

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

**CALL BEFORE YOU DIG**

THE CONTRACTOR SHALL CALL "UNDERGROUND SERVICE ALERT" (USA) AT 800-227-2600 AT LEAST 2 WORKING DAYS PRIOR TO PERFORMING ANY EXCAVATION

**SHEET INDEX**

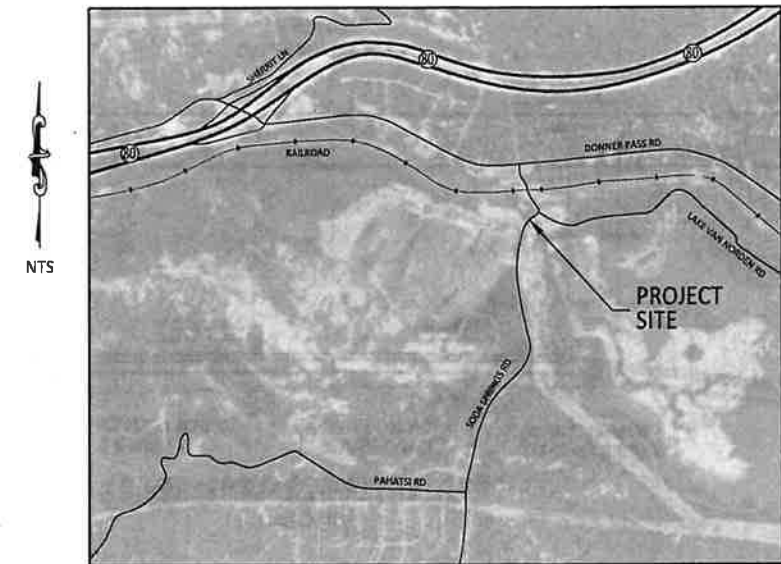
SHEET NO	DESCRIPTION
1	COVER SHEET
2	TYPICAL SECTIONS & GENERAL NOTES
3	LAYOUT PLAN
4	PROFILE AND SUPERELEVATION
5-6	CONSTRUCTION DETAILS
7	TEMPORARY/PERMANENT EROSION CONTROL
8	CONTOUR GRADING
9	DRAINAGE PLAN
10	UTILITY PLAN
11	DETOUR PLAN
12	SUMMARY OF QUANTITIES
13-20	STRUCTURE PLANS

# NEVADA COUNTY Department of Public Works Project Plans

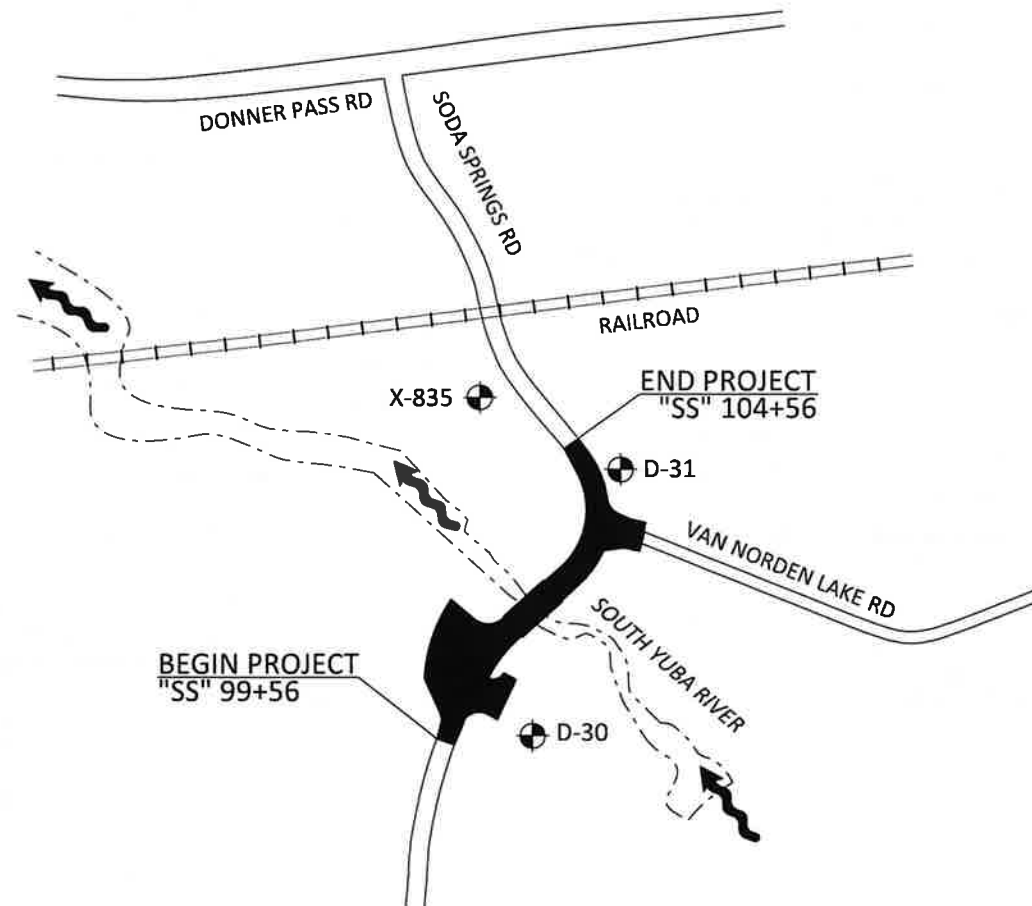
## for Soda Springs Road over South Yuba River Bridge Replacement Project

Federal Project No. BRLO-5917 (079)

To be supplemented by the Nevada County Standards and Standard Road Drawings and the California Department of Transportation Standard Plans and Specifications dated 2018.

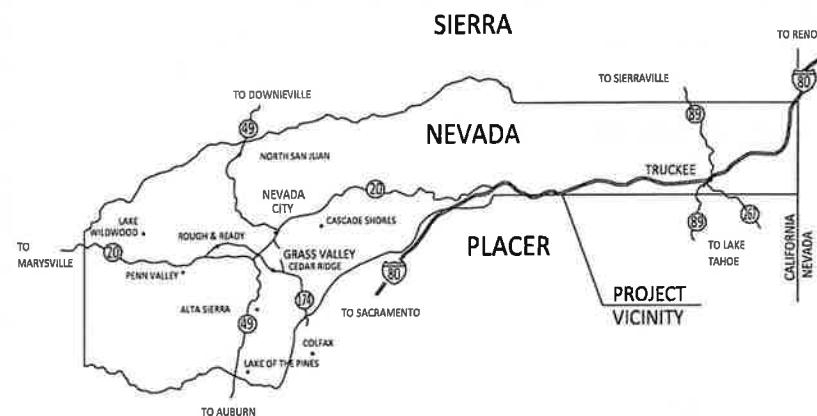


VICINITY MAP

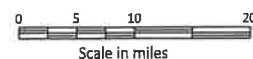


⊕ SURVEY CONTROL, SEE TYPICAL SECTIONS & GENERAL NOTES SHEET

SODA SPRINGS ROAD  
NO SCALE



INDEX MAP



*Patrick Perkins*

Patrick Perkins, R.C.E. 52684  
Principal Engineer, Department of Public Works

8/21/2020  
Date

*Trisha Tillotson*

Trisha Tillotson  
Director, Department of Public Works

8/25/20  
Date

Chairperson  
Board of Supervisors

Date

REVISIONS		
NO.	DESCRIPTION	DATE



DESIGNED BY DOKKEN ENGINEERING  
FOR  
**NEVADA COUNTY**  
DEPARTMENT OF PUBLIC WORKS  
DESIGN/CONSTRUCTION DIVISION



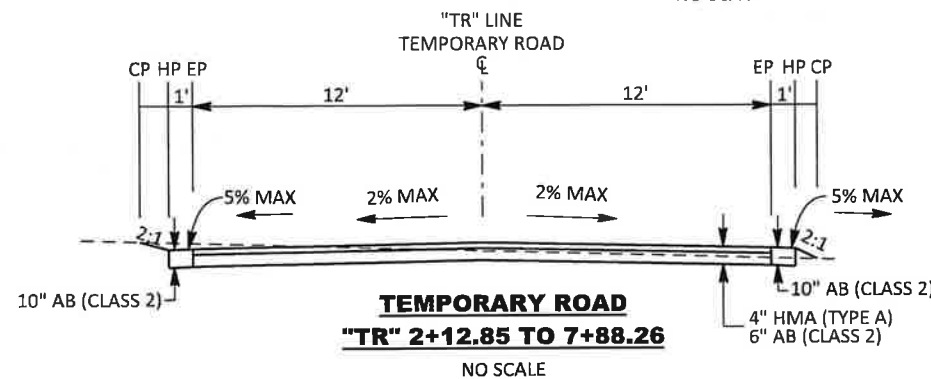
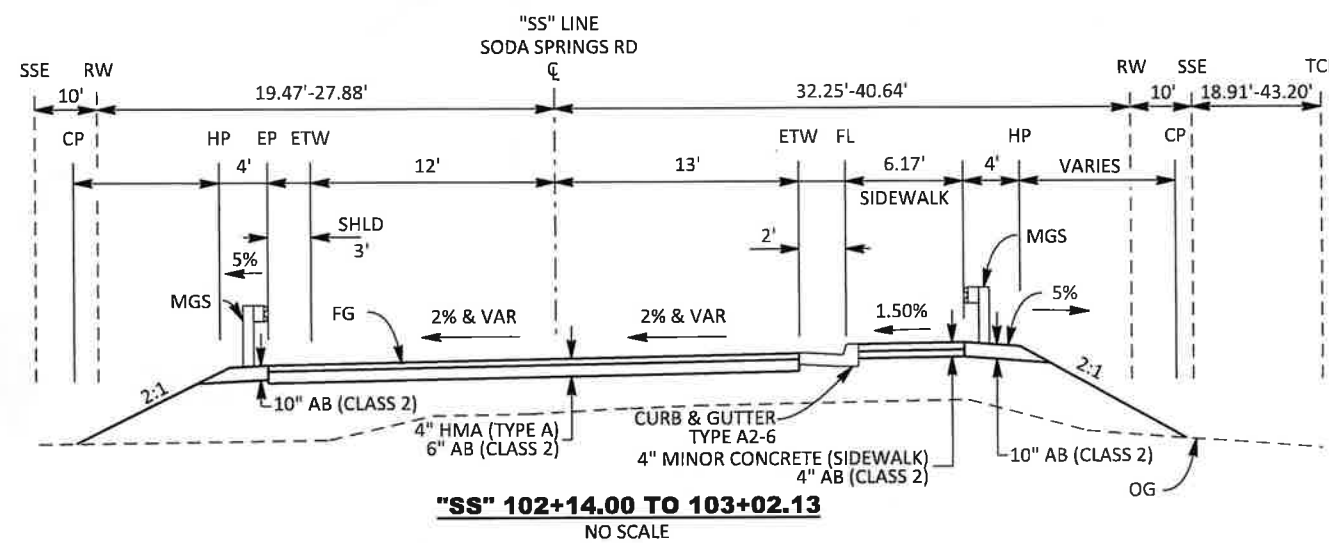
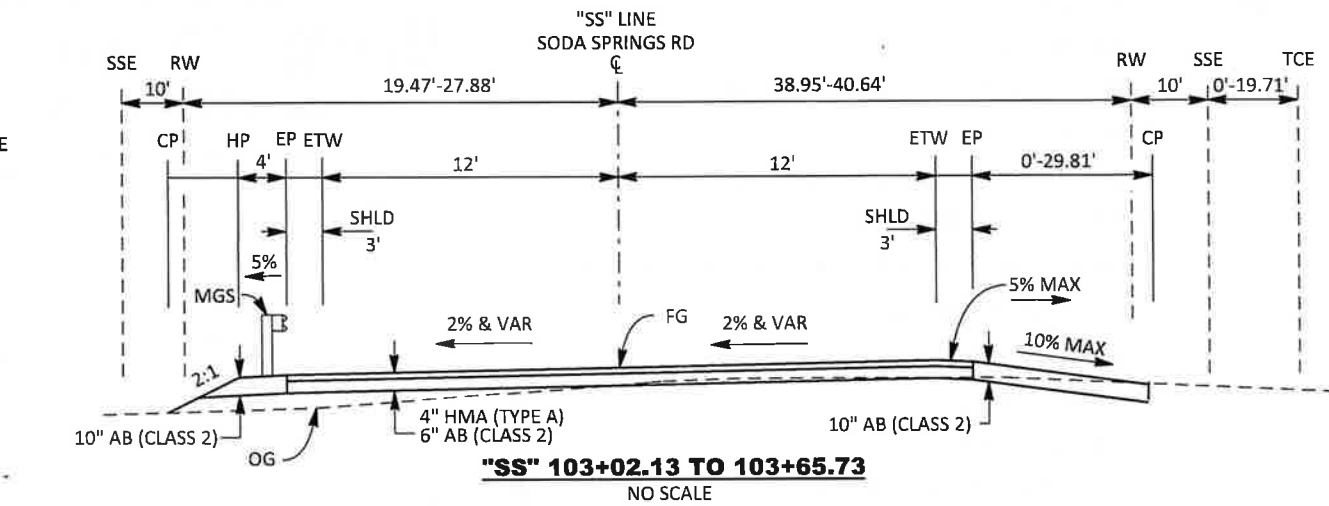
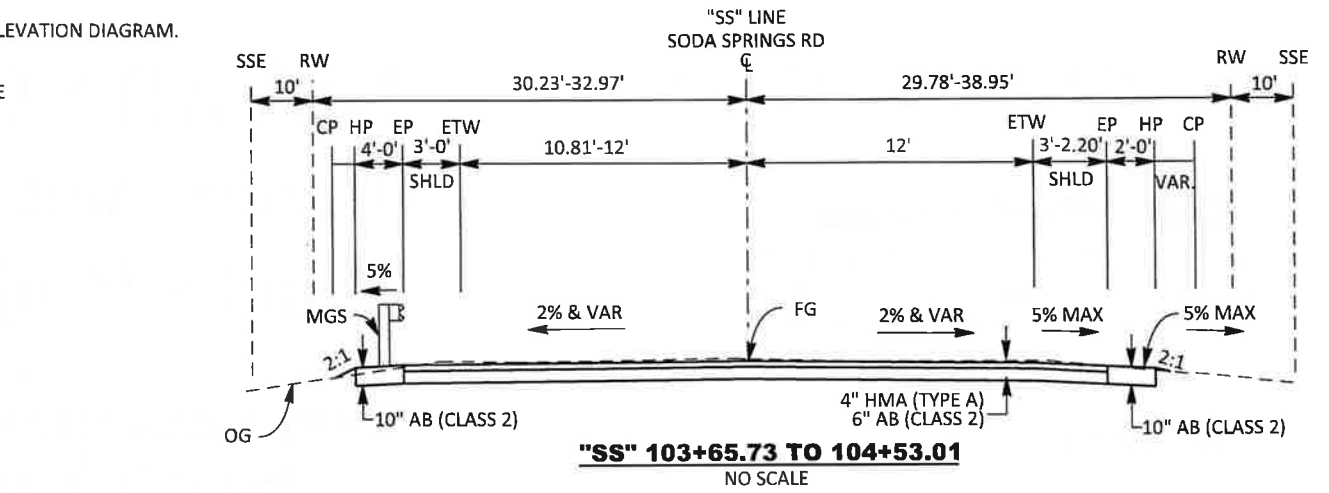
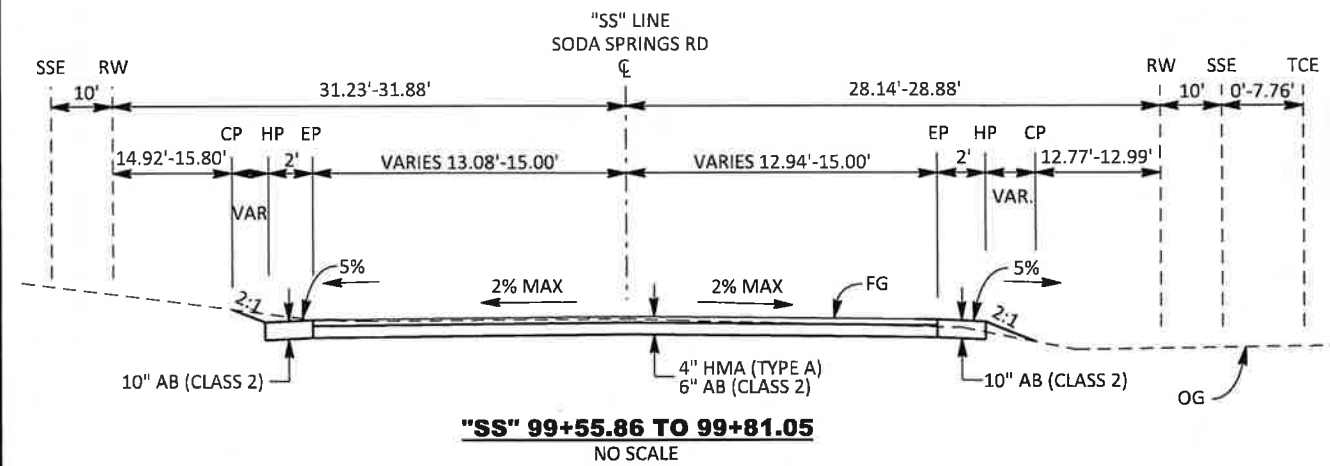
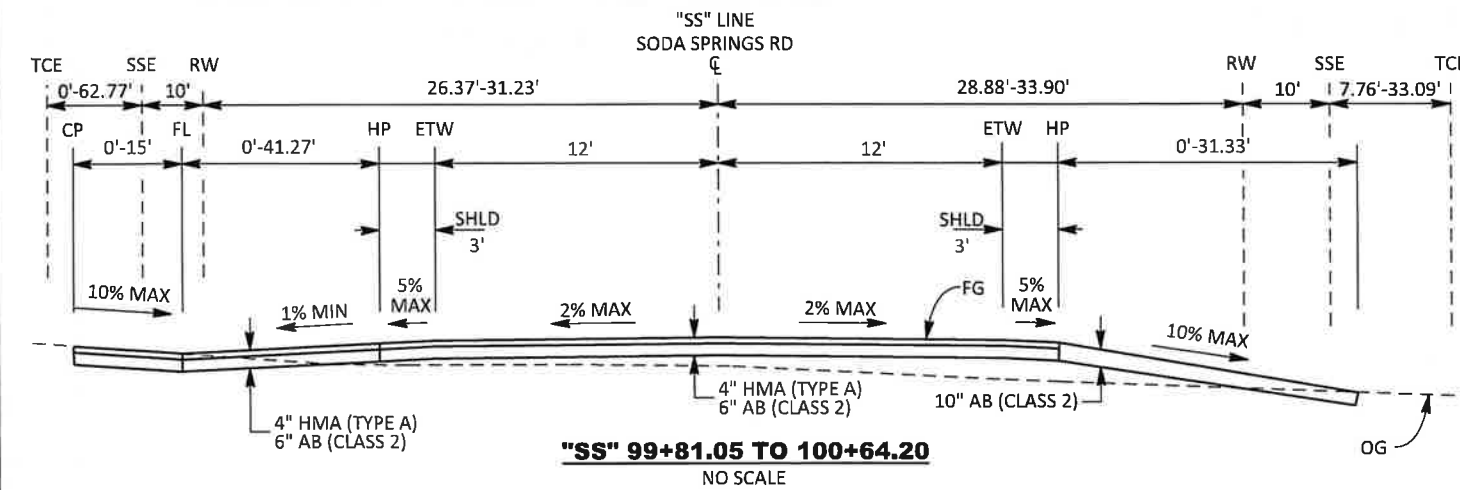
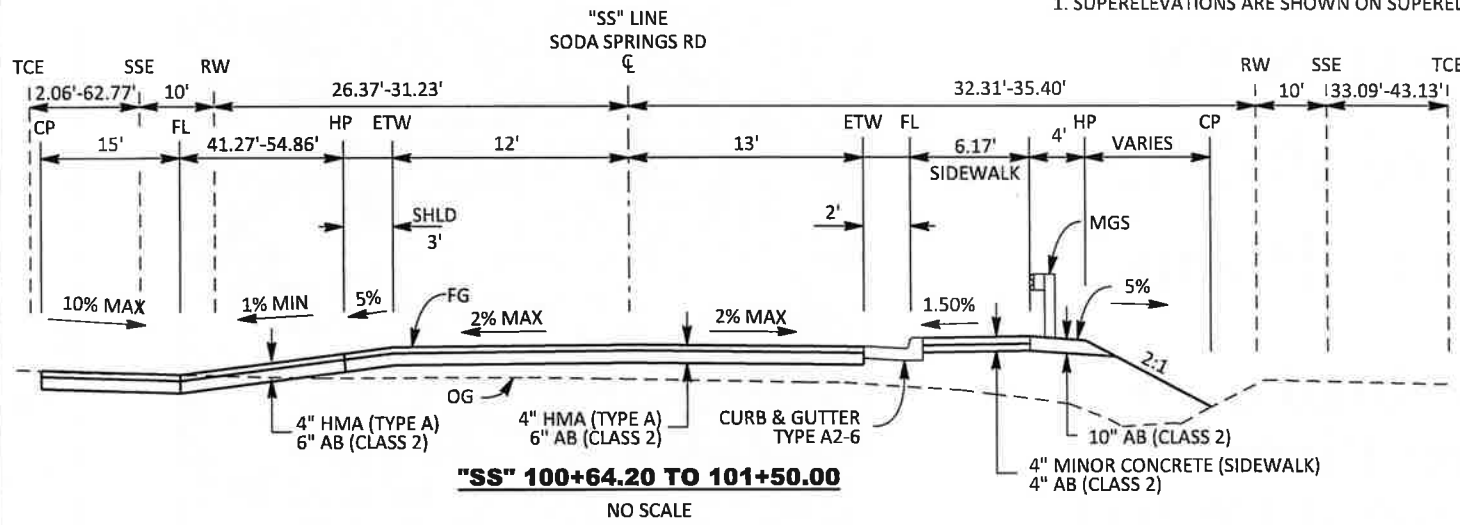
SODA SPRINGS ROAD  
OVER SOUTH YUBA RIVER  
COVER SHEET

BRIDGE No. 17C-0109  
DESIGNED: E. ESPINOZA  
DRAWN: J. BARAJAS  
CHECKED: R. GRIGGS  
JOB NO: 2101  
DATE: APRIL 20, 2020

SHEET  
**1**  
OF 20 SHEETS

**NOTES**

1. SUPERELEVATIONS ARE SHOWN ON SUPERELEVATION DIAGRAM.



SURVEY CONTROL TABLE				
CONTROL NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
X-835	2,247,481.890	7,020,222.620	6761.83'	CGS BRASS CAP
D-31	2,247,331.340	7,020,452.450	6755.30'	3/8" DIAMETER GIN SPIKE & SHINER
D-30	2,264,775.442	7,020,269.747	6769.16'	1/2" DIAMETER REBAR CENTER PUNCHED

**REVISIONS**

DATE	BY	DESCRIPTION	NO.



