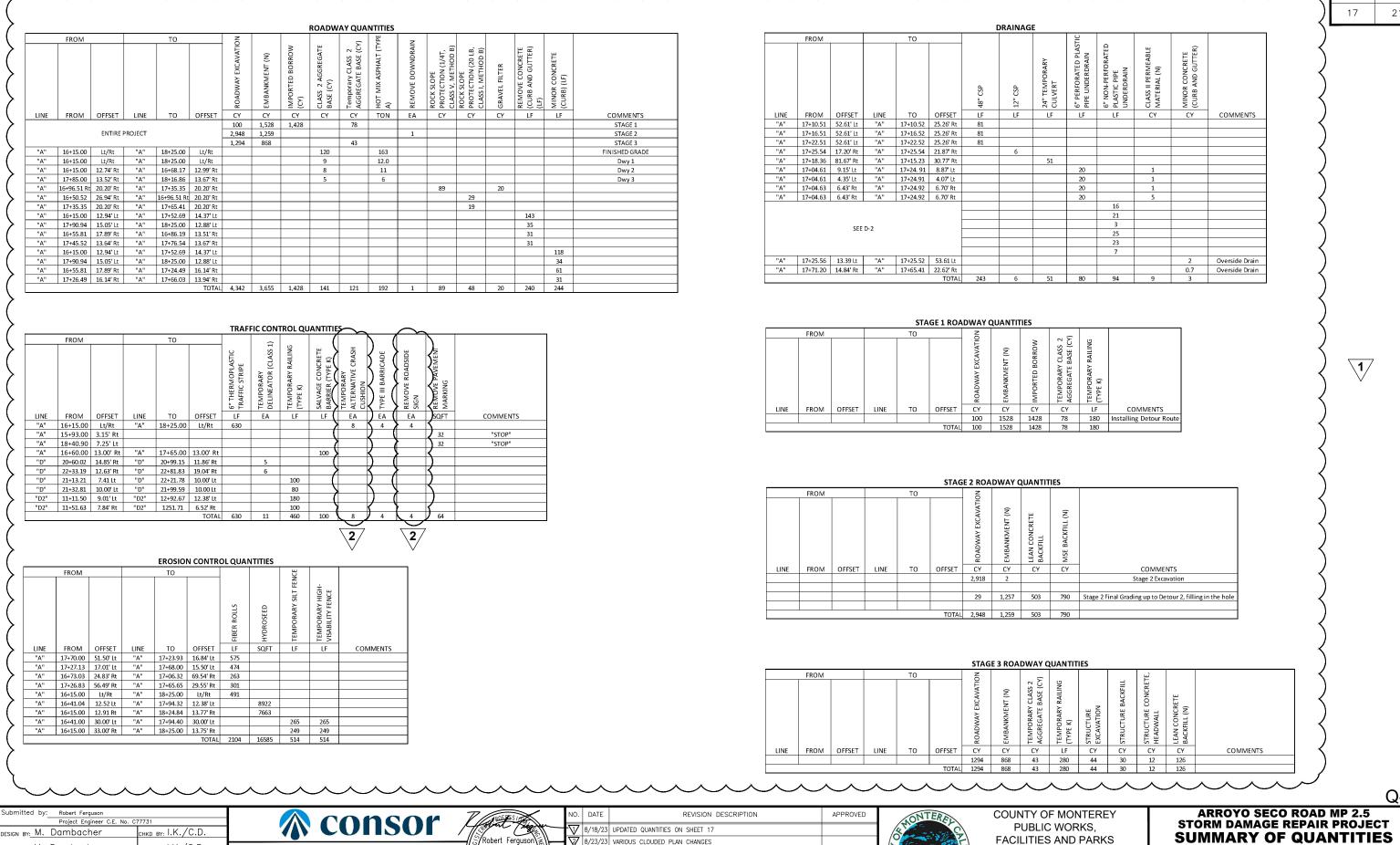
# ARROYO SECO ROAD MP 2.5 STORM DAMAGE REPAIR PROJECT **CONSTRUCTION AREA SIGNS**

DATE .		PROJECT NO.	SHEET
8/24/23	21-9302_RLA_001.DWG	723205	12
SCALEHORIZ: NTS	CONTRACT NO.		13
VERT: NTS	CONTRACT		of 2 1sheets









<sub>нкр ву:</sub> I.K./С.D.

