

COUNTY OF EL DORADO, CA DEPARTMENT OF TRANSPORTATION

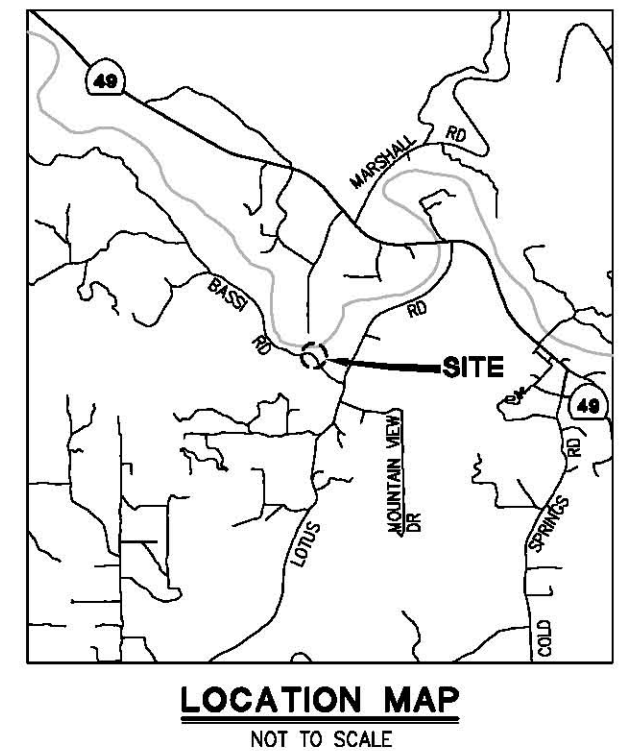
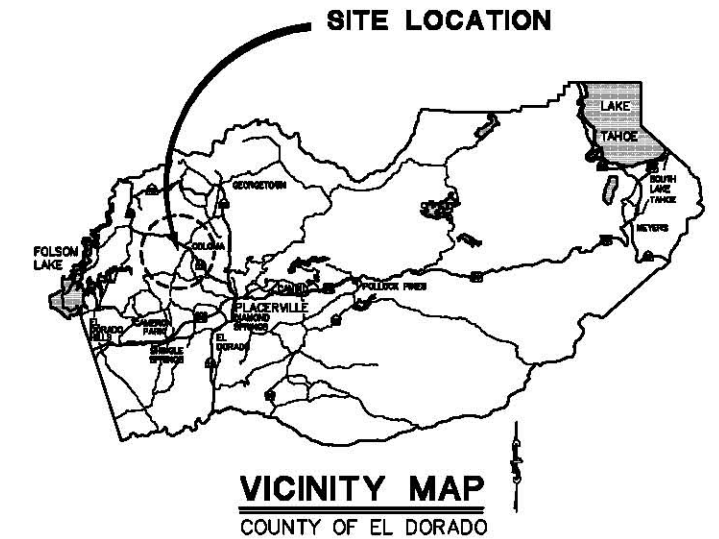
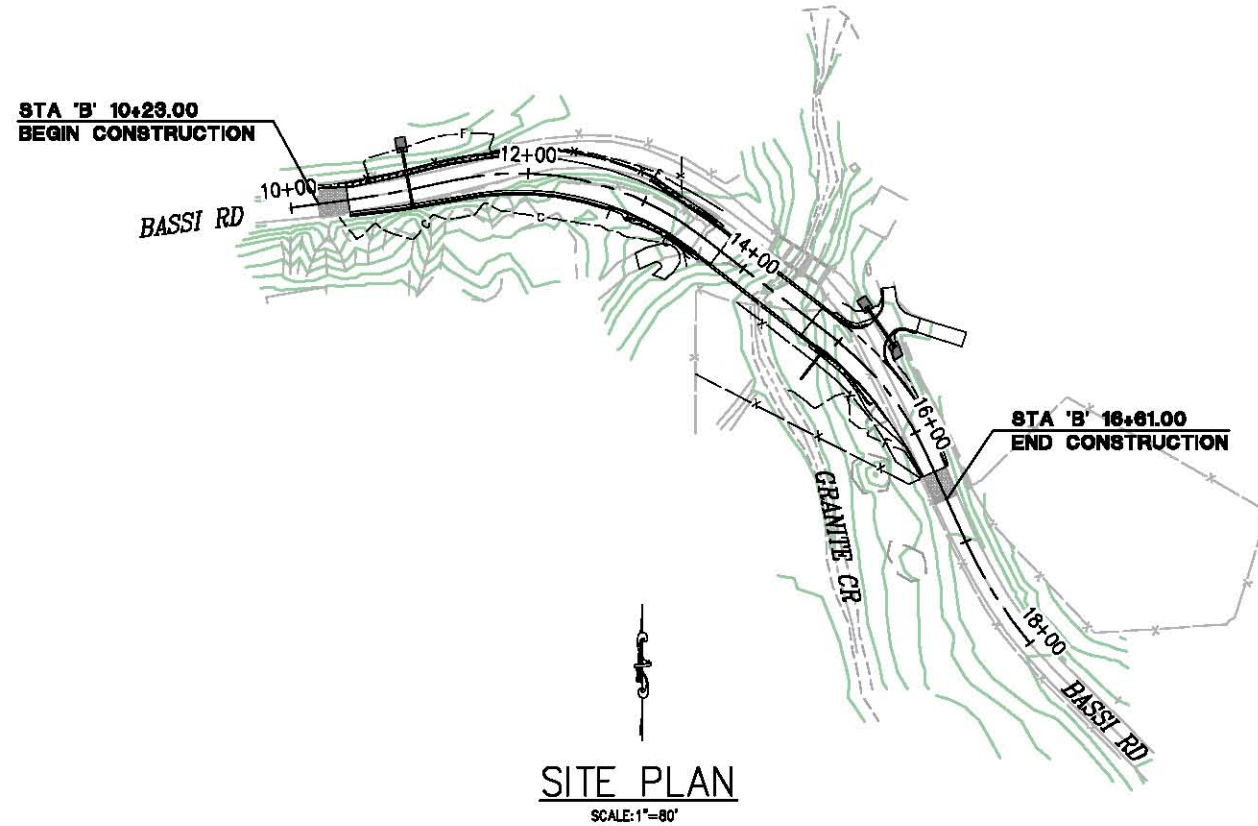
PROJECT PLANS FOR THE CONSTRUCTION OF BASSI RD AT GRANITE CREEK BRIDGE REPLACEMENT

IN THE COUNTY OF EL DORADO, DISTRICT 4
APPROXIMATELY 1.25 MILES FROM THE HWY 49/LOTUS RD INTERSECTION

To be supplemented with Standard Plans and Specifications dated 2015, including
the 2015 Revised Standard Specifications, of the California Department of
Transportation, unless otherwise noted.

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FEDERAL AID PROJECT
BRLO 5925 (094)

BOARD OF SUPERVISORS

JOHN HIDAHL	I
SHIVA FRENITZEN	II
BRIAN VEERKAMP	III
MICHAEL RANALLI	IV
SUE NOVASEL	V

**COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION**

(530) 621-5900
2850 FAIRLANE CT
PLACERVILLE, CA 95667

ADOPTED AND APPROVED BY:

MICHAEL RANALLI CHAIR, EL DORADO COUNTY BOARD OF SUPERVISORS	DATE
APPROVED BY:	DATE
RAFAEL MARTINEZ, DIRECTOR DEPARTMENT OF TRANSPORTATION	DATE
MATTHEW D. SHELTER, P.E. NO. C06632 DEPUTY DIRECTOR, ENGINEERING	DATE

PW NO. 17-31174 PROJECT NO. 7712B

**BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT**

TITLE SHEET

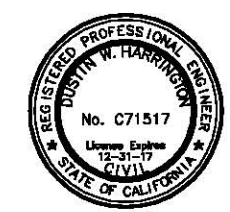
SHEET 1 OF 41

CONTRACTOR'S LICENSE CLASSIFICATION: Bidders shall be properly licensed to perform the Work pursuant to the State Contractor's License Act (Business and Professions Code section 7000 et seq.) and shall possess a CLASS A LICENSE or equivalent combination of Classes required by the categories and type of Work included in the Contract Documents and Plans. Failure of the successful Bidder to obtain proper and adequate licensing at the time bids are submitted shall constitute a failure to execute the Contract, and forfeiture as provided under that section.

REVISIONS		
MARK	DATE	BY

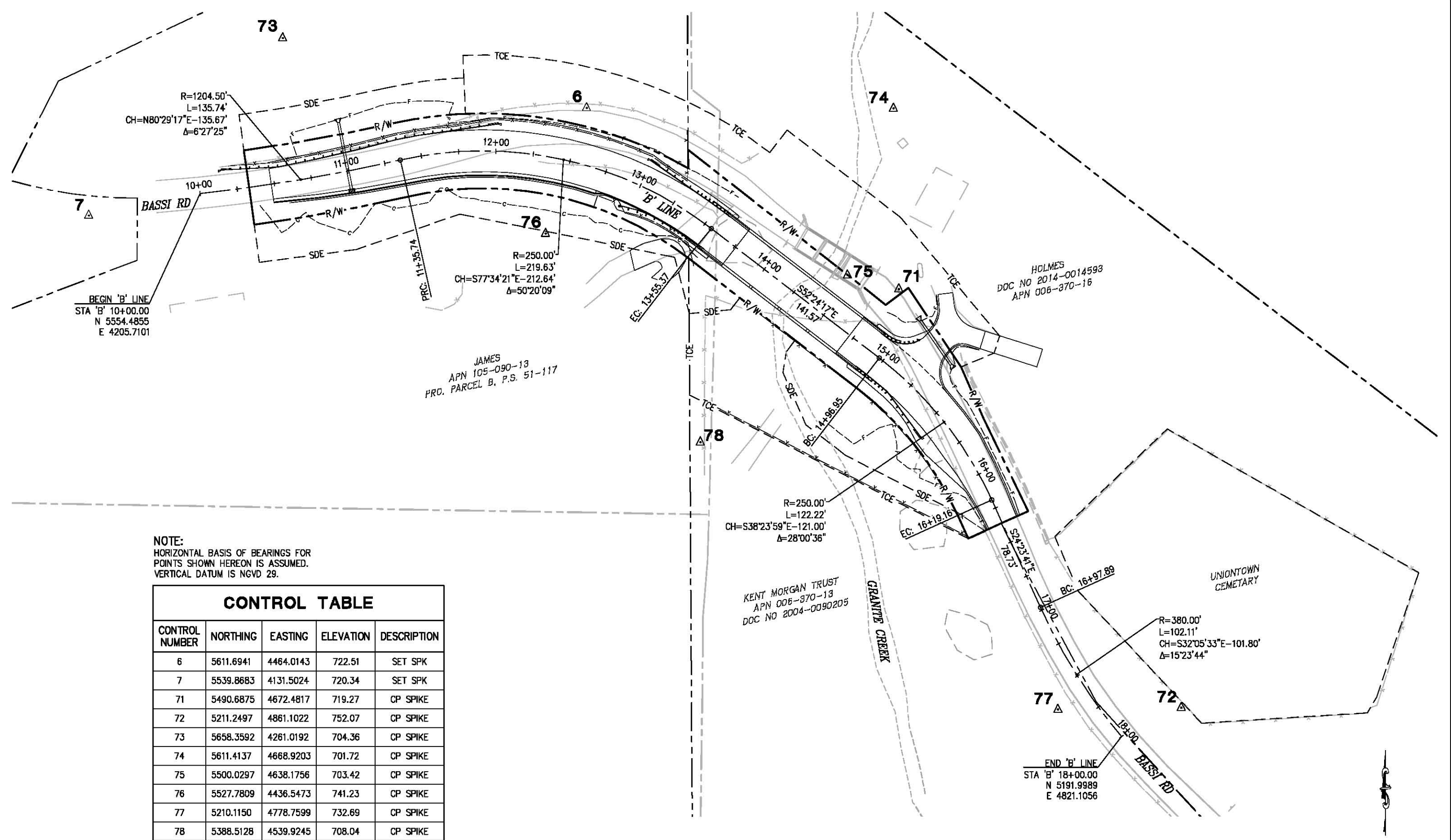


95% PRELIMINARY



SUBMITTED BY: _____ DATE _____
CIVIL ENGINEER
STATE OF CALIFORNIA NO. _____

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D\Projects\77128 Bassi Road at Granite Ck\CADD Files\Sheets\CD-1.dwg Layout Tab: CD-1 Jul 09, 2018 - 6:26am SMC/ky



NOTE:
 HORIZONTAL BASIS OF BEARINGS FOR
 POINTS SHOWN HEREON IS ASSUMED.
 VERTICAL DATUM IS NGVD 29.

CONTROL TABLE				
CONTROL NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
6	5611.6941	4464.0143	722.51	SET SPK
7	5539.8683	4131.5024	720.34	SET SPK
71	5490.6875	4672.4817	719.27	CP SPIKE
72	5211.2497	4861.1022	752.07	CP SPIKE
73	5658.3592	4261.0192	704.36	CP SPIKE
74	5611.4137	4668.9203	701.72	CP SPIKE
75	5500.0297	4638.1756	703.42	CP SPIKE
76	5527.7809	4436.5473	741.23	CP SPIKE
77	5210.1150	4778.7599	732.69	CP SPIKE
78	5388.5128	4539.9245	708.04	CP SPIKE

PRELIMINARY

SURVEY AND CONTROL DIAGRAM
 SCALE : 1" = 30'

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
 PROFESSIONAL LAND SURVEYOR
 DATE:

DESIGNED: DWH
 DRAWN: SGM
 CHECKED: JCN
 DATE: 07/09/18
 ROAD NUMBER: 023

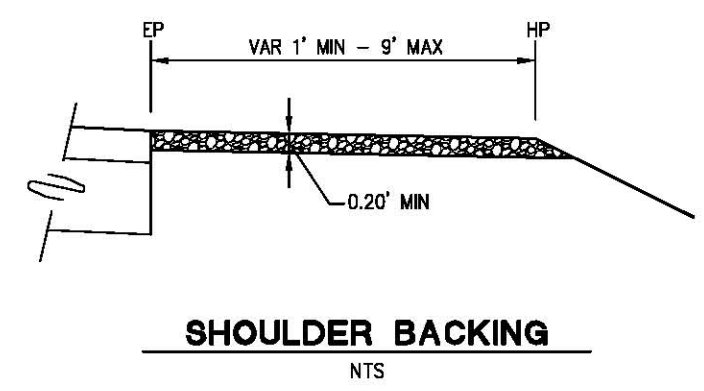
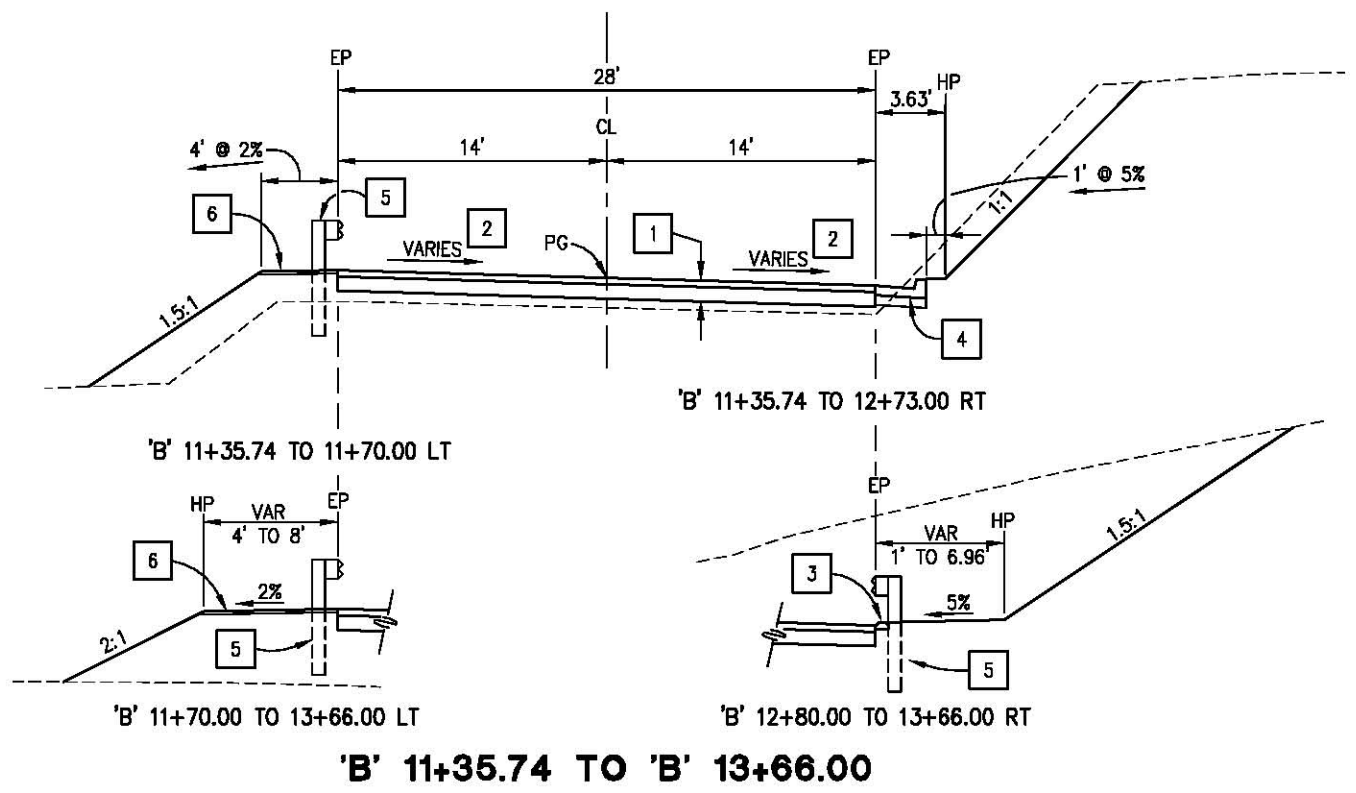


COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

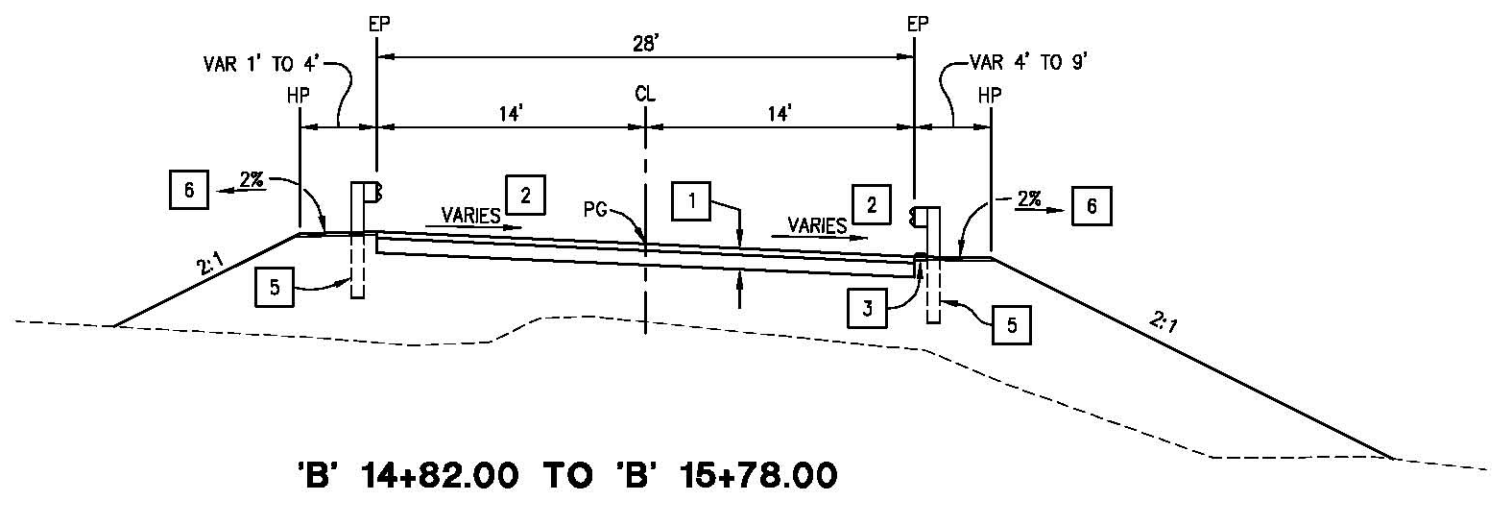
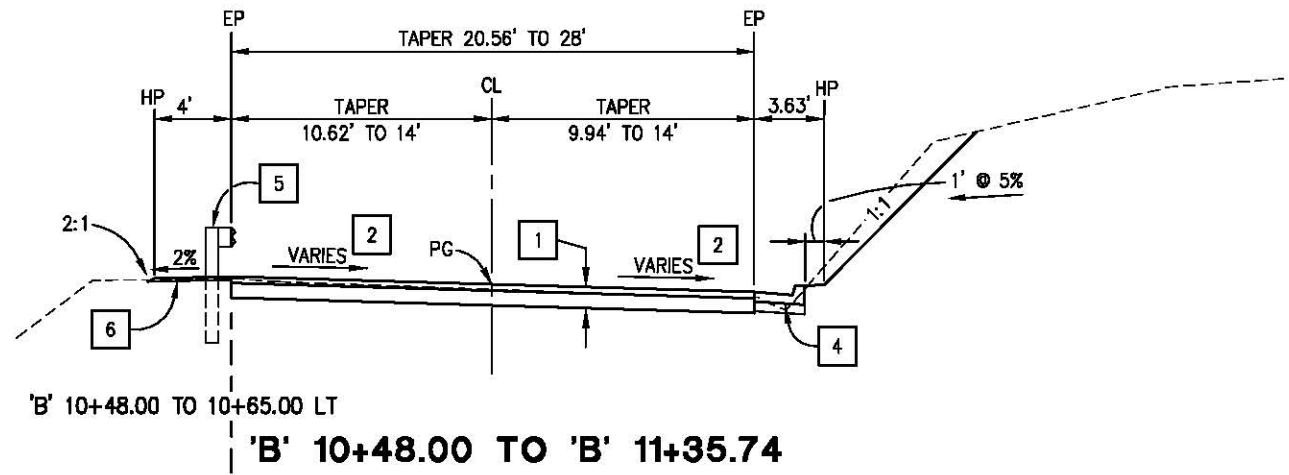
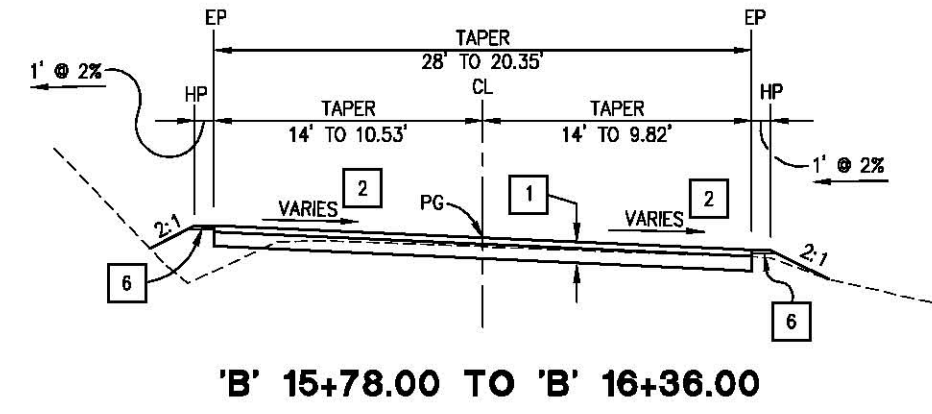
BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT

SHEET
CD-1
 2 OF 41
 W.D. No. **77128**

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D Projects\77128 Bassi Rd at Granite Ck\Sheets\X-Sheets.dwg Layout Tab: X-1 Jul 19, 2018 -- 11:09am SMC/vey
 FOR REDUCED PLANS



- CONSTRUCTION NOTES:**
- 1 - 4" HMA (TYPE A)
8" AB (CLASS 2)
 - 2 - CROSS SLOPE VARIES, SEE SUPERELEVATION
DIAGRAM ON APPLICABLE 'L' SHEET
 - 3 - HMA DIKE, TYPE AND LIMITS VARY, SEE 'L' SHEETS
 - 4 - A2-6 CURB, PER 87A
6" AB (CLASS 2)
 - 5 - MGS WHERE OCCURRING, SEE 'L' SHEETS
NOTE: ALL MGS TO BE STAINED GALVANIZED SURFACE
 - 6 - SHOULDER BACKING, PER DETAIL, THIS SHT



PRELIMINARY

**TYPICAL SECTIONS
SCALE : NONE**

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER
 DATE: _____

DESIGNED: DWH
 DRAWN: SGM
 CHECKED: DWH
 DATE: 07/19/18
 ROAD NUMBER: 023

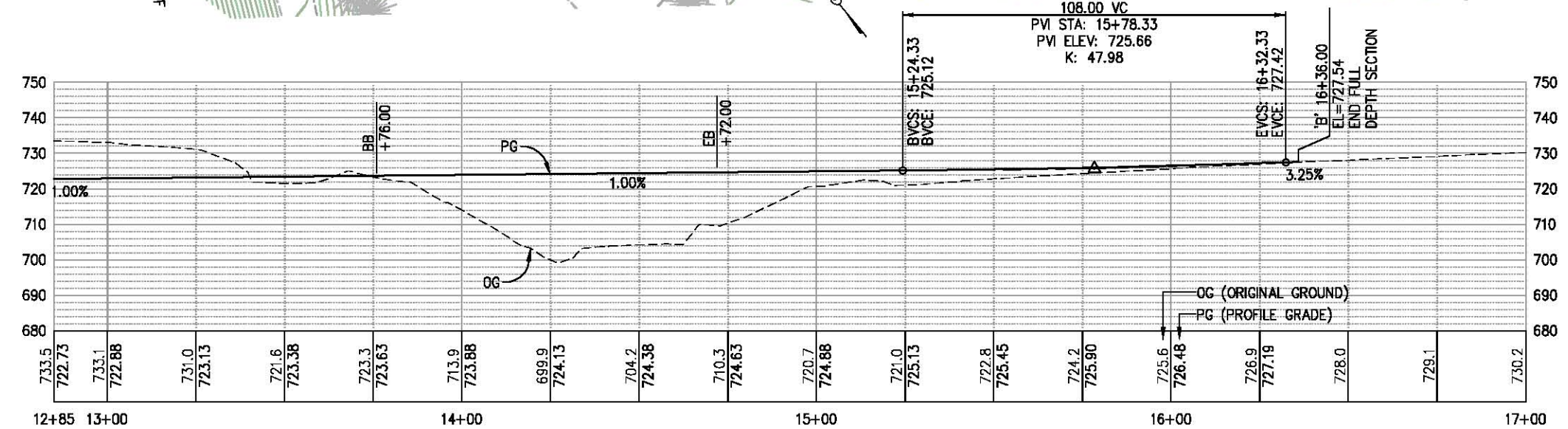
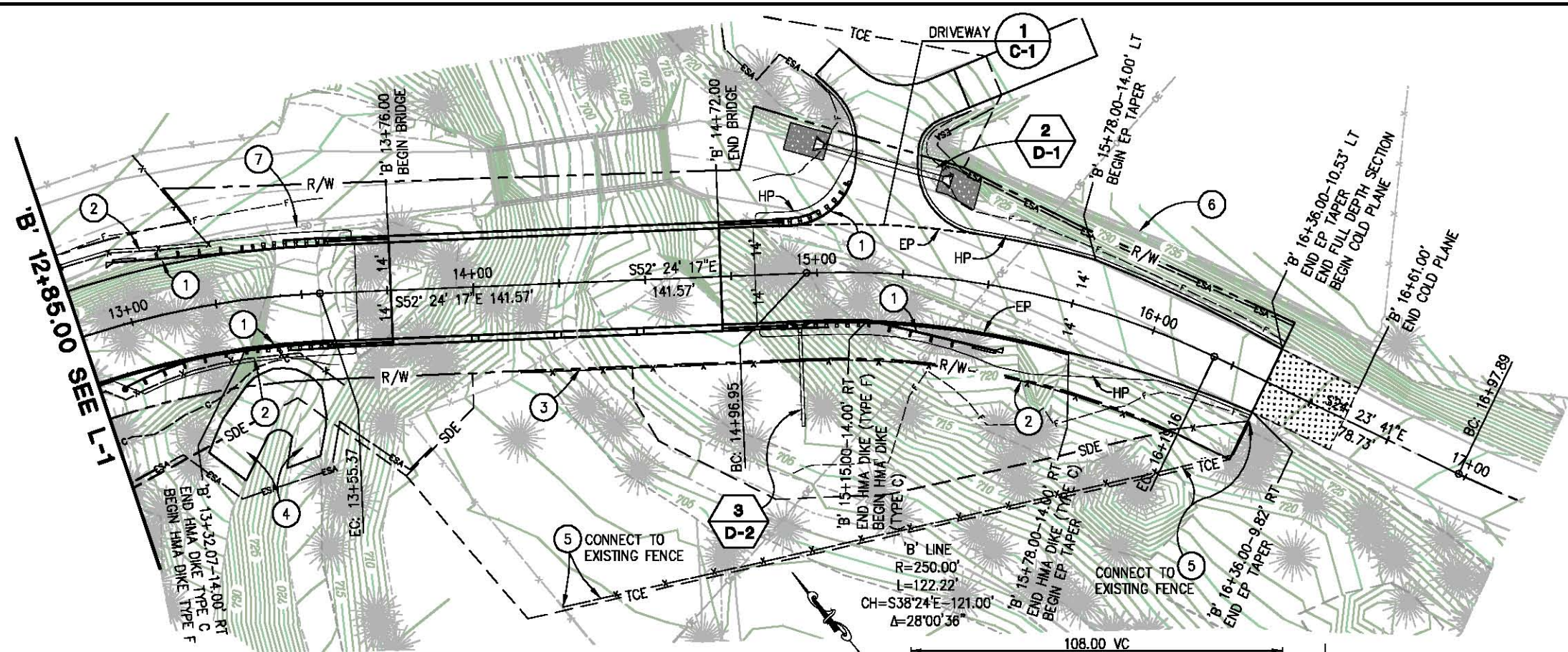


**COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION**

**BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT**

SHEET
X-1
 3 OF 41
 W.O. No. **77128**

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D\Projects\77128 Bassi Road at Granite Creek\Files\Sheets\L-Sheets.dwg Layout Tab: L-2 Jul 19, 2018 - 11:06am SmeVey



- CONSTRUCTION NOTES:**
- ① — MGS, SEE SHT C-2
 - ② — FENCE, SEE SHT C-2
 - ③ — GATE, SEE SHT C-2
 - ④ — REGRADE DRIVEWAY/PATH AREA TO ALLOW A SMALL VEHICLE (GOLF CART, 4 WHEELER, ETC.) TO NEGOTIATE CURVE
 - ⑤ — TEMPORARY FENCE (TYPE WM), PER A86
 - ⑥ — PROTECT EXISTING STONE WALL IN PLACE
 - ⑦ — REMOVE 18± OF 8" RCP

LEGEND:

— ESA — — TEMPORARY HIGH VISIBILITY FENCE

PRELIMINARY

LAYOUT
 SCALE : 1" = 20' H,V

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER
 DATE:

DESIGNED: DWH
 DRAWN: SGM
 CHECKED: DWH
 DATE: 07/18/18
 ROAD NUMBER: 023

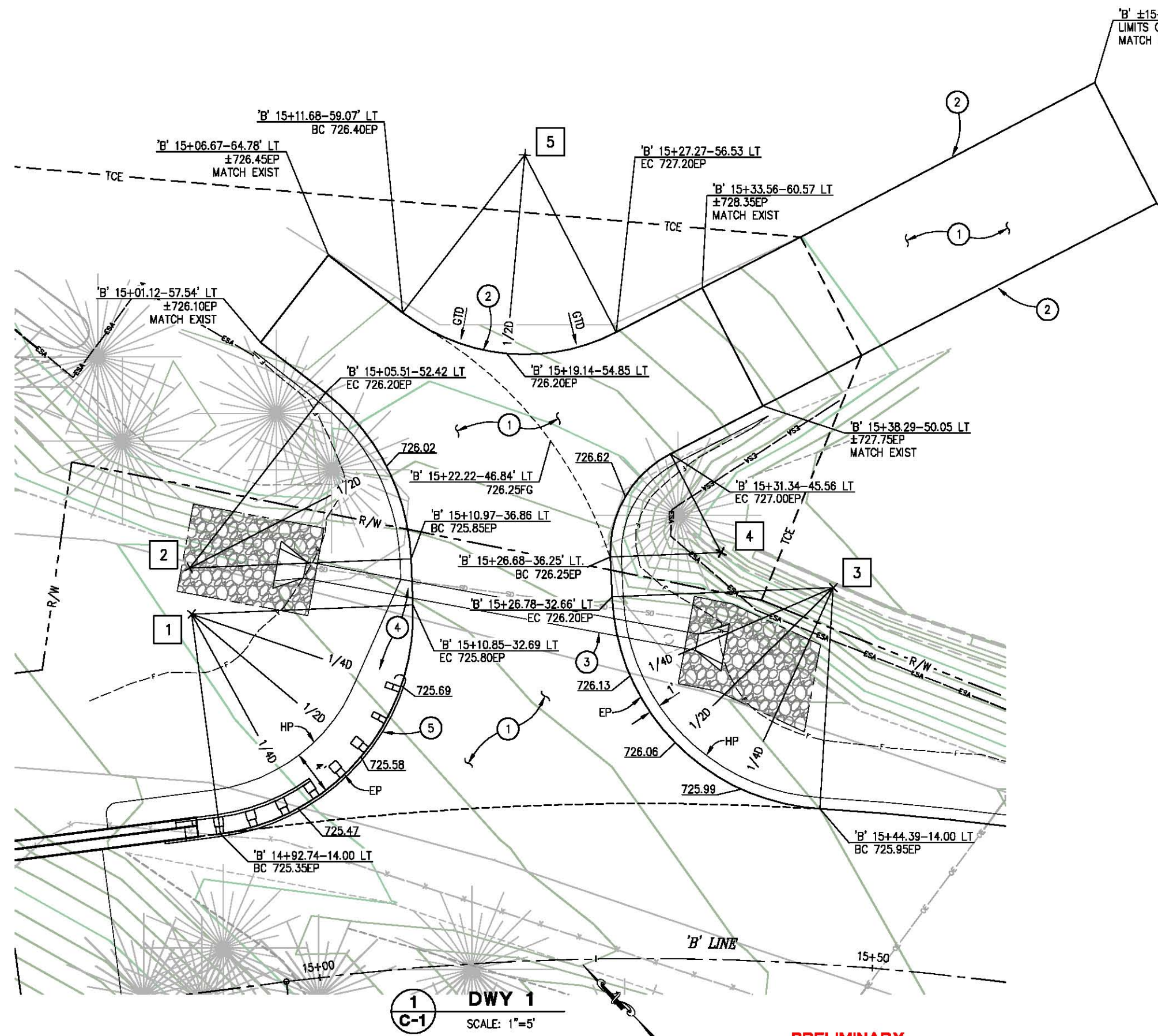


COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT

SHEET
L-2
 5 OF 41
 W.O. No. **77128**

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D\Projects\77128 Bassi Road at Granite Creek\Files\Sheets\C-Sheets.dwg Layout Tab: C-1 Jul 09, 2018 - 8:57am SMC/vey
 FOR REDUCED PLANS



DWY 1 CURVE RETURN DATA					
REFERENCE NUMBER	LOCATION	LENGTH	RADIUS	DELTA	CHORD
1	'B' 14+92.74-34.00 Lt	29.67	20	84°59'18"	N85°06'04"E 27.02
2	'B' 14+93.11-38.15 Lt	17.39	20	49°48'18"	N17°42'16"E 16.84
3	'B' 15+44.39-34.00 Lt	29.37	20	84°08'21"	N00°32'15"E 26.80
4	'B' 15+35.39-36.74 Lt	11.37	10	65°09'03"	N75°10'57"E 10.77
5	'B' 15+35.39-36.74 Lt	20.43	18	65°02'39"	N39°43'12"E 19.35

CONSTRUCTION NOTES:

- ① - 2.5" HMA OVER 4" AB (CLASS 2).
- ② - PLACE SHOULDER BACKING ALONG DRIVEWAYS AS NEEDED
- ③ - 18" STORM DRAIN, SEE D-1
- ④ - TRANSITION SHOULDER
'B' 15+05.84-26.49 LT = 4'
'B' 15+10.04-35.06 LT = 1'
- ⑤ - FOR GUARDRAIL PLACEMENT SEE SHT C-2

ABBREVIATIONS:

GTD - GRADE TO DRAIN

1
C-1
DWY 1
SCALE: 1"=5'

PRELIMINARY

CONSTRUCTION DETAILS
SCALE : AS SHOWN

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER
 DATE: _____

DESIGNED: DWH
 DRAWN: SGM
 CHECKED: DWH
 DATE: 07/09/18
 ROAD NUMBER: 023

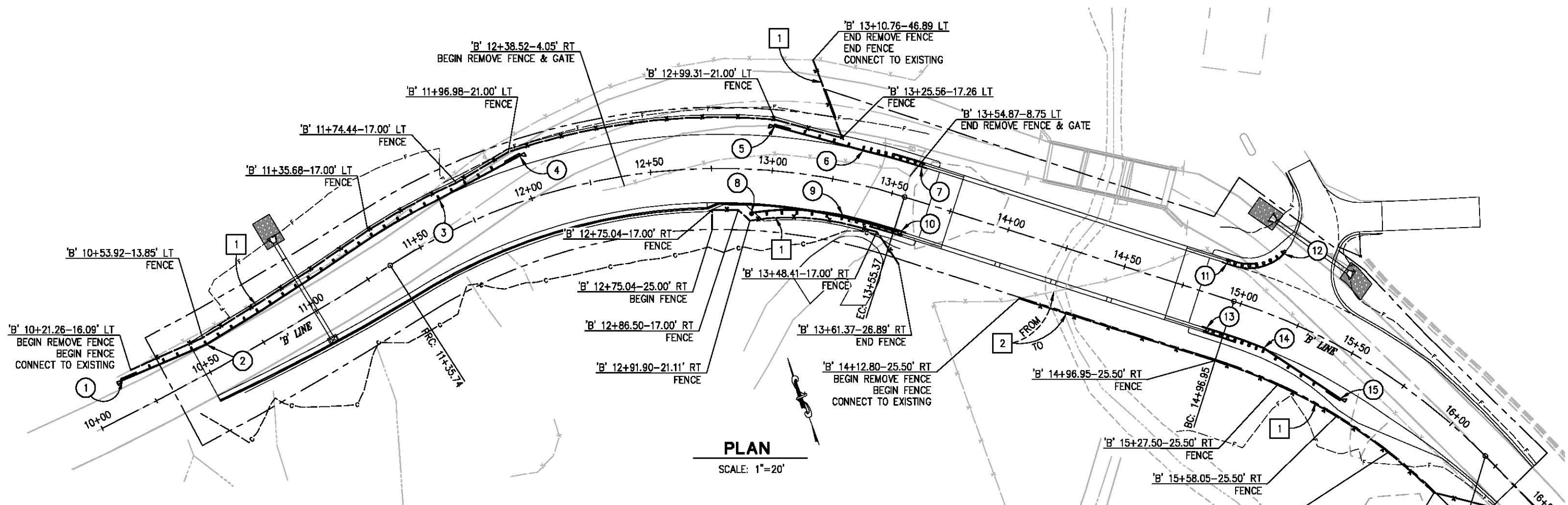


COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT

SHEET
C-1
6 OF 41
W.O. No. **77128**

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D\Projects\77128 Bassi Rd at Granite Ck\Sheets\C-Sheets.dwg Layout Tab: C-2 Jul 09, 2018 - 6:58am SmeVey
 FOR REDUCED PLANS



PLAN
 SCALE: 1"=20'

GUARDRAIL (MGS) GENERAL NOTES:

1. STATIONS AND OFFSETS ARE TO CENTER OF POST AT OUTSIDE FACE OF RAIL ELEMENT
2. APPLY STAIN TO GALVANIZED SURFACES OF ALL MGS (WOOD POST), TRANSITION RAILING (TYPE WB-31), AND TERMINAL SYSTEMS

GUARDRAIL (MGS) CONSTRUCTION NOTES:

- | | | |
|--|---|---|
| ① - 'B' 10+16.24-13.80 LT
BEGIN MGS FLARED TERMINAL SYSTEM | ⑦ - 'B' 13+58.38-13.75 LT
END TRANSITION RAILING | ⑬ - 'B' 14+89.62-13.75 RT
BEGIN TRANSITION RAILING, TYPE WB-31 |
| ② - 'B' 10+54.04-10.60 LT
END TERMINAL SYSTEM
BEGIN MGS | ⑧ - 'B' 12+92.37-17.70 RT
BURIED POST END ANCHOR
BEGIN MGS | ⑭ - 'B' 15+15.67-13.75 RT
END TRANSITION RAILING, TYPE WB-31
BEGIN MGS FLARED TERMINAL SYSTEM |
| ③ - 'B' 11+65.64-13.75 LT
END MGS
BEGIN MGS FLARED TERMINAL SYSTEM | ⑨ - 'B' 13+32.07-13.75 RT
END MGS
BEGIN TRANSITION RAILING, TYPE WB-31 | ⑮ - 'B' 15+55.54-18.40 RT
END TERMINAL SYSTEM |
| ④ - 'B' 12+00.75-18.02 LT
END TERMINAL SYSTEM | ⑩ - 'B' 13+58.37-13.75 RT
END TRANSITION RAILING | |
| ⑤ - 'B' 12+99.43-18.02 LT
BEGIN MGS FLARED TERMINAL SYSTEM | ⑪ - 'B' 14+89.62-13.75 LT
BEGIN TRANSITION RAILING, TYPE WB-31
R=20' (MUST BE SHAPED IN SHOP) | |
| ⑥ - 'B' 13+34.54-13.75 LT
END TERMINAL SYSTEM
BEGIN TRANSITION RAILING, TYPE WB-31 | ⑫ - 'B' 15+09.48-25.05 LT
END TRANSITION RAILING | |

FENCE CONSTRUCTION NOTES:

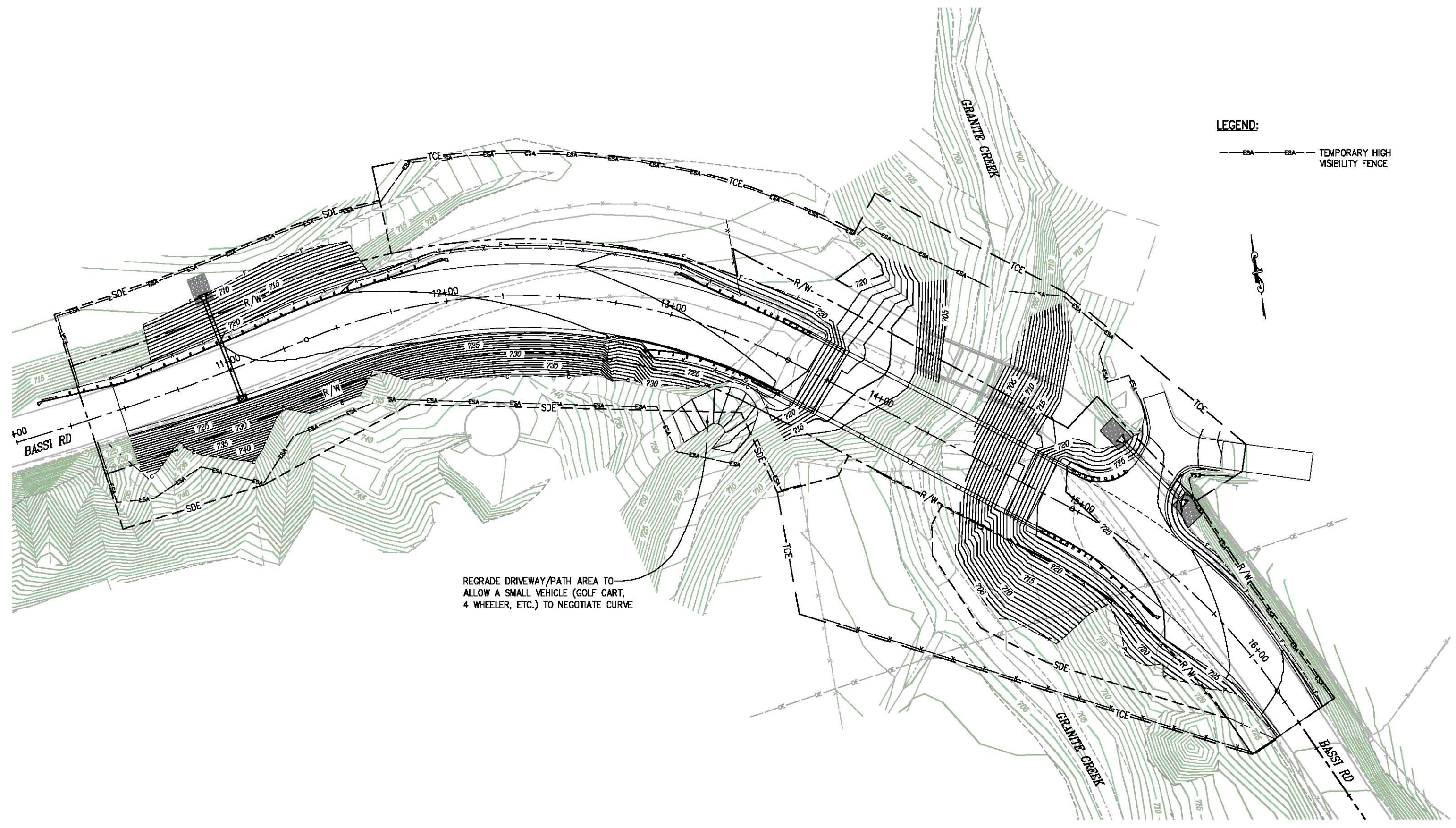
- ① - FENCE (TYPE WM, METAL POST) PER A86
- ② - RELOCATE CUSTOM GATE AT CREEK CROSSING, REPLACE PARTS AS NECESSARY TO RESTORE FULL FUNCTIONALITY

PRELIMINARY

CONSTRUCTION DETAILS-GUARDRAIL AND FENCING PLAN
 SCALE : AS SHOWN

<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">REVISION</th> <th style="width: 10%;">NUMBER</th> <th style="width: 10%;">DATE</th> <th style="width: 40%;">DESCRIPTION</th> <th style="width: 10%;">BY</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>	REVISION	NUMBER	DATE	DESCRIPTION	BY																	PREPARED UNDER THE SUPERVISION OF : REGISTERED CIVIL ENGINEER DATE:	DESIGNED: DWH CHECKED: DWH ROAD NUMBER: 023	DRAWN: SGM DATE: 07/09/18	<p>COUNTY OF EL DORADO DEPARTMENT OF TRANSPORTATION</p>	<p>BASSI RD AT GRANITE CREEK BRIDGE REPLACEMENT</p>	SHEET C-2 7 OF 41 W.D. No. 77128
REVISION	NUMBER	DATE	DESCRIPTION	BY																							

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D Projects\77128 Bassi Road at Granite C\AADD Files\Sheets\G-1.dwg Layout Tab: G-1 Jul 06, 2018 - 11:16am SMeVey



LEGEND:
 - - - - - ESA - - - - - TEMPORARY HIGH VISIBILITY FENCE

REGRADE DRIVEWAY/PATH AREA TO ALLOW A SMALL VEHICLE (GOLF CART, 4 WHEELER, ETC.) TO NEGOTIATE CURVE

FOR REDUCED PLANS
 0 1 2

PRELIMINARY

**GRADING PLAN
 SCALE : 1" = 20'**

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
JUSTIN W. HARRINGTON
 No. C71517
 License Expires 12-31-17
 CIVIL
 REGISTERED CIVIL ENGINEER
 STATE OF CALIFORNIA

DESIGNED: DWH
 CHECKED: DWH
 ROAD NUMBER: 023

DRAWN: SGM
 DATE: 07/06/18

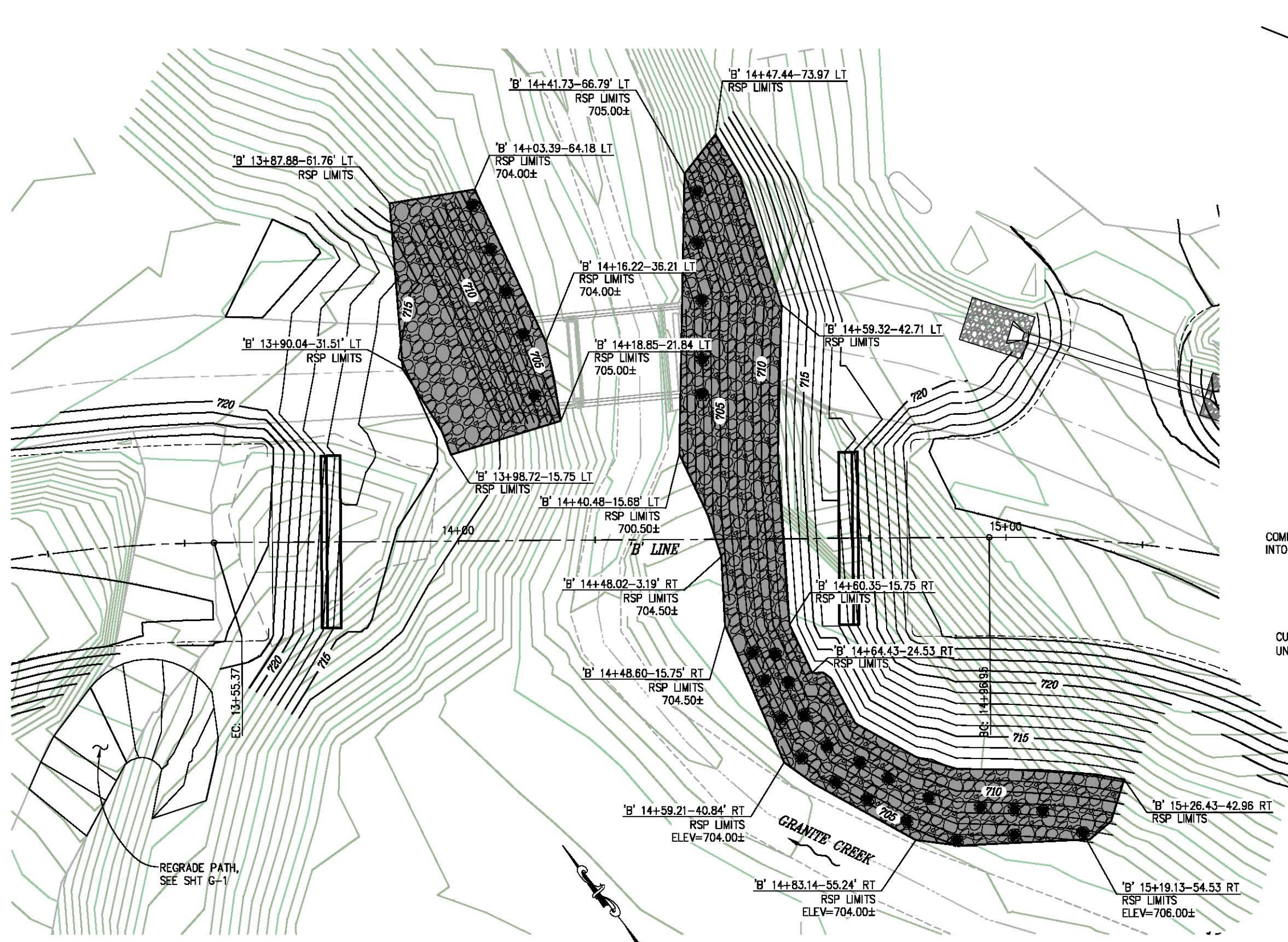


**COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION**

**BASSI RD AT GRANITE CREEK
 BRIDGE REPLACEMENT**

SHEET
G-1
 8 OF 41
 W.O. No. **77128**

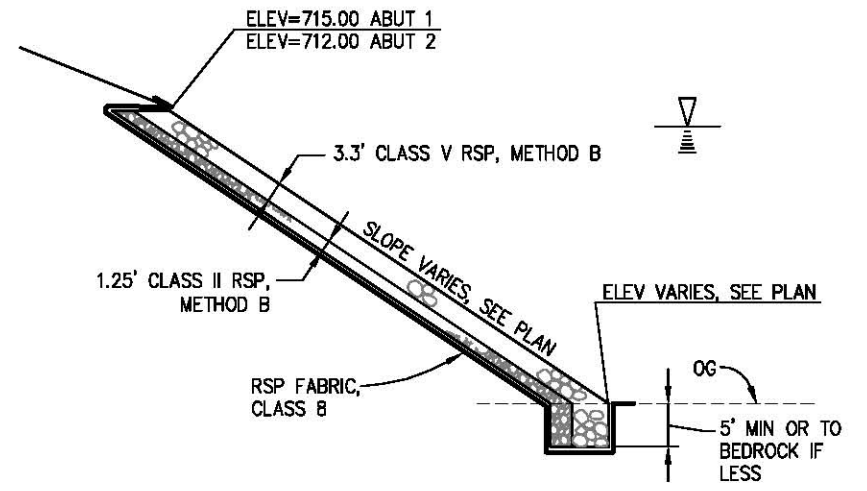
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 FOR REDUCED PLANS



PLAN

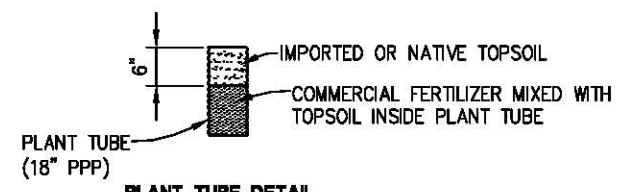
1"=10'

PRELIMINARY



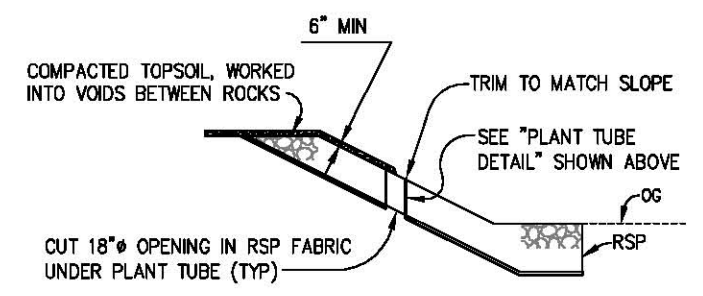
ROCK SLOPE PROTECTION

NTS



PLANT TUBE DETAIL

NTS



WILLOW CUTTINGS PLANT TUBE LOCATION DETAIL

NTS

LEGEND

- ROCK SLOPE PROTECTION
- INDICATES 100-YEAR DESIGN WATER SURFACE ELEVATION (710.41)
- WILLOW CUTTING IN PLANTING TUBE (PLACE 30 TOTAL IN RSP)

ROCK SLOPE PROTECTION SCALE: AS SHOWN



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER
 DATE:

DESIGNED: MSF
 DRAWN: SGM
 CHECKED: DWH
 DATE: 07/19/18
 ROAD NUMBER: 023

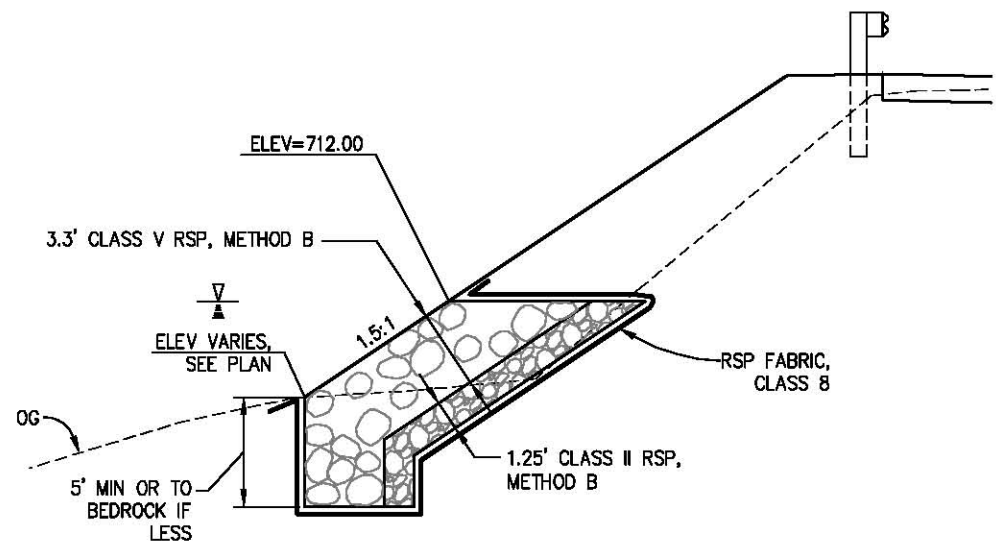


COUNTY OF EL DORADO DEPARTMENT OF TRANSPORTATION

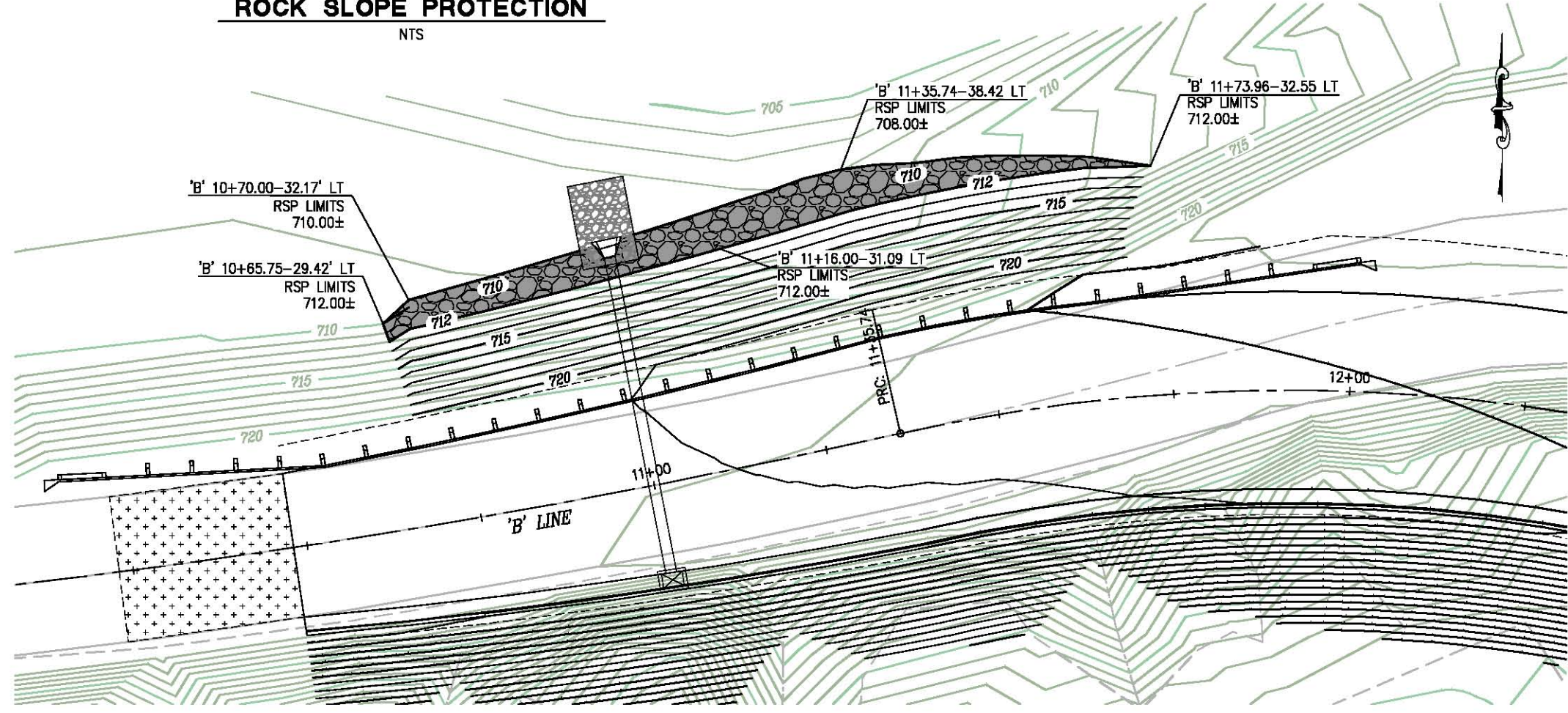
BASSI RD AT GRANITE CREEK BRIDGE REPLACEMENT