DESIGNED BY DOKKEN ENGINEERING  
**FOR**  
**NEVADA COUNTY**  
 DEPARTMENT OF PUBLIC WORKS  
 DESIGN/CONSTRUCTION DIVISION



**SODA SPRINGS ROAD**  
**OVER SOUTH YUBA RIVER**  
 TYPICAL SECTIONS  
 & GENERAL NOTES

BRIDGE No.	17C-0109
DESIGNED:	E. ESPINOZA
DRAWN:	J. BARAJAS
CHECKED:	R. GRIGGS
JOB NO:	2101
DATE:	APRIL 20, 2020

SHEET  
**2**  
 OF 20 SHEETS



**CALL BEFORE YOU DIG**

THE CONTRACTOR SHALL CALL "UNDERGROUND SERVICE ALERT" (USA) AT 800-227-2600 AT LEAST 2 WORKING DAYS PRIOR TO PERFORMING ANY EXCAVATION

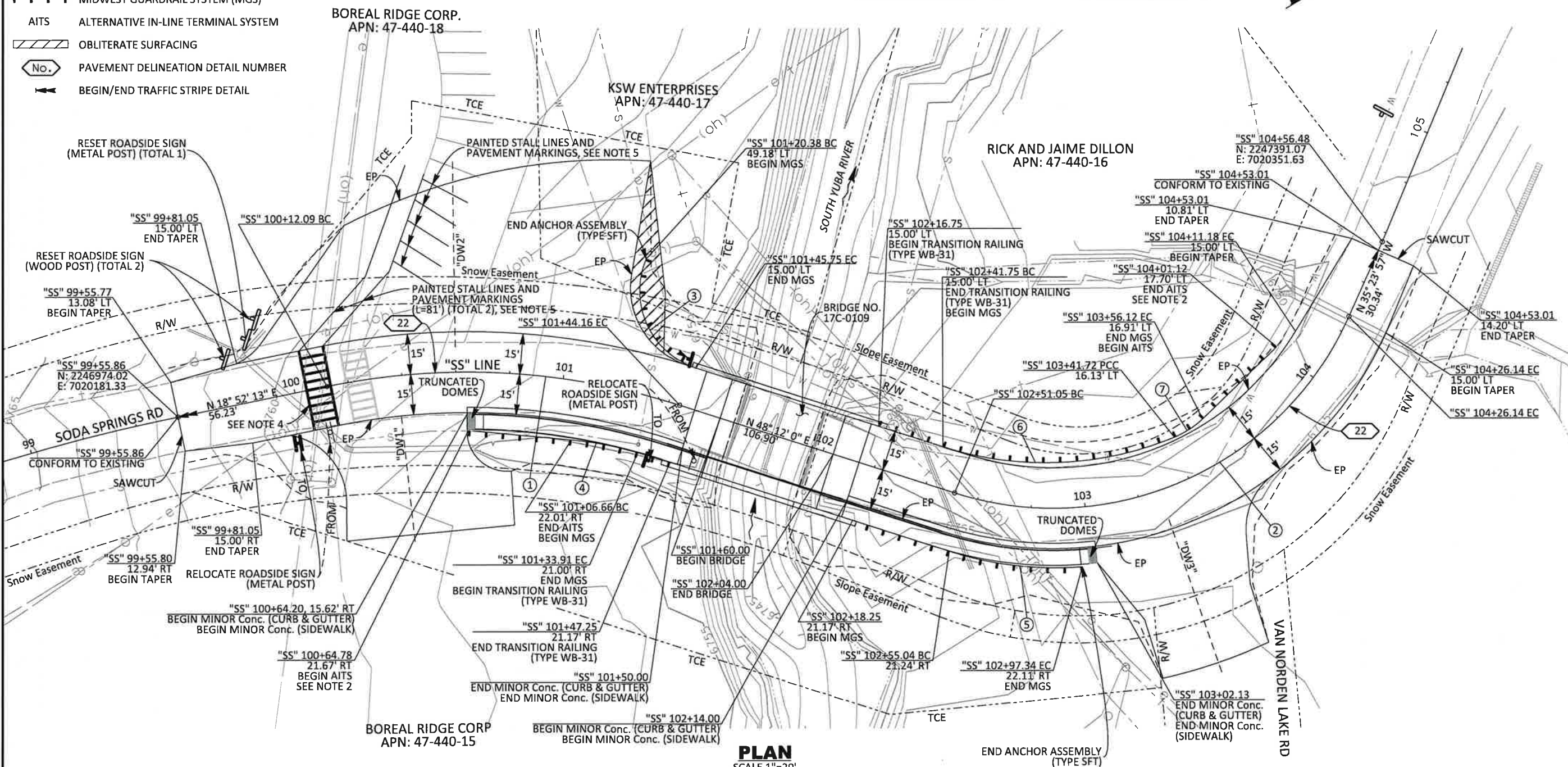
**LEGEND**

- MINOR CONTOUR INTERVAL: 1 FOOT
- - / - - - - FILL/ CUT, LIMITS OF GRADING
- MIDWEST GUARDRAIL SYSTEM (MGS)
- AITS ALTERNATIVE IN-LINE TERMINAL SYSTEM
- ▨ OBLITERATE SURFACING
- ⬡(No.) PAVEMENT DELINEATION DETAIL NUMBER
- ➔ BEGIN/END TRAFFIC STRIPE DETAIL

**NOTES:**

1. FOR DRIVEWAY DETAILS, SEE CONSTRUCTION DETAILS.
2. FOR AITS, USE SOFT STOP TL-2 OR APPROVED EQUAL.
3. FOR LOCATION OF ESA FENCE, SEE "TEMPORARY DETOUR SHEET".
4. FOR CROSSWALK DETAIL SEE CONSTRUCTION DETAIL SHEET.
5. PAINTED STALL LINES AND PAVEMENT MARKINGS SHALL BE 6" YELLOW.
6. FOR CONFORM DETAIL SEE CONSTRUCTION DETAIL SHEET.

CURVE DATA				
No	RADIUS (FT)	DELTA	TANGENT (FT)	LENGTH (FT)
①	257.99	29° 19' 47"	67.51	132.06
②	120.00	83° 35' 58"	107.29	175.09
③	30.00	95° 29' 35"	33.02	50.00
④	130.00	11° 01' 06"	12.54	25.00
⑤	130.00	-22° 02' 13"	25.31	50.00
⑥	125.00	40° 06' 25"	45.63	87.50
⑦	35.00	20° 27' 46"	6.32	12.50



**PLAN**  
SCALE 1"=20'

REVISIONS	
DATE	DESCRIPTION



DESIGNED BY DOKKEN ENGINEERING  
FOR  
**NEVADA COUNTY**  
DEPARTMENT OF PUBLIC WORKS  
DESIGN/CONSTRUCTION DIVISION



**SODA SPRINGS ROAD**  
**OVER SOUTH YUBA RIVER**  
**LAYOUT PLAN**

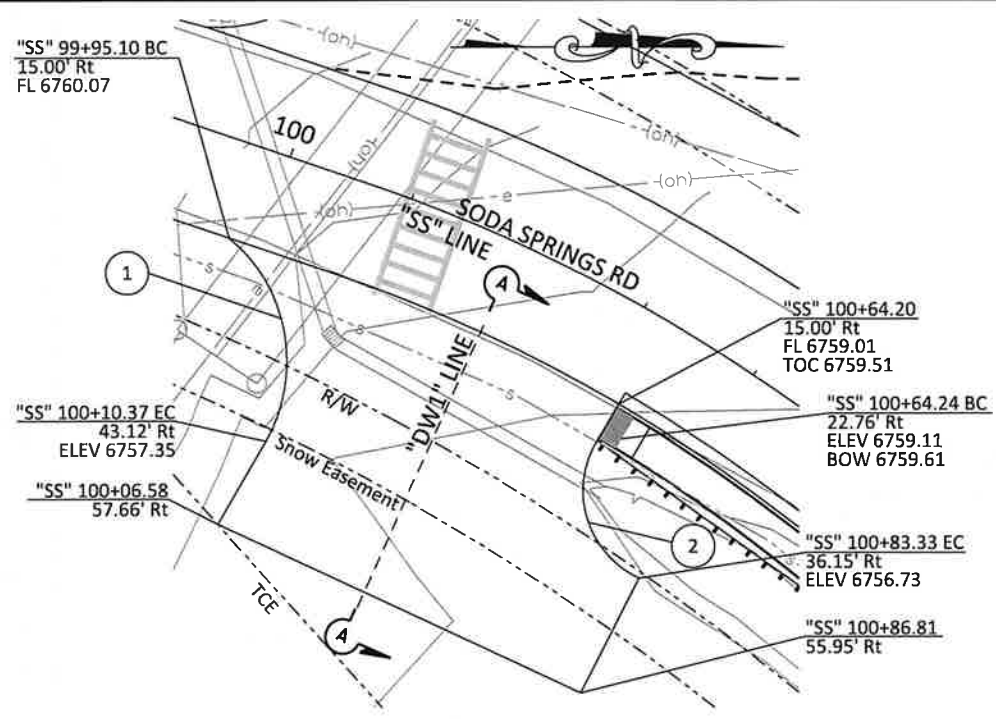
BRIDGE No. 17C-0109  
DESIGNED: E. ESPINOZA  
DRAWN: J. BARAJAS  
CHECKED: R. GRIGGS  
JOB NO: 2101  
DATE: APRIL 20, 2020

SHEET  
**3**  
OF 20 SHEETS

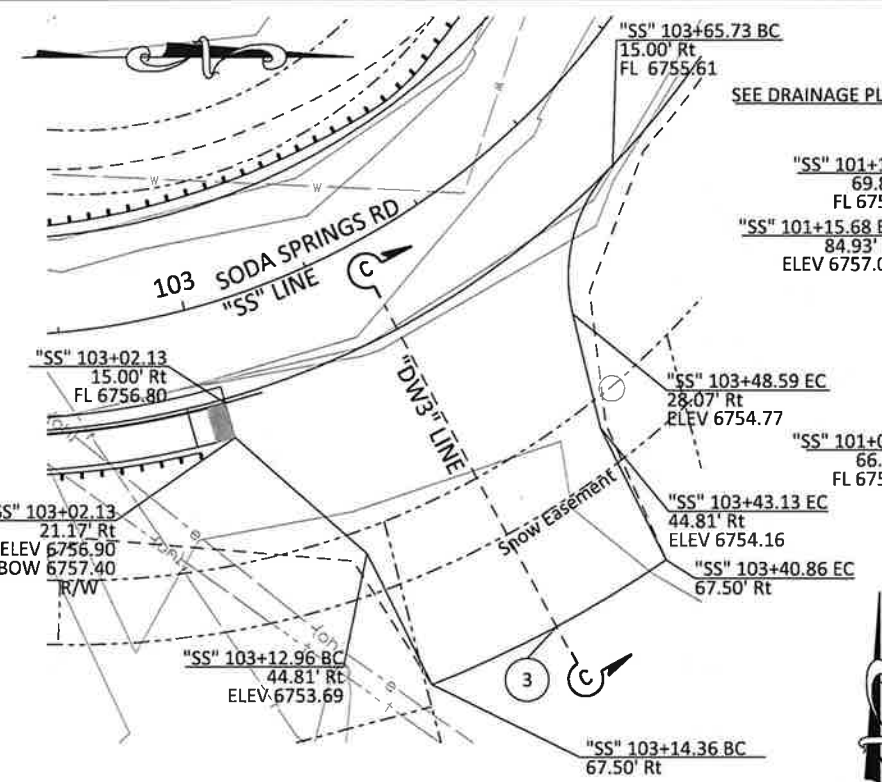
509



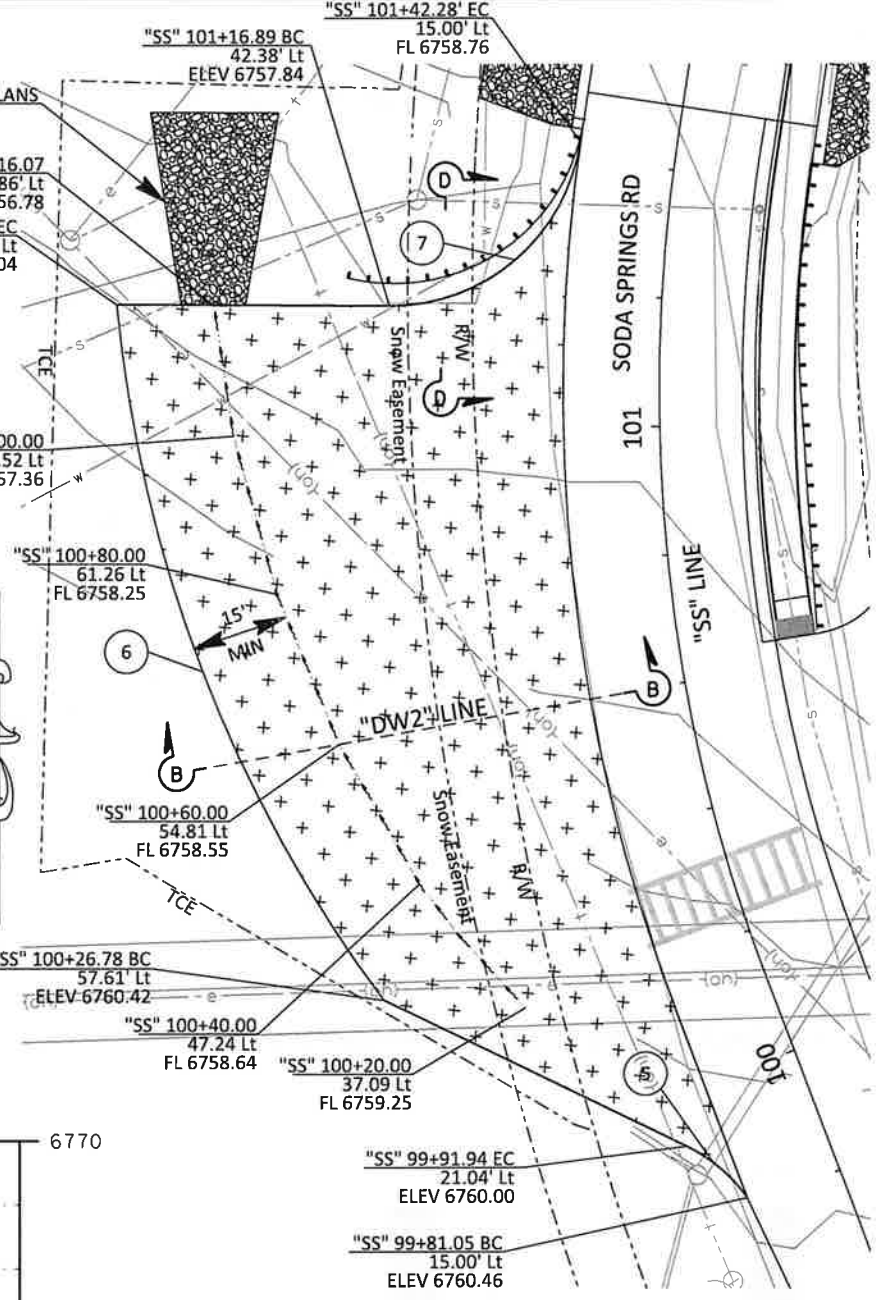




**DRIVEWAY "DW1" DETAIL**  
SCALE 1"=15'



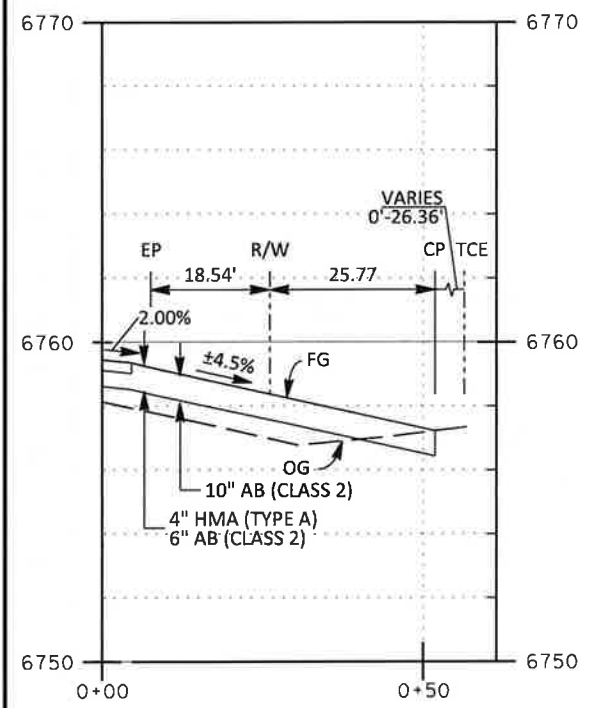
**DRIVEWAY "DW3" DETAIL**  
SCALE 1"=15'



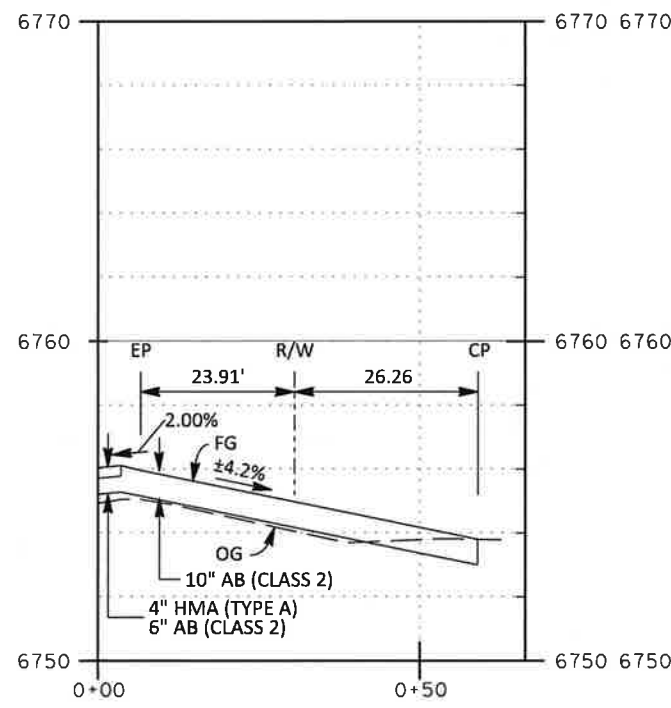
**DRIVEWAY "DW2" DETAIL**  
SCALE 1"=15'

**LEGEND**  
[Patterned Box] REMOVE ASPHALT

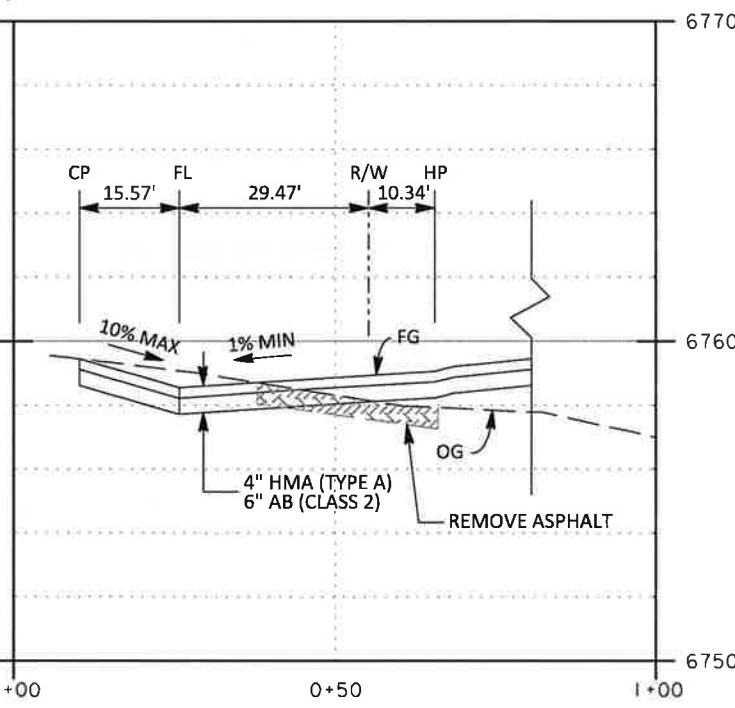
CURVE DATA				
NO	RADIUS (FT)	DELTA	TANGENT (FT)	LENGTH (FT)
1	25.00	-80° 02' 25"	20.99	34.91
2	15.00	95° 28' 35"	16.51	25.00
3	187.50	12° 39' 2"	20.78	41.40
4	25.00	57° 29' 04"	13.71	25.08
5	25.00	-28° 50' 03"	6.43	12.58
6	215.00	-31° 19' 06"	60.27	117.52
7	30.00	-81° 46' 14"	25.97	42.81