Chief of Public Works and Facilities

<sub>СНКО ву:</sub> D. Morgan

11017 COBBLEROCK DRIVE, SUITE 100

RANCHO CORDOVA, CA 95670 P: 916.368.9181

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

C77731

6/30/25

CIVII

DRAWN BY: M. Dambacher

roval Recommended by:\_\_\_

SPECIFICATIONS WRITTEN BY: J. WILSON

SHEETS 21

Q-1

SHEET

17

of 2 1sheets

8/24/23 | 21-9302\_RPA\_001.DWG | 1

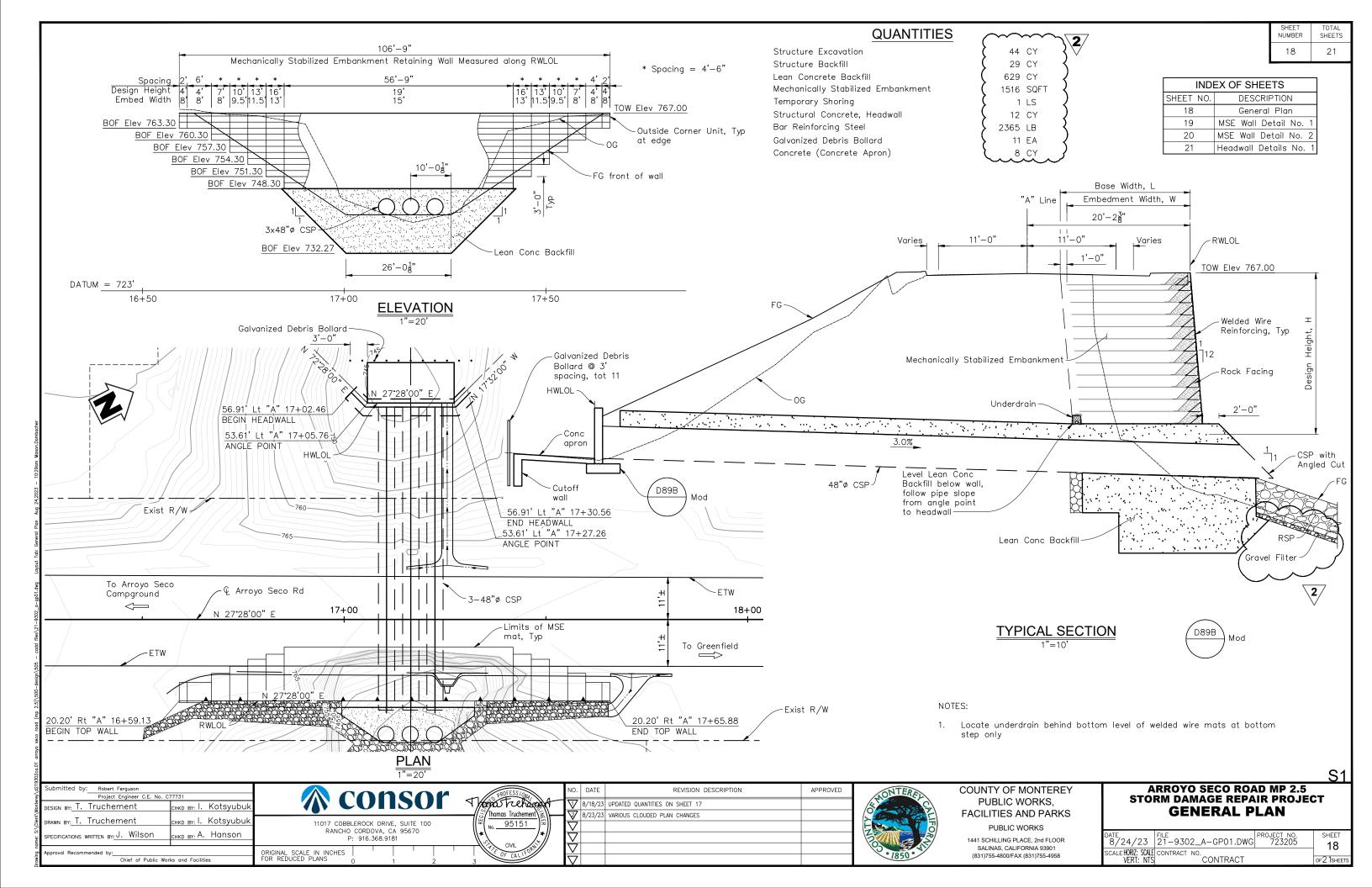
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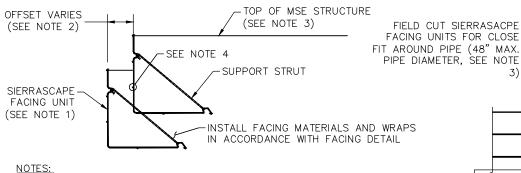
PUBLIC WORKS