SHEET **G-2**
 9 OF 41
 W.D. No. **77128**

ORIGINAL SCALE IS IN INCHES
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 FOR REDUCED PLANS
 2
 1
 0



ROCK SLOPE PROTECTION
NTS



PLAN
1"=10'

PRELIMINARY

ROCK SLOPE PROTECTION
SCALE: AS SHOWN

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER
 DATE: _____

DESIGNED: MSF
 CHECKED: DWH
 ROAD NUMBER: 023
 DRAWN: SGM
 DATE: 07/18/18

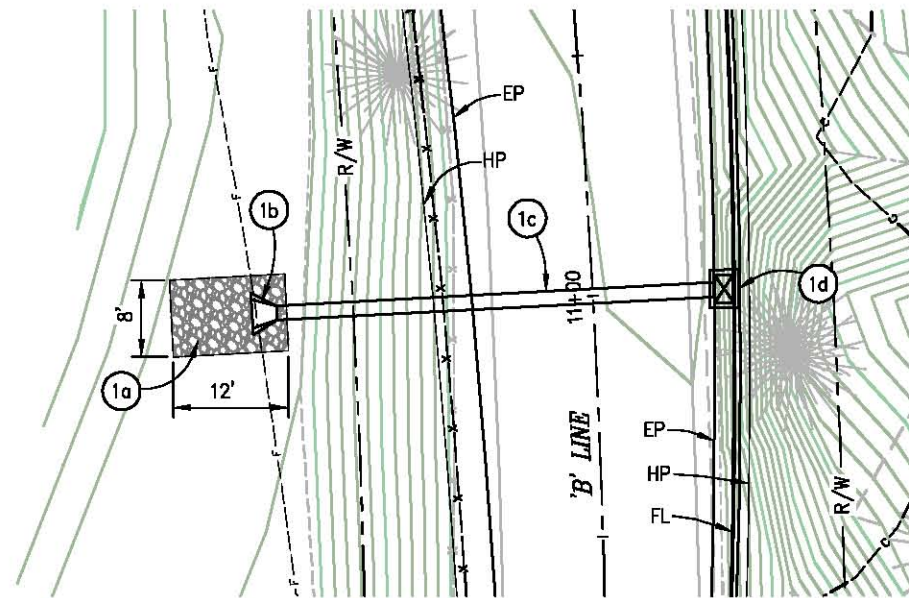


COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT

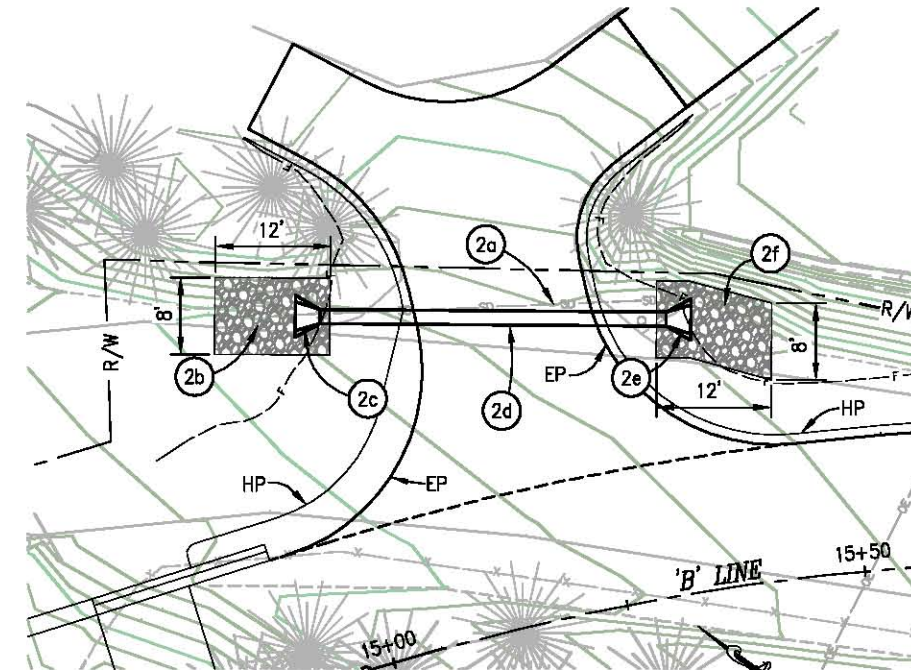
SHEET
G-3
10 OF 41
W.O. No. **77128**

ORIGINAL SCALE IS IN INCHES
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 FOR REDUCED PLANS



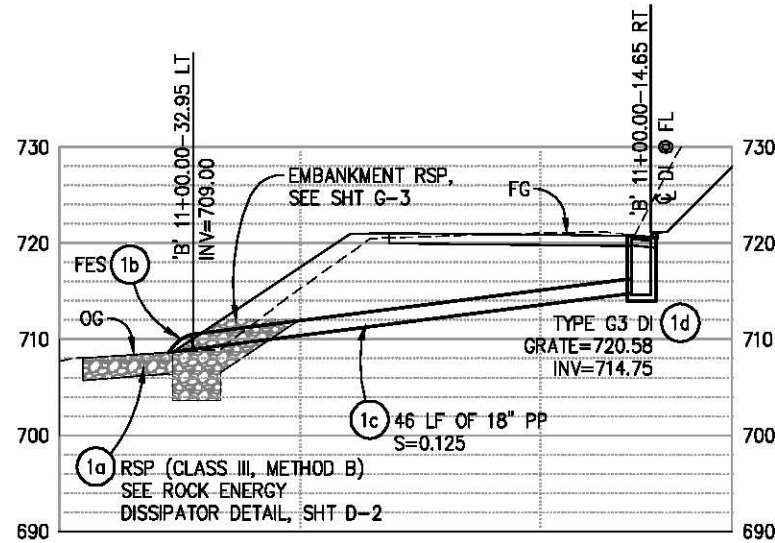
PLAN-SD SYSTEM 1

SCALE: 1"=10'



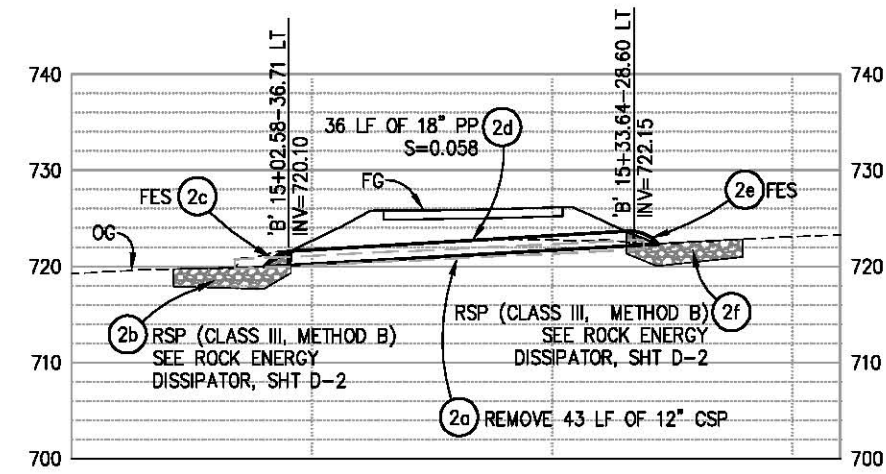
PLAN-SD SYSTEM 2

SCALE: 1"=10'



PROFILE-SD SYSTEM 1

SCALE: 1"=10' H,V



PROFILE-SD SYSTEM 2

SCALE: 1"=10' H,V

PRELIMINARY

**DRAINAGE
SCALE : AS SHOWN**

REVISION	NUMBER	DATE	DESCRIPTION	BY	DATE



PREPARED UNDER THE SUPERVISION OF:
JUSTIN W. HARRINGTON
 No. C71517
 License Expires 12-31-17
 CIVIL
 REGISTERED CIVIL ENGINEER

DESIGNED: DWH	DRAWN: SGM
CHECKED: DWH	DATE: 07/06/18
ROAD NUMBER: 023	

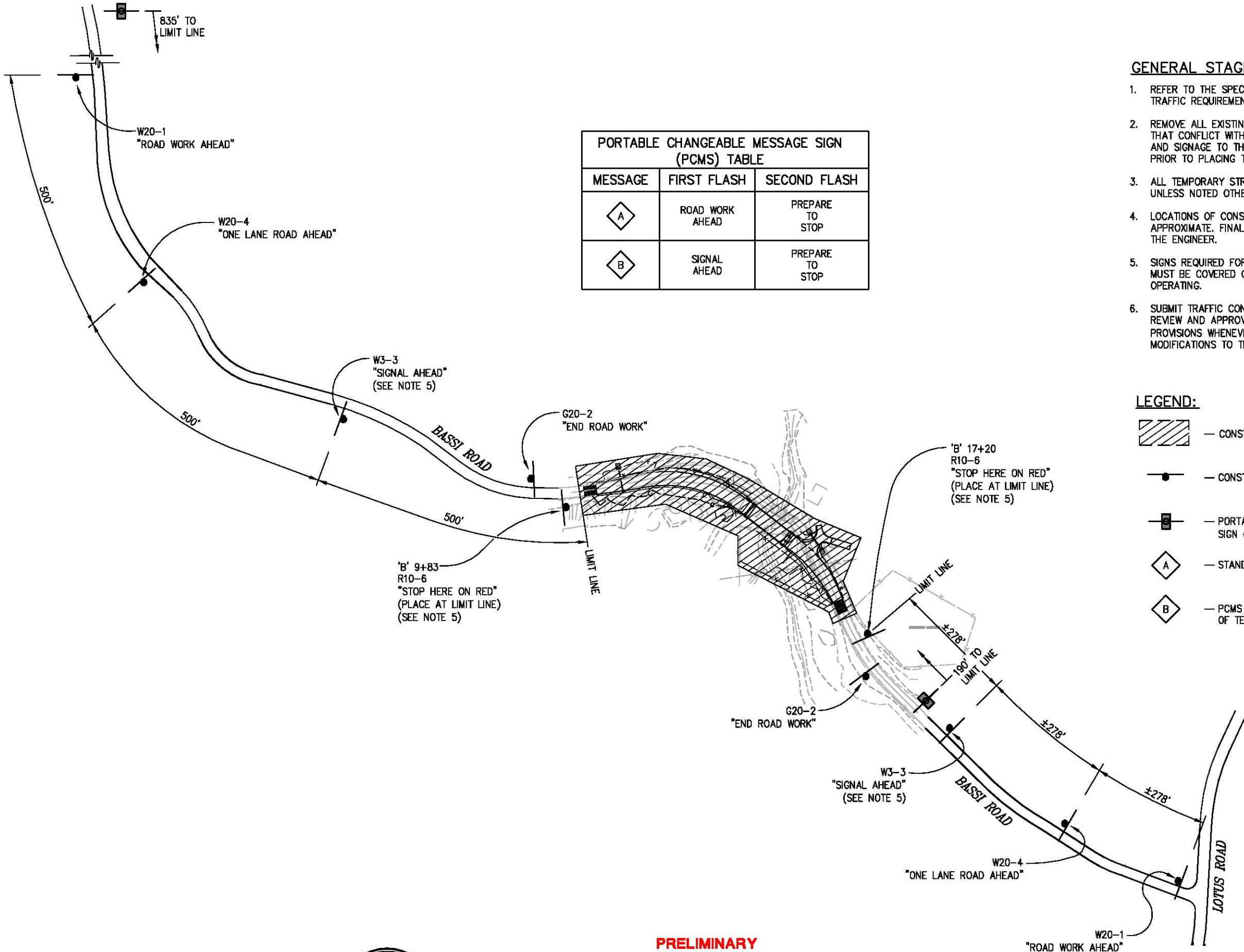


**COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION**

**BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT**

SHEET D-1
11 OF 41
W.O. No. 77128

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D Projects\77128 Bassi Road at Granite Creek\SC-1\SC-1.dwg
 Layout Tab: SC-1 Jul 19, 2018 11:20am Shivey
 FOR REDUCED PLANS
 2
 1
 0



PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) TABLE		
MESSAGE	FIRST FLASH	SECOND FLASH
◊ A	ROAD WORK AHEAD	PREPARE TO STOP
◊ B	SIGNAL AHEAD	PREPARE TO STOP

GENERAL STAGE CONSTRUCTION NOTES:

- REFER TO THE SPECIAL PROVISIONS FOR MAINTAINING TRAFFIC REQUIREMENTS WITHIN THE WORK AREA.
- REMOVE ALL EXISTING STRIPING, MARKINGS, AND SIGNAGE THAT CONFLICT WITH THE TEMPORARY STRIPING, MARKINGS AND SIGNAGE TO THE SATISFACTION OF THE ENGINEER PRIOR TO PLACING TEMPORARY STRIPING.
- ALL TEMPORARY STRIPING AND MARKINGS ARE TO BE PAINT UNLESS NOTED OTHERWISE.
- LOCATIONS OF CONSTRUCTION AREA SIGNS ARE APPROXIMATE. FINAL LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
- SIGNS REQUIRED FOR THE PORTABLE TEMPORARY SIGNAL MUST BE COVERED OR REMOVED WHEN THE SIGNAL IS NOT OPERATING.
- SUBMIT TRAFFIC CONTROL PLANS TO THE ENGINEER FOR REVIEW AND APPROVAL IN ACCORDANCE WITH THE SPECIAL PROVISIONS WHENEVER CONTRACTOR'S OPERATIONS REQUIRE MODIFICATIONS TO THE TRAFFIC CONTROL PLANS.

LEGEND:

- CONSTRUCTION AREA
- CONSTRUCTION SIGN
- PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
- STANDARD PCMS MESSAGE
- PCMS MESSAGE DURING OPERATION OF TEMPORARY SIGNAL

PRELIMINARY

**STAGE CONSTRUCTION
SCALE : 1" = 100'**



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER
 DATE:

DESIGNED: MSF
 DRAWN: SGM
 CHECKED: DWH
 DATE: 07/19/18
 ROAD NUMBER: 023

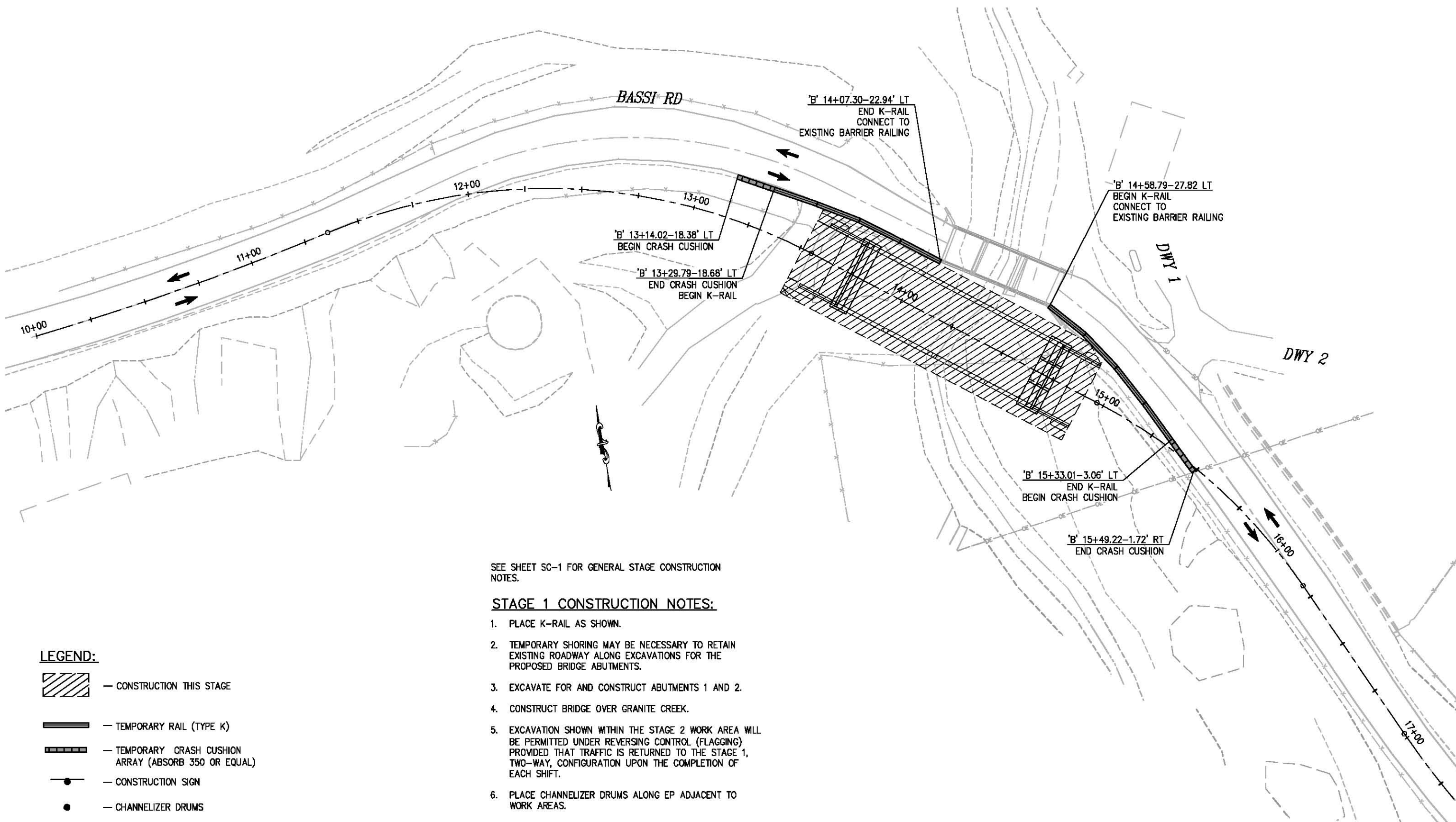


**COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION**

**BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT**

SHEET
SC-1
 13 OF 41
 W.O. No. **77128**

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D\Projects\77128 Bassi Rd at Granite C\ADD Files\Sheets\SC-Sheets.dwg Layout Tab: SC-2 Jul 19, 2018 11:20am Shivey
 FOR REDUCED PLANS



SEE SHEET SC-1 FOR GENERAL STAGE CONSTRUCTION NOTES.

STAGE 1 CONSTRUCTION NOTES:

1. PLACE K-RAIL AS SHOWN.
2. TEMPORARY SHORING MAY BE NECESSARY TO RETAIN EXISTING ROADWAY ALONG EXCAVATIONS FOR THE PROPOSED BRIDGE ABUTMENTS.
3. EXCAVATE FOR AND CONSTRUCT ABUTMENTS 1 AND 2.
4. CONSTRUCT BRIDGE OVER GRANITE CREEK.
5. EXCAVATION SHOWN WITHIN THE STAGE 2 WORK AREA WILL BE PERMITTED UNDER REVERSING CONTROL (FLAGGING) PROVIDED THAT TRAFFIC IS RETURNED TO THE STAGE 1, TWO-WAY, CONFIGURATION UPON THE COMPLETION OF EACH SHIFT.
6. PLACE CHANNELIZER DRUMS ALONG EP ADJACENT TO WORK AREAS.

LEGEND:

- CONSTRUCTION THIS STAGE
- TEMPORARY RAIL (TYPE K)
- TEMPORARY CRASH CUSHION ARRAY (ABSORB 350 OR EQUAL)
- CONSTRUCTION SIGN
- CHANNELIZER DRUMS
- DIRECTION OF TRAFFIC

07/19/18

**STAGE CONSTRUCTION
 SCALE : 1" = 20'**

REVISION	NUMBER	DATE	DESCRIPTION	BY	DATE



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER

DESIGNED: MSF	DRAWN: SGM
CHECKED: DWH	DATE: 07/19/18
ROAD NUMBER: 023	

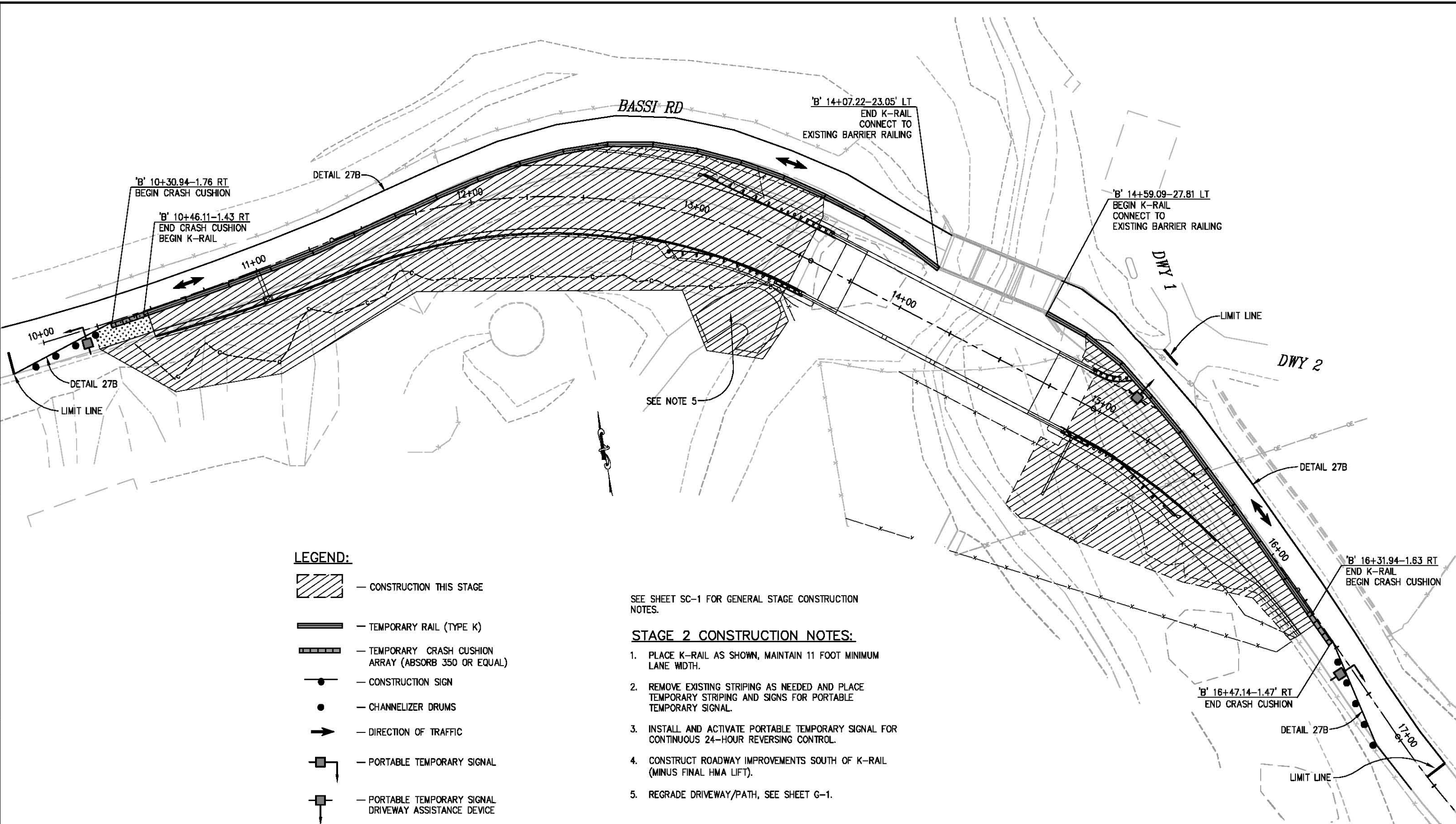


**COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION**

**BASSI RD AT GRANITE CREEK
 BRIDGE REPLACEMENT**

SHEET	SC-2
14 OF 41	
W.D. No.	77128

ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D\Projects\77128 Bassi Rd at Granite Ck\SC-3 Sheets\SC-Sheets.dwg Layout Tab: SC-3 Jul 19, 2018 11:21am Svicley



LEGEND:

- CONSTRUCTION THIS STAGE
- TEMPORARY RAIL (TYPE K)
- TEMPORARY CRASH CUSHION ARRAY (ABSORB 350 OR EQUAL)
- CONSTRUCTION SIGN
- CHANNELIZER DRUMS
- DIRECTION OF TRAFFIC
- PORTABLE TEMPORARY SIGNAL
- PORTABLE TEMPORARY SIGNAL DRIVEWAY ASSISTANCE DEVICE

SEE SHEET SC-1 FOR GENERAL STAGE CONSTRUCTION NOTES.

STAGE 2 CONSTRUCTION NOTES:

1. PLACE K-RAIL AS SHOWN, MAINTAIN 11 FOOT MINIMUM LANE WIDTH.
2. REMOVE EXISTING STRIPING AS NEEDED AND PLACE TEMPORARY STRIPING AND SIGNS FOR PORTABLE TEMPORARY SIGNAL.
3. INSTALL AND ACTIVATE PORTABLE TEMPORARY SIGNAL FOR CONTINUOUS 24-HOUR REVERSING CONTROL.
4. CONSTRUCT ROADWAY IMPROVEMENTS SOUTH OF K-RAIL (MINUS FINAL HMA LIFT).
5. REGRADE DRIVEWAY/PATH, SEE SHEET G-1.