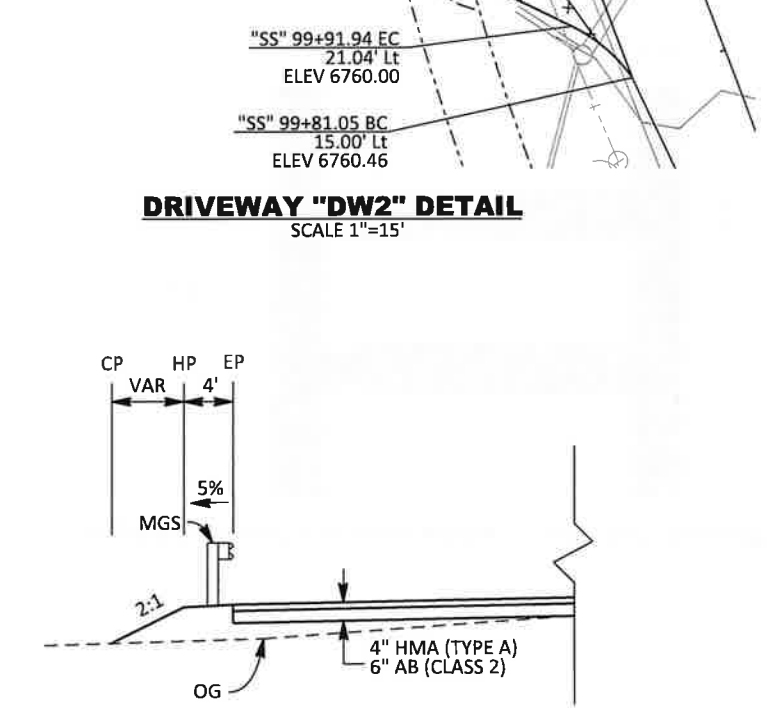
**DRIVEWAY "DW1" SECTION A-A**  
VERT SCALE 1"=75'  
HORIZ SCALE 1"=15'



**DRIVEWAY "DW3" SECTION C-C**  
VERT SCALE 1"=75'  
HORIZ SCALE 1"=15'



**DRIVEWAY "DW2" SECTION B-B**  
VERT SCALE 1"=75'  
HORIZ SCALE 1"=15'



**DRIVEWAY "DW2" SECTION D-D**  
NO SCALE

REVISIONS		
NO.	DESCRIPTION	DATE



DESIGNED BY DOKKEN ENGINEERING  
FOR  
**NEVADA COUNTY**  
DEPARTMENT OF PUBLIC WORKS  
DESIGN/CONSTRUCTION DIVISION



**SODA SPRINGS ROAD**  
**OVER SOUTH YUBA RIVER**  
CONSTRUCTION DETAILS

BRIDGE No. 17C-0109  
DESIGNED: E. ESPINOZA  
DRAWN: J. BARAJAS  
CHECKED: R. GRIGGS  
JOB NO: 2101  
DATE: APRIL 20, 2020

SHEET  
**5**  
OF 20 SHEETS





REVISIONS	
NO.	DESCRIPTION



DESIGNED BY DOKKEN ENGINEERING  
 FOR  
**NEVADA COUNTY**  
 DEPARTMENT OF PUBLIC WORKS  
 DESIGN/CONSTRUCTION DIVISION



**SODA SPRINGS ROAD  
 OVER SOUTH YUBA RIVER  
 TEMPORARY/ PERMANENT  
 EROSION CONTROL PLAN**

BRIDGE No. 17C-0109  
 DESIGNED: E. ESPINOZA  
 DRAWN: J. BARAJAS  
 CHECKED: R. GRIGGS  
 JOB NO: 2101  
 DATE: APRIL 20, 2020

SHEET  
**7**  
 OF 20 SHEETS

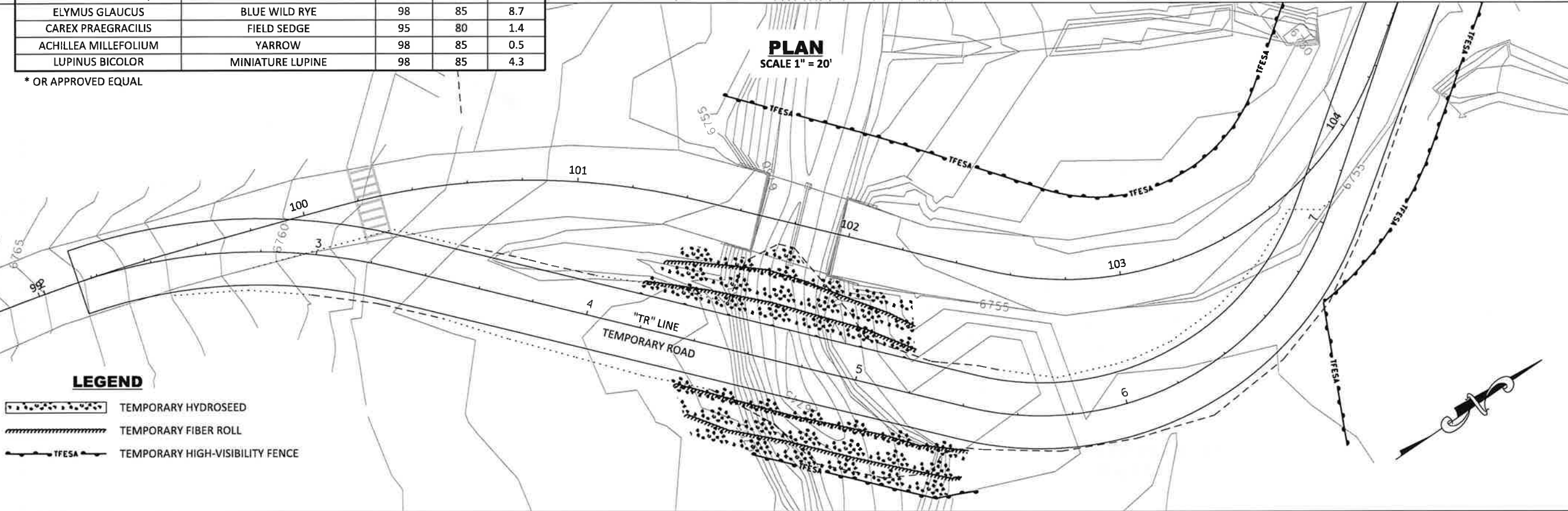
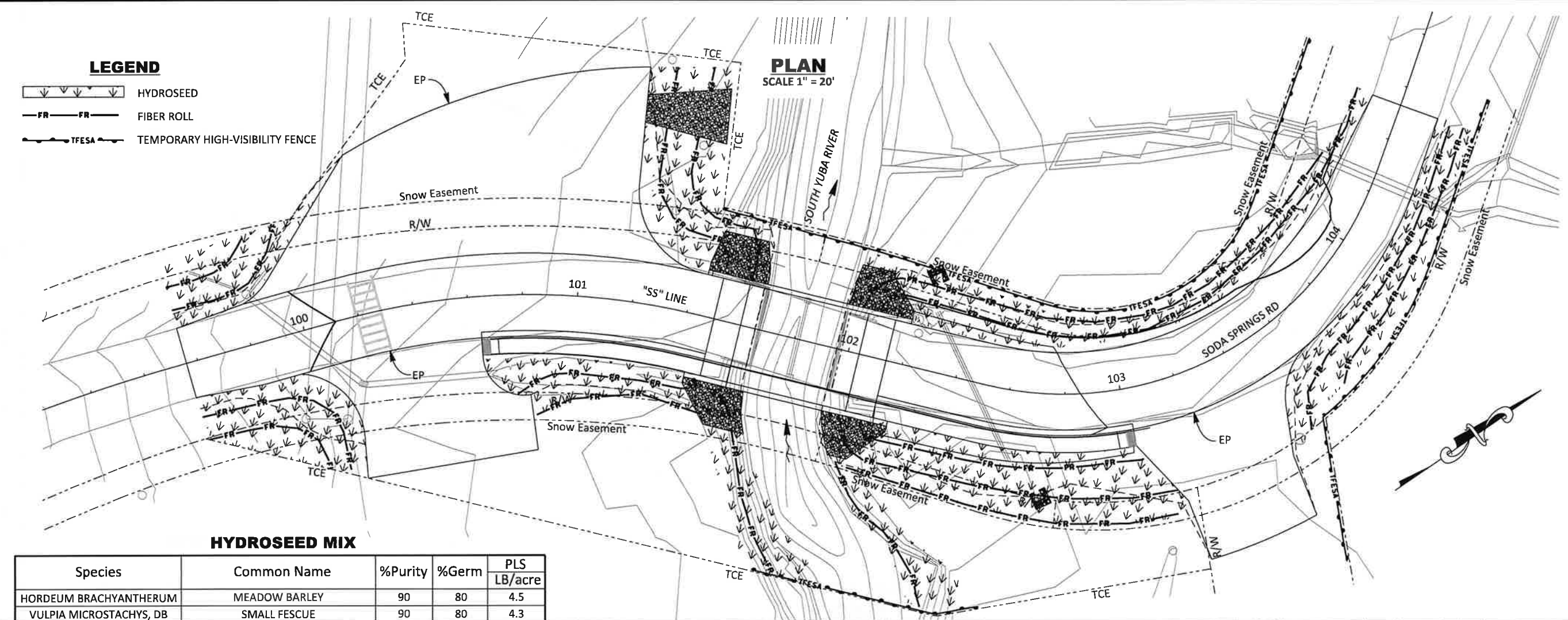
**LEGEND**

	HYDROSEED
	FIBER ROLL
	TEMPORARY HIGH-VISIBILITY FENCE

**HYDROSEED MIX**

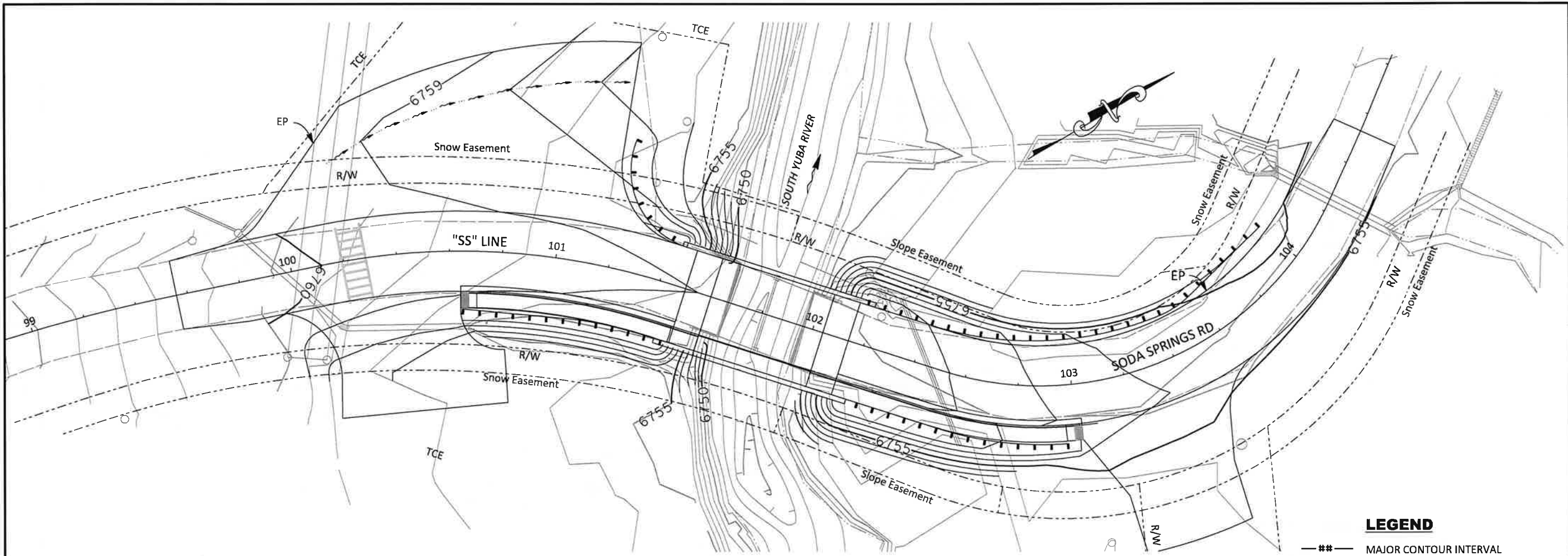
Species	Common Name	%Purity	%Germ	PLS LB/acre
HORDEUM BRACHYANTHERUM	MEADOW BARLEY	90	80	4.5
VULPIA MICROSTACHYS, DB	SMALL FESCUE	90	80	4.3
ELYMUS GLAUCUS	BLUE WILD RYE	98	85	8.7
CAREX PRAEGRACILIS	FIELD SEDGE	95	80	1.4
ACHILLEA MILLEFOLIUM	YARROW	98	85	0.5
LUPINUS BICOLOR	MINIATURE LUPINE	98	85	4.3

\* OR APPROVED EQUAL



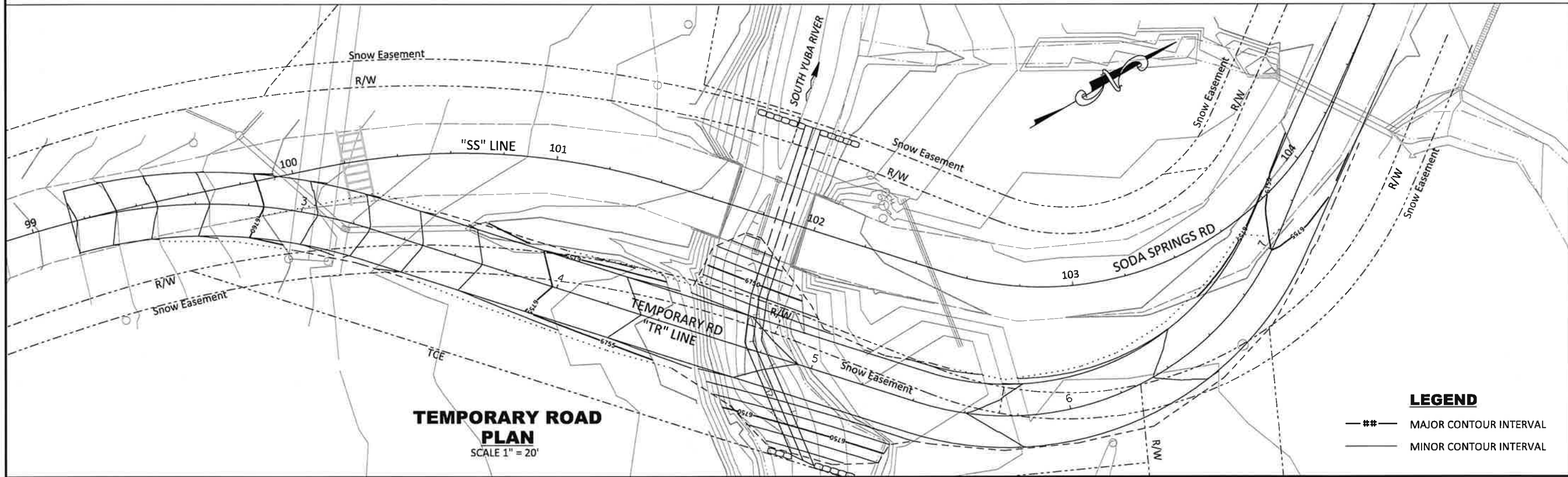
**LEGEND**

	TEMPORARY HYDROSEED
	TEMPORARY FIBER ROLL
	TEMPORARY HIGH-VISIBILITY FENCE



**"SS" LINE PLAN**  
SCALE 1" = 20'

**LEGEND**  
 ---##--- MAJOR CONTOUR INTERVAL  
 - - - - - MINOR CONTOUR INTERVAL



**TEMPORARY ROAD PLAN**  
SCALE 1" = 20'

**LEGEND**  
 ---##--- MAJOR CONTOUR INTERVAL  
 - - - - - MINOR CONTOUR INTERVAL

REVISIONS			
NO.	DESCRIPTION	BY	DATE



DESIGNED BY DOKKEN ENGINEERING  
 FOR  
**NEVADA COUNTY**  
 DEPARTMENT OF PUBLIC WORKS  
 DESIGN/CONSTRUCTION DIVISION



**SODA SPRINGS ROAD  
 OVER SOUTH YUBA RIVER  
 CONTOUR GRADING**

BRIDGE No. 17C-0109  
 DESIGNED: E. ESPINOZA  
 DRAWN: J. BARAJAS  
 CHECKED: R. GRIGGS  
 JOB NO: 2101  
 DATE: APRIL 20, 2020

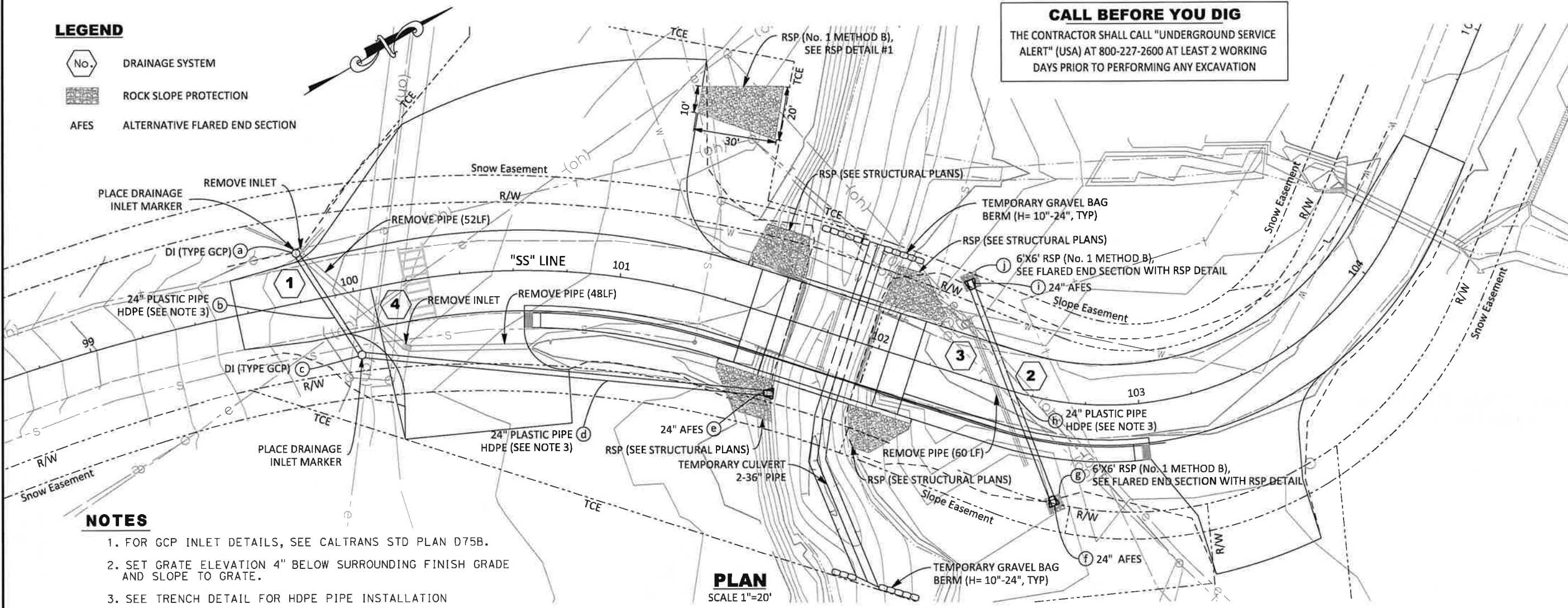
SHEET  
**8**  
 OF 20 SHEETS



**LEGEND**

-  DRAINAGE SYSTEM
-  ROCK SLOPE PROTECTION
-  ALTERNATIVE FLARED END SECTION

**CALL BEFORE YOU DIG**  
 THE CONTRACTOR SHALL CALL "UNDERGROUND SERVICE ALERT" (USA) AT 800-227-2600 AT LEAST 2 WORKING DAYS PRIOR TO PERFORMING ANY EXCAVATION



**NOTES**



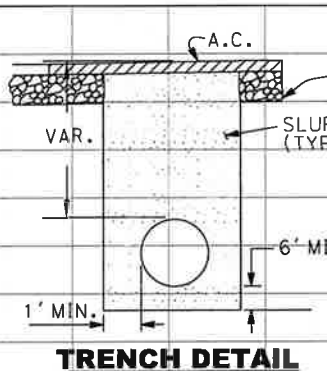
1. FOR GCP INLET DETAILS, SEE CALTRANS STD PLAN D75B.
2. SET GRATE ELEVATION 4" BELOW SURROUNDING FINISH GRADE AND SLOPE TO GRATE.
3. SEE TRENCH DETAIL FOR HDPE PIPE INSTALLATION