1441 SCHILLING PLACE, 2nd FLOOR

SALINAS, CALIFORNIA 93901

(831)755-4800/FAX (831)755-4958

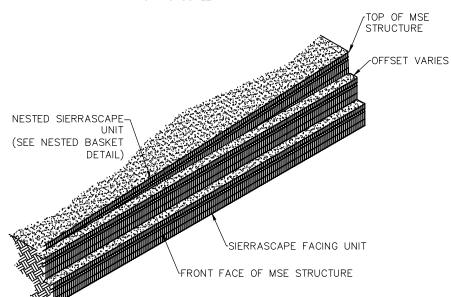




- SEE SIERRASCAPE FACING DETAIL FOR FACING MATERIALS AND DIMENSIONS.
- OFFSET AS NEEDED TO ACHIEVE OVERALL BATTER AS SHOWN IN THE TYPICAL SECTION.
- SET TOPMOST SIERRASCAPE FACING UNIT INSIDE SIERRASCAPE FACING UNIT BELOW TO FOLLOW GRADE.
- HORIZONTAL WIRES OF TOPMOST SIERRASCAPE FACING UNIT MAY BE CUT TO ALLOW INSTALLATION OVER STRUTS OF SIERRASCAPE FACING UNIT BELOW.

### NESTED BASKET DETAIL (OFFSET)

NOT TO SCALE



#### NOTES: 1. SEE SIERRASCAPE FACING UNIT DETAIL FOR FACING MATERIALS AND DIMENSIONS.

36'

EXTEND PIPE 3" MIN BEYOND-

SIERRRASCAPE FACING UNIT

- 2. SEE ELEVATION VIEW FOR GEOGRID TYPE, LOCATION, AND DIMENSIONS.
- 3. TERMINATE GEOGRIDS NO MORE THAN 3" FROM PIPE.

CONTINUE FACING COMPONENTS (BIAXIAL GEOGRID-

AND/OR GEOTEXTILE) FROM FACING UNIT ALONG PIPE

**TENSAR** 

**GEOGRID** 

STRUCTURAL

ELEVATION VIEW

4. CONTRACTOR RESPONSIBLE TO INSTALL PIPE WITH LEAK-PROOF JOINTS.

# PIPE PENETRATION DETAIL AT SIERRASCAPE WALL SCAPE

PAVEMENT OBSTRUCTION DEPTH, REFER TO CONTRACT DRAWINGS (MIN.) SIERRASCAPE, FACING UNIT (SEE NOTE 1) TENSAR STRUCTURAL GEOGRID HORIZONTAL PAVEMENT/OBSTRUCTION STRUCTURE

# ISOMETRIC VIEW - NESTED BASKET AT TOP OF MSE STRUCTURE DETAIL (OFFSET)

#### NOTES:

- SEE SIERRASCAPE FACING UNIT DETAIL FOR FACING MATERIALS AND DIMENSIONS.
- CONTRACTOR IS RESPONSIBLE TO COORDINATE THE PLACEMENT OF THE GEOGRID TO AVOID CONFLICT WITH THE CONTRACT PAVEMENT/OBSTRUCTION SECTION. GEOGRID MUST BE SEPARATED FROM THE PAVEMENT/OBSTRUCTION SECTION BY A MINIMUM OF 3".

# SUPERELEVATED ROADWAY PAVEMENT/OBSTRUCTION SECTION SIERRASCAPE~ FACING UNIT TENSAR STRUCTURAL GEOGRID (SEE NOTE 1) SUPERELEVATED PAVEMENT/OBSTRUCTION STRUCTURE

# **GENERAL NOTES** LOAD AND RESISTANCE FACTOR DESIGN

AASHTO LRFD Bridge Design Specifications, 8th edition and the

Caltrans Amendments.

SEISMIC DESIGN:

Caltrans Seismic Design Criteria (SDC), version 2.0, dated April

2019.

DEAD LOAD:

Self-weight of Mechanically Stabilized Earth

LIVE LOADING:

FRONT FACE OF

SIFRRASCAPE

FACING UNIT

SECTION A-A

Traffic Surcharge = 2' of 120 PCF soil.