PRELIMINARY

STAGE CONSTRUCTION SCALE: 1" = 20'



PREPARED UNDER THE SUPERVISION OF:
REGISTERED CIVIL ENGINEER

DESIGNED: MSF
CHECKED: DWH
ROAD NUMBER: 023



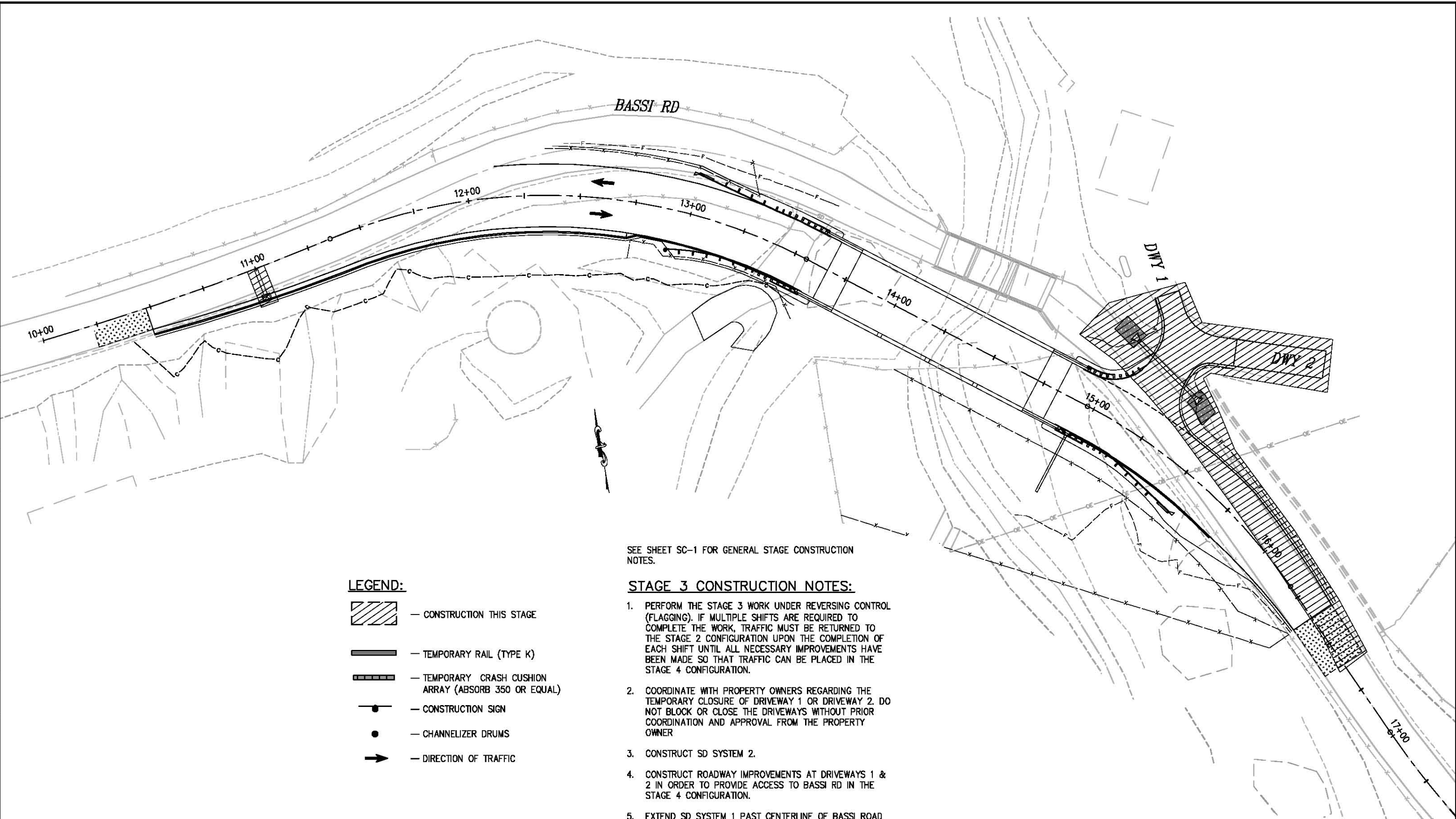
COUNTY OF EL DORADO DEPARTMENT OF TRANSPORTATION

BASSI RD AT GRANITE CREEK BRIDGE REPLACEMENT

SHEET
SC-3
15 OF 41
W.D. No. **77128**

REVISION	NUMBER	DATE	DESCRIPTION	BY

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D\Projects\77128 Bassi Road at Granite Ck\CADD Files\Sheets\SC-Sheets.dwg Layout Tab: SC-4 Jul 19, 2018 11:21am SMCvey
 FOR REDUCED PLANS



LEGEND:

- CONSTRUCTION THIS STAGE
- TEMPORARY RAIL (TYPE K)
- TEMPORARY CRASH CUSHION ARRAY (ABSORB 350 OR EQUAL)
- CONSTRUCTION SIGN
- CHANNELIZER DRUMS
- DIRECTION OF TRAFFIC

SEE SHEET SC-1 FOR GENERAL STAGE CONSTRUCTION NOTES.

STAGE 3 CONSTRUCTION NOTES:

1. PERFORM THE STAGE 3 WORK UNDER REVERSING CONTROL (FLAGGING). IF MULTIPLE SHIFTS ARE REQUIRED TO COMPLETE THE WORK, TRAFFIC MUST BE RETURNED TO THE STAGE 2 CONFIGURATION UPON THE COMPLETION OF EACH SHIFT UNTIL ALL NECESSARY IMPROVEMENTS HAVE BEEN MADE SO THAT TRAFFIC CAN BE PLACED IN THE STAGE 4 CONFIGURATION.
2. COORDINATE WITH PROPERTY OWNERS REGARDING THE TEMPORARY CLOSURE OF DRIVEWAY 1 OR DRIVEWAY 2. DO NOT BLOCK OR CLOSE THE DRIVEWAYS WITHOUT PRIOR COORDINATION AND APPROVAL FROM THE PROPERTY OWNER
3. CONSTRUCT SD SYSTEM 2.
4. CONSTRUCT ROADWAY IMPROVEMENTS AT DRIVEWAYS 1 & 2 IN ORDER TO PROVIDE ACCESS TO BASSI RD IN THE STAGE 4 CONFIGURATION.
5. EXTEND SD SYSTEM 1 PAST CENTERLINE OF BASSI ROAD TO ALLOW FOR COMPLETION DURING STAGE 4.

PRELIMINARY

**STAGE CONSTRUCTION
SCALE : 1" = 20'**

REVISION	NUMBER	DATE	DESCRIPTION	BY	DATE



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER

DESIGNED: MSF
 DRAWN: SGM
 CHECKED: DWH
 DATE: 07/19/18
 ROAD NUMBER: 023

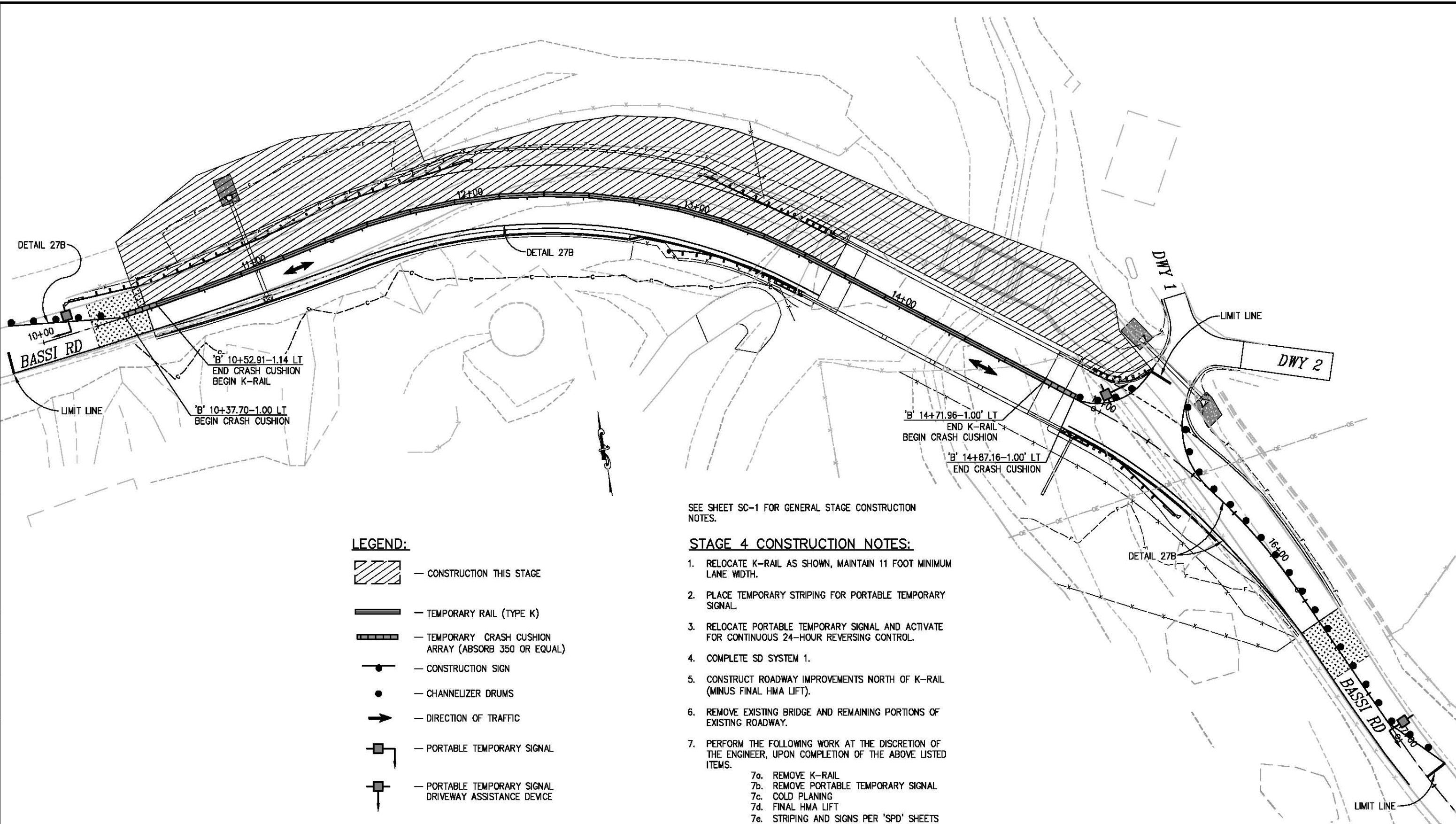


**COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION**

**BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT**

SHEET
SC-4
 16 OF 41
 W.O. No. **77128**

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D\Projects\77128 Bassi Road at Granite Creek\SC-5\SC-Sheets.dwg Layout Tab: SC-5 Jul 19, 2018 11:21am SMCvey
 FOR REDUCED PLANS



SEE SHEET SC-1 FOR GENERAL STAGE CONSTRUCTION NOTES.

STAGE 4 CONSTRUCTION NOTES:

1. RELOCATE K-RAIL AS SHOWN, MAINTAIN 11 FOOT MINIMUM LANE WIDTH.
2. PLACE TEMPORARY STRIPING FOR PORTABLE TEMPORARY SIGNAL.
3. RELOCATE PORTABLE TEMPORARY SIGNAL AND ACTIVATE FOR CONTINUOUS 24-HOUR REVERSING CONTROL.
4. COMPLETE SD SYSTEM 1.
5. CONSTRUCT ROADWAY IMPROVEMENTS NORTH OF K-RAIL (MINUS FINAL HMA LIFT).
6. REMOVE EXISTING BRIDGE AND REMAINING PORTIONS OF EXISTING ROADWAY.
7. PERFORM THE FOLLOWING WORK AT THE DISCRETION OF THE ENGINEER, UPON COMPLETION OF THE ABOVE LISTED ITEMS.
 - 7a. REMOVE K-RAIL
 - 7b. REMOVE PORTABLE TEMPORARY SIGNAL
 - 7c. COLD PLANING
 - 7d. FINAL HMA LIFT
 - 7e. STRIPING AND SIGNS PER 'SPD' SHEETS

LEGEND:

- CONSTRUCTION THIS STAGE
- TEMPORARY RAIL (TYPE K)
- TEMPORARY CRASH CUSHION ARRAY (ABSORB 350 OR EQUAL)
- CONSTRUCTION SIGN
- CHANNELIZER DRUMS
- DIRECTION OF TRAFFIC
- PORTABLE TEMPORARY SIGNAL
- PORTABLE TEMPORARY SIGNAL DRIVEWAY ASSISTANCE DEVICE

PRELIMINARY

**STAGE CONSTRUCTION
SCALE : 1" = 20'**

REVISION	NUMBER	DATE	DESCRIPTION	BY	DATE



PREPARED UNDER THE SUPERVISION OF:
JUSTIN W. HARRINGTON
 No. C71517
 License Expires 12-31-17
 CIVIL
 REGISTERED CIVIL ENGINEER

DESIGNED: MSF
 CHECKED: DWH
 ROAD NUMBER: 023

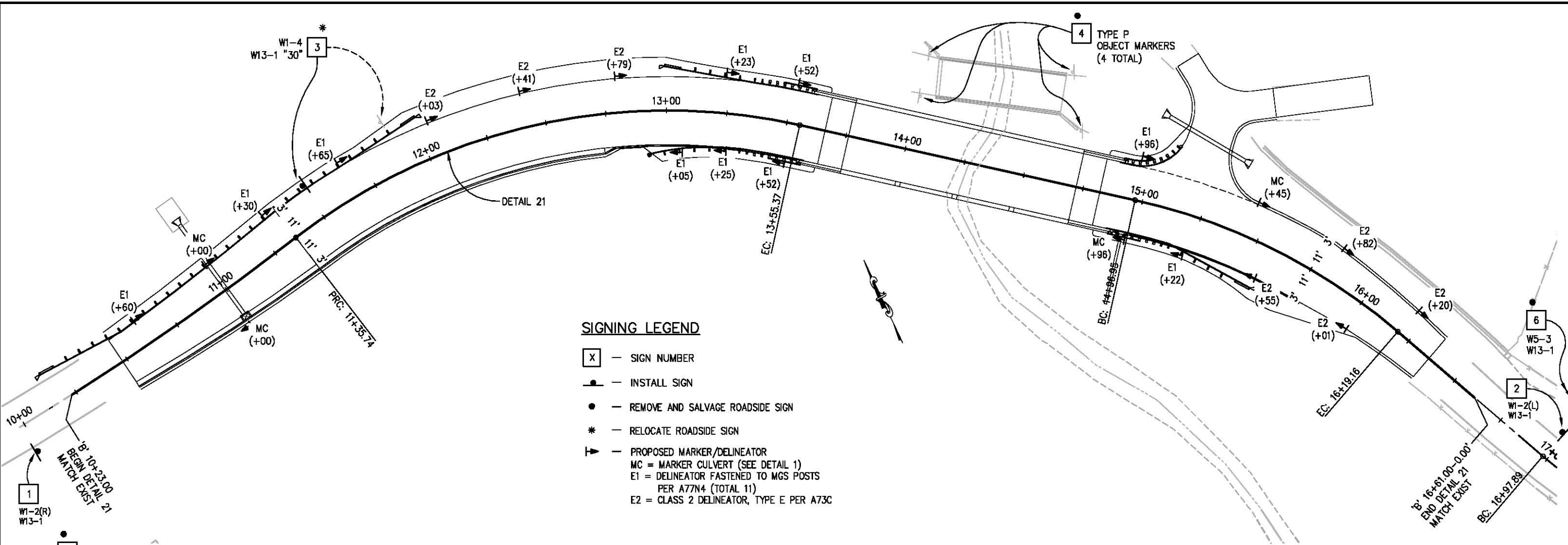


**COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION**

**BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT**

SHEET
SC-5
 17 OF 41
 W.O. No. **77128**

ORIGINAL SCALE IS IN INCHES
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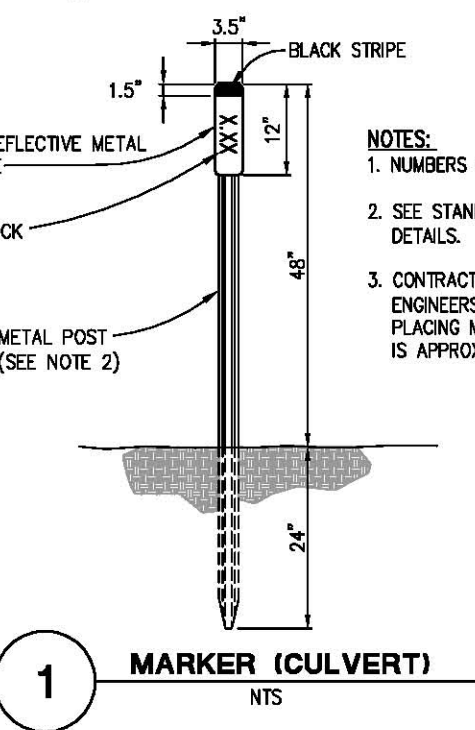


SIGNING LEGEND

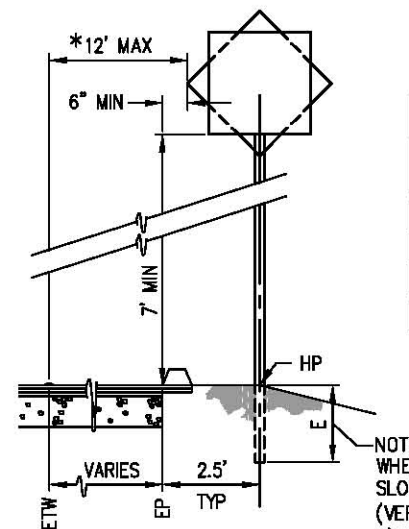
- [X] — SIGN NUMBER
- — INSTALL SIGN
- — REMOVE AND SALVAGE ROADSIDE SIGN
- * — RELOCATE ROADSIDE SIGN
- ▶ — PROPOSED MARKER/DELINEATOR
- MC = MARKER CULVERT (SEE DETAIL 1)
- E1 = DELINEATOR FASTENED TO MGS POSTS PER A77N4 (TOTAL 11)
- E2 = CLASS 2 DELINEATOR, TYPE E PER A73C

CONSTRUCTION NOTES

1. SIGNING AND PAVEMENT DELINEATION PLANS ARE ACCURATE FOR SIGNING AND PAVEMENT DELINEATION ONLY. SEE "SC" SHEETS FOR CONSTRUCTION AREA SIGNS.
2. LOCATIONS OF SIGNS SHOWN ARE APPROXIMATE. EXACT LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
3. VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES PRIOR TO SIGN POST INSTALLATION.
4. ALL CONSTRUCTION AND PERMANENT SIGNS SHALL HAVE PRESSURE TREATED DOUGLAS FIR WOOD POSTS. POST SIZES SHOWN ARE DRESSED DRY MINIMUM SIZE.
5. POST LENGTHS GIVEN ARE APPROXIMATE. EXACT LENGTH TO BE DETERMINED BY THE ENGINEER.
6. SIGNS SHALL BE LOCATED PER "SIGN LOCATION DETAIL", THIS SHEET.
7. ALL PERMANENT SIGNS SHALL BE 12 GAUGE (0.078") ALUMINUM PANELS.
8. ALL EXISTING MARKERS/DELINEATORS WITHIN THE CONSTRUCTION AREA SHALL BE REMOVED AND SALVAGED UNLESS OTHERWISE NOTED.
9. ALL CULVERT MARKERS SHALL BE PLACED PER "MARKER (CULVERT)" DETAIL, THIS SHEET.
10. ANY RELOCATED SIGNS DAMAGED BY THE RELOCATION PROCESS SHALL BE REPLACED AT CONTRACTOR'S EXPENSE. DAMAGED SIGNS ARE TO BE SALVAGED AND RETURNED TO EL DORADO COUNTY.



1 MARKER (CULVERT)
NTS



2 SIGN LOCATION DETAIL
NTS
SEE ALSO STD PLAN RS-2

POST SIZE	"E"
4"x4"	3.5'
4"x6"	4.5'
6"x6"	5.0'
6"x8"	6.0'

* WHERE CLEARANCE FROM ETW IS GREATER THAN 12', USE STD PLAN RS-1

- NOTES:**
1. NUMBERS AS DESIGNATED BY THE ENGINEER.
 2. SEE STANDARD PLAN A73B FOR METAL POST DETAILS.
 3. CONTRACTOR SHALL FIELD VERIFY PM WITH ENGINEERS APPROVAL PRIOR TO ORDERING AND PLACING METAL TARGET PLATES. POST MILE IS APPROXIMATE ON THESE PLANS.

PRELIMINARY

THIS PLAN ACCURATE FOR SIGNING AND PAVEMENT DELINEATION WORK ONLY

SIGNING AND PAVEMENT DELINEATION
SCALE : 1" = 40'

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER
 DATE: _____

DESIGNED: DWH
 DRAWN: SGM
 CHECKED: DWH
 DATE: 07/19/18
 ROAD NUMBER: 023



COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT

SHEET
SPD-1
 18 OF 41
 W.D. No. **77128**

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D\Projects\77128 Bassi Road at Granite C\ADD Files\Sheets\SPD-Sheets.dwg Layout Tab: SPD-2 Jul 19, 2018 -- 11:31am Shalvey
 FOR REDUCED PLANS
 2
 1
 0

SIGN QUANTITIES									
SIGN NO.	SIGN	CALIFORNIA MUTCD CODE	PANEL SIZE (INCHES)	WOOD POST SIZE & LENGTH 4" X 6"	ROADSIDE SIGNS			EXISTING LOCATION	PROPOSED LOCATION (APPROXIMATELY)
					ONE POST EA	RELOCATE EA	SALVAGE EA		
1	ADVANCED WARNING 'CURVE AHEAD'	W1-2(R)	36 X 36	15	1				'B' 10+00 RT
	'25 MPH'	W13-1	30 X 30						
2	ADVANCED WARNING 'CURVE AHEAD'	W1-2(L)	36 X 36	15	1				'B' 17+00 LT
	'25 MPH'	W13-1	30 X 30						
3	ADVANCED WARNING 'CURVE AHEAD'/ADVISORY SPEED	W1-4 AND W13-1		15		1		'B' 11+88 LT	'B' 11+50 LT
4	TYPE 'P' MARKER						4	EXISTING BRIDGE	
5	ADVANCED WARNING 'BRIDGE AHEAD'/ADVISORY SPEED	W5-3 AND W13-1					1	±8+60 RT	
6	ADVANCED WARNING 'BRIDGE AHEAD'/ADVISORY SPEED	W5-3 AND W13-1					1	±19+10 LT	
TOTAL					2	1	6		

MARKER (CULVERT)					
NUMERAL ON TARGET ON PLATE	FACING TRAFFIC		FACING TRAFFIC		LOCATION
	EA		EA		
	E	W	S	N	
0.30	1				'B' 11+00 LT
0.30		1			'B' 11+00 RT
0.22		1			'B' 14+96 RT
0.21	1				'B' 15+45 LT
SUBTOTAL	2	2			
TOTAL	4				

THERMOPLASTIC TRAFFIC STRIPE (ENHANCED WET NIGHT VISIBILITY)				
DETAIL NO./STANDARD PLAN	FROM	TO	WHITE FT	YELLOW FT
DETAIL 21/A20A	'B' 10+23.00	'B' 16+61.00		1,276
TOTAL				1,276

DELINEATORS		
LOCATION	TYPE E CLASS 1	TYPE E CLASS 2
'B' 10+60 LT	1	
'B' 11+30 LT	1	
'B' 11+65 LT	1	
'B' 12+03 LT		1
'B' 12+41 LT		1
'B' 12+79 LT		1
'B' 13+05 RT	1	
'B' 13+23 LT	1	
'B' 13+25 RT	1	
'B' 13+52 LT & RT	2	
'B' 14+96 LT	1	
'B' 15+22 RT	1	
'B' 15+55 RT		1
'B' 15+82 LT		1
'B' 16+01 RT		1
'B' 16+20 LT		1
TOTAL	10	7

PRELIMINARY

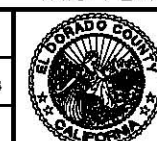
THIS PLAN ACCURATE FOR SIGNING AND PAVEMENT DELINEATION WORK ONLY

**SIGNING AND PAVEMENT DELINEATION
SCALE : NONE**



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER
 DATE: _____

DESIGNED: DWH
 CHECKED: DWH
 ROAD NUMBER: 023



**COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION**

**BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT**

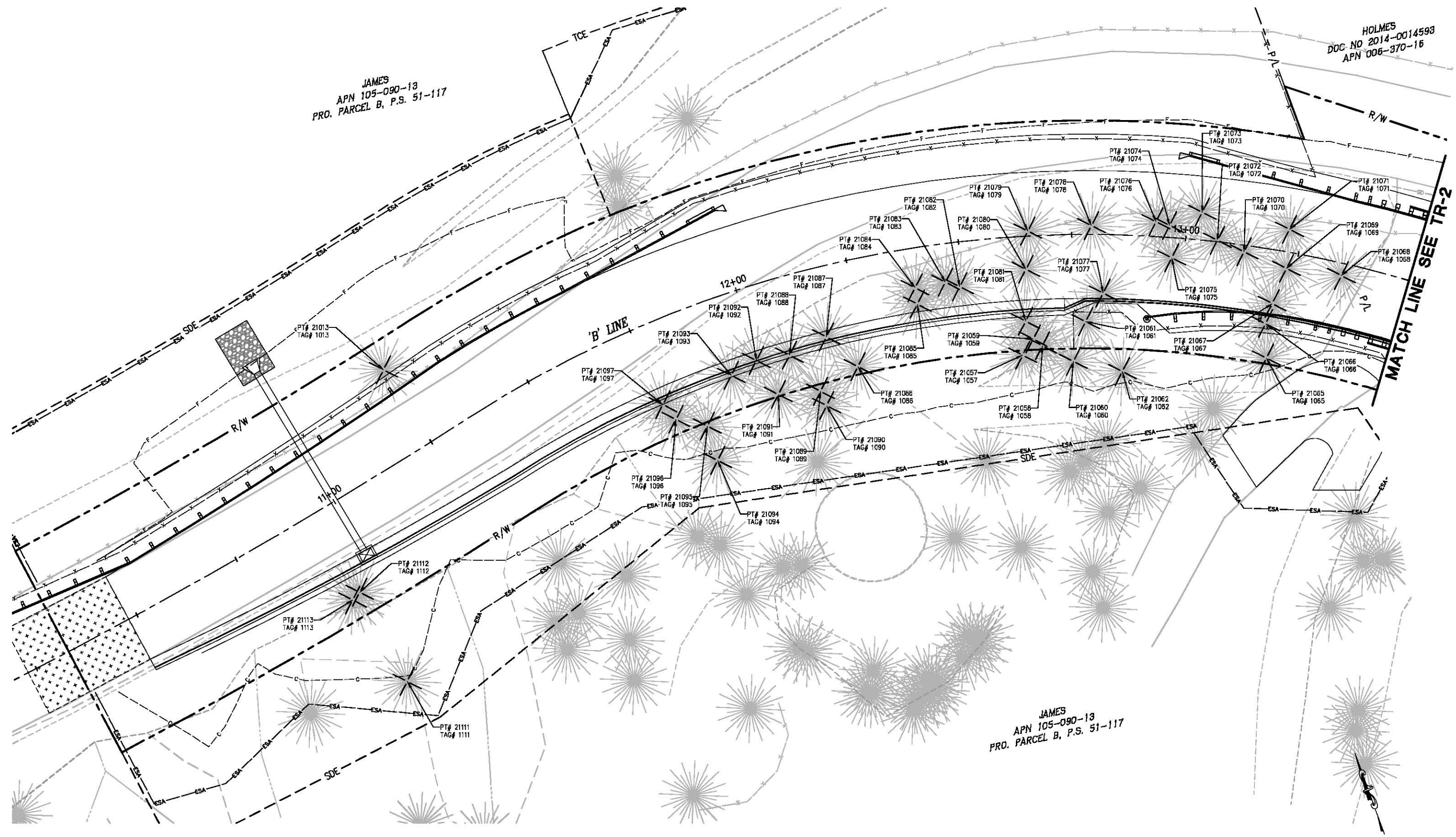
SHEET
SPD-2
 19 OF 41
 W.O. No. **77128**

HOLMES
 DOC NO 2014-0014593
 APN 006-370-16

JAMES
 APN 105-090-13
 PRO. PARCEL B, P.S. 51-117

JAMES
 APN 105-090-13
 PRO. PARCEL B, P.S. 51-117

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D\Projects\77128 Bassi Road at Granite Creek\TR-Sheets.dwg Layout Tab: TR-1 Jul 09, 2018 7:13am SmeVey
 FOR REDUCED PLANS
 2
 1
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PRELIMINARY

**TREE REMOVAL PLAN
 SCALE : 1" = 10'**



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER
 DATE:

DESIGNED: DWH
 DRAWN: SGM
 CHECKED: DWH
 DATE: 07/09/18
 ROAD NUMBER: 023



**COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION**

**BASSI RD AT GRANITE CREEK
 BRIDGE REPLACEMENT**

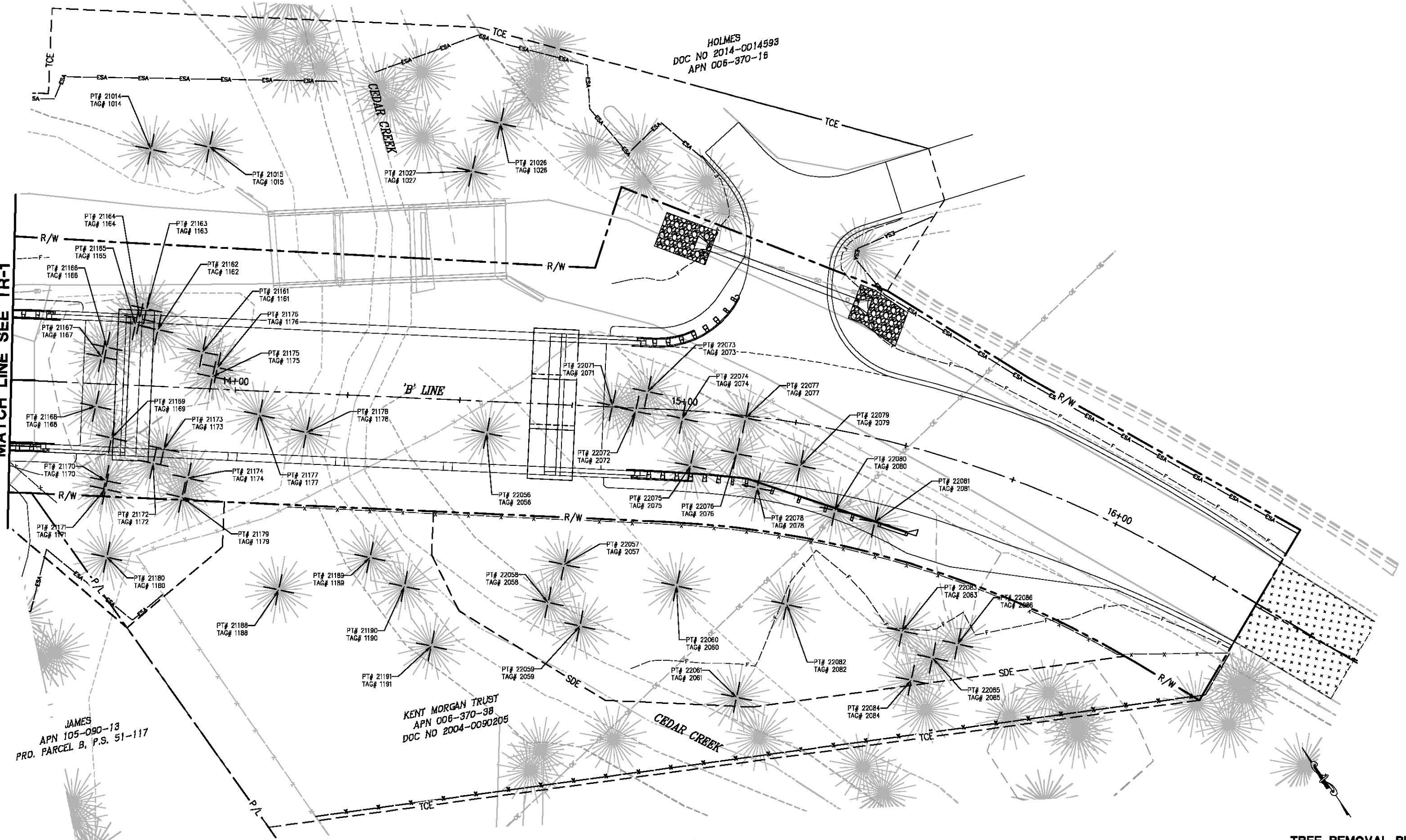
SHEET
TR-1
 20 OF 41
 W.D. No. **77128**