**PLAN**  
SCALE 1"=20'

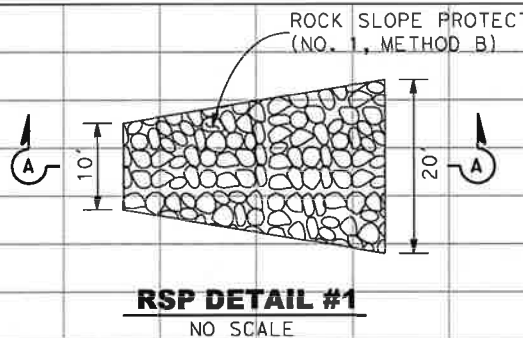
REVISIONS	
NO.	DESCRIPTION

DESIGNED BY DOKKEN ENGINEERING

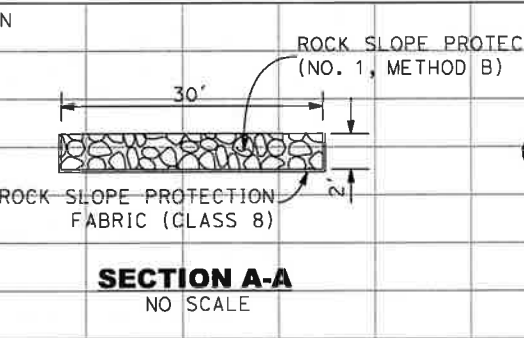
FOR  
**NEVADA COUNTY**  
 DEPARTMENT OF PUBLIC WORKS  
 DESIGN/CONSTRUCTION DIVISION

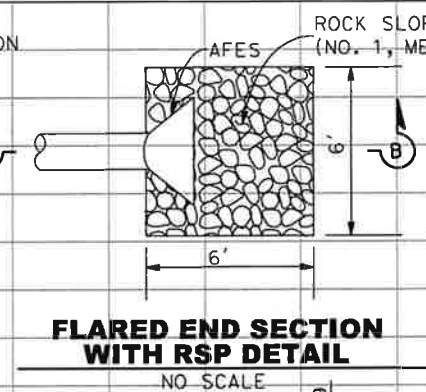
**TRENCH DETAIL**



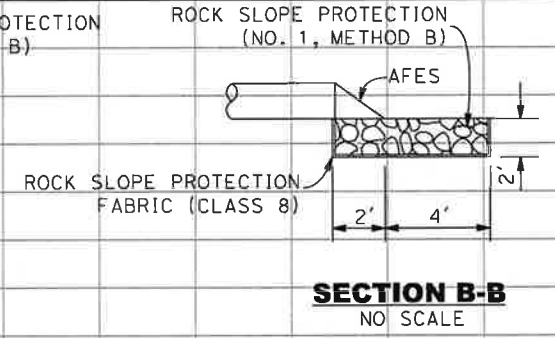
**RSP DETAIL #1**  
NO SCALE



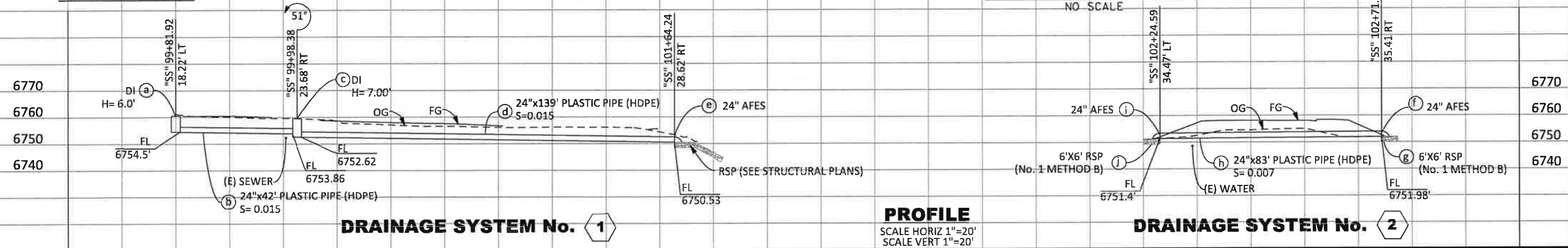
**SECTION A-A**  
NO SCALE



**FLARED END SECTION WITH RSP DETAIL**  
NO SCALE



**SECTION B-B**  
NO SCALE



**DRAINAGE SYSTEM No. 1**

**PROFILE**  
SCALE HORIZ 1"=20'  
SCALE VERT 1"=20'

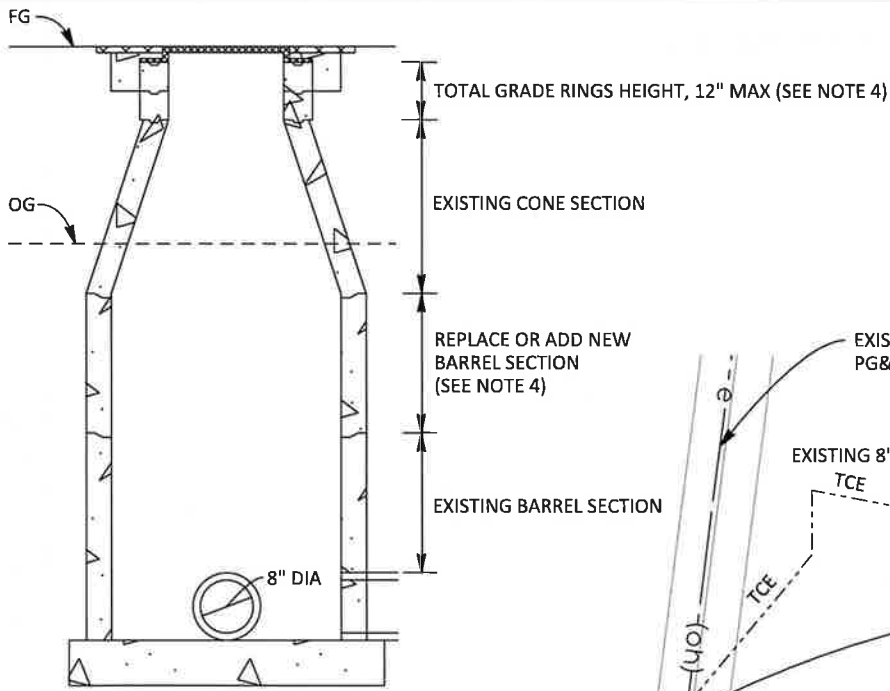
**DRAINAGE SYSTEM No. 2**

SODA SPRINGS ROAD  
 OVER SOUTH YUBA RIVER  
 DRAINAGE PLAN

BRIDGE No. 17C-0109  
 DESIGNED: E. ESPINOZA  
 DRAWN: J. BARAJAS  
 CHECKED: R. GRIGGS  
 JOB NO: 2101  
 DATE: APRIL 20, 2020

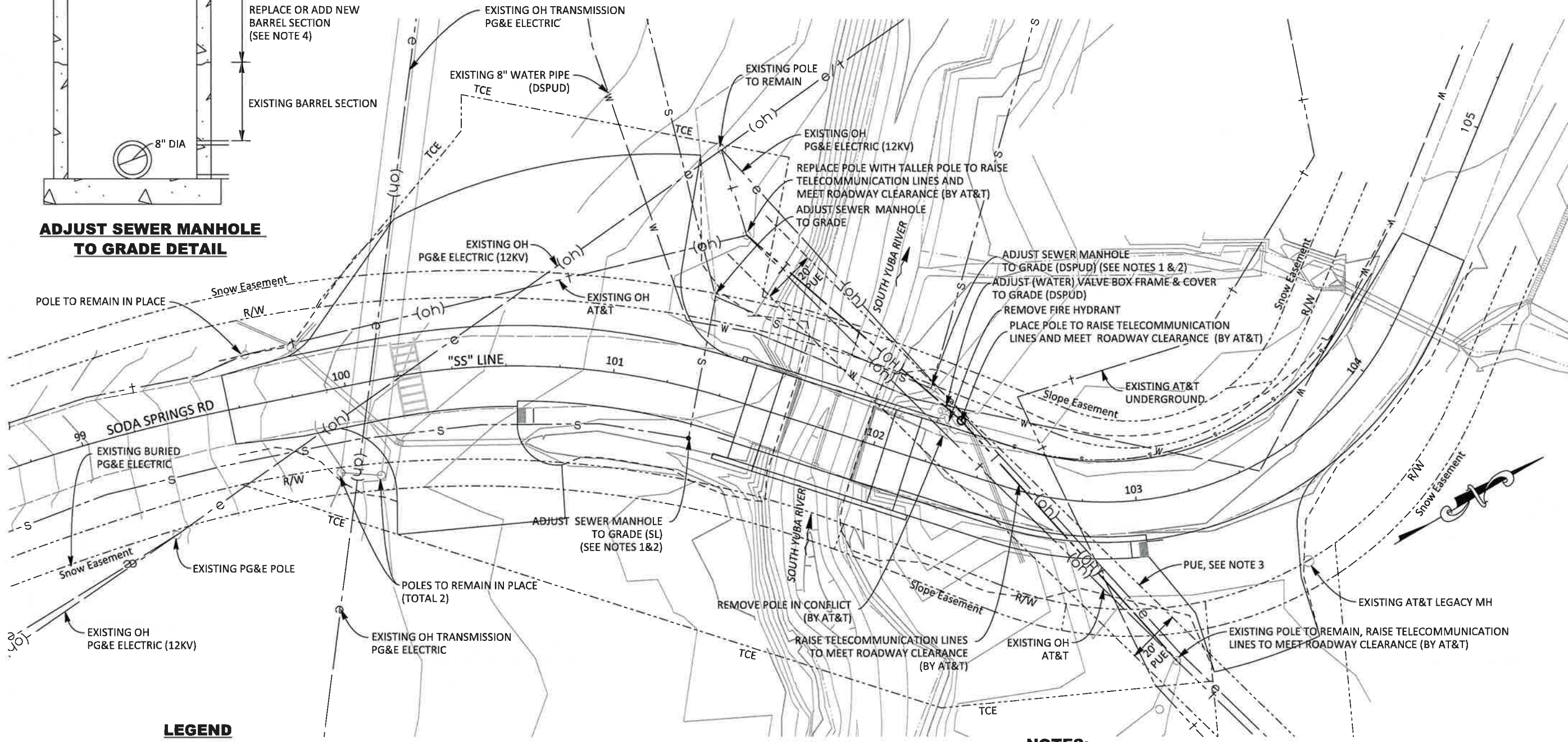
SHEET  
**9**  
 OF 20 SHEETS





**ADJUST SEWER MANHOLE TO GRADE DETAIL**

**CALL BEFORE YOU DIG**  
 THE CONTRACTOR SHALL CALL "UNDERGROUND SERVICE ALERT" (USA) AT 800-227-2600 AT LEAST 2 WORKING DAYS PRIOR TO PERFORMING ANY EXCAVATION



**LEGEND**

— e — (oh) —	PG&E (OH-TRANSMISSION)
— e — e —	PG&E (UNDERGROUND)
--- t --- (oh) ---	AT&T (OVERHEAD)
--- t --- t ---	AT&T (FIBEROPTIC)
--- T --- (OH) ---	AT&T (OVERHEAD-PROPOSED)
— w — w —	WATER
--- s --- s ---	SEWER

**PLAN**  
SCALE 1"=20'

**NOTES:**

- FOR SEWER OWNER UPSTREAM CONTACT SIERRA LAKES COUNTY WATER DISTRICT (SL). FOR SEWER OWNER DOWNSTREAM CONTACT DONNER SUMMIT PUD (DSPUD).
- PROVIDE SIERRA LAKES 30 DAY NOTICE FOR WORK TO BE DONE AT MANHOLE.
- TWENTY-FOOT WIDE PUBLIC UTILITY EASEMENT ALONG TELEPHONE LINE AS RECORDED ON COUNTY OF NEVADA OFFICIAL RECORDS BOOK 4, PAGE 208, DATED AUGUST 23, 1929.
- BARREL SECTION TO BE ADDED OR REPLACED TO MAKE UP THE MAJORITY OF GRADE DIFFERENCE. THE MAXIMUM HEIGHT OF GRADE RINGS (TOP OF CONE TO FRAME/LID) IS 12".

REVISIONS	
NO.	DATE



DESIGNED BY DOKKEN ENGINEERING  
 FOR  
**NEVADA COUNTY**  
 DEPARTMENT OF PUBLIC WORKS  
 DESIGN/CONSTRUCTION DIVISION



**SODA SPRINGS ROAD  
 OVER SOUTH YUBA RIVER**  
 UTILITY PLAN

BRIDGE No.	17C-0109
DESIGNED:	E. ESPINOZA
DRAWN:	J. BARAJAS
CHECKED:	R. GRIGGS
JOB NO:	2101
DATE:	APRIL 20, 2020

SHEET  
**10**  
 OF 20 SHEETS

516

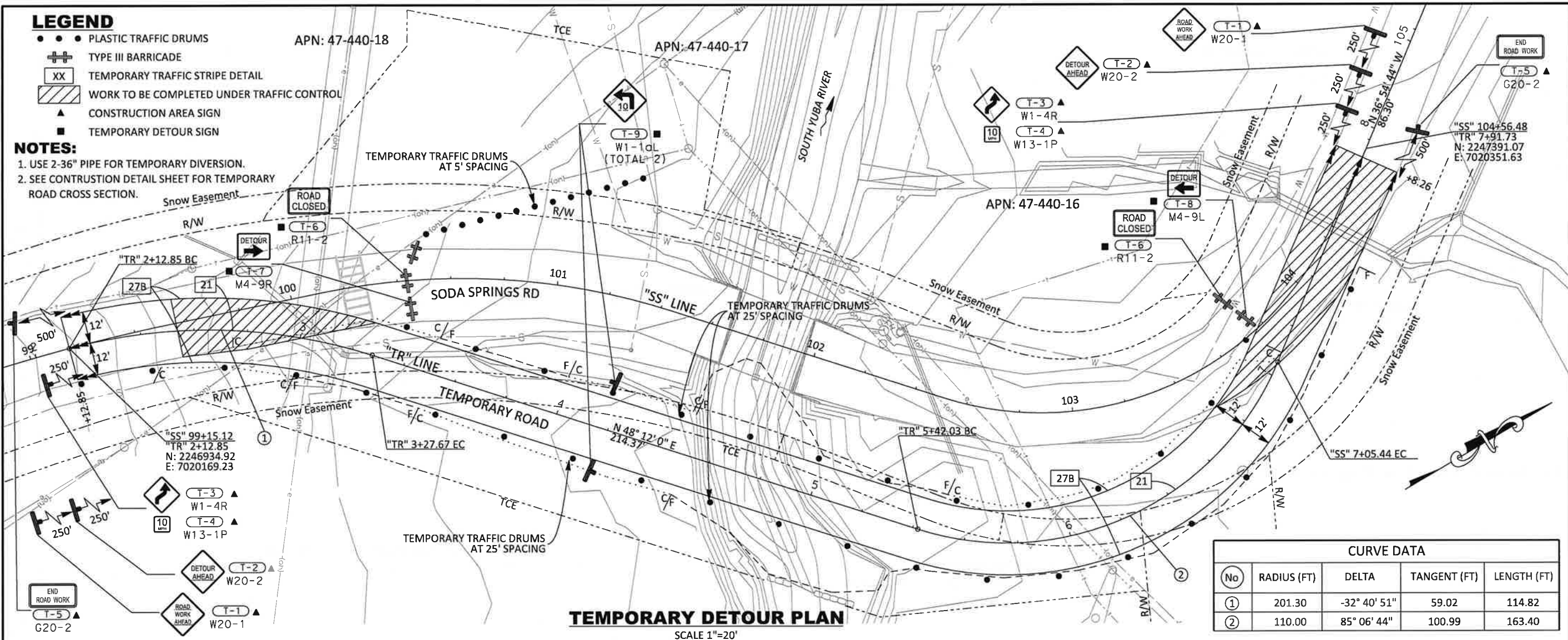


**LEGEND**

- ● ● PLASTIC TRAFFIC DRUMS
- ++ TYPE III BARRICADE
- XX TEMPORARY TRAFFIC STRIPE DETAIL
- ▨ WORK TO BE COMPLETED UNDER TRAFFIC CONTROL
- ▲ CONSTRUCTION AREA SIGN
- TEMPORARY DETOUR SIGN

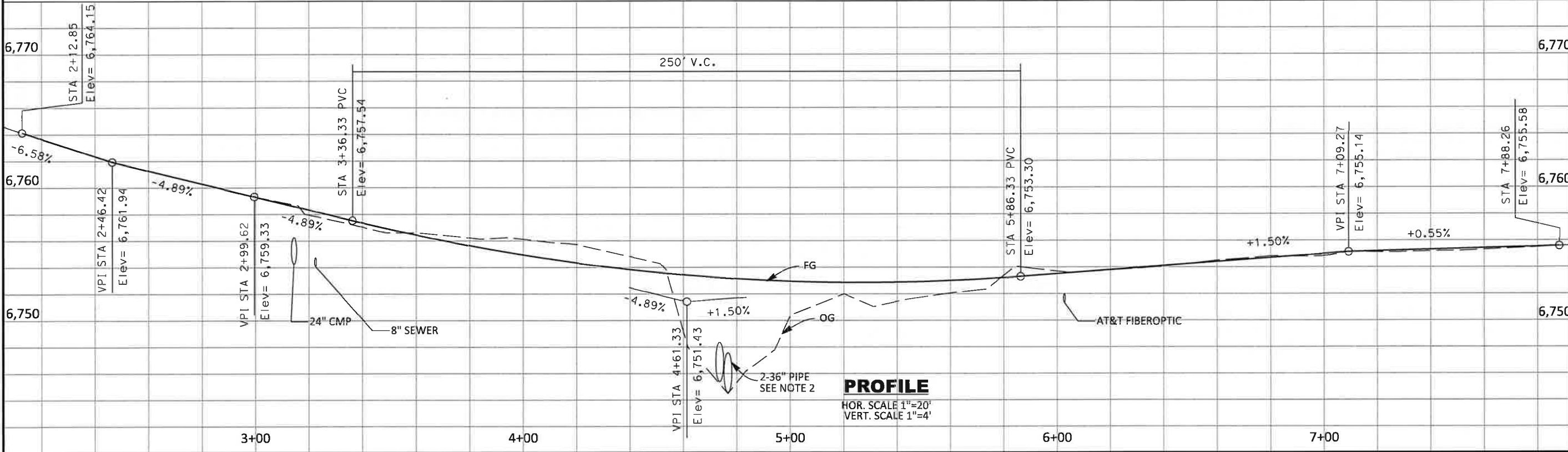
**NOTES:**

1. USE 2-36" PIPE FOR TEMPORARY DIVERSION.
2. SEE CONTRUCTION DETAIL SHEET FOR TEMPORARY ROAD CROSS SECTION.



**CURVE DATA**

No	RADIUS (FT)	DELTA	TANGENT (FT)	LENGTH (FT)
①	201.30	-32° 40' 51"	59.02	114.82
②	110.00	85° 06' 44"	100.99	163.40



**REVISIONS**

NO.	DESCRIPTION	BY	DATE

DESIGNED BY: DOKKEN ENGINEERING

FOR  
**NEVADA COUNTY**  
DEPARTMENT OF PUBLIC WORKS  
DESIGN/CONSTRUCTION DIVISION

**SODA SPRINGS ROAD  
OVER SOUTH YUBA RIVER  
DETOUR PLAN**

BRIDGE No. 17C-0109  
DESIGNED: E. ESPINOZA  
DRAWN: J. BARAJAS  
CHECKED: R. GRIGGS  
JOB NO: 2101  
DATE: APRIL 20, 2020

SHEET  
**11**  
OF 20 SHEETS

**ROADWAY QUANTITIES**

LOCATION	EARTHWORK		AGGREGATE BASE (CLASS 2)	HMA (TYPE A)	OBLITERATE SURFACING	COLD PLANE ASPHALT CONCRETE PAVEMENT	REMOVE ASPHALT CONCRETE PAVEMENT (SQFT)
	ROAD EXCAVATION	IMPORTED BORROW					
	CY	CY	CY	TON	SQYD	SQYD	SQFT
"SS" LINE	114	910	271	303		34	
"TR" LINE	515	380	292	335	1666		
"DW" 1			82				
"DW" 2			133	175	59		7187
"DW" 3			83				
SIDEWALK			13				
TOTAL	629	1290	874	813	1725	34	7187


**EROSION CONTROL**

STATION	FIBER ROLL	HYDROSEED	TEMPORARY FIBER ROLL	TEMPORARY HYDROSEED
	LF	SQYD	LF	SQYD
"SS" 99+55.86 TO 101+65.37, LT	240	650		
"SS" 99+55.86 TO 101+65.37, RT	320	790		
"SS" 101+95.64 TO 104+56.48, LT	420	580		
"SS" 101+95.64 TO 104+56.48, RT	660	1260		
"TR" 2+12.85 TO 7+91.73			810	2000
TOTAL	1640	3280	810	2000

**MINOR CONCRETE**

STATION	CURB AND GUTTER	SIDEWALK
	CY	CY
"SS" 100+62.20 TO 101+50.00, RT	5	6
"SS" 102+14.00 TO 103+2.13, RT	6	7
TOTAL	11	13