SEISMIC LOADING:

Soil profile  $V_{30} = 410 \text{ m/s}$ Moment Magnitude  $M_{max} = 6.74$ Peak Ground Acceleration = 0.42 g

CONCRETE:

 $f_v = 60,000 \text{ psi}$  $f'_{c} = 3,600 \text{ psi}$ 

n = 8

# SOIL PROPERTIES AND STABILITY

#### SOIL PROPERTIES:

Reinforced Engineered Fill: Friction  $\tilde{A}$ ngle,  $\Phi = 34^{\circ}$ Cohesion, c' = 0 psf Unit Weight = 120 pcf Sliding Resistance Friction Angle,  $\Phi_u = 38^{\circ}$ 

Sliding resistance shall be considered at the face of the engineered fill and the reinforcements.

Retained Fill:

Friction Angle,  $\Phi = 34^{\circ}$ Unit Weight = 120 pcf Cohesion, c' = 0 psf  $K_h = 0.14$ 

Foundation:

Friction Angle,  $\Phi = 38^{\circ}$ 

REQUIRED FACTORS OF SAFETY FOR REINFORCED SOIL SLOPE:

Surficial static slope stability = 1.3 Deep-seated landsliding = 1.5Seismic = 1.1

Surficial and internal stability to be designed by MSE Manufacturer.

i			
	Submitted by: Robert Ferguson		
	Project Engineer C.E. No. C777	731	
	DESIGN BY: T. TRUCHEMENT CH	<sub>нко ву:</sub> I. Kotsyubuk	
	DRAWN BY: T. TRUCHEMENT CH	<sub>нкр ву:</sub> I. Kotsyubuk	Г
	SPECIFICATIONS WRITTEN BY: J. WIISON CH	<sub>HKD BY:</sub> A. Hanson	
	Approval Recommended by		

Chief of Public Works and Facilities

11017 COBBLEROCK DRIVE, SUITE 100 RANCHO CORDOVA, CA 95670 P: 916.368.9181 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

Thomas Trehamant THOMAS TRUCHEMENT 95151

NO. DATE REVISION DESCRIPTION APPROVED 17 8/18/23 UPDATED QUANTITIES ON SHEET 17 8/23/23 VARIOUS CLOUDED PLAN CHANGES



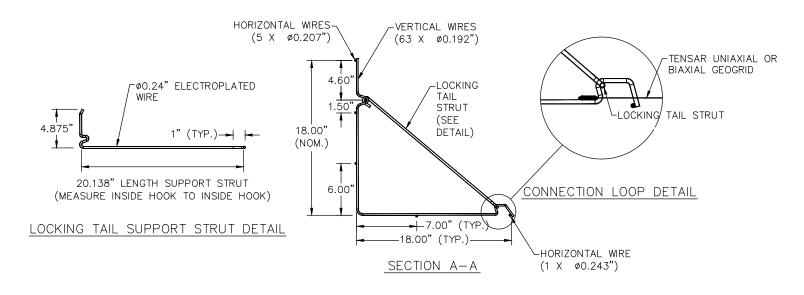
**COUNTY OF MONTEREY** PUBLIC WORKS. **FACILITIES AND PARKS** 

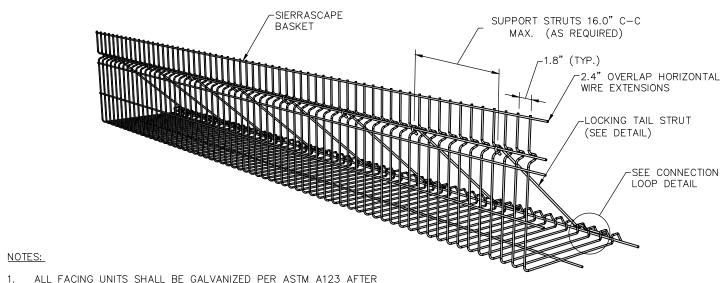
PUBLIC WORKS

1441 SCHILLING PLACE, 2nd FLOOR SALINAS, CALIFORNIA 93901 (831)755-4800/FAX (831)755-4958

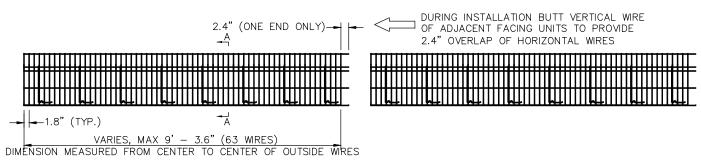
**ARROYO SECO ROAD MP 2.5** STORM DAMAGE REPAIR PROJECT **MSE WALL DETAILS NO. 1** 