REVISION	NUMBER	DATE	DESCRIPTION	BY

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D\Projects\77128 Bassi Road at Granite C\AADD Files\Sheets\TR-Sheets.dwg Layout Tab: TR-2 Jul 09, 2018 7:13am SMC\vey

MATCH LINE SEE TR-1

HOLMES
 DOC NO 2014-0014593
 APN 006-370-16



JAMES
 APN 105-090-13
 PRD. PARCEL B, P.S. 51-117

KENT MORGAN TRUST
 APN 006-370-98
 DOC NO 2004-0090205

PRELIMINARY

TREE REMOVAL PLAN
 SCALE: 1" = 10'

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER
 DATE: _____

DESIGNED: DWH
 CHECKED: DWH
 ROAD NUMBER: 023



COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT

SHEET
TR-2
 21 OF 41
 W.D. No. **77128**

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D Projects\77128 Bassi Road at Granite C\CADD Files\Sheets\TR-Sheets.dwg Layout Tab: TR-3 Jul 09, 2018 7:13am SMC\ey

TREE REMOVAL TABLE

POINT NUMBER	TAG NUMBER	'B' LINE STATION	OFFSET	DESCRIPTION & DIA.
21013	1013	11+24.53	18.94' LT	OAK CLUSTER-0.48" TO 0.73"
21014	1014	13+78.77	52.63' LT	ORNAMENTAL FORKED-0.51"
21015	1015	13+91.78	53.75' LT	ORNAMENTAL-0.83"
21026	1026	14+56.24	61.90' LT	OAK-0.64"
21027	1027	14+50.39	51.02' LT	ORNAMENTAL CLUSTER-0.38"
21057	1057	12+62.51	26.04' RT	OAK FORKED-0.86" & 0.99"
21058	1058	12+67.45	24.21' RT	OAK-0.48"
21059	1059	12+65.27	22.64' RT	OAK FORKED-0.54" & 0.60"
21060	1060	12+74.90	27.85' RT	OAK-0.48"
21061	1061	12+77.95	19.13' RT	OAK-0.45"
21062	1062	12+87.08	29.96' RT	OAK-0.95"
21065	1065	13+22.03	23.74' RT	OAK CLUSTER-0.48" TO 1.05"
21066	1066	13+20.41	16.33' RT	OAK-0.66"
21067	1067	13+21.14	11.74' RT	OAK CLUSTER-0.67" TO 0.83"
21068	1068	13+35.26	2.72' RT	OAK-0.92"
21069	1069	13+22.98	3.59' RT	PINE-1.45"
21070	1070	13+13.10	1.46' RT	PINE-1.37"
21071	1071	13+22.14	4.95' LT	OAK-0.67"
21072	1072	13+06.96	0.31' LT	OAK-1.05"
21073	1073	13+03.03	6.08' LT	OAK-0.64"
21074	1074	12+96.29	0.00' RT	OAK-0.64"
21075	1075	12+97.26	4.48' RT	OAK-0.80"
21076	1076	12+93.25	3.23' LT	OAK-0.76"
21077	1077	12+82.00	12.86' RT	OAK-0.51"
21078	1078	12+79.27	1.91' LT	OAK CLUSTER-0.57" TO 0.83"
21079	1079	12+65.35	1.08' LT	PINE-1.59"
21080	1080	12+64.46	7.28' RT	OAK-0.48"
21081	1081	12+63.72	18.63' RT	OAK FORKED-0.32" & 0.45"
21082	1082	12+49.13	9.83' RT	OAK FORKED-1.02" & 1.18"
21083	1083	12+46.03	8.45' RT	OAK CLUSTER-0.38" TO 0.89"
21084	1084	12+39.03	8.69' RT	OAK FORKED-0.38" & 0.73"
21085	1085	12+38.93	12.33' RT	OAK FORKED-1.05" & 1.18"
21086	1086	12+22.35	23.29' RT	OAK-0.54"
21087	1087	12+16.70	15.34' RT	OAK CLUSTER-0.32" TO 0.38"
21088	1088	12+07.22	17.07' RT	OAK CLUSTER-0.32" TO 0.41"
21089	1089	12+12.04	26.56' RT	OAK-0.45"
21090	1090	12+12.54	29.94' RT	OAK CLUSTER-0.32" TO 0.57"

TREE REMOVAL TABLE

POINT NUMBER	TAG NUMBER	'B' LINE STATION	OFFSET	DESCRIPTION & DIA.
21091	1091	12+01.93	24.60' RT	OAK-0.45"
21092	1092	11+99.41	16.02' RT	OAK CLUSTER-0.32" TO 0.48"
21093	1093	11+92.67	17.32' RT	OAK CLUSTER-0.35" TO 0.64"
21094	1094	11+82.16	33.70' RT	OAK FORKED-0.76" & 0.83"
21095	1095	11+82.98	25.86' RT	OAK-0.41"
21096	1096	11+76.57	21.85' RT	OAK-0.54"
21097	1097	11+75.12	17.74' RT	OAK FORKED-0.54" & 0.80"
21111	1111	10+93.58	42.09' RT	OAK-1.24"
21112	1112	10+94.59	19.94' RT	OAK FORKED-0.60" & 0.83"
21113	1113	10+92.44	20.61' RT	OAK-0.38"
21161	1161	13+92.31	8.13' LT	ORNAMENTAL CLUSTER-0.32" TO 0.48"
21162	1162	13+82.13	12.61' LT	ORNAMENTAL FORKED-0.45" & 0.48"
21163	1163	13+79.43	17.12' LT	ORNAMENTAL FORKED-0.35" & 0.45"
21164	1164	13+78.00	14.85' LT	ORNAMENTAL FORKED-0.38" & 0.45"
21165	1165	13+77.07	13.52' LT	ORNAMENTAL-0.54"
21166	1166	13+70.96	8.21' LT	OAK-0.48"
21167	1167	13+69.90	6.03' LT	OAK FORKED-0.64" & 0.92"
21168	1168	13+69.07	5.06' RT	OAK-1.40"
21169	1169	13+72.92	11.93' RT	OAK-0.57"
21170	1170	13+72.00	21.47' RT	OAK-0.64"
21171	1171	13+72.06	23.37' RT	OAK-0.64"
21172	1172	13+82.41	17.14' RT	ORNAMENTAL-0.32"
21173	1173	13+84.68	13.84' RT	ORNAMENTAL-0.45"
21174	1174	13+90.29	20.07' RT	ORNAMENTAL-0.41"
21175	1175	13+94.75	2.71' LT	ORNAMENTAL-0.48"
21176	1176	13+95.78	4.80' LT	ORNAMENTAL-0.76"
21177	1177	14+05.57	5.31' RT	ORNAMENTAL-1.21"
21178	1178	14+16.22	8.74' RT	ORNAMENTAL-1.21"
21179	1179	13+89.16	24.39' RT	BUCKEYE-0.45"
21180	1180	13+73.06	38.46' RT	OAK-1.53"
21188	1188	14+11.62	44.01' RT	OAK-0.51"
21189	1189	14+31.57	35.91' RT	ORNAMENTAL-2.01"
21190	1190	14+39.51	41.98' RT	ORNAMENTAL-1.81"
21191	1191	14+46.10	54.99' RT	ORNAMENTAL-0.99"
22056	2056	14+56.27	7.07' RT	ORNAMENTAL-2.23"
22057	2057	14+74.86	35.50' RT	ORNAMENTAL-1.57"
22058	2058	14+71.62	44.12' RT	ORNAMENTAL-1.31"

TREE REMOVAL TABLE

POINT NUMBER	TAG NUMBER	'B' LINE STATION	OFFSET	DESCRIPTION & DIA.
22059	2059	14+78.93	49.02' RT	ORNAMENTAL-1.43"
22060	2060	15+00.61	39.10' RT	OAK-0.57"
22061	2061	15+20.38	62.44' RT	ORNAMENTAL-0.83"
22071	2071	14+83.99	0.33' LT	ORNAMENTAL-0.41"
22072	2072	14+89.17	0.70' RT	ORNAMENTAL-0.48"
22073	2073	14+91.69	3.77' LT	OAK FORKED-1.21" & 1.40"
22074	2074	14+99.67	1.83' RT	OAK FORKED-0.67" & 0.83"
22075	2075	15+02.19	12.25' RT	OAK-0.48"
22076	2076	15+12.57	8.60' RT	OAK-0.64"
22077	2077	15+13.76	0.50' RT	OAK-1.21"
22078	2078	15+18.37	15.66' RT	OAK FORKED-1.18" & 1.27"
22079	2079	15+27.54	9.34' RT	PINE-0.95"
22080	2080	15+37.53	17.69' RT	OAK CLUSTER-1.02" to 2.32"
22081	2081	15+47.50	18.23' RT	BUCKEYE CLUSTER-0.32" to 0.48"
22082	2082	15+30.16	40.29' RT	OAK-1.56"
22083	2083	15+61.59	39.90' RT	OAK FORKED-0.73" & 0.86"
22084	2084	15+68.07	49.70' RT	OAK-1.21"
22085	2085	15+71.55	43.43' RT	BUCKEYE-0.45"
22086	2086	15+76.58	38.56' RT	BUCKEYE-0.32"

PRELIMINARY

**TREE REMOVAL TABLE
SCALE : NONE**



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER
 DATE: _____

DESIGNED: DWH
 CHECKED: DWH
 ROAD NUMBER: 023



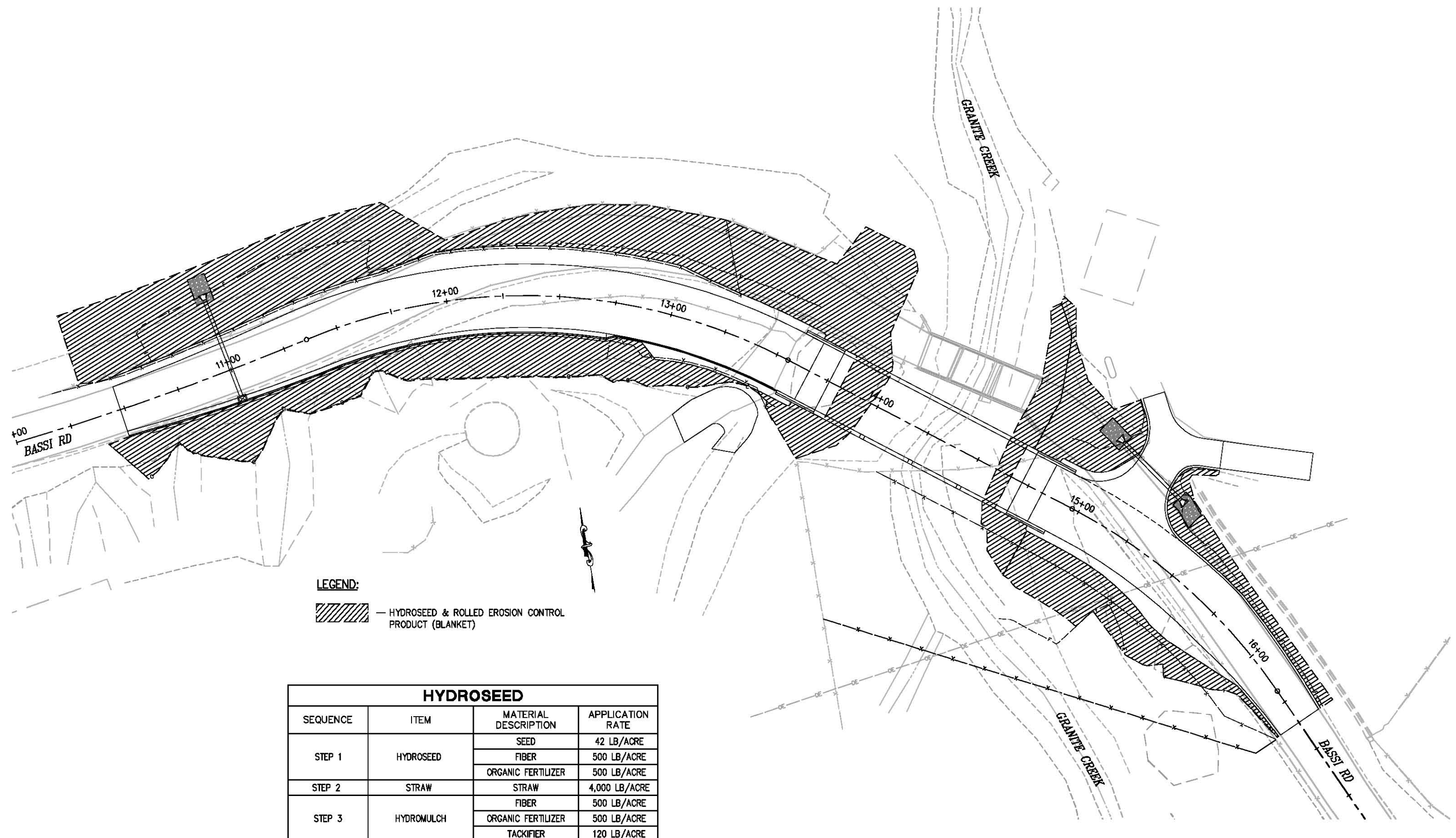
**COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION**

**BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT**

SHEET
TR-3
 22 OF 41
 77128

REVISION	NUMBER	DATE	DESCRIPTION	BY

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D Projects\77128 Bassi Road at Granite C\EC-Sheets.dwg Layout Tab: EC-1 Jul 09, 2018 -- 7:16am Shelley
 FOR REDUCED PLANS



LEGEND:
 — HYDROSEED & ROLLED EROSION CONTROL PRODUCT (BLANKET)

HYDROSEED			
SEQUENCE	ITEM	MATERIAL DESCRIPTION	APPLICATION RATE
STEP 1	HYDROSEED	SEED	42 LB/ACRE
		FIBER	500 LB/ACRE
		ORGANIC FERTILIZER	500 LB/ACRE
STEP 2	STRAW	STRAW	4,000 LB/ACRE
STEP 3	HYDROMULCH	FIBER	500 LB/ACRE
		ORGANIC FERTILIZER	500 LB/ACRE
		TACKIFIER	120 LB/ACRE

PRELIMINARY

THIS PLAN ACCURATE FOR EROSION CONTROL WORK ONLY

EROSION CONTROL PLAN
 SCALE : 1" = 20'

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF :
 REGISTERED CIVIL ENGINEER
 DATE: _____

DESIGNED: MSF
 CHECKED: DWH
 ROAD NUMBER: 023

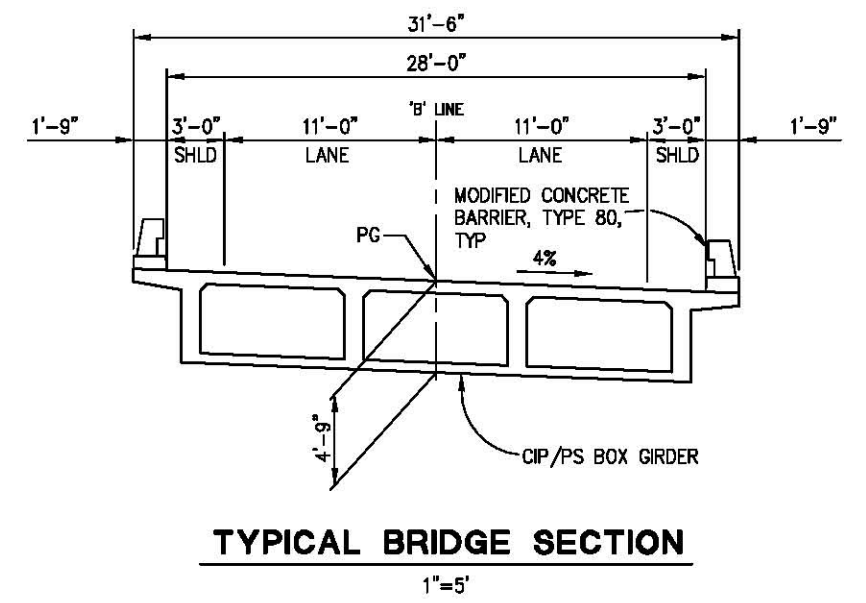
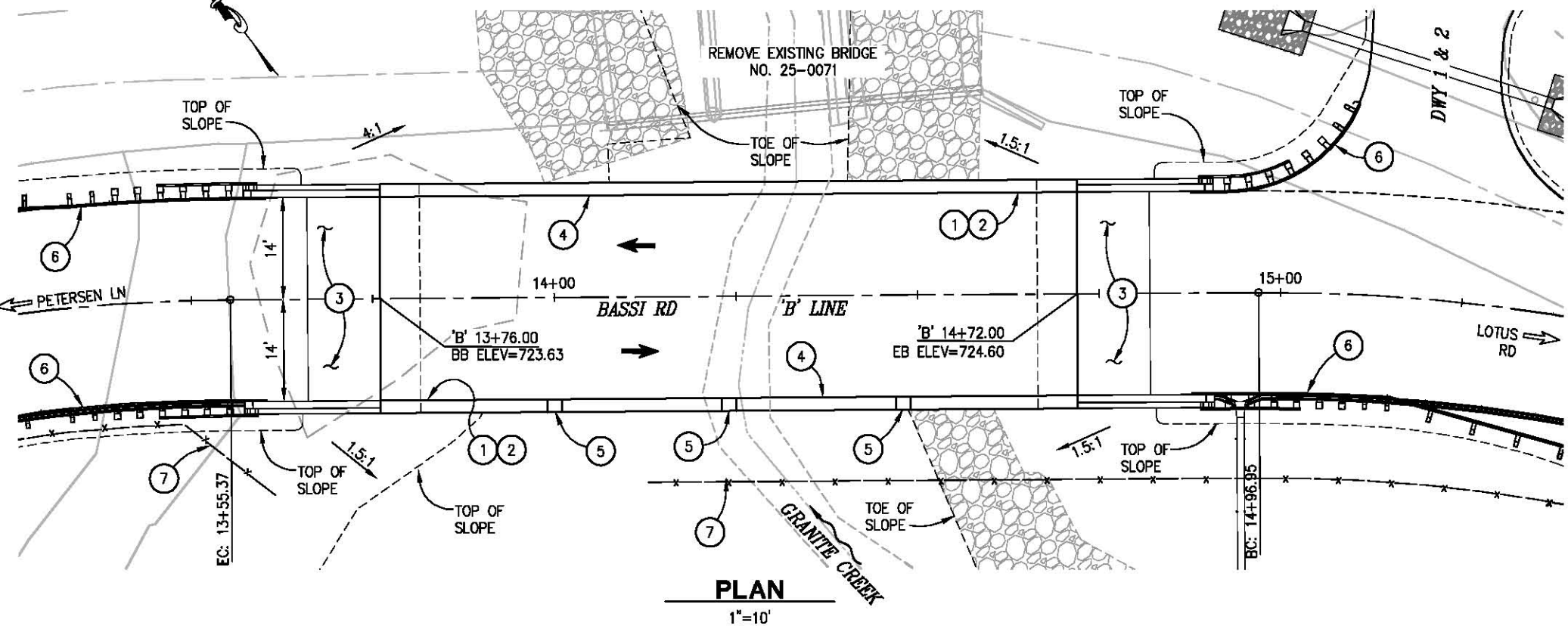
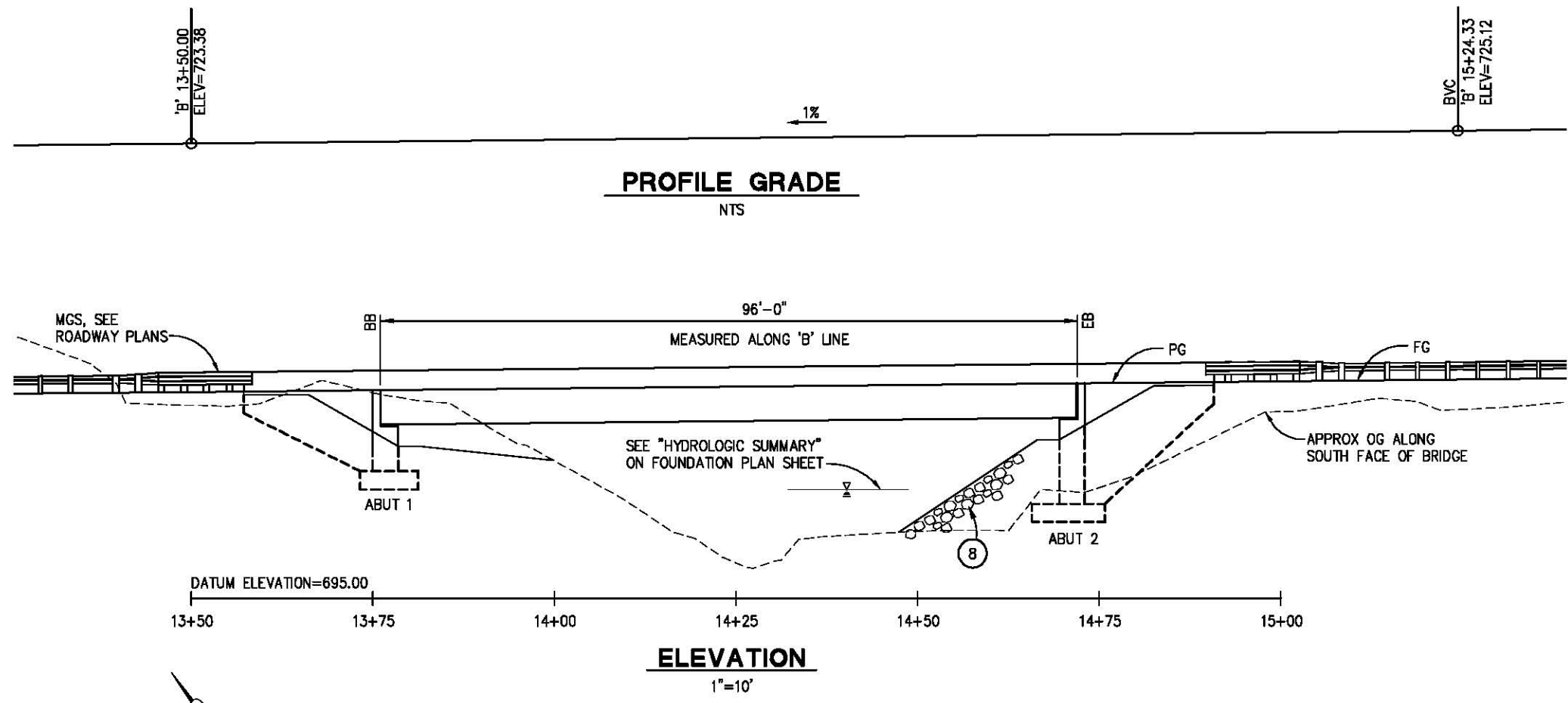


COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT

SHEET
EC-1
 23 OF 41
 W.O. No. **77128**

ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D\Projects\77128 Bassi Road at Granite Ck\ADD Files\Sheets\S-Sheets.dwg Layout Tab: S-1 Jul 19, 2018 - 7:49am SmeVey



QUANTITIES:

BRIDGE REMOVAL	1	LS
STRUCTURE EXCAVATION (BRIDGE)	XX	CY
STRUCTURE BACKFILL (BRIDGE)	XX	CY
PRESTRESSING CAST-IN-PLACE CONCRETE	1	LS
STRUCTURAL CONCRETE, BRIDGE FOOTING	XX	CY
STRUCTURAL CONCRETE, BRIDGE	XX	CY
STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER)	XX	CY
STRUCTURAL CONCRETE, APPROACH SLAB (TYPE EQ)	XX	CY
JOINT SEAL (MR 1")	XX	LF
BAR REINFORCING STEEL (BRIDGE)	XX	LB
BAR REINFORCING STEEL, EPOXY COATED (BRIDGE)	XX	LB
CONCRETE BARRIER (TYPE 80 MODIFIED)	XX	LF

- GENERAL NOTES:**
- CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS PRIOR TO ORDERING OR FABRICATING ANY MATERIAL, OR PERFORMING STRUCTURE EXCAVATION.
 - EXISTING BRIDGE TO BE REMOVED.
 - FOR 'B' LINE ALIGNMENT DATA SEE "CD" AND "L" SHEETS.

- CONSTRUCTION NOTES:**
- PAINT "BRIDGE NO. 25-0145" ON BOTTOM RAIL
 - PAINT "GRANITE CREEK BRIDGE" ON BOTTOM RAIL
 - STRUCTURE APPROACH SLAB, TYPE EQ(10)
 - CONCRETE BARRIER, (TYPE 80 MOD)
 - SCUPPER: 3 EA @ 14+00, 14+24, AND 14+48 **B7-8**
 - MIDWEST GUARDRAIL SYSTEM, SEE ROAD PLANS
 - FENCE, SEE ROAD PLANS
 - ROCK SLOPE PROTECTION, SEE ROAD PLANS

PRELIMINARY **GENERAL PLAN SCALE: AS SHOWN**

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
MICHAEL S. FROMM
 No. C79395
 LICENSED PROFESSIONAL ENGINEER
 REGISTERED CIVIL ENGINEER

DESIGNED: MSF
 DRAWN: SGM
 CHECKED: LLK
 DATE: 07/19/18
 ROAD NUMBER: 023

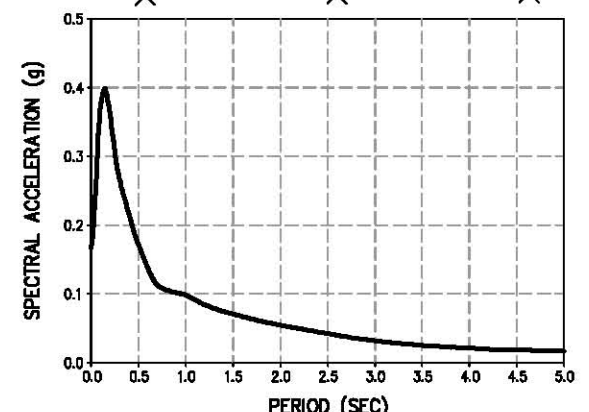
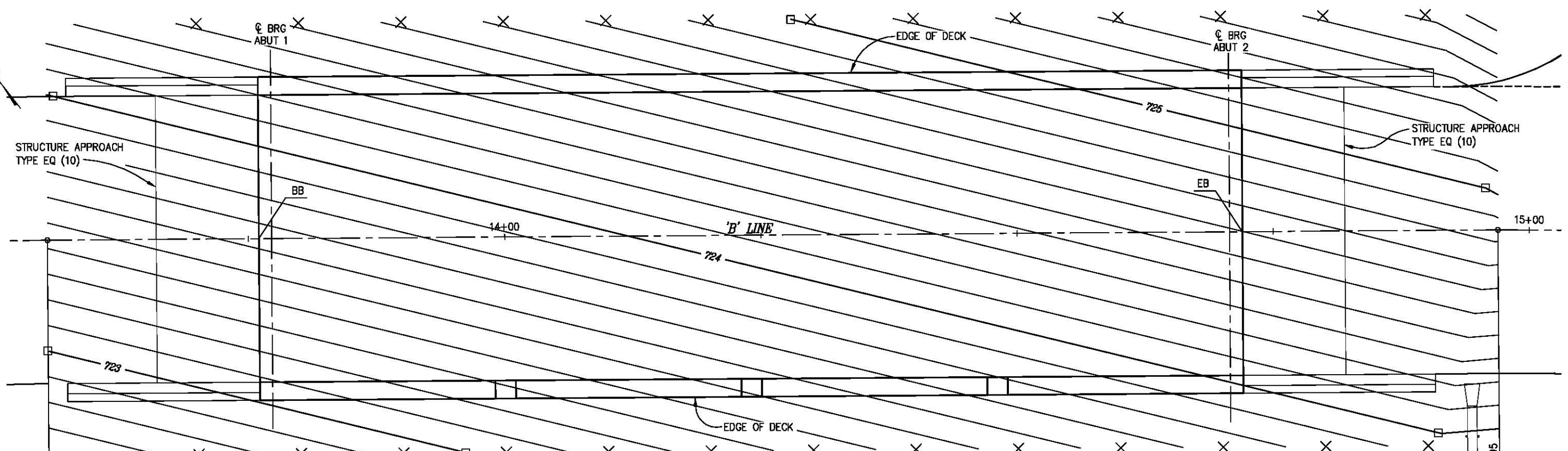


COUNTY OF EL DORADO DEPARTMENT OF TRANSPORTATION

BASSI RD AT GRANITE CREEK BRIDGE REPLACEMENT

SHEET **S-1**
 24 OF 41
 W.D. No. **77128**

ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D\Projects\77128 Bassi Rd at Granite Ck\CADD Files\Sheets\S-Sheets.dwg Layout Tab: S-2 Jul 19, 2018 - 7:53am SMeVey
FOR REDUCED PLANS



ACCELERATION RESPONSE SPECTRA CURVE
NTS

DECK CONTOURS
SCALE: 1"=5'

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

DESIGN:
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS,
6TH EDITION AND THE CALTRANS AMENDMENTS,
PREFACE DATED JANUARY 2014.