**DRAINAGE QUANTITIES**

DRAINAGE SYSTEM No. 	DI (TYPE GCP)	MISCELLANEOUS IRON AND STEEL	MINOR CONCRETE (MINOR STRUCTURE, DRAINAGE)	DRAINAGE INLET MARKER	24" PLASTIC PIPE (HDPE)	RSP PROTECTION FABRIC (CLASS 8)	RSP (No. 1 METHOD B)	24" ALTERNATIVE FLARED END SECTION	REMOVE PIPE	REMOVE INLET	SLURRY CEMENT (TYPE 2) (N)
	EA	LB	CY	EA	LF	SQYD	CY	EA	LF	EA	CY
1	2	472	4	2	181			1			
2					83	10	6	2			
3									60		
4									100	2	
"DW2"						71	34				
TOTAL	2	472	4	2	264	81	40	3	60	2	26

NOTE: FOR ADDITIONAL QUANTITIES, SEE STRUCTURE PLANS.  
(N) NOT A PAY ITEM

**TEMPORARY ROADSIDE SIGN QUANTITIES**

Sign NO.	SIGN CODE	SIGN MESSAGE	SIGN QUANTITY
			EA
T-1	W20-1	ROAD WORK AHEAD	2
T-2	W20-2	DETOUR AHEAD	2
T-3	W1-4R	ARROW	2
T-4	W13-1P	10 MPH	2
T-5	G20-2	END ROAD WORK	2
T-6	R11-2	ROAD CLOSED	2
T-7	M4-9R	DETOUR W/ARROW, RIGHT	1
T-8	M4-9L	DETOUR W/ARROW, LEFT	1
T-9	W1-1aL	LEFT TURN WITH SPEED	2

**SIGN QUANTITIES**

SHEET	POST TYPE	RESET ROADSIDE SIGN	RELOCATE ROADSIDE SIGN
		EA	EA
3	METAL POST	1	2
	WOOD POST	2	
TOTAL		3	2

**MIDWEST GUARDRAIL SYSTEM**

STATION	MGS	ALTERNATIVE IN-LINE TERMINAL SYSTEM	END ANCHOR ASSEMBLY (TYPE SFT)	TRANSITION RAILING (TYPE WB-31)
	LF	EA	EA	EA
"SS" 100+64.78 TO 101+47.25, RT	25	1		1
"SS" 101+20.38 TO 101+45.75, LT	50		1	
"SS" 102+16.75 TO 104+01.12, LT	100	1		1
"SS" 102+18.25 TO 102+97.34, RT	50		1	
TOTAL	200	2	2	2

**TEMPORARY HIGH-VISIBILITY FENCE**

SHEET	TEMPORARY HIGH-VISIBILITY FENCE
	LF
7	637
TOTAL	637

**PAVEMENT STRIPING AND MARKING**

DETAIL No.	FROM	TO	* 6" TWO-COMPONENT PAINT TRAFFIC STRIPE	PAVEMENT MARKER (RETROREFLECTIVE- RECESSED)	TWO-COMPONENT PAINT CROSSWALK AND PAVEMENT MARKING	CONTRAST STRIPE PAINT (1-COAT)	PAINTED STALL LINES AND PAVEMENT MARKINGS
			LF	EA	SQFT	LF	SQFT
22	"SS" 99+55.86	"SS" 104+53.01	500	43		500	247
					132		
					132	500	247
TOTAL			500	43	132	500	247

\* DOUBLE STRIPE DETAILS ARE QUANTIFIED AS A SINGLE STRIPE

**TEMPORARY CREEK DIVERSION SYSTEM**

SHEET	TEMPORARY 36" PLASTIC PIPE (N)	TEMPORARY GRAVEL BAR BERM (N)
	LF	LF
9	270	75
TOTAL	270	75

(N) NOT A PAY ITEM

**TEMPORARY TRAFFIC HANDLING & STRIPING**

SHEET	TYPE III BARRICADE	PLASTIC TRAFFIC DRUMS	TEMPORARY TRAFFIC STRIPE (PAINT)	
			6" WHITE	6" YELLOW *
	EA	EA	LF	LF
11	5	60	1151	576
TOTAL	5	60	1151	576

\* DOUBLE STRIPE DETAILS ARE QUANTIFIED AS A SINGLE STRIPE

**UTILITY QUANTITIES**

SHEET	ADJUST SEWER MANHOLE	ADJUST VALVE BOX FRAME AND COVER TO GRADE	REMOVE FIRE HYDRANT
	EA	EA	EA
10	3	1	1
TOTAL	3	1	1

**REVISIONS**

NO.	DESCRIPTION	BY	DATE



DESIGNED BY DOKKEN ENGINEERING  
FOR  
**NEVADA COUNTY**  
DEPARTMENT OF PUBLIC WORKS  
DESIGN/CONSTRUCTION DIVISION

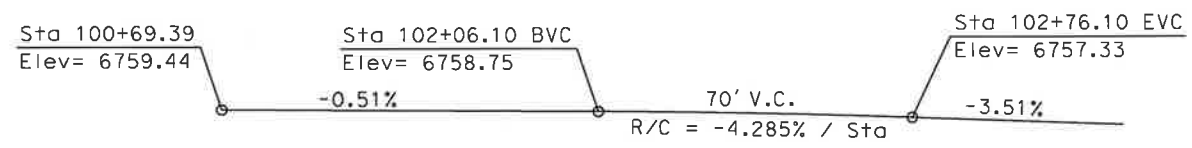


**SODA SPRINGS ROAD**  
**OVER SOUTH YUBA RIVER**  
SUMMARY OF QUANTITIES

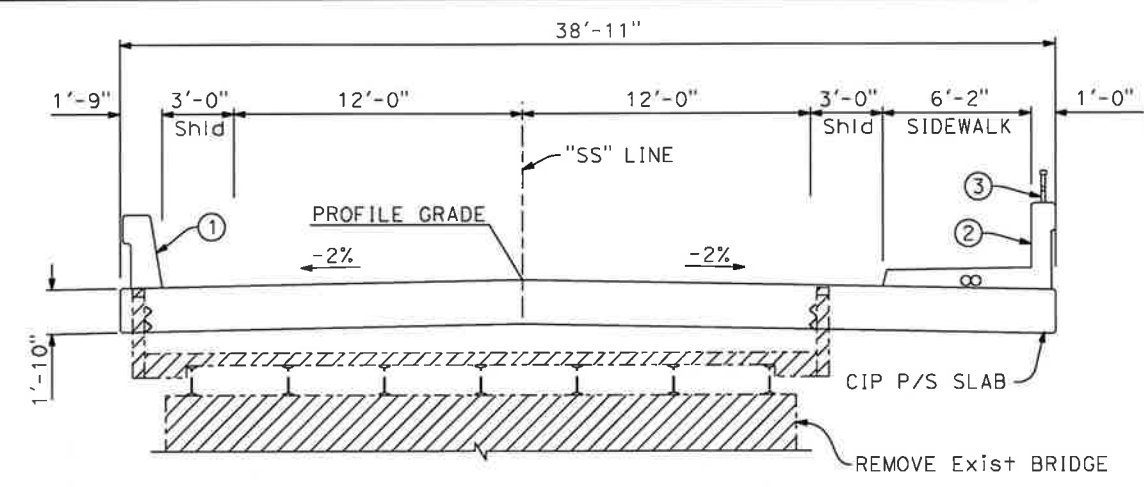
BRIDGE No. 17C-0109  
DESIGNED: E. ESPINOZA  
DRAWN: J. BARAJAS  
CHECKED: R. GRIGGS  
JOB NO: 2101  
DATE: APRIL 20, 2020

SHEET  
**12**  
OF 20 SHEETS

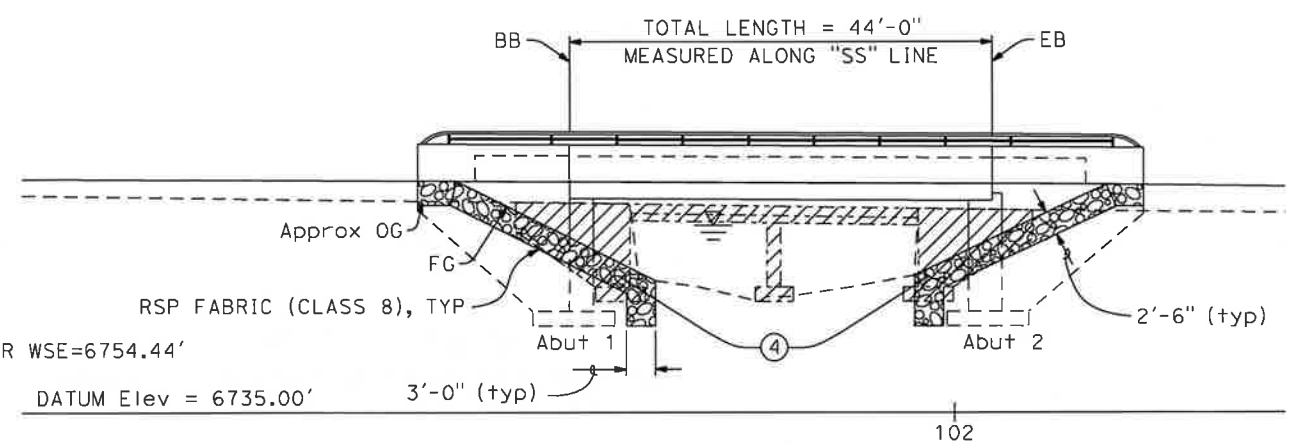




**PROFILE GRADE**  
NO SCALE



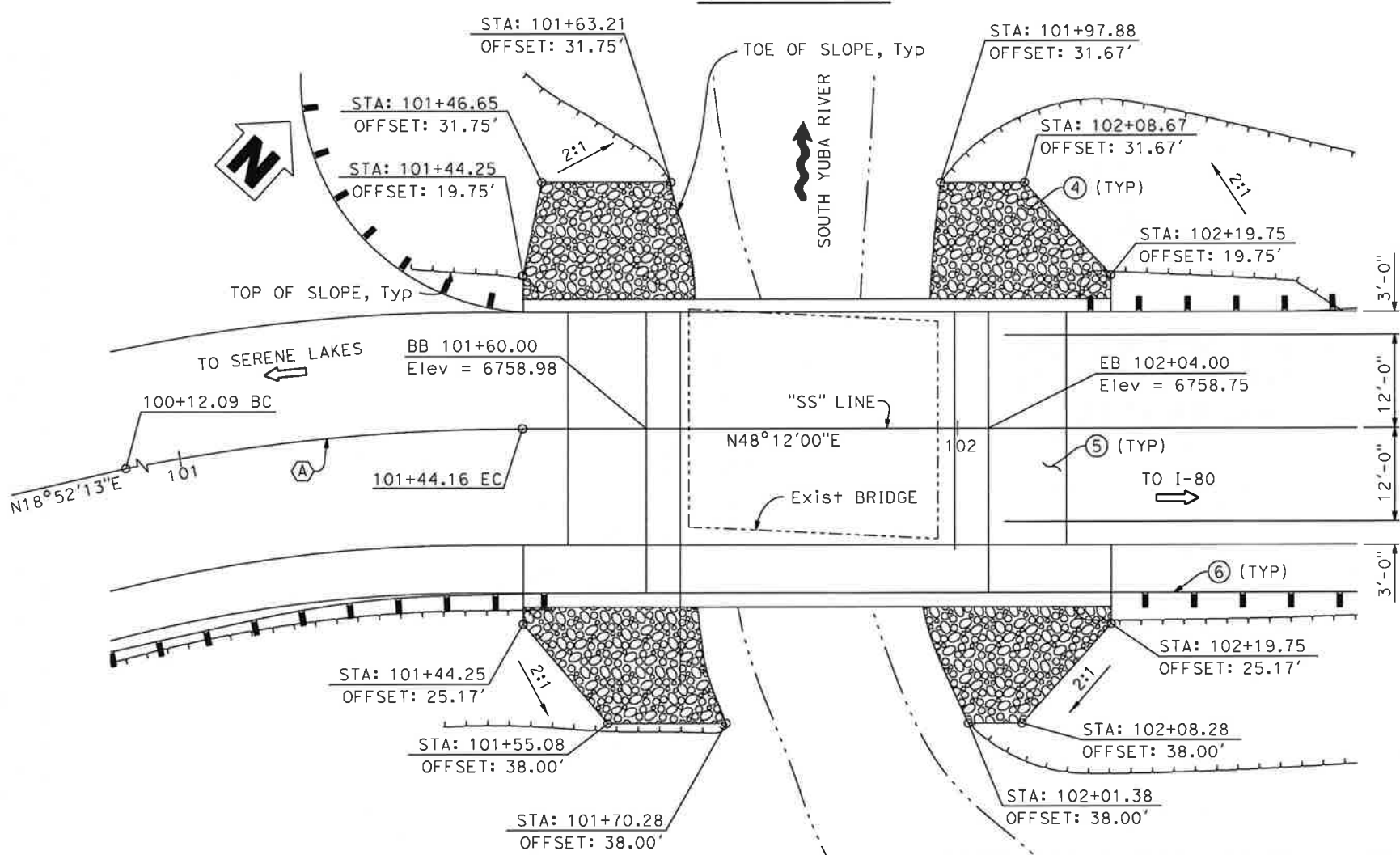
**TYPICAL SECTION**  
1/4" = 1'-0"



**ELEVATION**  
1" = 10'

**INDEX TO PLANS**

Sheet No.	Title
13	GENERAL PLAN
14	DECK CONTOURS
15	FOUNDATION PLAN
16	ABUTMENT 1 LAYOUT
17	ABUTMENT 2 LAYOUT
18	SLAB REINFORCEMENT
19	MISCELLANEOUS DETAILS
20	LOG OF TEST BORINGS



**PLAN**  
1" = 10'

**CURVE DATA**

(A)  
 R = 257.99'  
 $\Delta$  = 29°19'47"  
 T = 67.51'  
 L = 132.06'

**LEGEND**

- ① CONCRETE BARRIER TYPE 836
- ② CONCRETE BARRIER TYPE 732SW
- ③ TUBULAR HAND RAIL
- ④ RSP (150LB, CLASS III, METHOD B). SEE NOTE 4
- ⑤ STRUCTURE APPROACH TYPE EQ (10)
- ⑥ MGS, SEE "ROAD PLANS"
- Denotes existing structure
- ▨ Denotes bridge removal

**NOTES:**

1. For "Hydrologic Summary", see "FOUNDATION PLAN" sheet.
2. For "General Notes", see "DECK CONTOURS" sheet.
3. The contractor shall verify all controlling field dimensions before ordering or fabricating any material.
4. Bottom of RSP elev to match bottom of footing elev.

**REVISIONS**

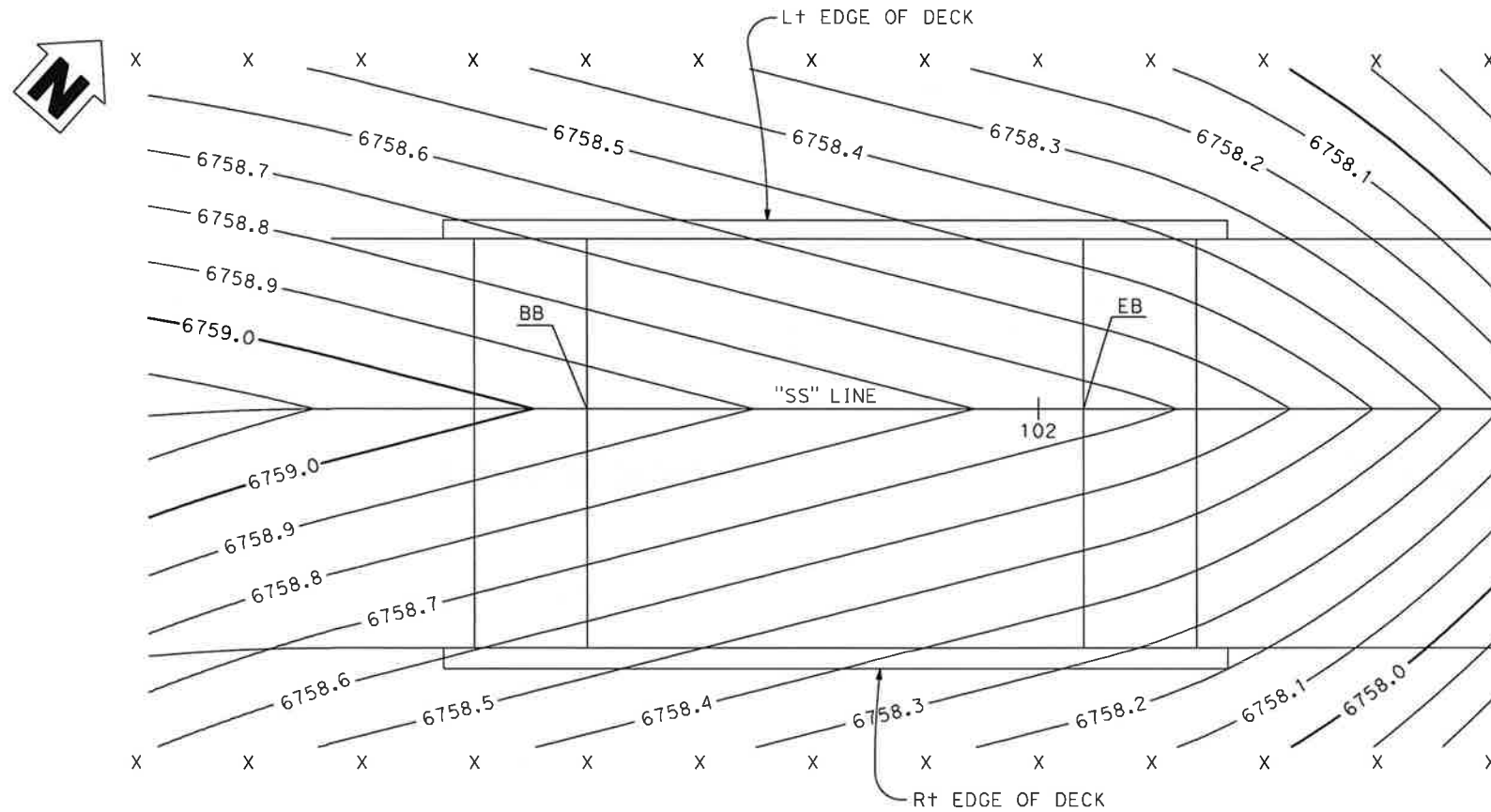
NO.	DESCRIPTION	BY	DATE

NEVADA COUNTY  
DEPARTMENT OF PUBLIC WORKS  
DESIGN/CONSTRUCTION DIVISION

SODA SPRINGS ROAD  
BRIDGE OVER SOUTH  
YUBA RIVER  
GENERAL PLAN

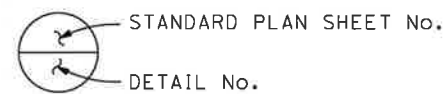
BRIDGE NO:	17C0109
DESIGNED:	G. MORALES
DRAWN:	K. DANG
CHECKED:	F. ENRIQUEZ
JOB NO:	2101
DATE:	FEB. 21, 2020

SHEET  
**13**  
OF 20 SHEETS



**STANDARD PLANS DATED 2018**

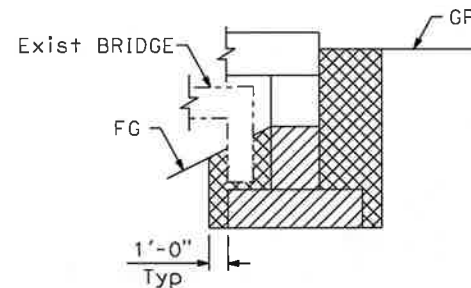
Sheet No.	Title
A3A	ABBREVIATIONS (SHEET 1 OF 3)
A3B	ABBREVIATIONS (SHEET 2 OF 3)
A3C	ABBREVIATIONS (SHEET 3 OF 3)
A10A	LEGEND - LINES AND SYMBOLS (SHEET 1 OF 5)
A10B	LEGEND - LINES AND SYMBOLS (SHEET 2 OF 5)
A10C	LEGEND - LINES AND SYMBOLS (SHEET 3 OF 5)
A10D	LEGEND - LINES AND SYMBOLS (SHEET 4 OF 5)
A10E	LEGEND - LINES AND SYMBOLS (SHEET 5 OF 5)
A10F	LEGEND - SOIL (SHEET 1 OF 2)
A10G	LEGEND - SOIL (SHEET 2 OF 2)
A10H	LEGEND - ROCK
A62C	LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL BRIDGE
RSP B0-1	BRIDGE DETAILS
B0-3	BRIDGE DETAILS
B0-13	BRIDGE DETAILS
B6-21	JOINT SEALS (MAXIMUM MOVEMENT RATING = 2")
B8-5	CAST-IN-PLACE POST-TENSIONED GIRDER DETAILS
B9-4	STRUCTURE APPROACH TYPE EQ (10)
B9-6	STRUCTURE APPROACH DRAINAGE DETAILS
B11-51	TUBULAR HANDRAILING
B11-58	CONCRETE BARRIER TYPE 732SW (SHEET 1 OF 2)
B11-59	CONCRETE BARRIER TYPE 732SW (SHEET 2 OF 2)
RSP B11-79	CONCRETE BARRIER TYPE 836 DETAILS NO. 1
RSP B11-80	CONCRETE BARRIER TYPE 836 DETAILS NO. 2



**NOTES:**

- X Denotes 10' interval along station line
- Contours do not include camber
- Contour interval is 0.10'

**PLAN**  
1/8" = 1'-0"



**LIMITS OF STRUCTURE EXCAVATION (TYPE D) AND BACKFILL**

NO SCALE

- Denotes Structure Excavation (Bridge Type D)
- Denotes Structure Backfill



- STRUCTURAL CONCRETE, BRIDGE (f'c = 3600 psi)
- STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER) (4,500 PSI AT 28 DAYS).
- STRUCTURAL CONCRETE, BRIDGE FOOTING (f'c = 3600 psi)