SHEET 8/24/23 | 21-9302\_B-WALLDT02.DWG 19 GCALE HORIZ: SCALE CONTRACT NO. CONTRACT of 2 1sheets





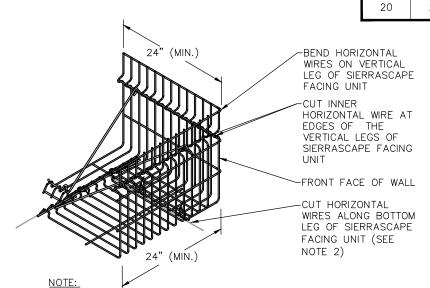
- BENDING
- 2. OVERALL LENGTH OF WIRE FORMS IS 9' 6 1/2" (114.5"). EFFECTIVE CONSTRUCTION WIDTH IS 9' 3.6" WITH 2.4" OVERLAPPING AT ENDS.



ELEVATION VIEW

# SIERRASCAPE FACING UNIT

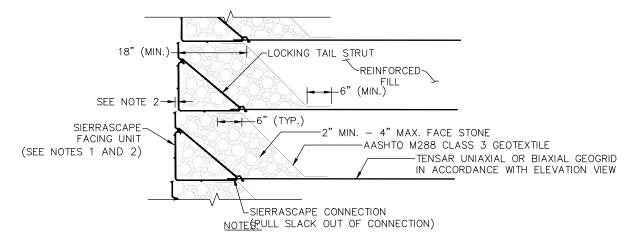
NOT TO SCALE



- SEE SIERRASCAPE FACING UNIT DETAIL FOR FACING MATERIALS AND DIMENSIONS.
- 2. CUT BOTTOM LEG FROM CONNECTION LOOPS TO SECOND HORIZONTAL WIRE TO ALLOW UNCUT LEG TO OVERLAP WHEN BENDING. SECURE WITH HOG WIRE OR ZIP TIE.

### SIERRASCAPE OUTSIDE CORNER UNIT

NOT TO SCALE



- SEE SIERRASCAPE FACING UNIT DETAIL FOR FACING MATERIAL AND DIMENSIONS.
- 2. OFFSET AS NEEDED TO ACHIEVE OVERALL BATTER AS SHOWN IN THE TYPICAL SECTION.
- 3. OPTIONAL A THIN LAYER (2" MIN.) OF FINER STONE (1/4"-1") MAY BE PLACED AT THE TOP OF EACH UNIT TO PROVIDE A LEVEL SURFACE FOR THE UNIT ABOVE.

# SIERRASCAPE STONE FACING DETAIL

NOT TO SCALE

erey	Submitted by: Robert Ferguson Project Engineer C.E. No. C77731  DESIGN BY: T. TRUCHEMENT CHKD BY: I. Kotsyubul	<b>a</b> consor	1) Trehomen		REVISION DESCRIPTION  UPDATED QUANTITIES ON SHEET 17  VARIOUS CLOUDED PLAN CHANGES	APPROVED	/6
2	DRAWN BY: T. TRUCHEMENT  SPECIFICATIONS WRITTEN BY: J. WIISON  CHKD BY: I. KOTSYUBUK  CHKD BY: A. Hanson	DANGUO CORROVA CA OFCZO	No. 95151	$\nabla$	VARIOUS CLOUDED PLAN CHANGES		YTV
Drawing no	Approval Recommended by:	ORIGINAL SCALE IN INCHES	V 00 00 11 160 00	$\nabla$			



# PUBLIC WORKS, FACILITIES AND PARKS

PUBLIC WORKS

1441 SCHILLING PLACE, 2nd FLOOR SALINAS, CALIFORNIA 93901 (831)755-4800/FAX (831)755-4958

#### ARROYO SECO ROAD MP 2.5 STORM DAMAGE REPAIR PROJECT MSE WALL DETAILS NO. 2

DATE 8/24/23	FILE 21-9302_B-WALLDT01.DWG	PROJECT NO. 723205	SHEET 20
SCALE HORIZ: SCALE			
VERT: VERTSCALE	CONTRACT		ог21ѕнеетѕ