SEISMIC DESIGN:
CALTRANS SEISMIC DESIGN CRITERIA (SDC),
VERSION 1.7, APRIL 2013

DEAD LOAD:
INCLUDES 35 PSF FOR FUTURE WEARING SURFACE,
AND 100 PLF FOR FUTURE UTILITIES.

LIVE LOAD:
HL93 W/ "LOW BOY" AND PERMIT DESIGN VEHICLE.

SEISMIC LOADING:
SDC ARS CURVE FOR SOIL PROFILE TYPE B
VS30 = 1408M/S (APPROXIMATELY 4619 FT/S)
MAGNITUDE = 6.5
PEAK HORIZONTAL GROUND ACCELERATION = 0.17G

REINFORCED CONCRETE:
fy = 60 KSI
fc = 3.6 KSI, UNLESS OTHERWISE NOTED.
n = 8

PRESTRESSED CONCRETE:
SEE "PRESTRESSING NOTES" ON "GIRDER LAYOUT"
SHEET.

NOTES:

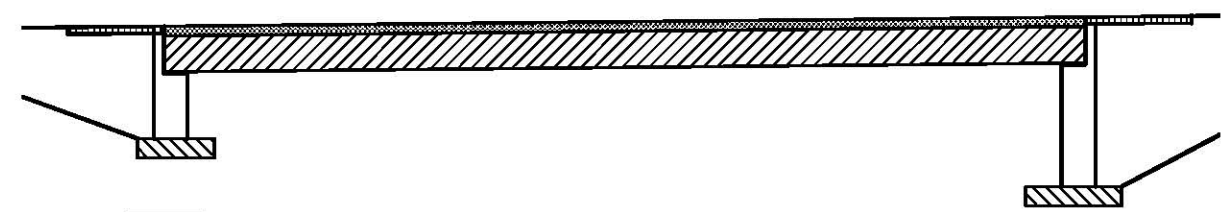
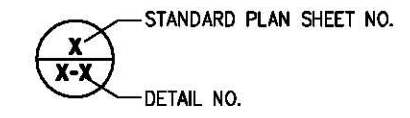
1. CONTOUR INTERVAL IS 0.1 FEET.
2. X - INDICATES 10' INTERVALS MEASURED ALONG 'B' LINE.
3. □ - INDICATES WHOLE-FOOT CONTOURS.
4. CONTOURS DO NOT INCLUDE CAMBER OR ALLOWANCE FOR FALSEWORK SETTLEMENT.

CALTRANS STANDARD PLANS DATED 2015:

- 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)
- RSP 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
- B0-1 BRIDGE DETAILS
- RSP B0-3 BRIDGE DETAILS
- B0-5 BRIDGE DETAILS
- B0-13 BRIDGE DETAILS
- B6-21 JOINT SEALS (MAXIMUM MOVEMENT RATING 2")
- B7-1 BOX GIRDER DETAILS
- B7-8 DECK DRAINAGE DETAILS
- RSP B8-5 CAST-IN-PLACE POST-TENSIONED GIRDER DETAILS
- RSP B9-5 STRUCTURE APPROACH SLAB DETAILS
- B11-60 CONCRETE BARRIER TYPE 80

INDEX TO PLANS:

- S-1 GENERAL PLAN
- S-2 DECK CONTOURS
- S-3 FOUNDATION PLAN
- S-4 ABUTMENT NO. 1 LAYOUT
- S-5 ABUTMENT NO. 2 LAYOUT
- S-6 ABUTMENT DETAILS NO. 1
- S-7 ABUTMENT DETAILS NO. 2
- S-8 TYPICAL SECTION
- S-9 GIRDER LAYOUT
- S-10 ANCHORAGE REINFORCEMENT DETAILS
- S-11 ARCHITECTURAL TREATMENT
- S-12 STRUCTURE APPROACH TYPE EQ (10)
- S-13 STRUCTURE APPROACH DRAINAGE DETAILS
- S-14 LOG OF TEST BORINGS (SHEET 1 OF 5)
- S-15 LOG OF TEST BORINGS (SHEET 2 OF 5)
- S-16 LOG OF TEST BORINGS (SHEET 3 OF 5)
- S-17 LOG OF TEST BORINGS (SHEET 4 OF 5)
- S-18 LOG OF TEST BORINGS (SHEET 5 OF 5)



- STRUCTURAL CONCRETE, BRIDGE (POLYMER FIBER) (fc=4.0 KSI @ 28 DAYS)
- STRUCTURAL CONCRETE, BRIDGE (fc=3.6 KSI @ 28 DAYS)
- STRUCTURAL CONCRETE, BRIDGE (fc=4.0 KSI @ 28 DAYS)
- STRUCTURAL CONCRETE, BRIDGE FOOTING (fc=3.6 KSI @ 28 DAYS)
- STRUCTURAL CONCRETE, STRUCTURE APPROACH (fc=3.6 KSI @ 28 DAYS)

CONCRETE STRENGTH AND TYPE LIMITS
NTS

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
MICHAEL S. FROMM
No. C79395
REGISTERED CIVIL ENGINEER
DATE:

DESIGNED: MSF
DRAWN: SGM
CHECKED: LLK
DATE: 07/19/18
ROAD NUMBER: 023



**COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION**

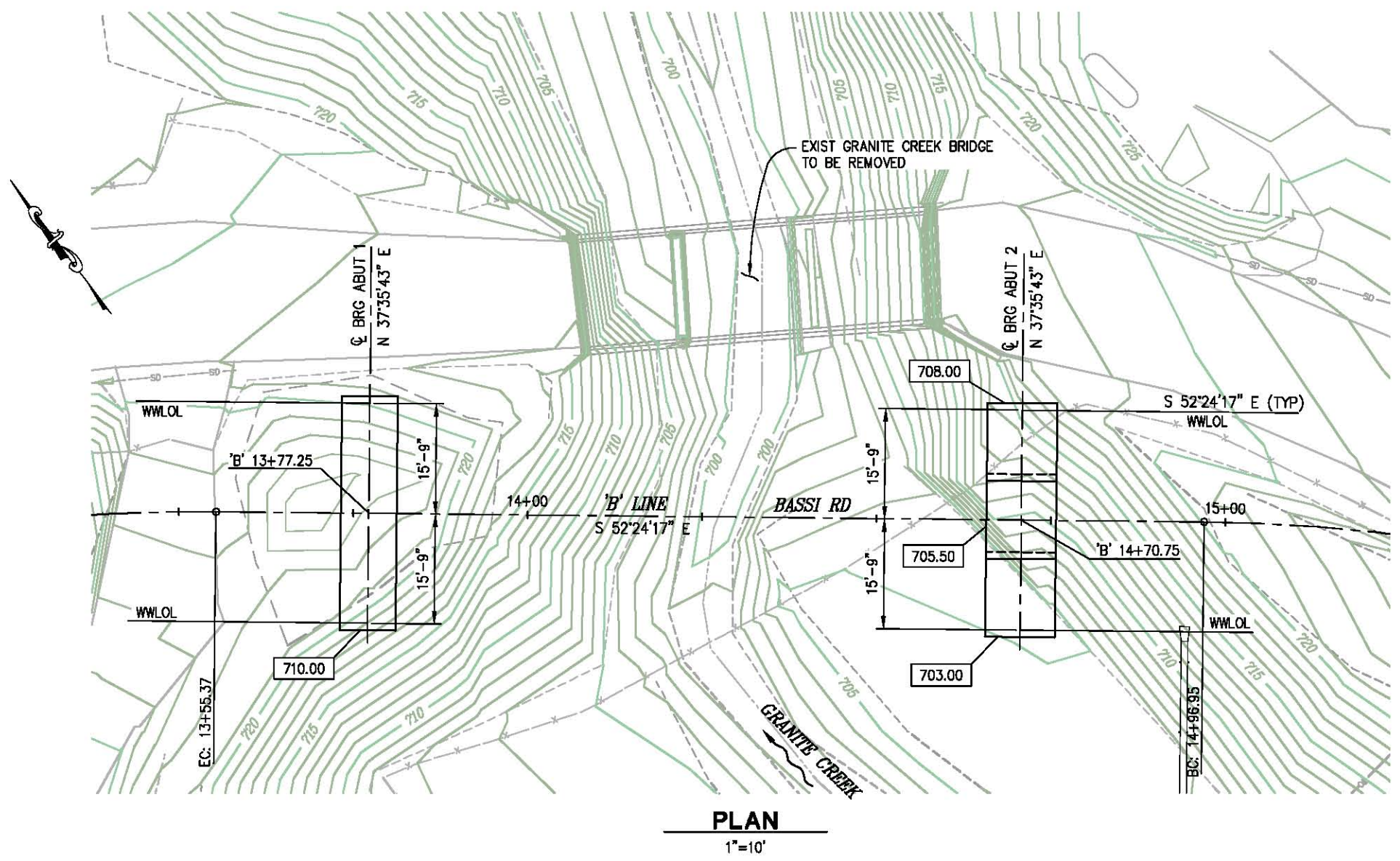
**BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT**

PRELIMINARY

**DECK CONTOURS
SCALE: AS SHOWN**

SHEET
S-2
25 OF 41
W.D. No. **77128**

ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D\Projects\77128 Bassi Rd at Granite C\ADD Files\Sheets\S-Sheets.dwg Layout Tab: S-3 Jul 19, 2018 8:02am SMeVey



LEGEND:
 XXX.XX — INDICATES BOTTOM OF FOOTING ELEVATION

NOTE:
 BOTTOM OF FOOTING MUST EXTEND A MIN OF 1 FT INTO ROCK. REMOVE LOOSE SOILS OR ROCKS AT BOTTOM OF EXCAVATION SO THAT CONCRETE IS PLACED AGAINST UNDISTURBED MATERIAL.

PLAN
 1"=10'

HYDROLOGIC SUMMARY		
DRAINAGE AREA = 4.68 SQ. MI.		
	DESIGN FLOOD	BASE FLOOD
FREQUENCY (YEARS)	50	100
DISCHARGE (CFS)	2170	2574
WATER SURFACE ELEVATION (FT)*	709.26	710.41

* FLOOD PLAIN DATA IS BASED UPON INFORMATION AVAILABLE WHEN THE PLANS WERE PREPARED AND IS SHOWN TO MEET FEDERAL REQUIREMENTS. THE ACCURACY OF SAID INFORMATION IS NOT WARRANTED, INTERESTED OR AFFECTED PARTIES SHOULD MAKE THEIR OWN INVESTIGATION.

SCOUR DATA TABLE		
SUPPORT NO.	LONG TERM (DEGRADATION AND CONTRACTION) SCOUR ELEVATION (FT)	SHORT TERM (LOCAL) SCOUR DEPTH (FT)
ABUT 1	N/A	0
ABUT 2	N/A	0

SPREAD FOOTING DATA TABLE			
SUPPORT LOCATION	SERVICE PERMISSIBLE NET CONTACT STRESS (SETTLEMENT) (KSF)	STRENGTH/CONSTRUCTION FACTORED GROSS NOMINAL BEARING RESISTANCE $\phi_b=0.45$ (KSF)	EXTREME EVENT FACTORED GROSS NOMINAL BEARING RESISTANCE $\phi_b=1.00$ (KSF)
ABUT 1	15.0	53.8	N/A
ABUT 2	13.0	27.0	N/A

- NOTES:
1. CONTROLLING LOAD COMBINATION IS THE ONE RESULTING IN THE HIGHEST RATIO OF $q_{g,max}/q_R$ FOR FOUNDATION ON ROCK.
 2. FOR SERVICE-I LIMIT STATE, CONTROLLING LOAD COMBINATION IS THE ONE RESULTING IN THE HIGHEST RATIO OF $q_{g,max}/q_R$ FOR FOUNDATIONS ON ROCK. PERMISSIBLE NET CONTACT STRESSES WERE CALCULATED FOR CONTROLLING LOAD COMBINATIONS.
 3. FOR STRENGTH, CONSTRUCTION, AND EXTREME EVENT LIMIT STATE, CONTROLLING LOAD COMBINATION IS THE ONE RESULTING IN THE HIGHEST RATIO OF $q_{g,max}/q_R$ FOR FOUNDATION ON ROCK. FACTORED GROSS NOMINAL BEARING RESISTANCES WERE CALCULATED FOR CONTROLLING LOAD COMBINATIONS.

PRELIMINARY

FOUNDATION PLAN SCALE: AS SHOWN

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER
 DATE:

DESIGNED: MSF
 CHECKED: LLK
 ROAD NUMBER: 023

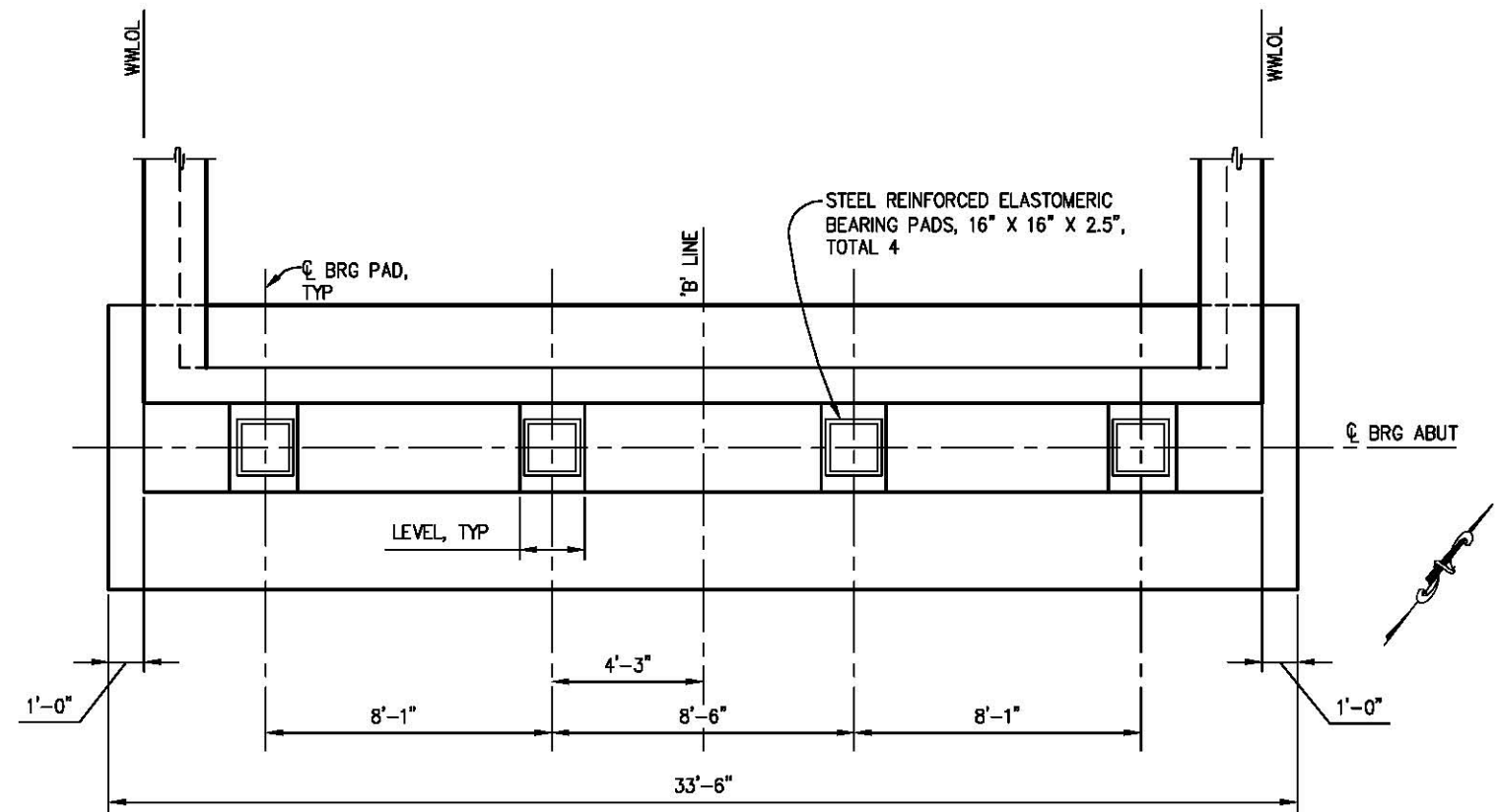


COUNTY OF EL DORADO DEPARTMENT OF TRANSPORTATION

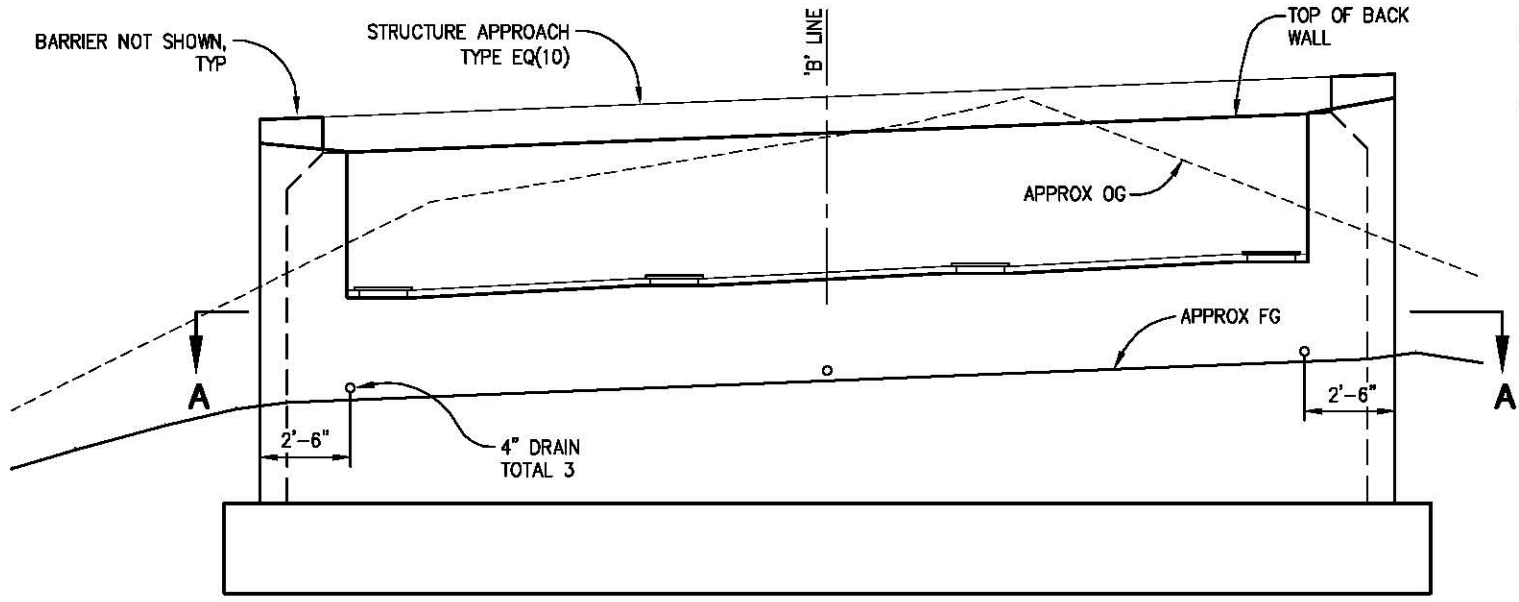
BASSI RD AT GRANITE CREEK BRIDGE REPLACEMENT

SHEET **S-3**
 26 OF 41
 W.D. No. **77128**

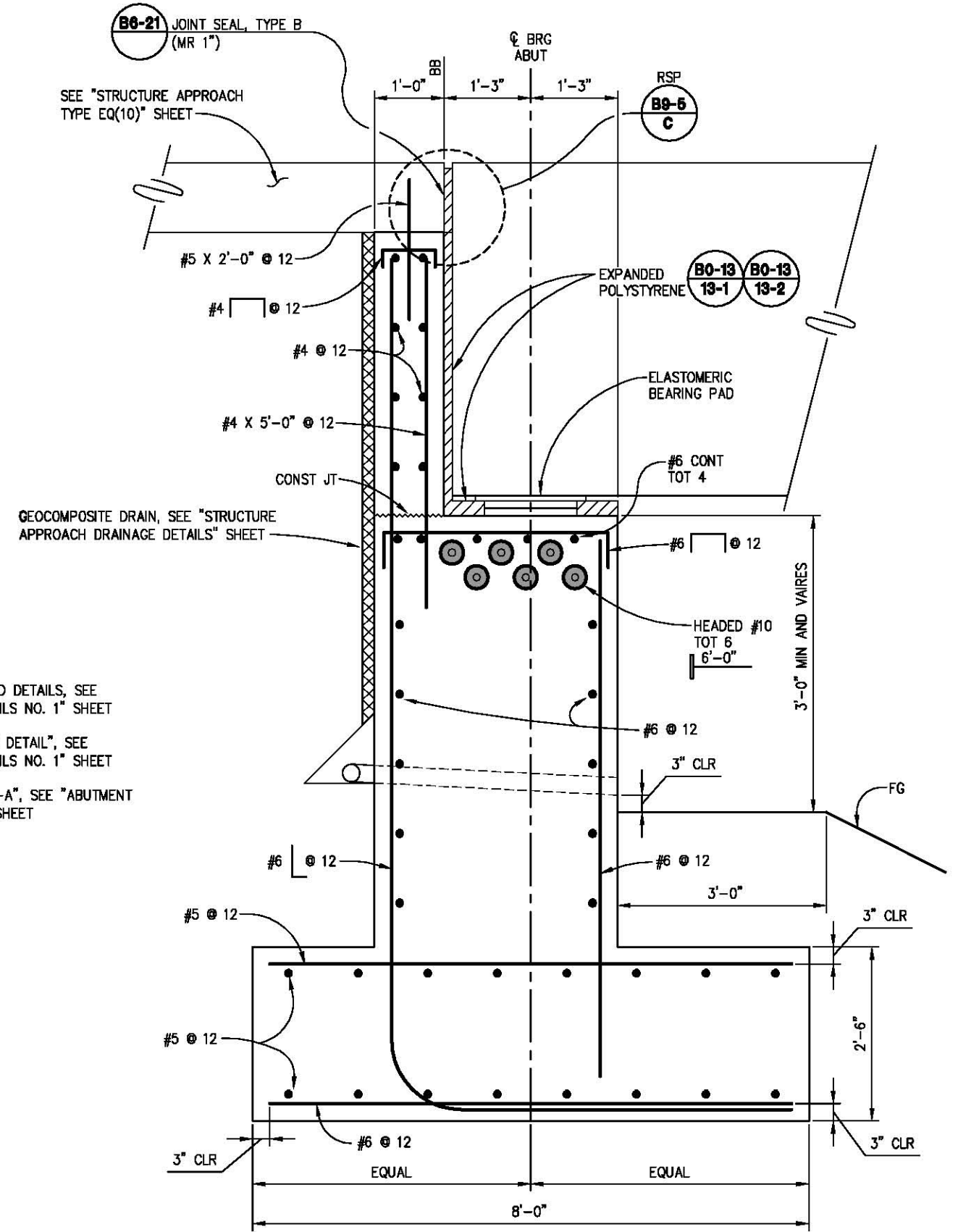
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 Layout Tab: S-4 Jul 19, 2018 8:01am SMeVey
 FOR REDUCED PLANS
 2
 1
 0



PLAN
3/8"=1'-0"



ELEVATION
3/8"=1'-0"



TYPICAL SECTION (ABUTMENT 1)
1"=1'-0"

- NOTES:**
1. FOR BEARING PAD DETAILS, SEE "ABUTMENT DETAILS NO. 1" SHEET
 2. FOR "SHEAR KEY DETAIL", SEE "ABUTMENT DETAILS NO. 1" SHEET
 3. FOR "SECTION A-A", SEE "ABUTMENT DETAILS NO. 1" SHEET

PRELIMINARY

ABUTMENT NO. 1 LAYOUT
SCALE: AS SHOWN

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
 MICHAEL S. FROMM
 No. C79395
 License Expires 03-31-18
 CIVIL
 REGISTERED CIVIL ENGINEER
 STATE OF CALIFORNIA

DESIGNED: MSF
 DRAWN: SGM
 CHECKED: LLK
 DATE: 07/19/18
 ROAD NUMBER: 023

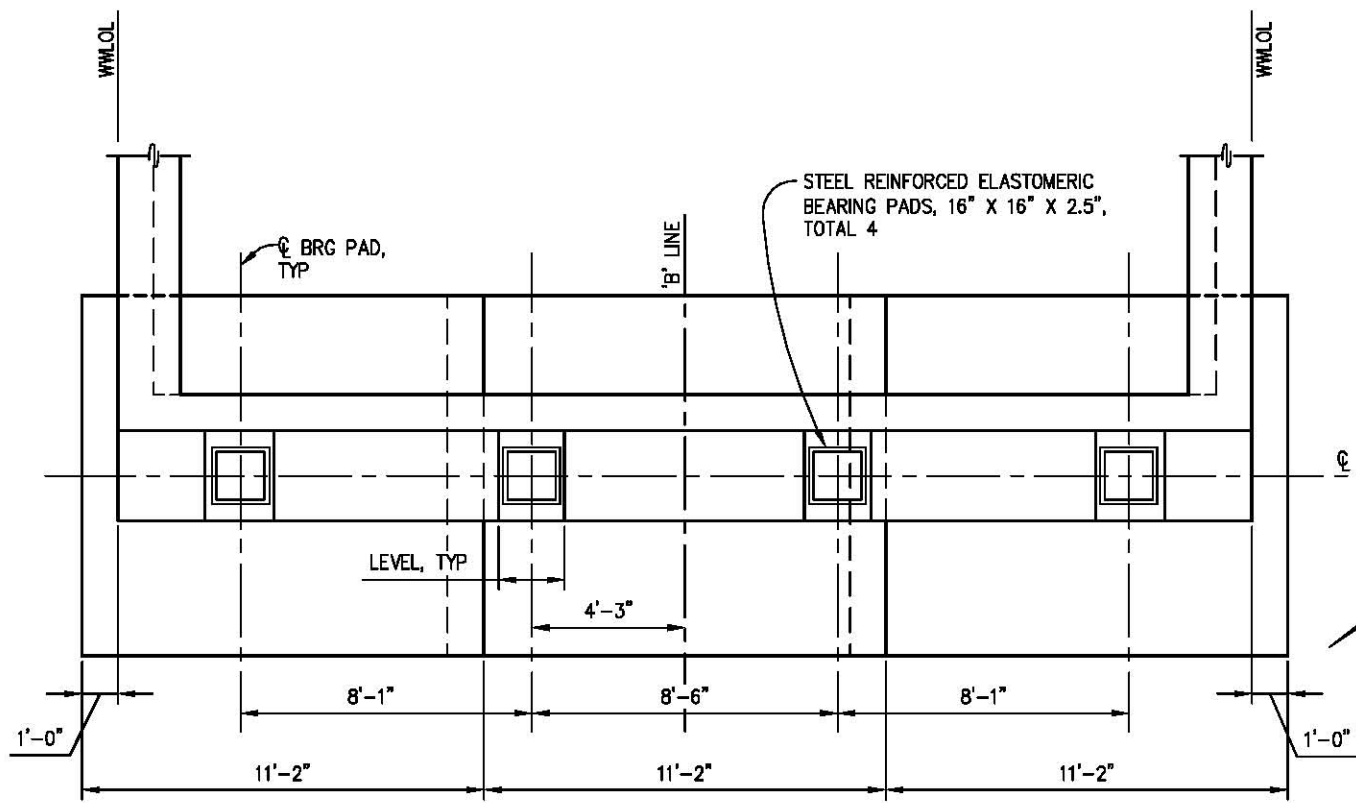


COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT

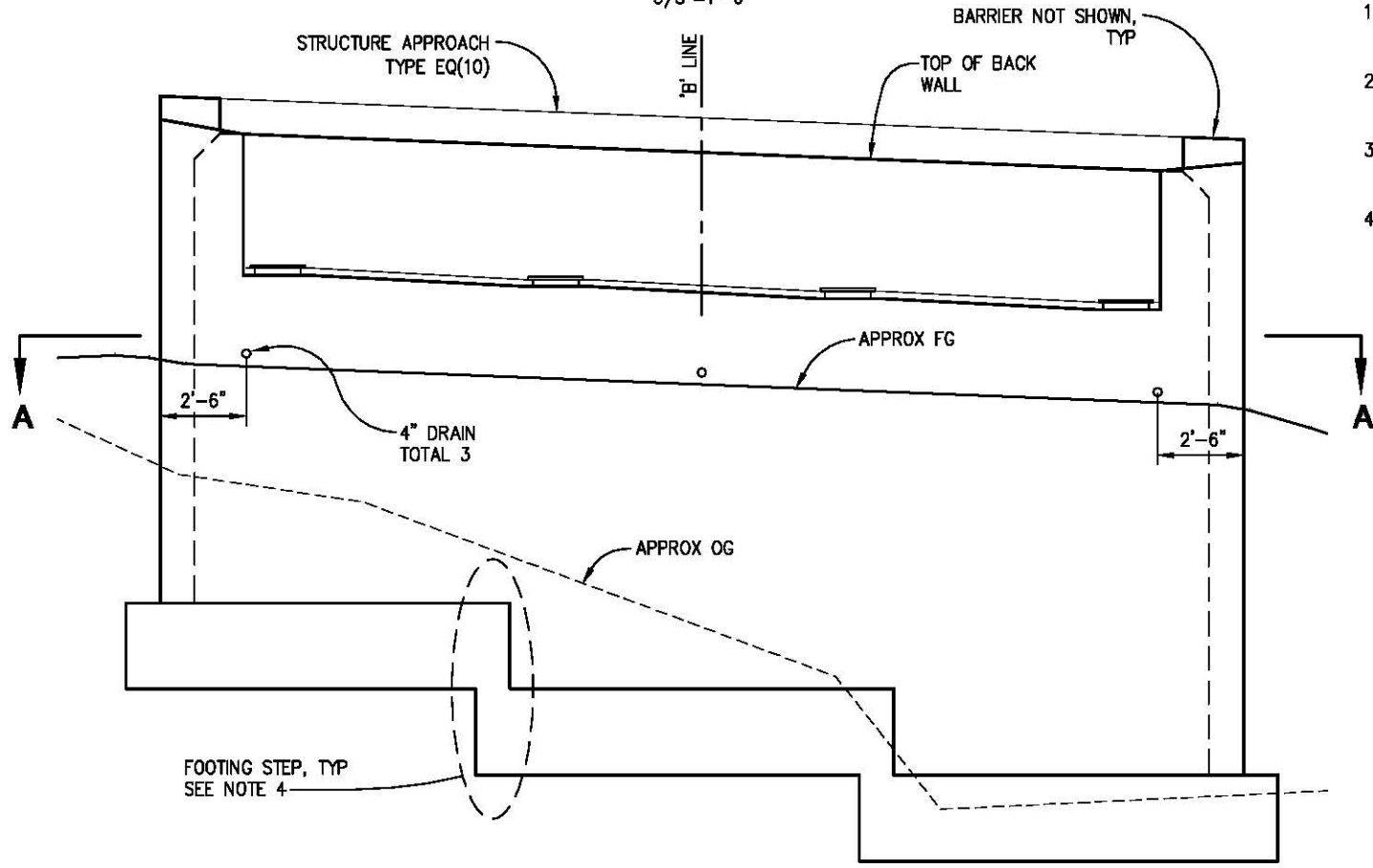
SHEET
S-4
27 OF 41
W.D. No. **77128**

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 FOR REDUCED PLANS
 2
 1
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PLAN