**CONCRETE STRENGTH AND TYPE LIMITS**

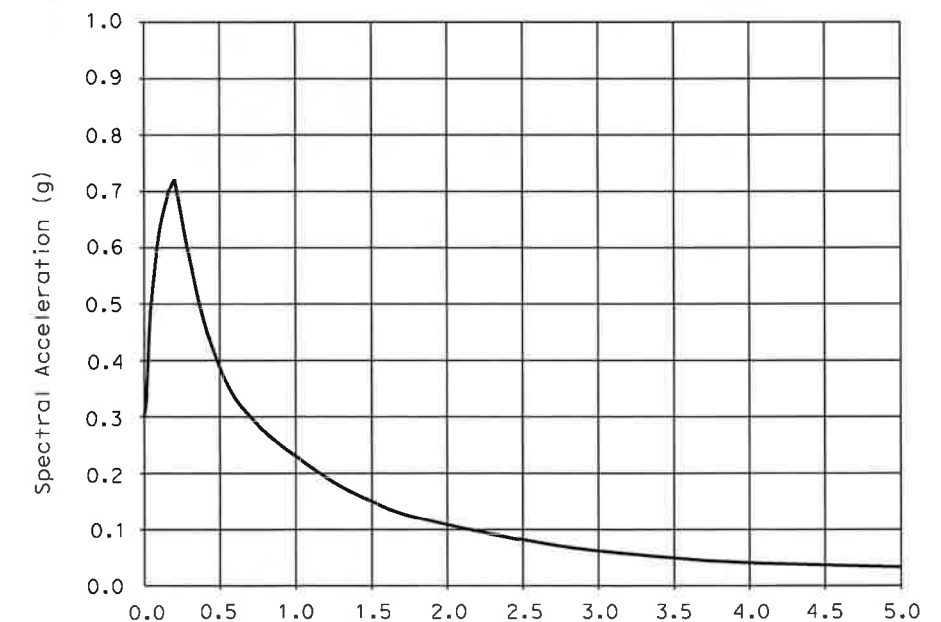
NO SCALE

**QUANTITIES**

Item	Total
BRIDGE REMOVAL	1 LS
STRUCTURE EXCAVATION (TYPE D)	365 CY
STRUCTURE EXCAVATION (ROCK SLOPE PROTECTION)	90 CY
STRUCTURE BACKFILL (BRIDGE)	455 CY
PRESTRESSING CAST-IN-PLACE CONCRETE	1 LS
STRUCTURAL CONCRETE, BRIDGE FOOTING	52 CY
STRUCTURAL CONCRETE, BRIDGE	120 CY
STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER)	117 CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE EQ)	27 CY
JOINT SEAL (MR 1")	78 LF
BAR REINFORCING STEEL (BRIDGE)	23,936 LB
BAR REINFORCING STEEL (EPOXY COATED) (BRIDGE)	15,584 LB
BAR REINFORCING STEEL (GALVANIZED)	102 LB
ROCK SLOPE PROTECTION (150 LB, CLASS III, METHOD B)	90 CY
ROCK SLOPE PROTECTION FABRIC (CLASS 8)	168 SQYD
TUBULAR HANDRAILING	76 LF
CONCRETE BARRIER (TYPE 836)	76 LF
CONCRETE BARRIER (TYPE 732SW)	76 LF

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

- DESIGN: AASHTO LRFD Bridge Design Specifications, 6th Edition with California Amendments, preface dated January 2014
- SEISMIC DESIGN: CALTRANS SEISMIC DESIGN CRITERIA (SDC) Version 1.7, April 2013
- DEAD LOAD: Includes 0.05 ksf for future wearing surface
- LIVE LOAD: HL-93, Caltrans' "Low Boy", and CA P-15 design vehicular loads.
- SEISMIC LOAD: ARS Online Version 2.3.09 with Vs30 = 2,493 ft/s and with near fault adjustments



**REINFORCED CONCRETE:**

- SUBSTRUCTURE: f<sub>y</sub> = 60 ksi
- f'c = See "CONCRETE STRENGTH AND TYPE LIMITS"
- n = 8

PRESTRESSED CONCRETE: See "PRESTRESSING NOTES" on "SLAB REINFORCEMENT" sheet.

STRUCTURAL STEEL FOR BARRIER RAILING: ASTM A36

**REVISIONS**

NO.	DESCRIPTION	BY	DATE



NEVADA COUNTY  
DEPARTMENT OF PUBLIC WORKS  
DESIGN/CONSTRUCTION DIVISION



SODA SPRINGS ROAD  
BRIDGE OVER SOUTH  
YUBA RIVER  
DECK CONTOURS

BRIDGE NO: 17C0109  
DESIGNED: G. MORALES  
DRAWN: K. DANG  
CHECKED: F. ENRIQUEZ  
JOB NO: 2101  
DATE: FEB. 21, 2020

SHEET

14

OF 20 SHEETS



REVISIONS	
NO.	DESCRIPTION



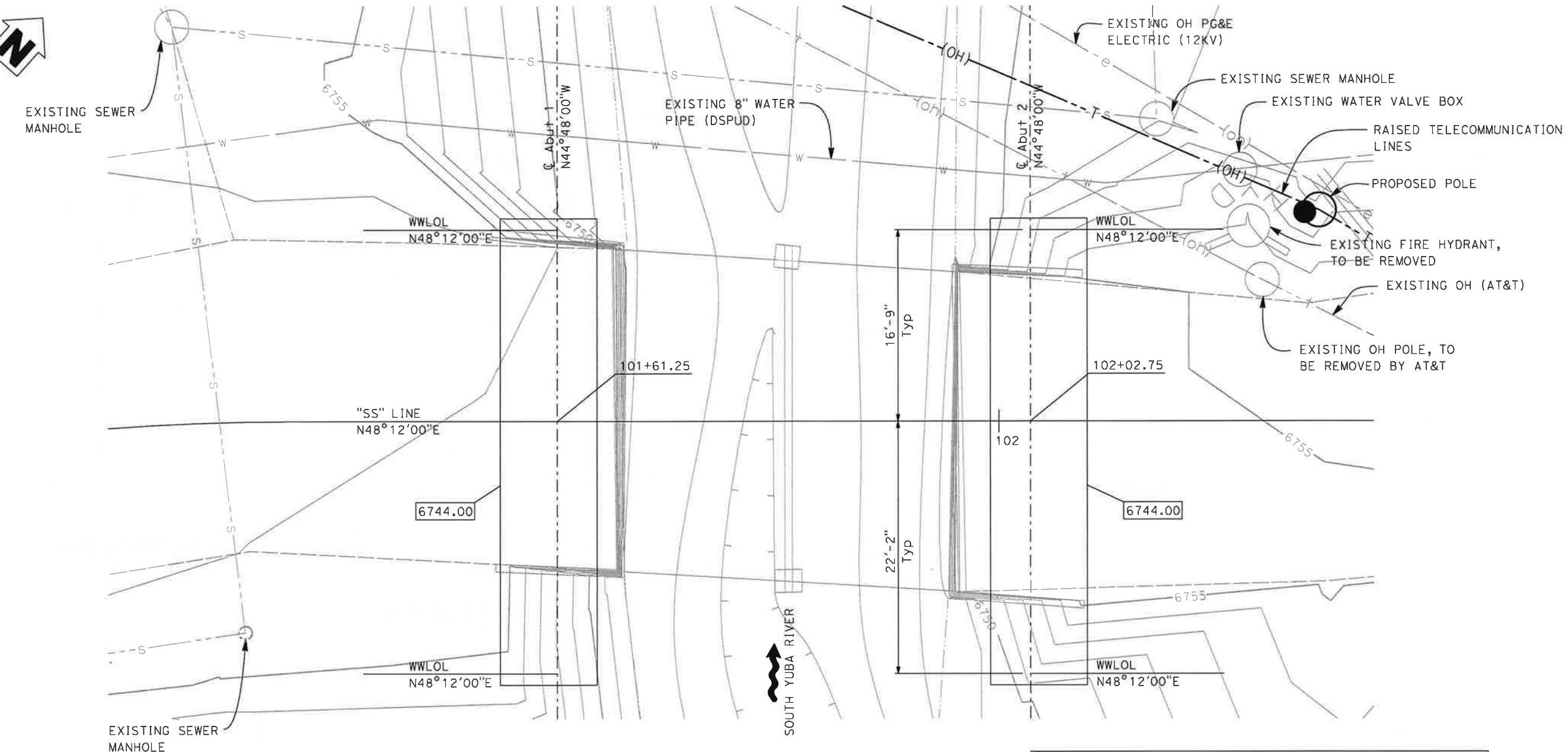
NEVADA COUNTY  
DEPARTMENT OF PUBLIC WORKS  
DESIGN/CONSTRUCTION DIVISION



SODA SPRINGS ROAD  
BRIDGE OVER SOUTH  
YUBA RIVER  
FOUNDATION PLAN

BRIDGE NO: 17C0109  
DESIGNED: G. MORALES  
DRAWN: K. DANG  
CHECKED: F. ENRIQUEZ  
JOB NO: 2101  
DATE: FEB. 21, 2020

SHEET  
**15**  
OF 20 SHEETS



SCOUR DATA TABLE

Support Location	Long Term (Deg And Contraction) Scour Elev (ft)	Short Term (Local) Scour Depth (ft)
Abut 1	0.0	8.3
Abut 2	0.0	10.3

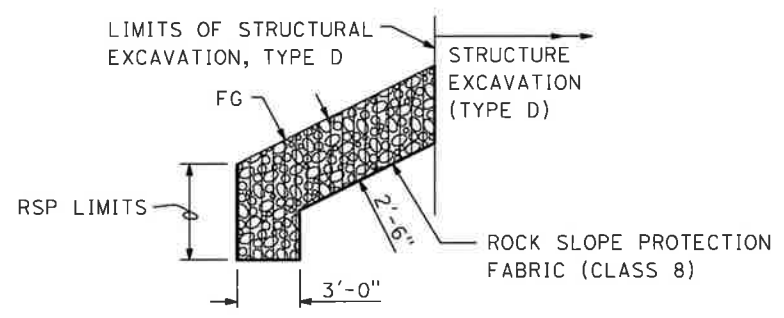
**LEGEND:**

- Denotes bottom of footing elev
- Existing Sewer

**NOTE:**  
The contractor shall verify all controlling field dimensions before ordering or fabricating any material.

**PLAN**

1" = 5'



**LIMITS OF STRUCTURE EXCAVATION (ROCK SLOPE PROTECTION)**

NO SCALE

- Denotes Structure Excavation (ROCK SLOPE PROTECTION)

**HYDROLOGIC SUMMARY**

STRUCTURE	50 YEAR		100 YEAR	
	WSE	FREEBOARD	WSE	FREEBOARD
EXISTING	6754.22	-1.22	6754.44	-1.44
REPLACEMENT	6753.77	2.70	6754.03	2.44
REPLACEMENT (DAM REMOVAL)	6754.40	2.1	6754.76	1.7

**SPREAD FOOTING DATA TABLE**

Support Location	Load And Resistance Factor Design (LRFD)		
	Service Permissible Net Contact Stress (Settlement) (ksf)	Strength Factored Gross Nominal Bearing Resistance $\phi_b = 0.45$ (ksf)	Extreme Event Factored Gross Nominal Bearing Resistance $\phi_b = 1.00$ (ksf)
Abut 1	4.8	10	N/A
Abut 2	4.8	10	N/A