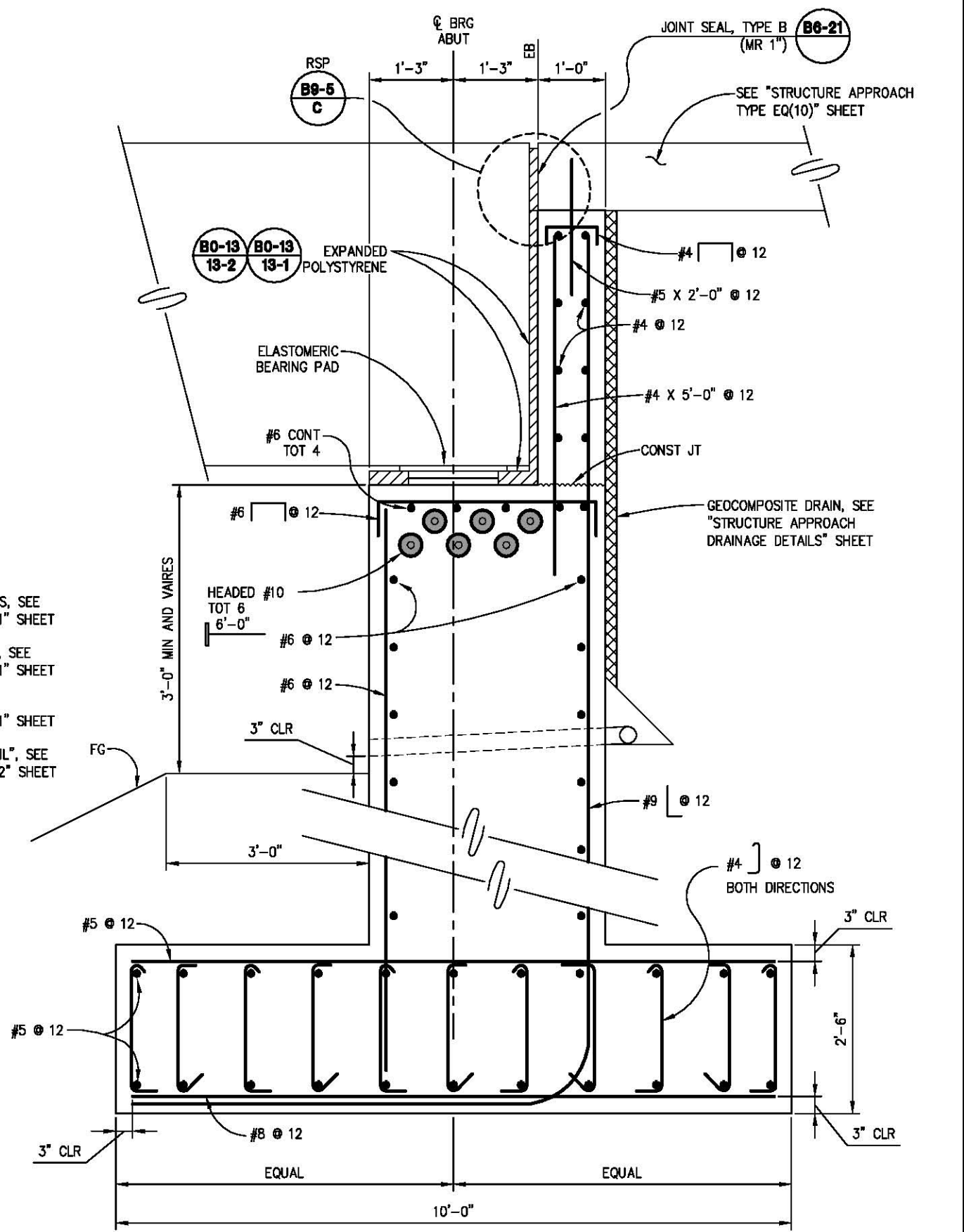
3/8"=1'-0"



ELEVATION

3/8"=1'-0"

- NOTES:**
1. FOR BEARING PAD DETAILS, SEE "ABUTMENT DETAILS NO. 1" SHEET
 2. FOR "SHEAR KEY DETAIL", SEE "ABUTMENT DETAILS NO. 1" SHEET
 3. FOR "SECTION A-A", SEE "ABUTMENT DETAILS NO. 1" SHEET
 4. FOR "FOOTING STEP DETAIL", SEE "ABUTMENT DETAILS NO. 2" SHEET

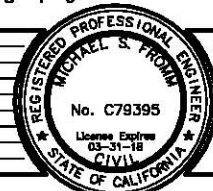


TYPICAL SECTION (ABUTMENT 2)

1"=1'-0"

ABUTMENT NO. 2 LAYOUT SCALE: AS SHOWN

PRELIMINARY



PREPARED UNDER THE SUPERVISION OF:
 MICHAEL S. FROMM
 No. C79395
 License Expires 03-31-18
 CIVIL
 REGISTERED CIVIL ENGINEER

DESIGNED: MSF
 DRAWN: SGM
 CHECKED: LLK
 DATE: 07/19/18
 ROAD NUMBER: 023

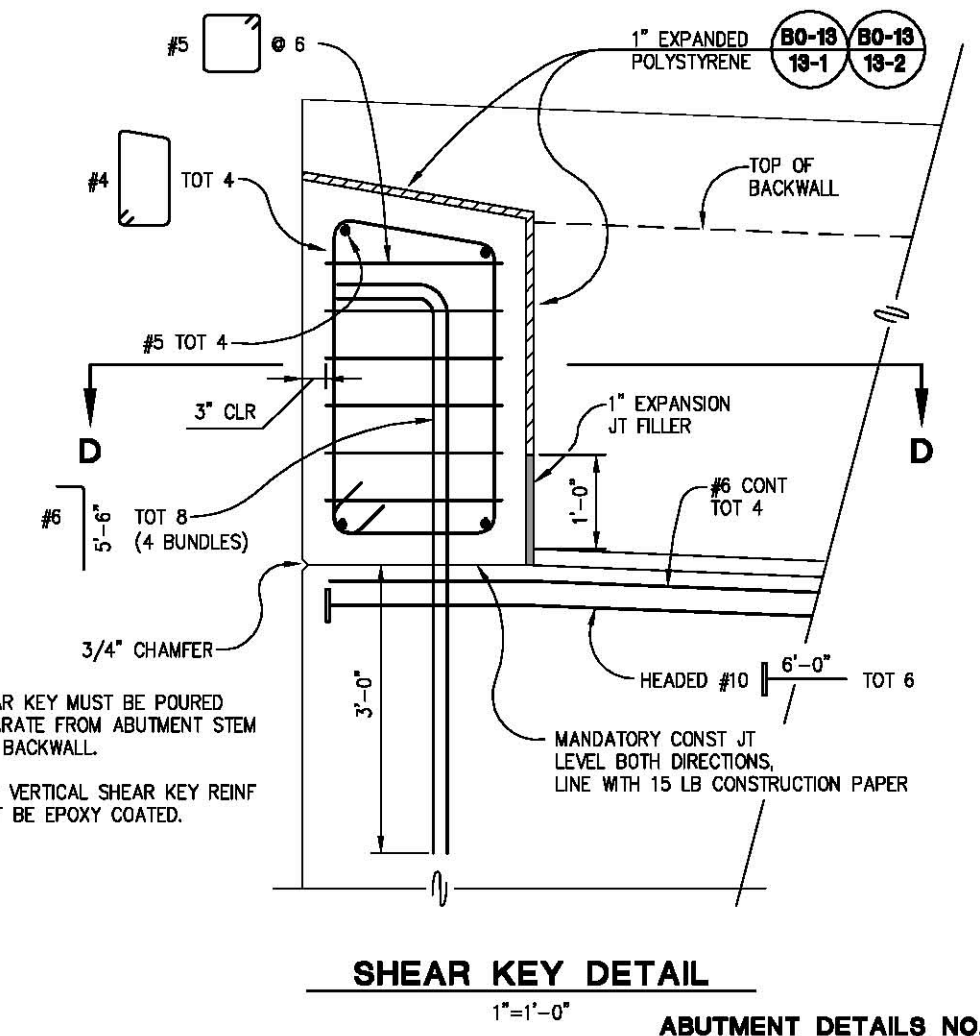
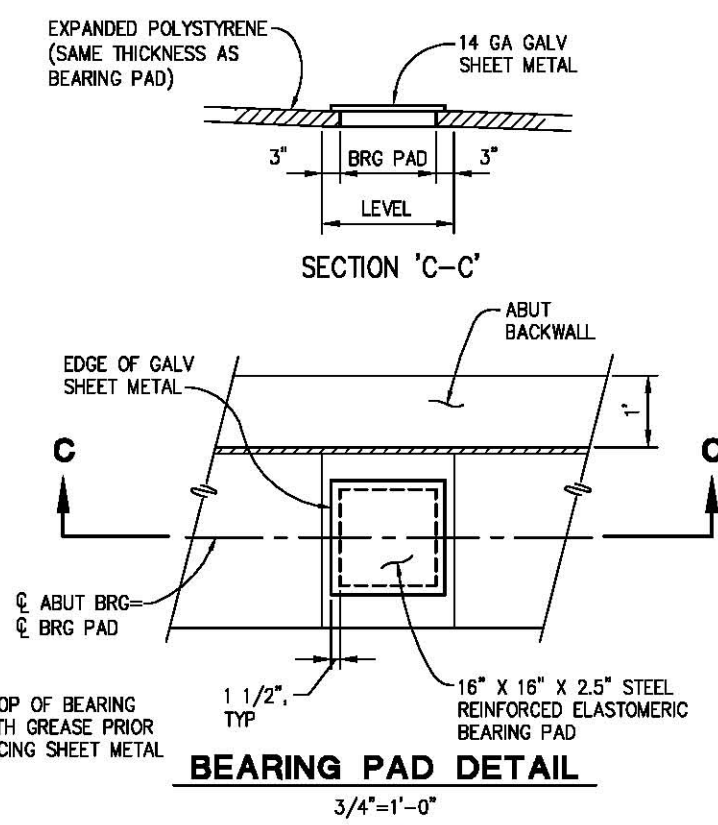
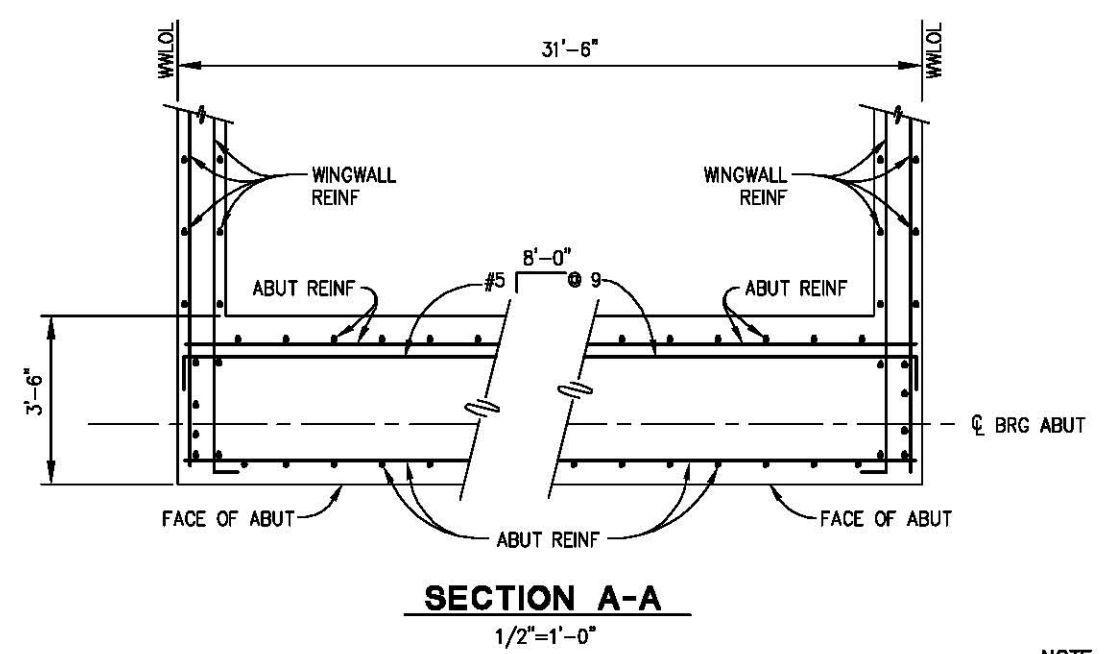
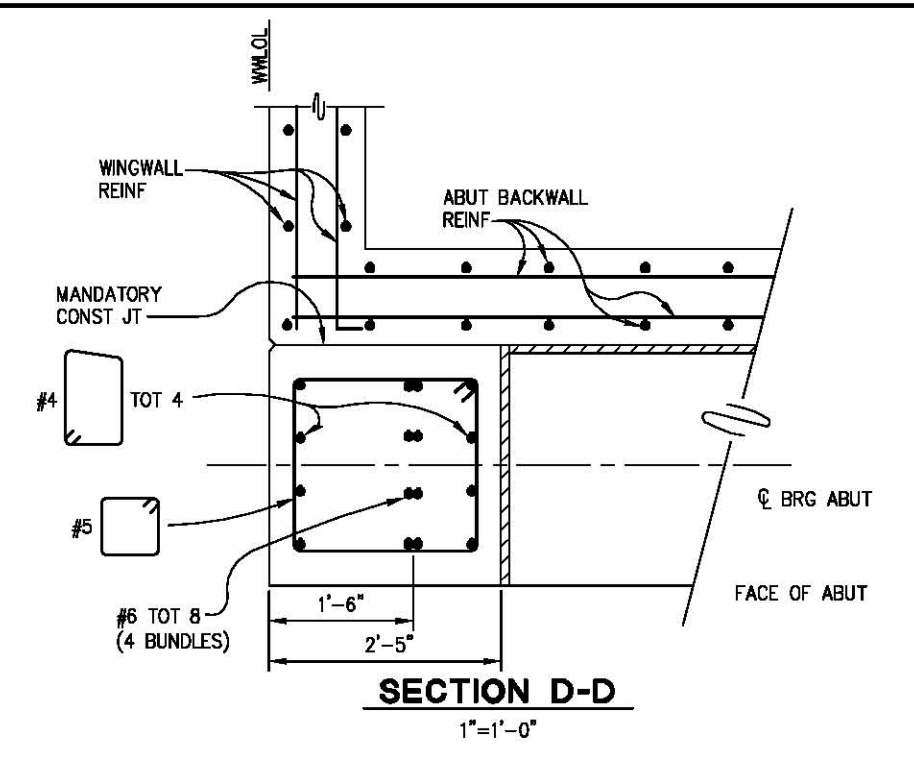
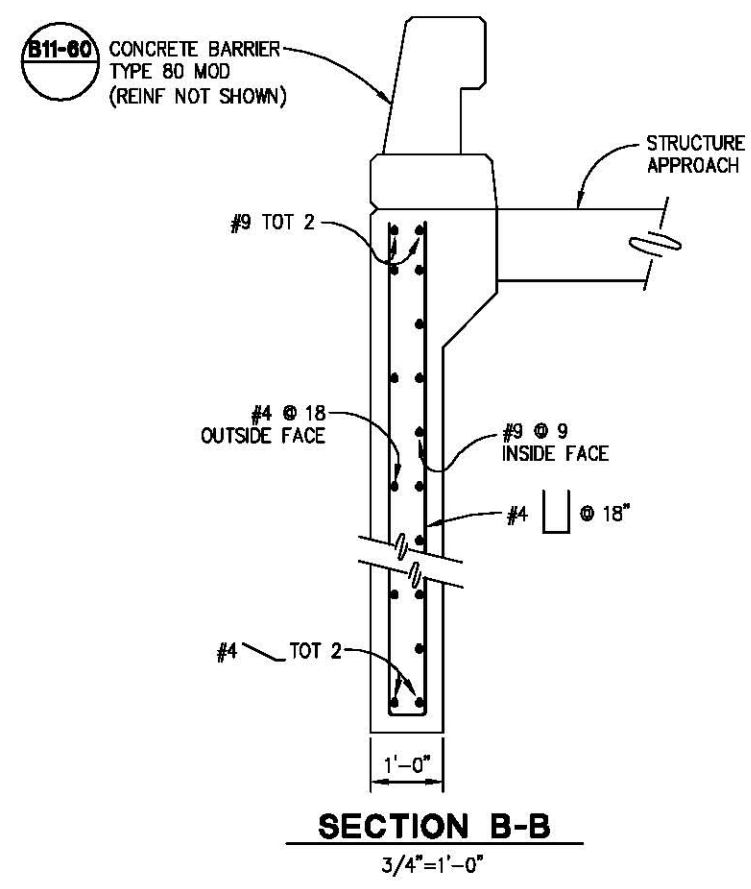
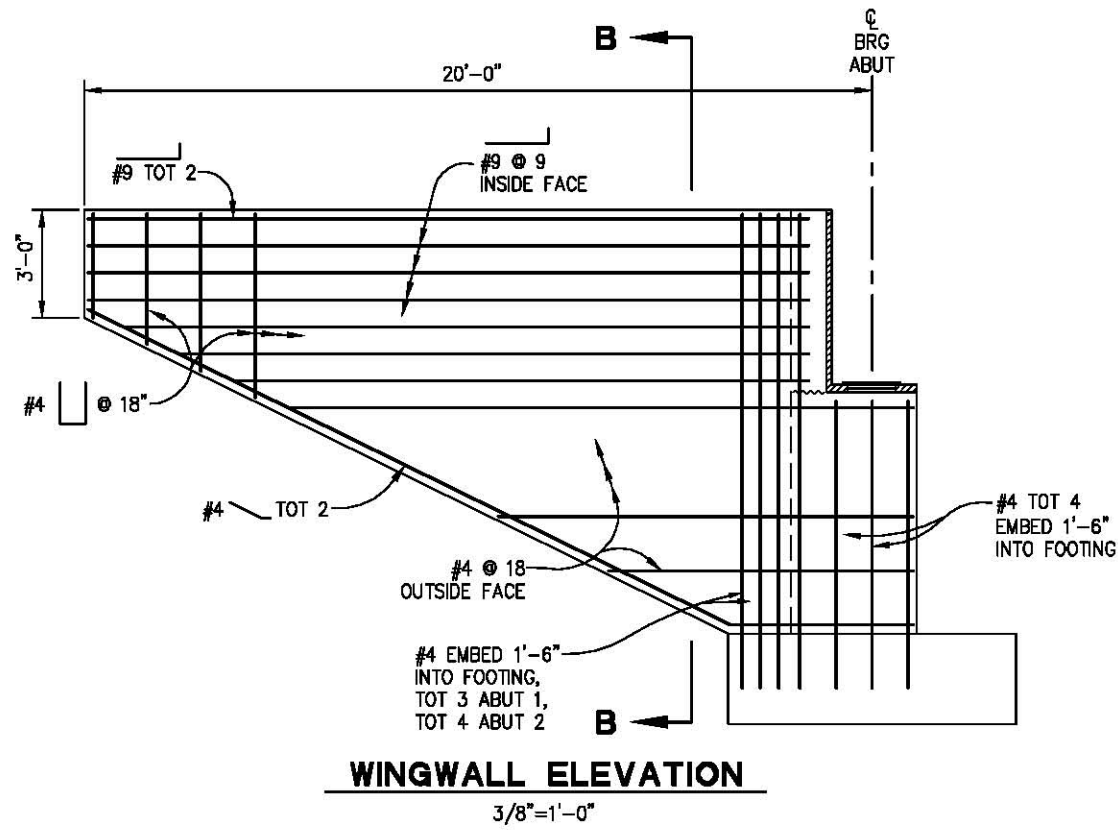


**COUNTY OF EL DORADO
 DEPARTMENT OF TRANSPORTATION**

**BASSI RD AT GRANITE CREEK
 BRIDGE REPLACEMENT**

SHEET
S-5
 28 OF 41
 W.D. No. 77128

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- NOTES:**
1. SHEAR KEY MUST BE POURED SEPARATE FROM ABUTMENT STEM AND BACKWALL.
 2. MAIN VERTICAL SHEAR KEY REINF MUST BE EPOXY COATED.

NOTE:
 COAT TOP OF BEARING PAD WITH GREASE PRIOR TO PLACING SHEET METAL

PRELIMINARY

ABUTMENT DETAILS NO. 1
 SCALE: AS SHOWN



PREPARED UNDER THE SUPERVISION OF:
 MICHAEL S. FROMM
 No. C79395
 LICENSED PROFESSIONAL ENGINEER
 CIVIL
 STATE OF CALIFORNIA

DESIGNED: MSF
 DRAWN: SGM
 CHECKED: LLK
 DATE: 07/19/18
 ROAD NUMBER: 023



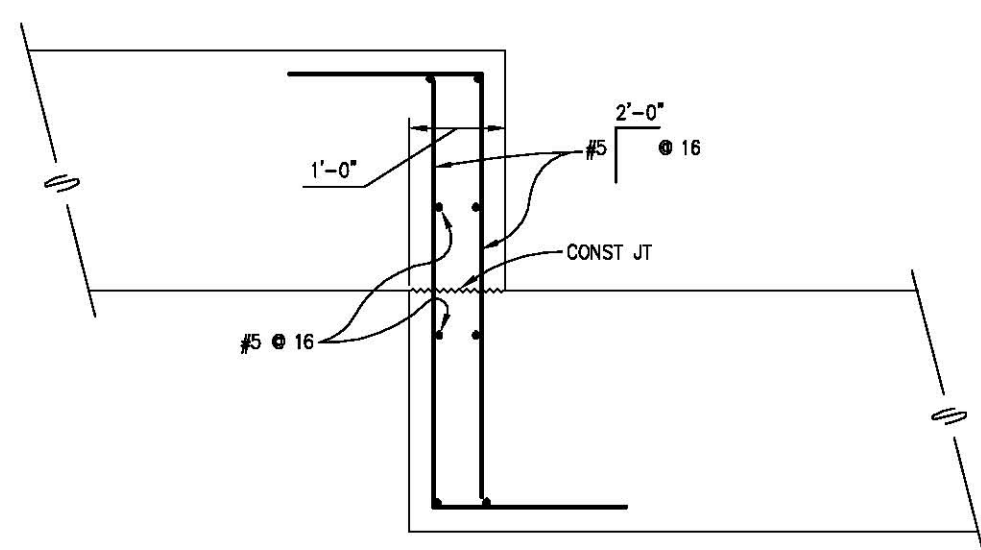
COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT

SHEET
S-6
 29 OF 41
 W.D. No. 77128

ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D Projects\77128 Bassi Road at Granite C\CADD Files\Sheets\S-Sheets.dwg Layout Tab: S-7 Jul 19, 2018 - 8:05am SMcVey

FOR REDUCED PLANS
2
1
0



FOOTING STEP DETAIL
1"=1'-0"

PRELIMINARY

ABUTMENT DETAILS NO. 2
SCALE: AS SHOWN



PREPARED UNDER THE SUPERVISION OF:

REGISTERED CIVIL ENGINEER
DATE: _____

DESIGNED: MSF	DRAWN: SGM
CHECKED: LLK	DATE: 07/19/18
ROAD NUMBER: 023	



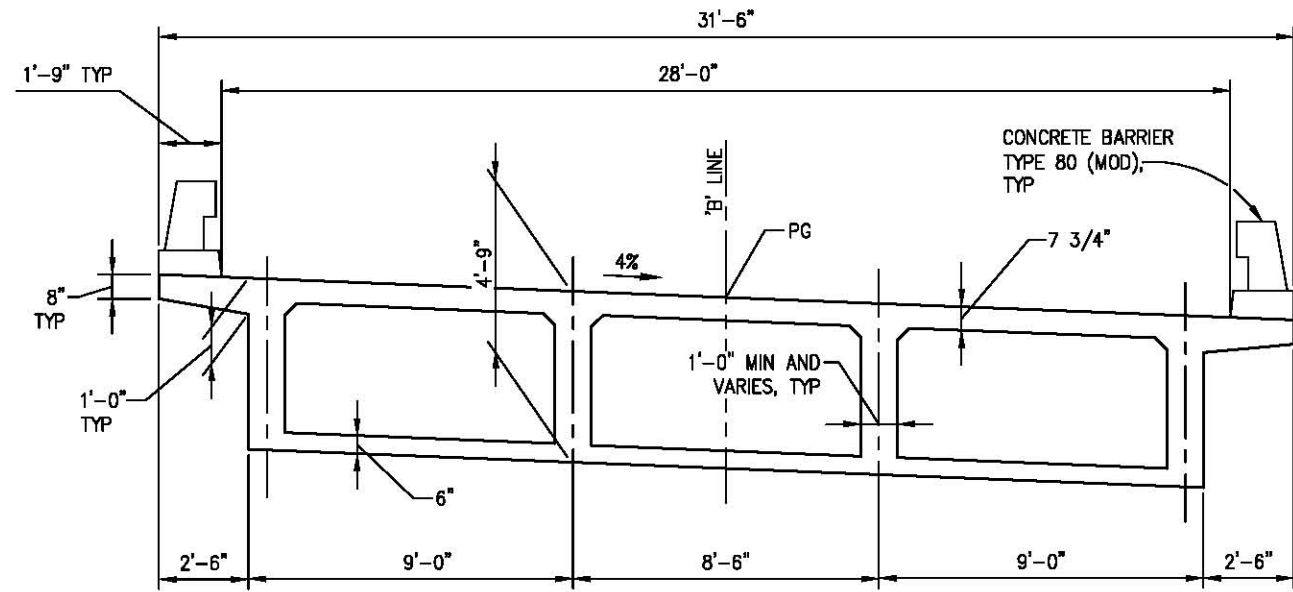
COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT