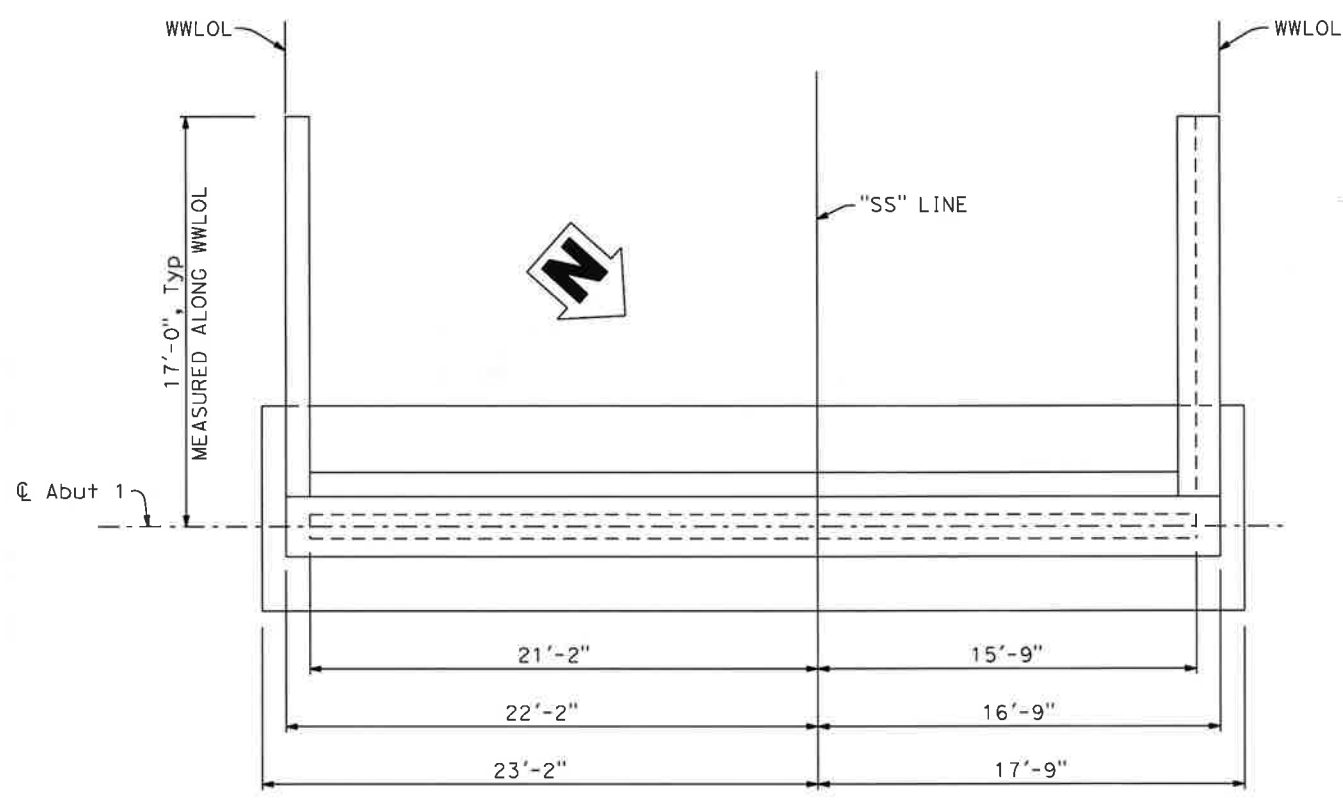
REVISIONS		
NO.	DESCRIPTION	DATE



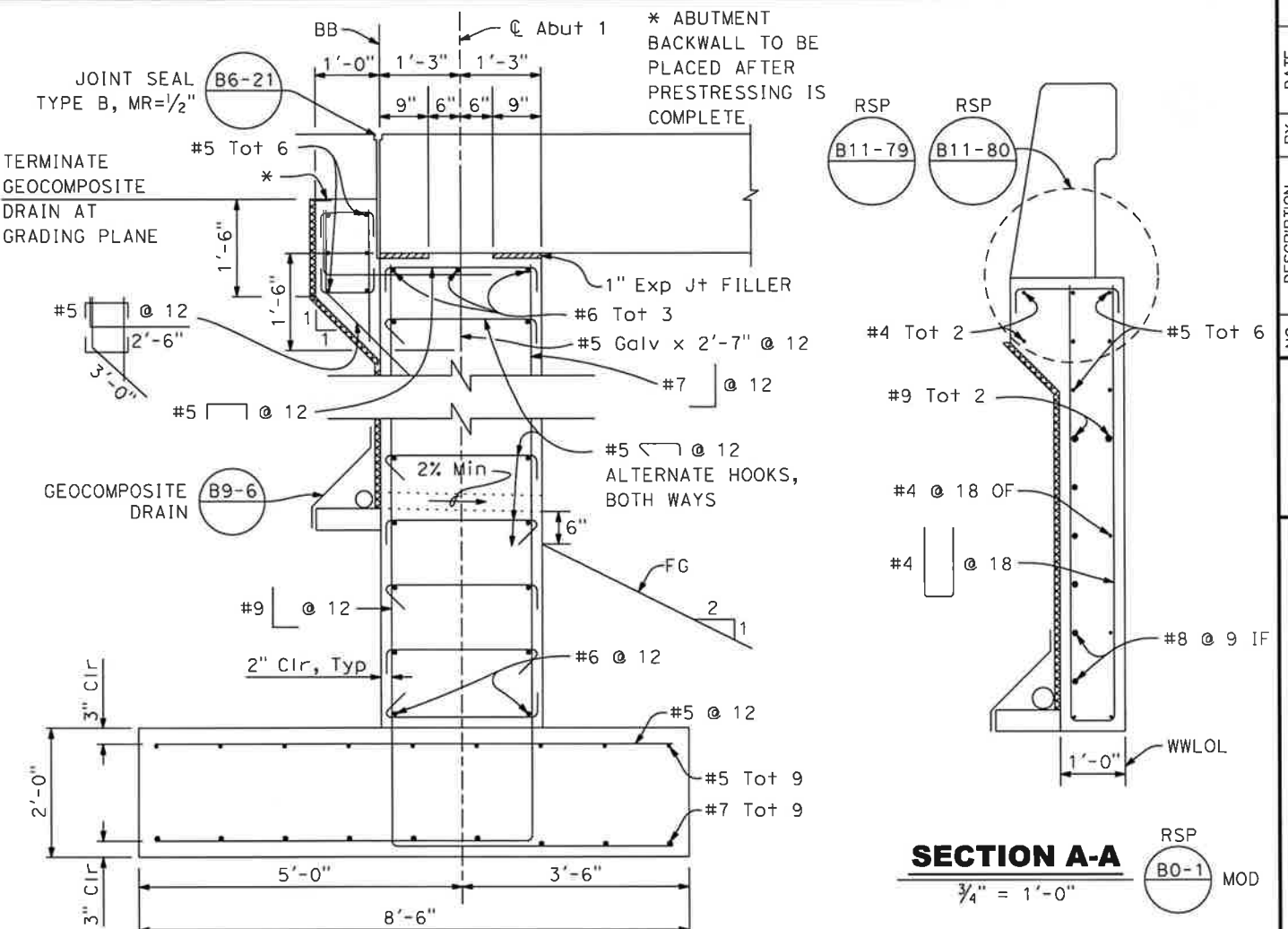
SODA SPRINGS ROAD  
BRIDGE OVER SOUTH  
YUBA RIVER  
ABUTMENT 1 LAYOUT

BRIDGE NO: 17C0109  
DESIGNED: G. MORALES  
DRAWN: K. DANG  
CHECKED: F. ENRIQUEZ  
JOB NO: 2101  
DATE: FEB. 21, 2020

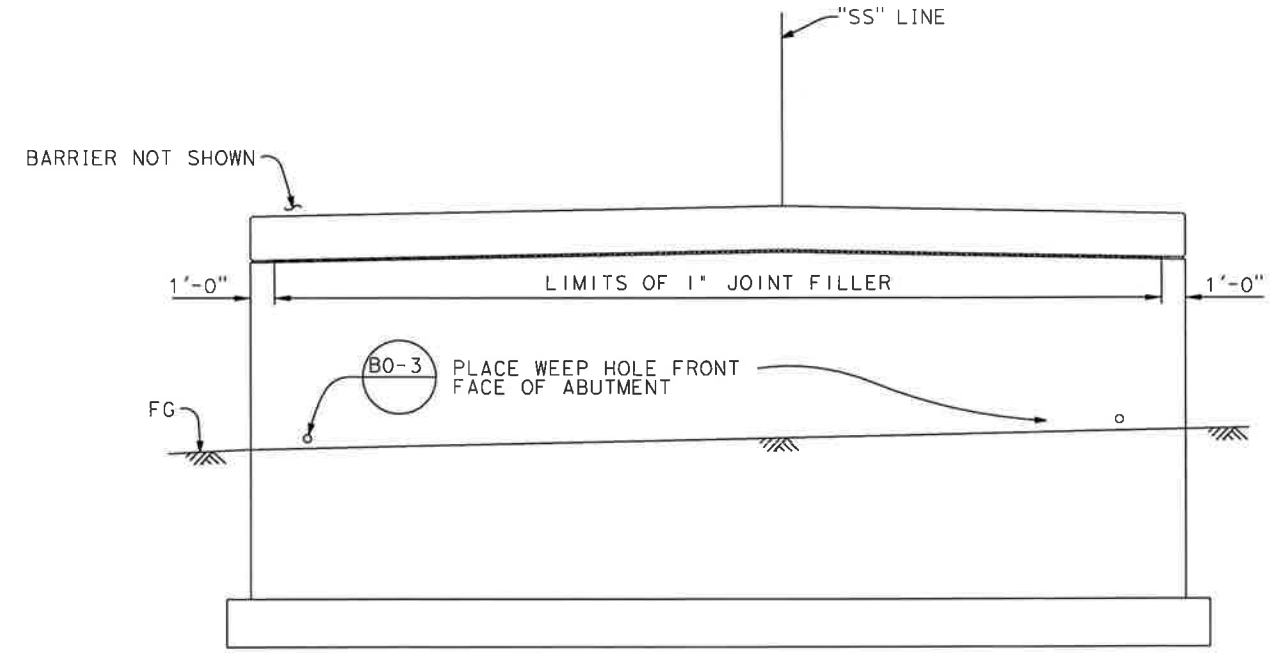
SHEET  
16  
OF 20 SHEETS



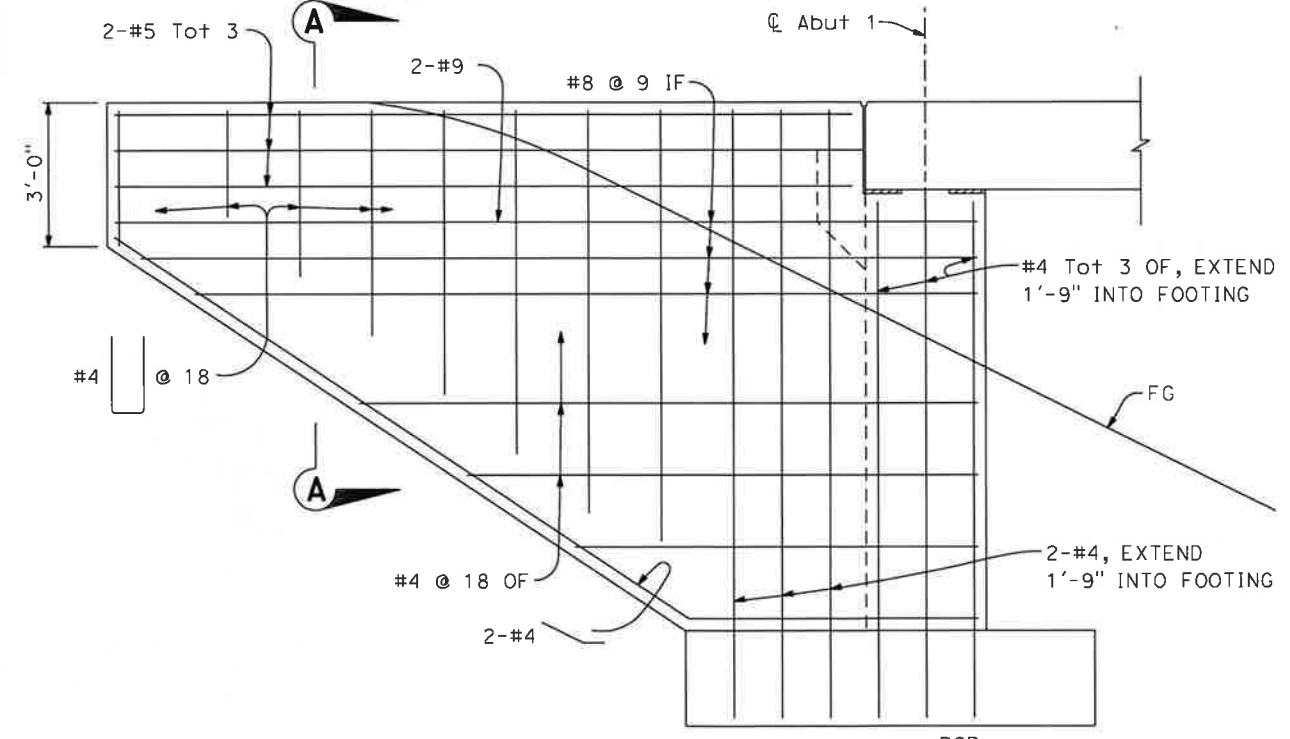
**PLAN**  
1/4" = 1'-0"



**ABUTMENT 1 SECTION**  
3/4" = 1'-0"

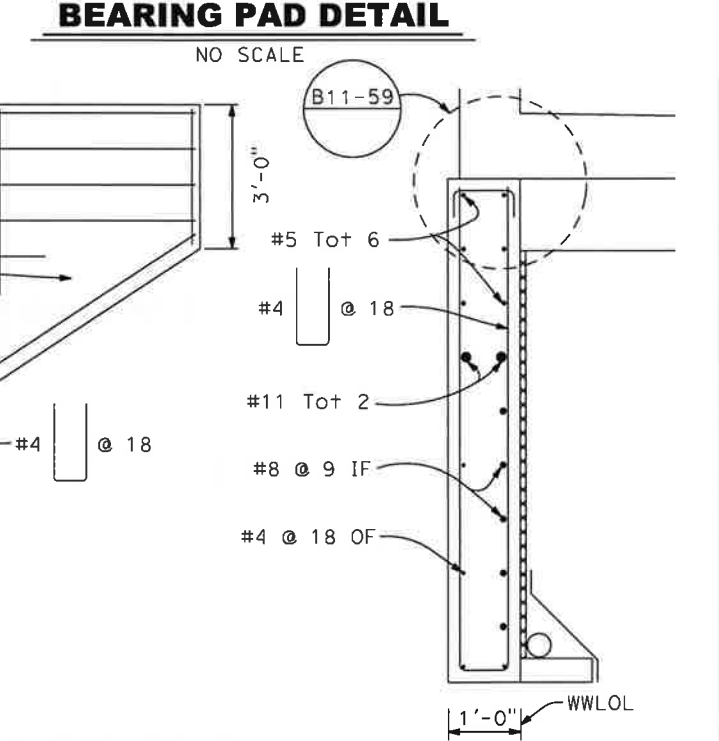
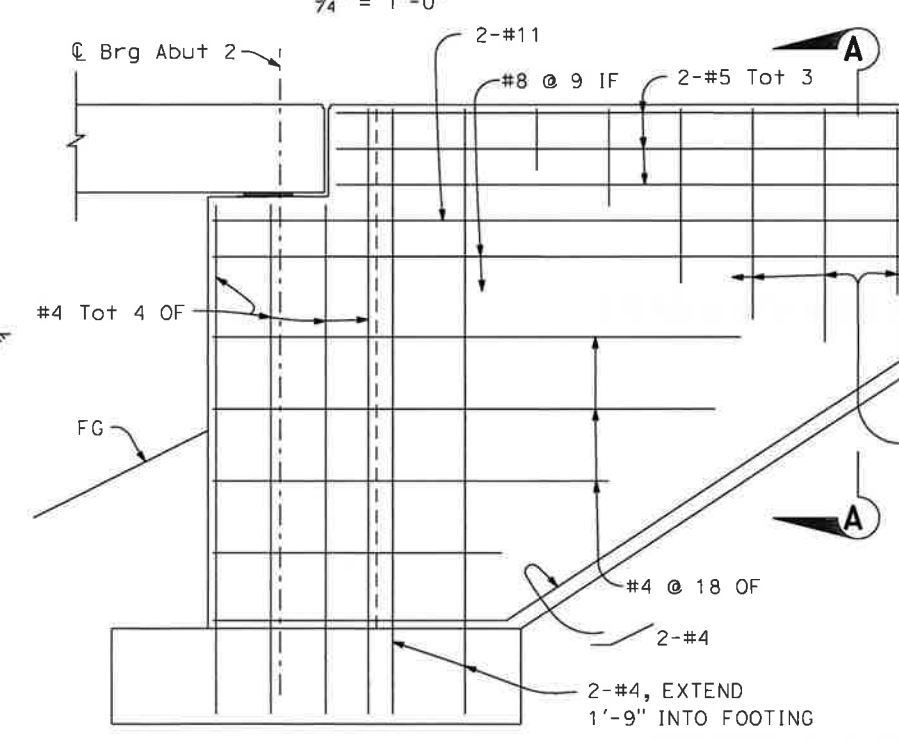
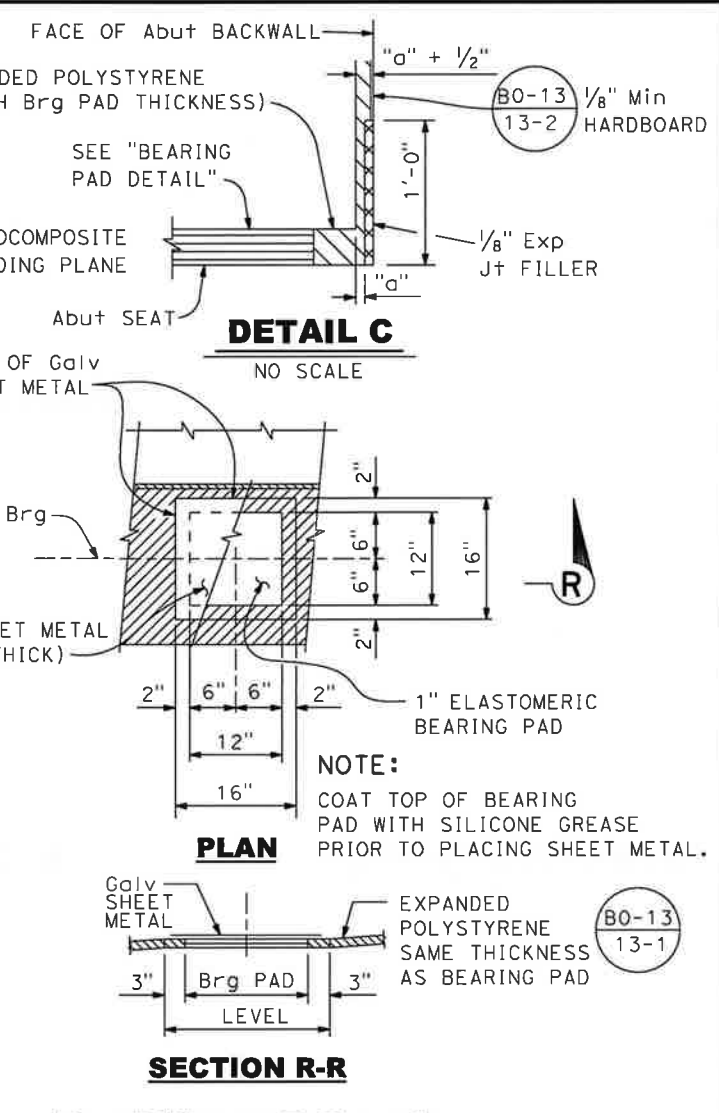
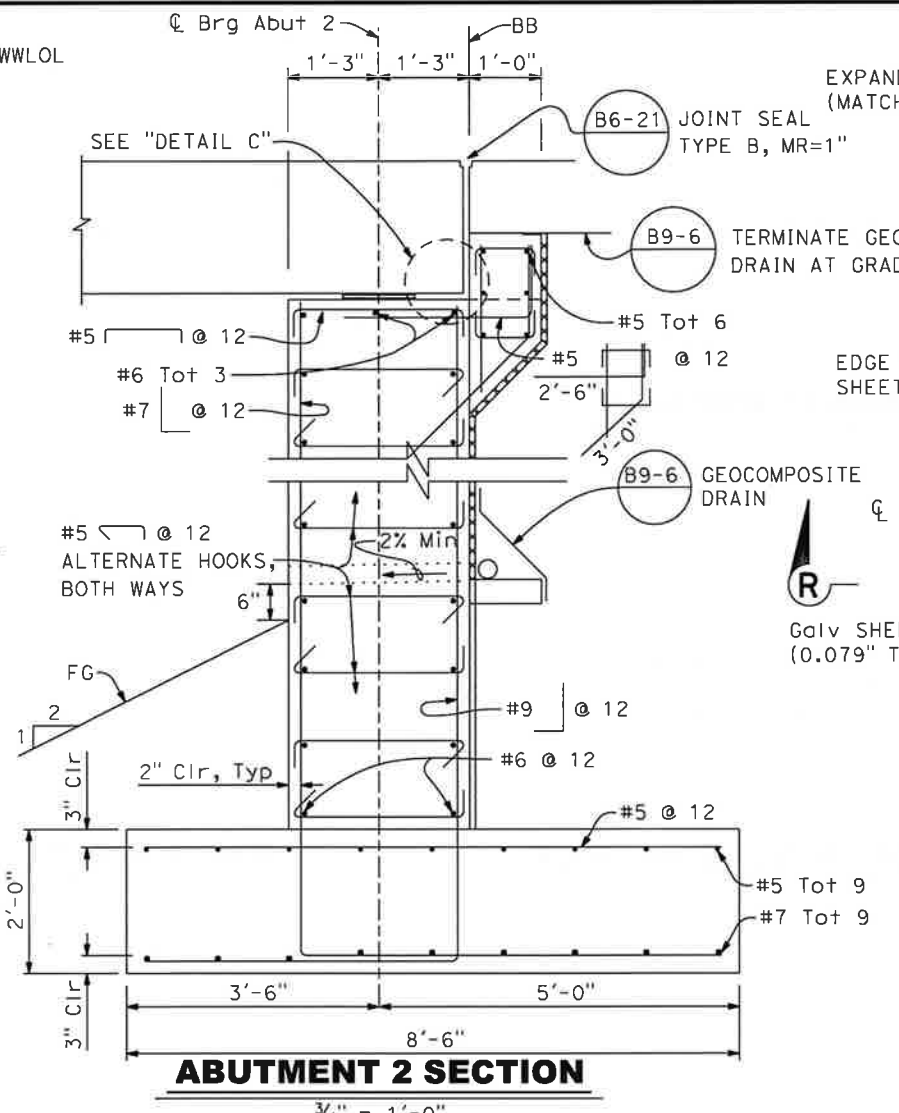
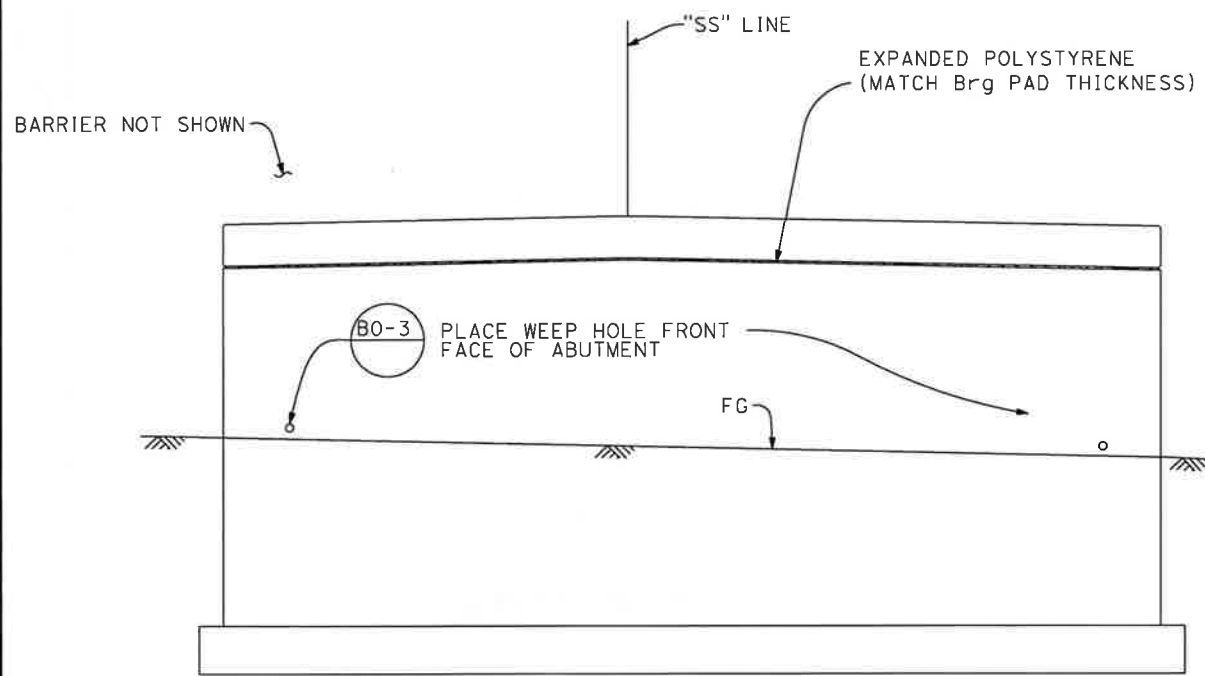
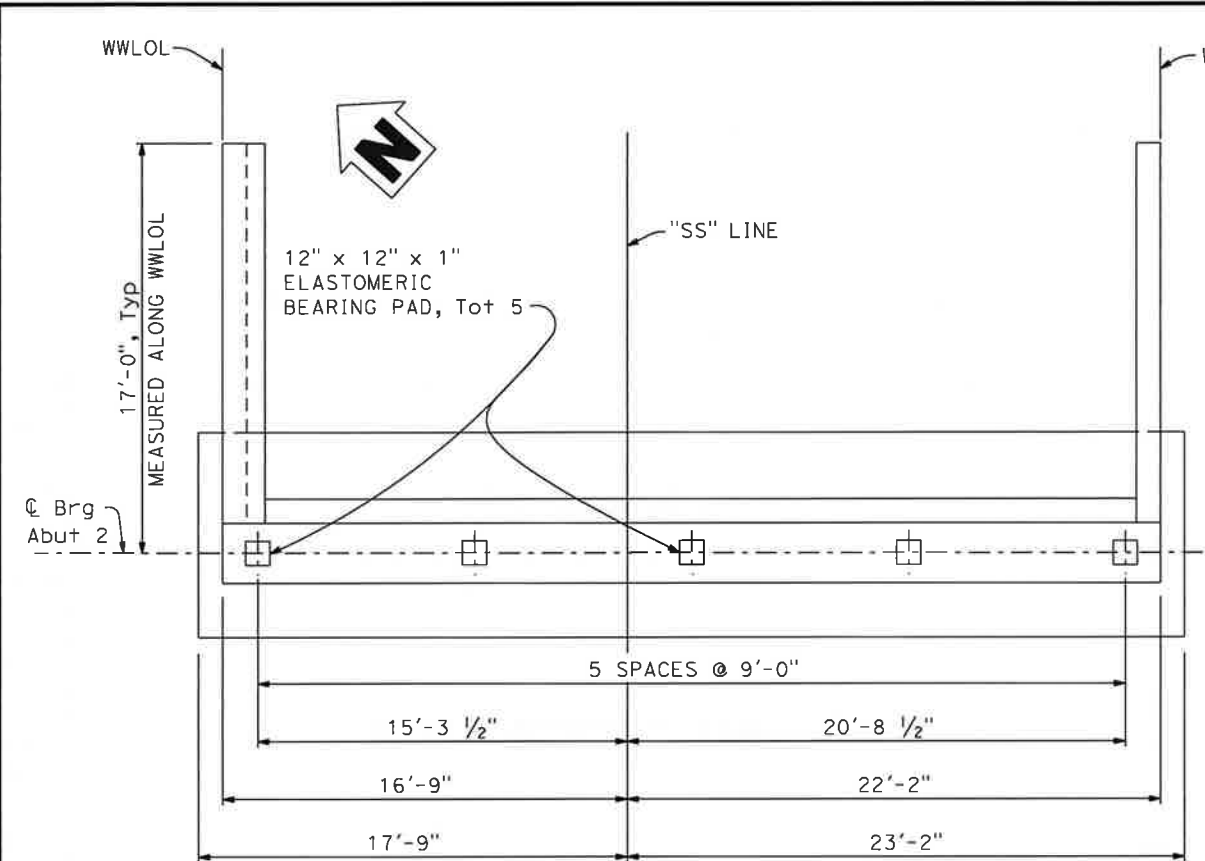


**ELEVATION**  
1/4" = 1'-0"



**WINGWALL ELEVATION**  
1/2" = 1'-0"

**NOTE:**  
The contractor shall verify all controlling field dimensions before ordering or fabricating any material.



**NOTE:**  
The contractor shall verify all controlling field dimensions before ordering or fabricating any material.

REVISIONS	
DATE	DESCRIPTION



NEVADA COUNTY  
DEPARTMENT OF PUBLIC WORKS  
DESIGN/CONSTRUCTION DIVISION

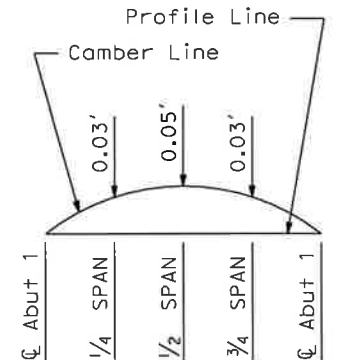
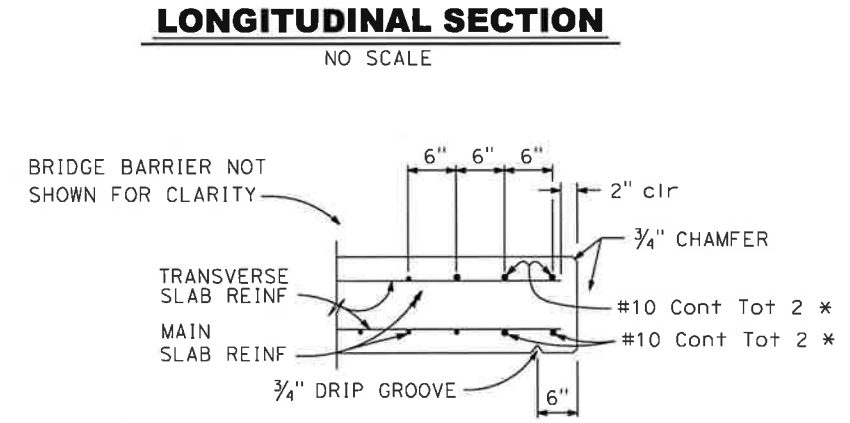
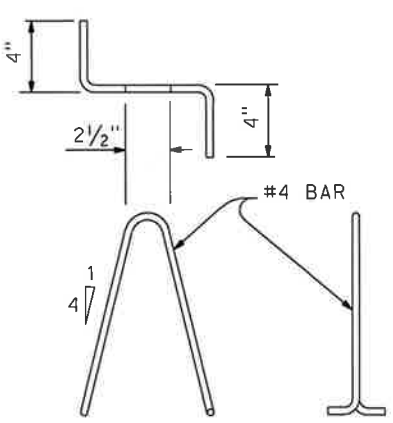
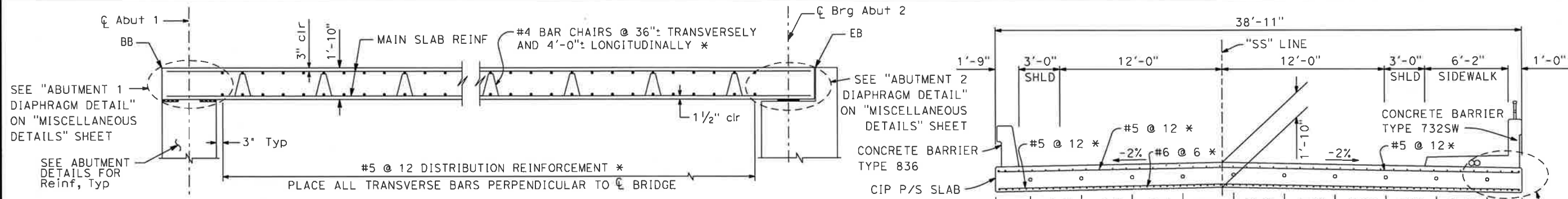


SODA SPRINGS ROAD  
BRIDGE OVER SOUTH  
YUBA RIVER  
ABUTMENT 2 LAYOUT

BRIDGE NO: 17C0109  
DESIGNED: G. MORALES  
DRAWN: K. DANG  
CHECKED: F. ENRIQUEZ  
JOB NO: 2101  
DATE: FEB. 21, 2020

SHEET  
17  
OF 20 SHEETS





**TYPICAL SECTION**

\* EPOXY COATED REINFORCEMENT

**PRESTRESSING NOTES**

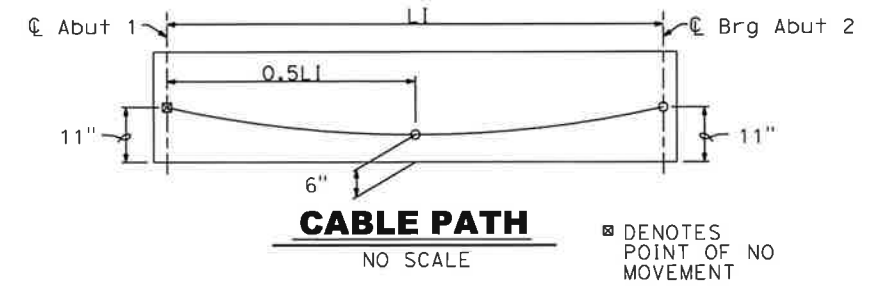
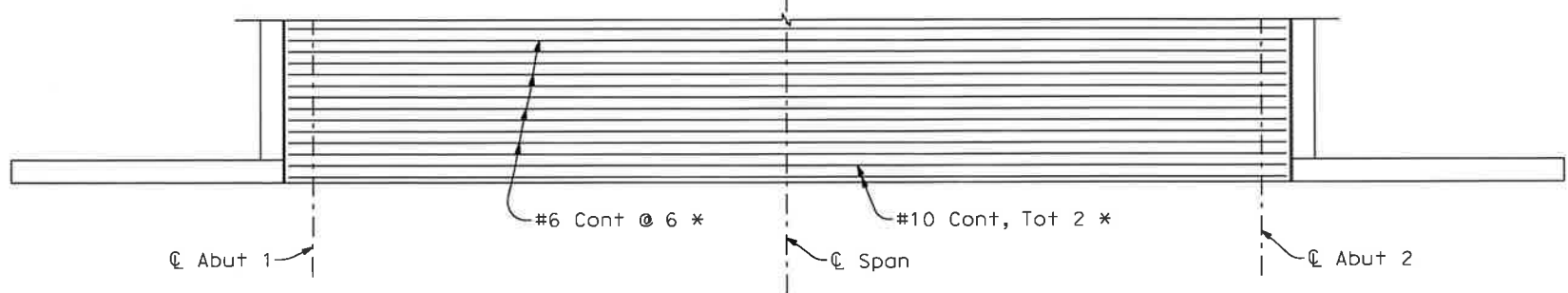
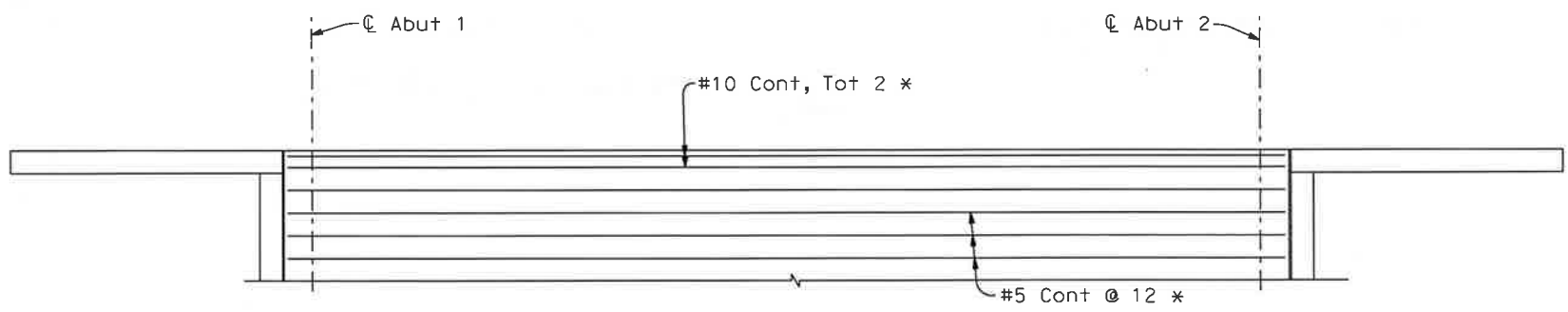
270 KSI low Relaxation Strand:  
 $P_{jack} = 7,800$  kips  
 Anchor Set = 3/8 in.  
 Total Number of Ducts = 10

The final force ratio (larger divided by smaller) between any two ducts shall not exceed the ratio of 10 to 9

Concrete:  $f'_c = 4.5$  ksi @ 28 days  
 $f'_{ci} = 3.5$  ksi @ time of stressing  
 $n = 8$

Contractor shall submit elongation calculations based on initial stress at  
 $\mu = 0.894$  times jacking stress.  
 $k = 0.0002$      $\mu = 0.15$

One end stressing shall be performed from Abut 2



**LEGEND**  
 Denotes bundled reinf

**NOTE:**  
 The contractor shall verify all controlling field dimensions before ordering or fabricating any material.

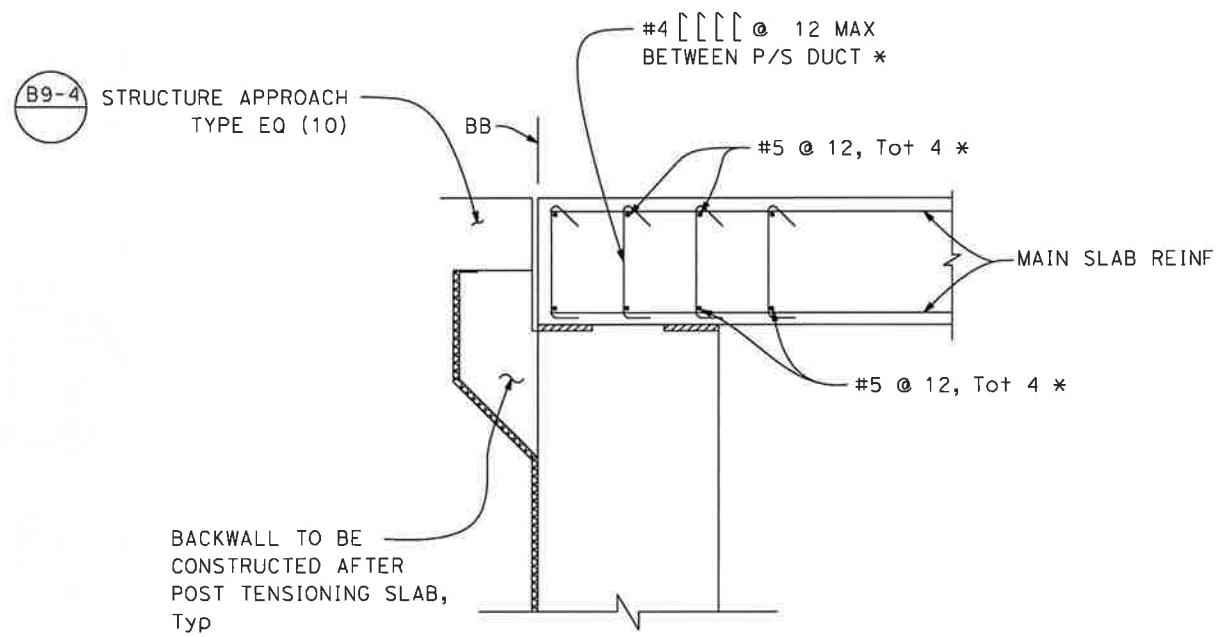
REVISIONS	
DATE	DESCRIPTION

NEVADA COUNTY  
 DEPARTMENT OF PUBLIC WORKS  
 DESIGN/CONSTRUCTION DIVISION

SODA SPRINGS ROAD  
 BRIDGE OVER SOUTH  
 YUBA RIVER  
 SLAB REINFORCEMENT

BRIDGE NO: 17C0109  
 DESIGNED: G. MORALES  
 DRAWN: K. DANG  
 CHECKED: F. ENRIQUEZ  
 JOB NO: 2101  
 DATE: FEB. 21, 2020

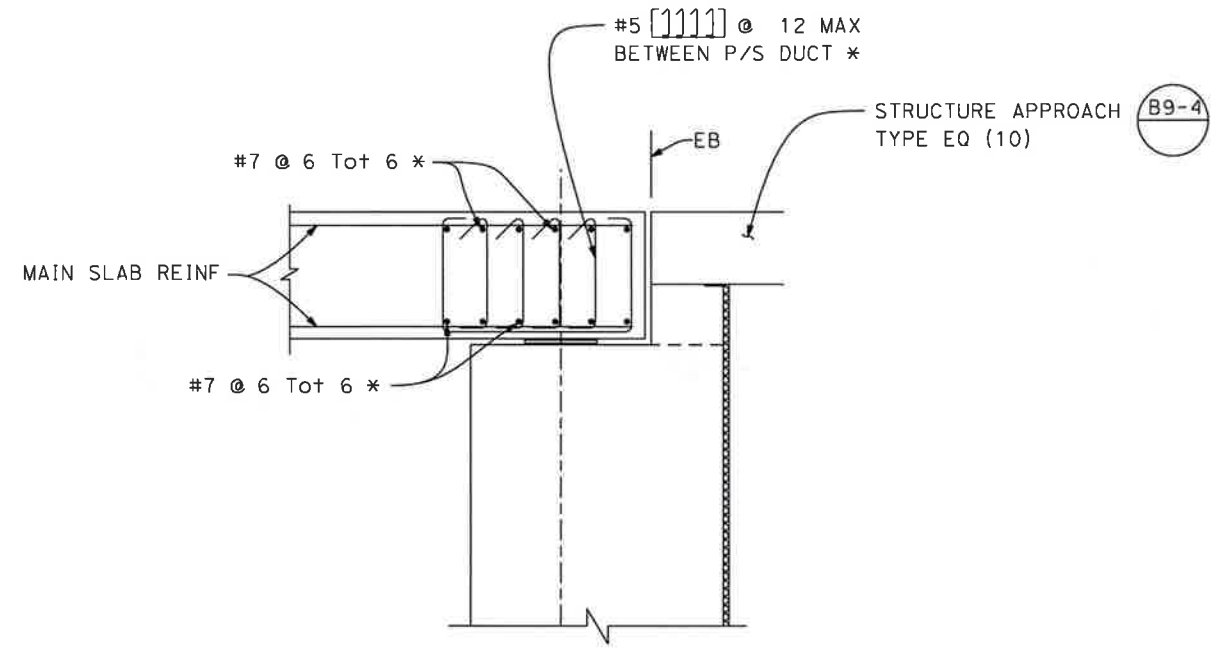
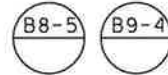
SHEET  
 18  
 OF 20 SHEETS



**ABUTMENT 1 DIAPHRAGM DETAIL**

3/4" = 1'-0"

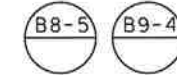
FOR REINFORCEMENT NOT CALLED OUT, SEE "ABUTMENT 1 SECTION" ON "ABUTMENT 1 LAYOUT" SHEET.



**ABUTMENT 2 DIAPHRAGM DETAIL**

3/4" = 1'-0"

FOR REINFORCEMENT NOT CALLED OUT, SEE "ABUTMENT 2 SECTION" ON "ABUTMENT 2 LAYOUT" SHEET.



\* EPOXY COATED REINFORCEMENT

**NOTE:**

The contractor shall verify all controlling field dimensions before ordering or fabricating any material.

REVISIONS

NO.	DESCRIPTION	BY	DATE



NEVADA COUNTY  
DEPARTMENT OF PUBLIC WORKS  
DESIGN/CONSTRUCTION DIVISION



SODA SPRINGS ROAD  
BRIDGE OVER SOUTH  
YUBA RIVER  
MISCELLANEOUS DETAILS

BRIDGE NO: 17C0109  
DESIGNED: G. MORALES  
DRAWN: K. DANG  
CHECKED: F. ENRIQUEZ  
JOB NO: 2101  
DATE: FEB. 21, 2020

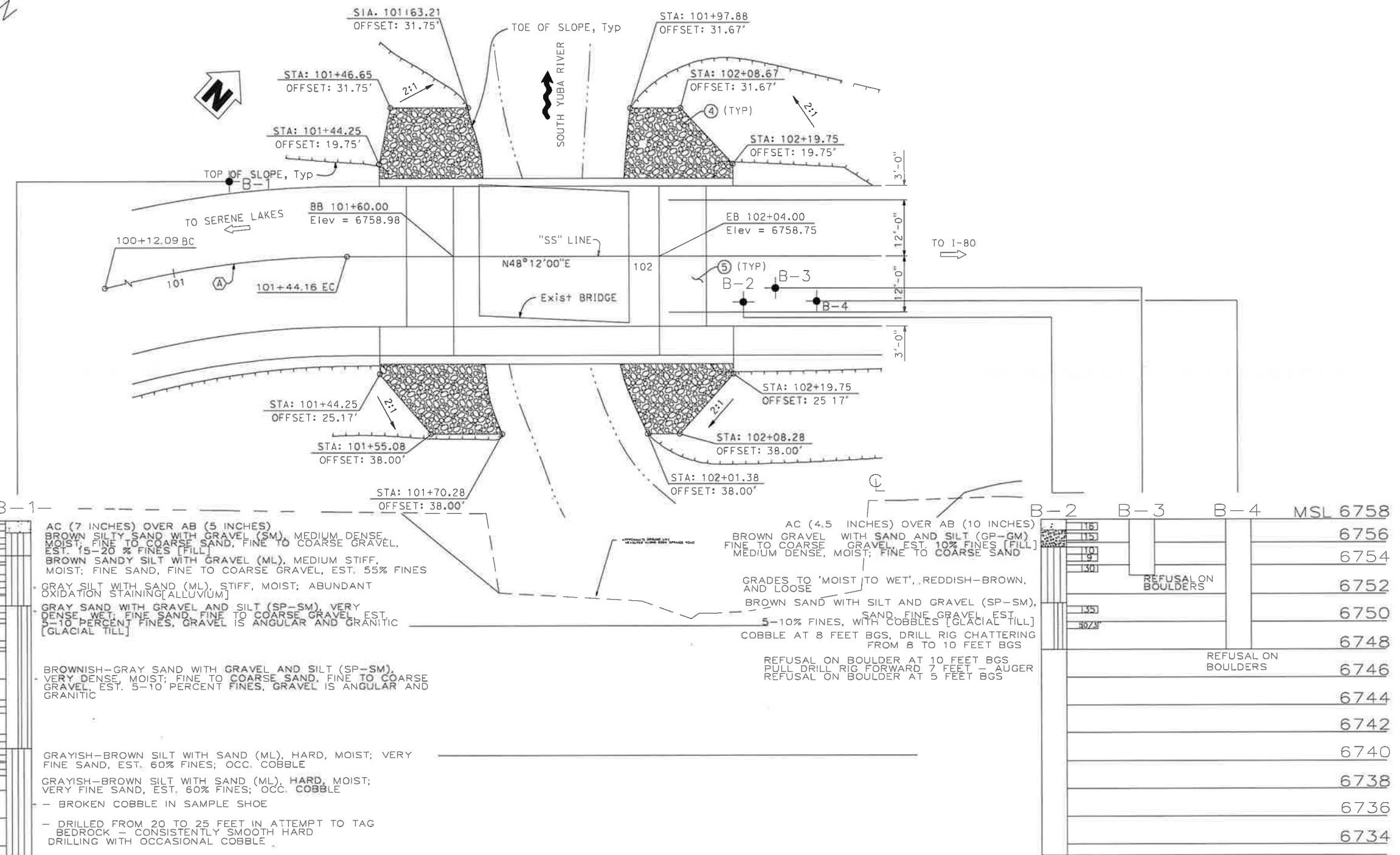
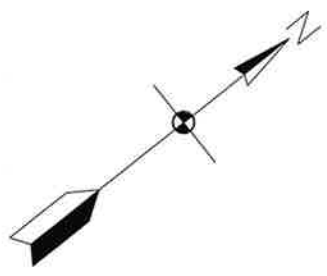
SHEET

19

OF 20 SHEETS



REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)



ELEVATION

6758	15	15
6756	10	10
6754	4	4
6752	4	4
6750	26	4074
6748	26	4074
6746		
6744	10	4075
6742		
6740	26	4074
6738	35	4074
6736	25	4071
6734	40	4071

PROFILE

6758	AC (7 INCHES) OVER AB (5 INCHES)	AC (4.5 INCHES) OVER AB (10 INCHES)	MSL 6758
6756	BROWN SILTY SAND WITH GRAVEL (SM), MEDIUM DENSE, MOIST; FINE TO COARSE SAND, FINE TO COARSE GRAVEL, EST. 15-20% FINES (FILL)	BROWN GRAVEL WITH SAND AND SILT (GP-GM), FINE TO COARSE GRAVEL, EST. 10% FINES (FILL), MEDIUM DENSE, MOIST; FINE TO COARSE SAND	6756
6754	BROWN SANDY SILT WITH GRAVEL (ML), MEDIUM STIFF, MOIST; FINE SAND, FINE TO COARSE GRAVEL, EST. 55% FINES	GRADES TO 'MOIST TO WET', REDDISH-BROWN, AND LOOSE	6754
6752	GRAY SILT WITH SAND (ML), STIFF, MOIST; ABUNDANT OXIDATION STAINING [ALLUVIUM]	BROWN SAND WITH SILT AND GRAVEL (SP-SM), SAND, FINE GRAVEL, EST. 5-10% FINES, WITH COBBLES [GLACIAL TILL]	6752
6750	GRAY SAND WITH GRAVEL AND SILT (SP-SM), VERY DENSE, WET; FINE SAND, FINE TO COARSE GRAVEL, EST. 5-10 PERCENT FINES, GRAVEL IS ANGULAR AND GRANITIC	COBBLE AT 8 FEET BGS, DRILL RIG CHATTERING FROM 8 TO 10 FEET BGS	6750
6748		REFUSAL ON BOULDER AT 10 FEET BGS	6748
6746	BROWNISH-GRAY SAND WITH GRAVEL AND SILT (SP-SM), VERY DENSE, MOIST; FINE TO COARSE SAND, FINE TO COARSE GRAVEL, EST. 5-10 PERCENT FINES, GRAVEL IS ANGULAR AND GRANITIC	PULL DRILL RIG FORWARD 7 FEET - AUGER REFUSAL ON BOULDER AT 5 FEET BGS	6746
6744		REFUSAL ON BOULDER AT 5 FEET BGS	6744
6742			6742
6740	GRAYISH-BROWN SILT WITH SAND (ML), HARD, MOIST; VERY FINE SAND, EST. 60% FINES; OCC. COBBLE		6740
6738	GRAYISH-BROWN SILT WITH SAND (ML), HARD, MOIST; VERY FINE SAND, EST. 60% FINES; OCC. COBBLE		6738
6736	- BROKEN COBBLE IN SAMPLE SHOE		6736
6734	- DRILLED FROM 20 TO 25 FEET IN ATTEMPT TO TAG BEDROCK - CONSISTENTLY SMOOTH HARD DRILLING WITH OCCASIONAL COBBLE		6734

ELEVATION

PROFILE

REVISIONS		
NO.	DESCRIPTION	DATE



NEVADA COUNTY  
DEPARTMENT OF PUBLIC WORKS  
DESIGN/CONSTRUCTION DIVISION



SODA SPRINGS ROAD BRIDGE  
REPLACEMENT PROJECT

DRAWING:  
DESIGNED: V. BAUTISTA  
DRAWN: V. BAUTISTA  
CHECKED: C. KULL  
JOB NO:  
DATE: NOV. 19, 2018

SHEET  
20  
OF 20 SHEETS