SHEET S-7
30 OF 41
W.O. No. 77128

REVISION	NUMBER	DATE	DESCRIPTION	BY

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D\Projects\77128 Bassi Road at Granite Ck\CADD Files\Sheets\S-Sheets.dwg Layout Tab: S-8 Jul 19, 2018 - 8:06am SMC/vey

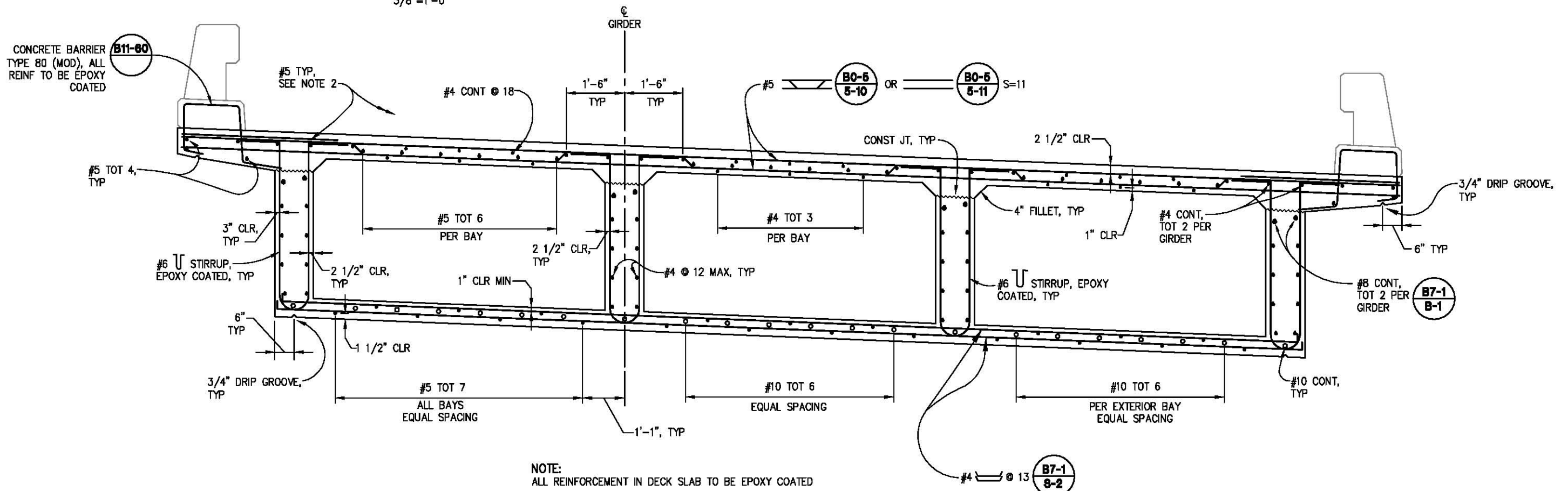


TYPICAL SECTION

3/8"=1'-0"

NOTES:

1. FOR STIRRUP PLACEMENT AND PRESTRESSING INFORMATION, SEE "GIRDER LAYOUT" SHEET
2. ADDITIONAL TOP TRANSVERSE DECK REINFORCEMENT SHALL BE PLACED IN THE OVERHANG FOR A DISTANCE OF 5'-0" ON EACH SIDE OF AN EXPANSION JOINT IN THE BARRIER RAIL AND AT THE ENDS OF THE BARRIER RAIL. THIS ADDITIONAL REINFORCEMENT SHALL BE BUNDLED WITH EACH ALTERNATING TOP TRANSVERSE BAR IN THE OVERHANG AND EXTEND 1'-6" MINIMUM BEYOND THE CENTERLINE OF THE EXTERIOR GIRDER



TYPICAL SECTION

3/4"=1'-0"

NOTE:
ALL REINFORCEMENT IN DECK SLAB TO BE EPOXY COATED

PRELIMINARY

**TYPICAL SECTION
SCALE: AS SHOWN**

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER
 DATE: _____

DESIGNED: MSF
 DRAWN: SGM
 CHECKED: LLK
 DATE: 07/19/18
 ROAD NUMBER: 023

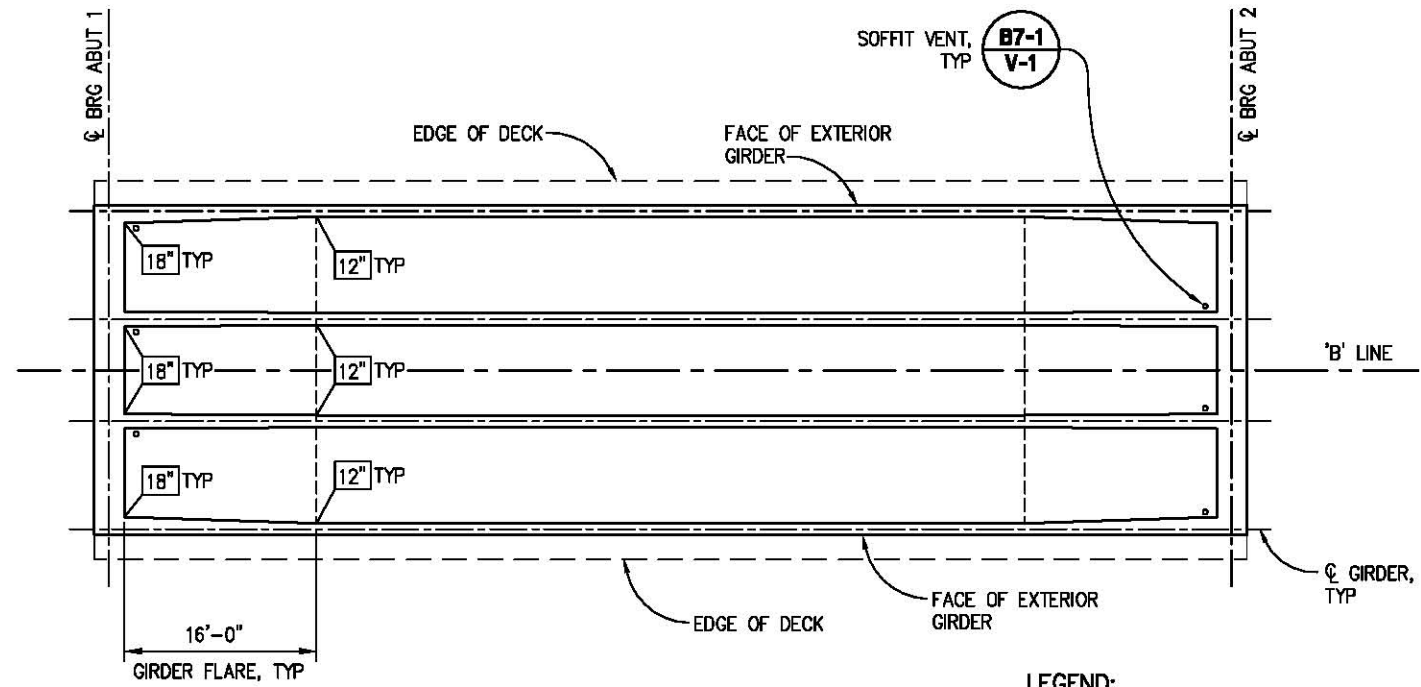


**COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION**

**BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT**

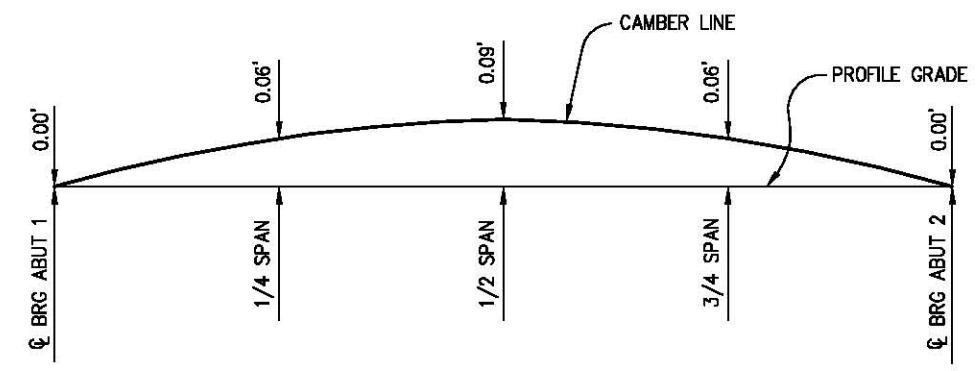
SHEET
S-8
31 OF 41
W.O. No. **77128**

ORIGINAL SCALE IS IN INCHES
Drawing name: C:\Civil 3D\Projects\77128 Bassi Road at Granite Ck\CADD Files\Sheets\S-Sheets.dwg Layout Tab: S-9 Jul 19, 2018 - 8:06am SMeVey

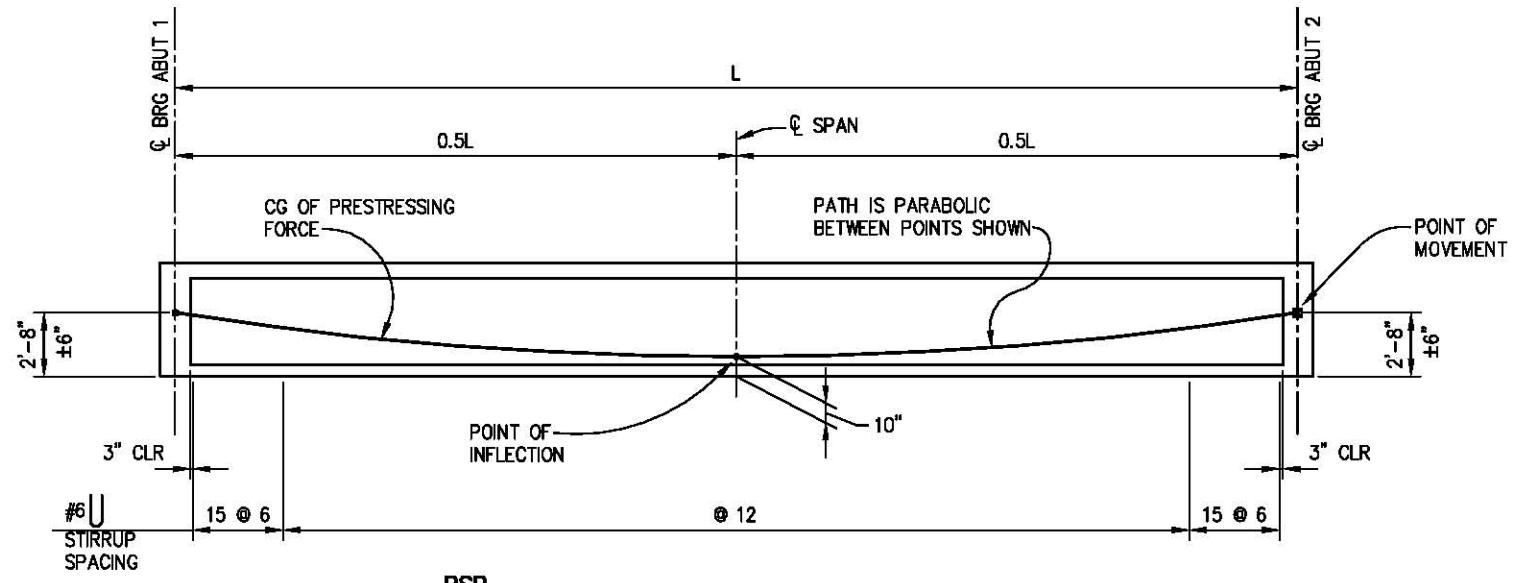


RSP
B8-6 **GIRDER LAYOUT**
1/8"=1'-0"

LEGEND:
X" — INDICATES GIRDER FLARE WIDTH **B7-1**
8-3



NOTE:
CAMBER DIAGRAM
DOES NOT INCLUDE ALLOWANCE FOR FALSEWORK SETTLEMENT OR FALSEWORK DEFLECTION
NTS



RSP
B0-6 **B7-1** **B8-6** **LONGITUDINAL SECTION**
1/8"=1'-0" H
1/4"=1'-0" V

PRESTRESSING NOTES:
270 KSI LOW RELAXATION STRAND:
PJACK = 5,840 KIPS
ANCHOR SET = 3/8"
TOTAL NUMBER OF GIRDERS = 4

FRICITION COEFFICIENTS:
K = 0.0002/FT
u = 0.15

DISTRIBUTION OF PRESTRESS FORCE (PJACK) BETWEEN THE GIRDERS SHALL NOT EXCEED THE RATIO OF 10:9

CONCRETE:
F'c = 4,000 PSI @ 28 DAYS
F'ci = 3,500 PSI AT TIME OF STRESSING

CONTRACTOR SHALL SUBMIT ELONGATION CALCULATIONS BASED ON INITIAL STRESS AT:

$\boxtimes = 0.954 \times \text{JACKING STRESS}$

ONE END STRESSING SHALL BE PERFORMED FROM ABUT 1

PRELIMINARY



PREPARED UNDER THE SUPERVISION OF:
MICHAEL S. PROHM
No. C79395
REGISTERED CIVIL ENGINEER

DESIGNED: MSF
CHECKED: LLK
DATE: 07/19/18
ROAD NUMBER: 023



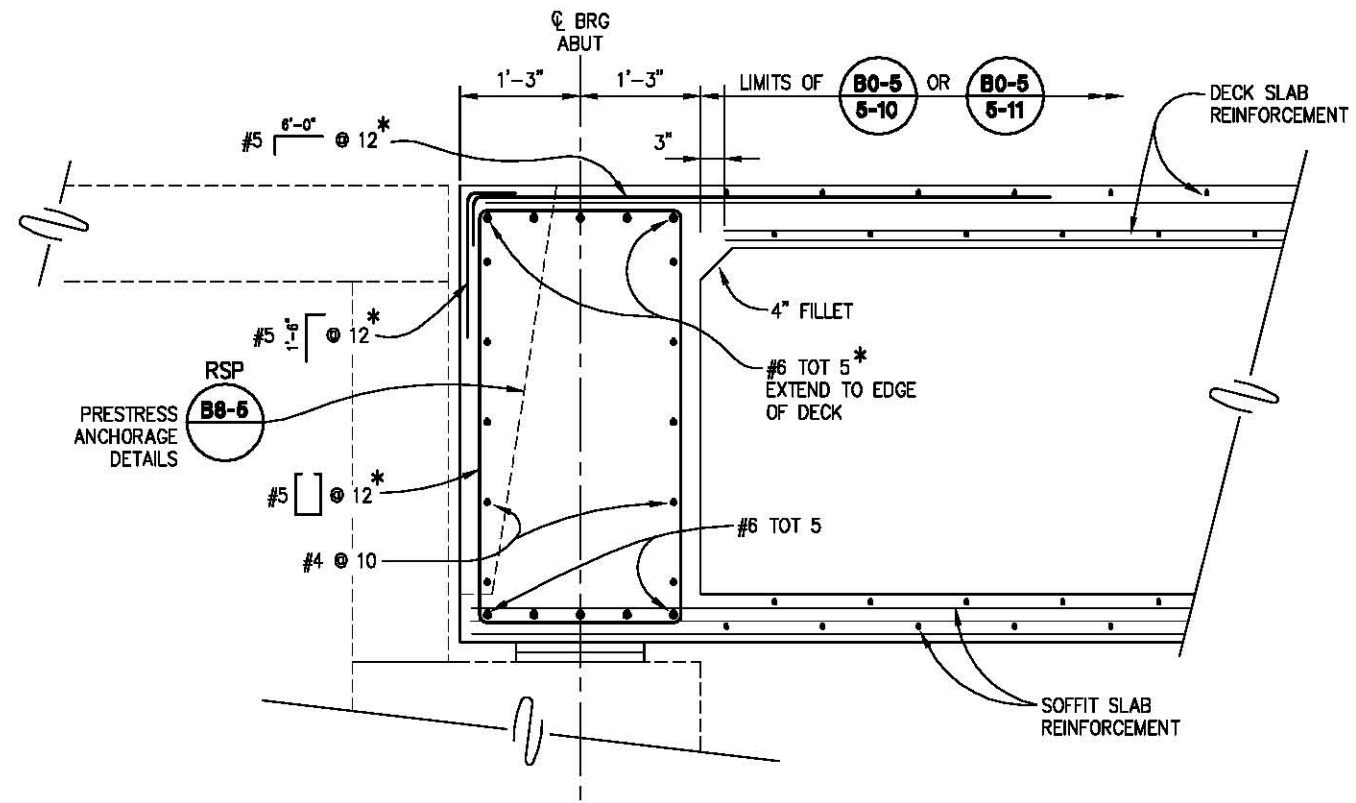
COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT

GIRDER LAYOUT
SCALE: AS SHOWN

SHEET
S-9
32 OF 41
W.O. No. **77128**

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D Projects\77128 Bassi Road at Granite C\CADD Files\Sheets\S-Sheets.dwg Layout Tab: S-10 Jul 19, 2018 - 8:07am Shcvey
 FOR REDUCED PLANS
 2
 1
 0



END DIAPHRAGM SECTION
1"=1'-0"

NOTE:
* - INDICATES EPOXY COATED REINFORCEMENT

PRELIMINARY

ANCHORAGE REINFORCEMENT DETAILS
SCALE: AS SHOWN

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER
 DATE: _____

DESIGNED: MSF
 CHECKED: LLK
 ROAD NUMBER: 023

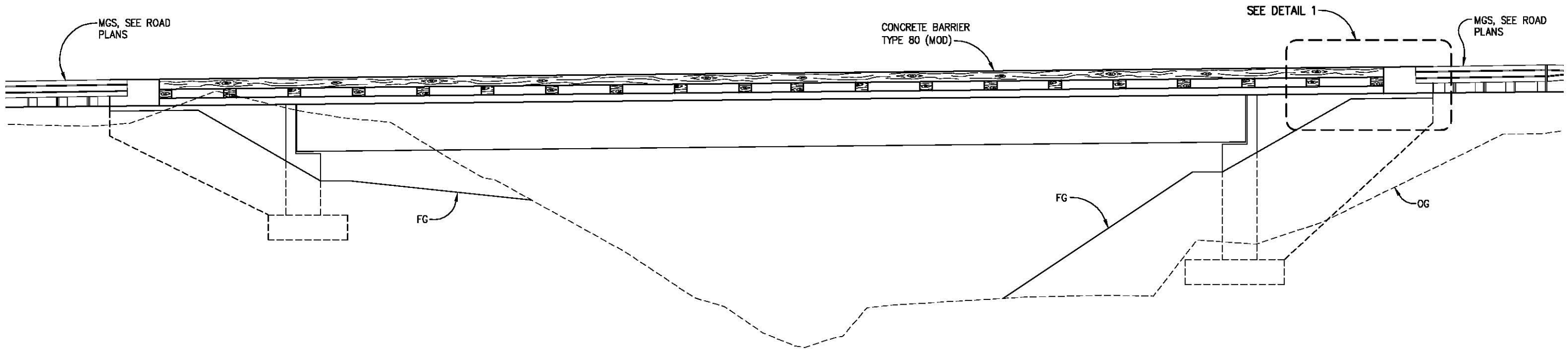


COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

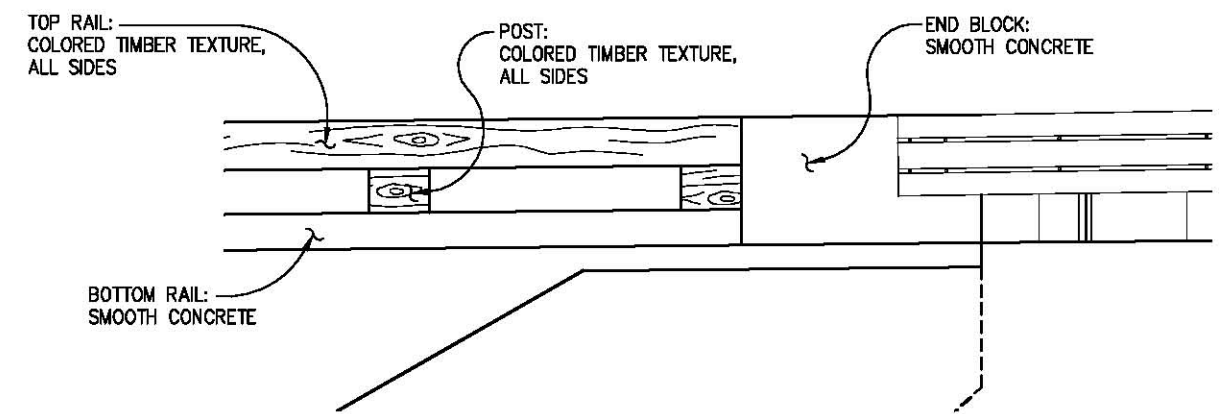
BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT

SHEET
8-10
33 OF 41
W.O. No. **77128**

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D Projects\77128 Bassi Road at Granite Ck\CADD Files\Sheets\S-Sheets.dwg Layout Tab: S-11 Jul 19, 2018 8:07am SMCvey
 FOR REDUCED PLANS
 2
 1
 0



ELEVATION
1"=5'



DETAIL 1
1/2"=1'-0"

PRELIMINARY

ARCHITECTURAL TREATMENT
SCALE: AS SHOWN

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER
 DATE:

DESIGNED: MSF
 CHECKED: LLK
 ROAD NUMBER: 023

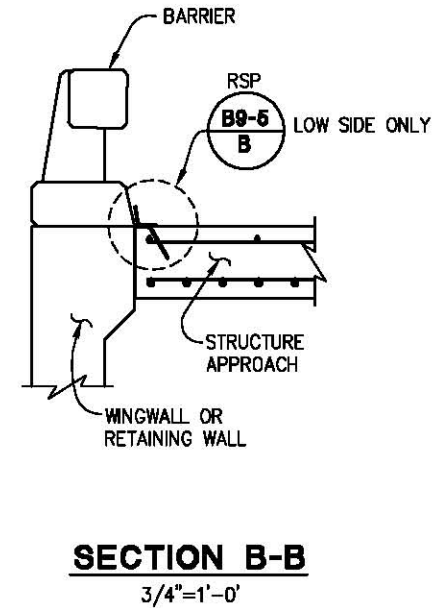
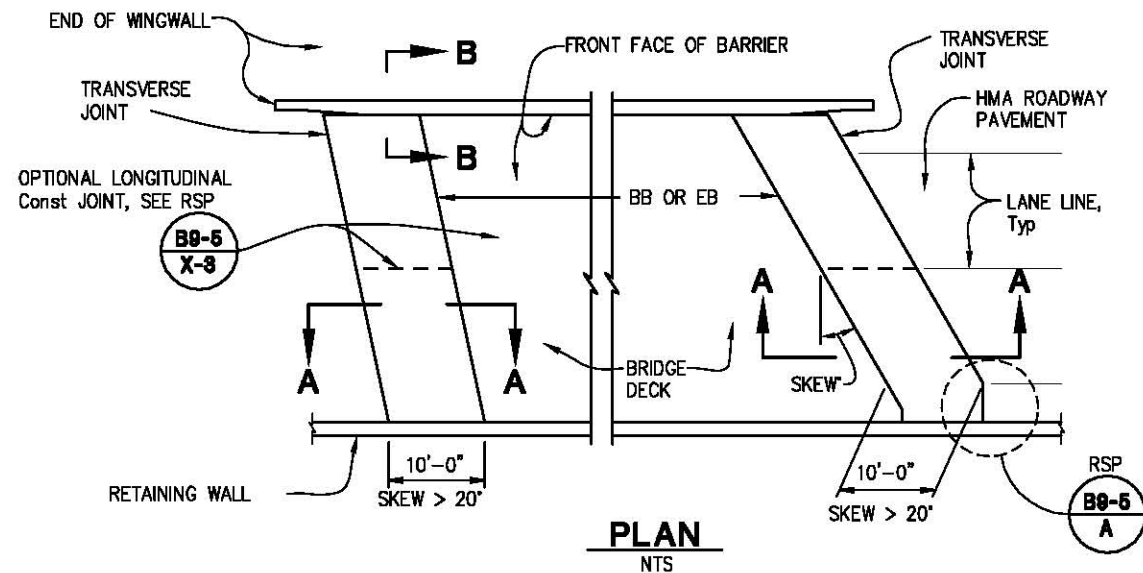


COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT

SHEET
S-11
 34 OF 41
 W.O. No. **77128**

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D\Projects\77128 Bassi Road at Granite Ck\CADD Files\Sheets\S-Sheets.dwg Layout Tab: S-12 Jul 19, 2018 10:20am SMeley
 FOR REDUCED PLANS

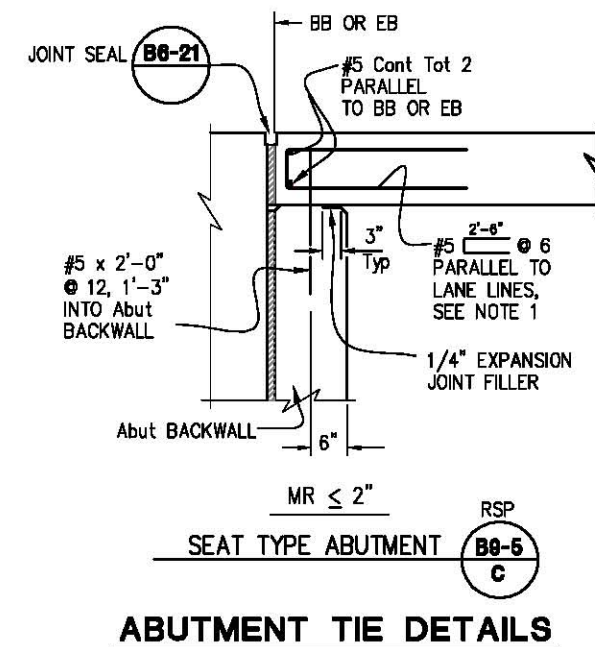
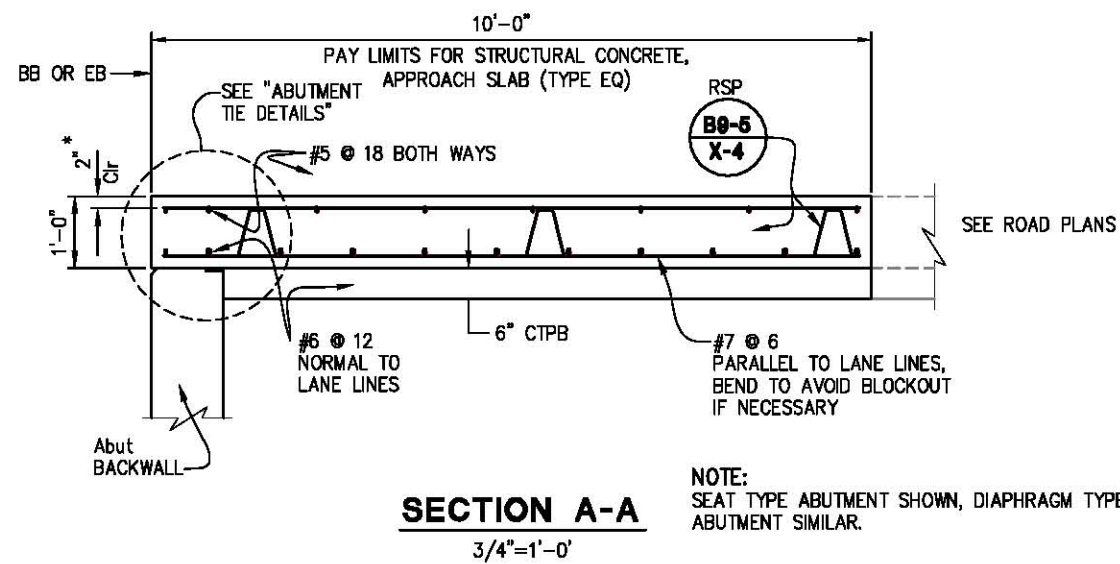


LEGEND:

* ALL APPROACH SLAB REINFORCEMENT SHALL BE EPOXY COATED AND MINIMUM TOP MAT COVER 2 1/2" IN FREEZE-THAW AREA.

NOTES:

1. FOR $MR \leq 2"$, ADJUST REINFORCEMENT TO CLEAR SAWCUT FOR SEALED JOINT. FOR $MR > 2"$, REINFORCEMENT MUST BE NORMAL TO BB OR EB AND SPACED TO AVOID JOINT SEAL ASSEMBLY ANCHORAGE.
2. AT THE CONTRACTOR'S OPTIONS, APPROACH SLAB TRANSVERSE REINFORCEMENT MAY BE PLACED PARALLEL TO BB OR EB. SPACING OF TRANSVERSE REINFORCEMENT IS MEASURED ALONG ROADWAY.
3. FOR DETAILS NOT SHOWN, REFER TO REVISED STANDARD PLAN RSP B9-5.



PRELIMINARY

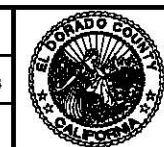
**STRUCTURE APPROACH TYPE EQ (10)
SCALE: AS SHOWN**

REVISION	NUMBER	DATE	DESCRIPTION	BY



PREPARED UNDER THE SUPERVISION OF:
 MICHAEL S. PROHM
 No. C79395
 License Expires 03-31-18
 CIVIL
 REGISTERED CIVIL ENGINEER
 STATE OF CALIFORNIA

DESIGNED: MSF
 CHECKED: LLK
 ROAD NUMBER: 023

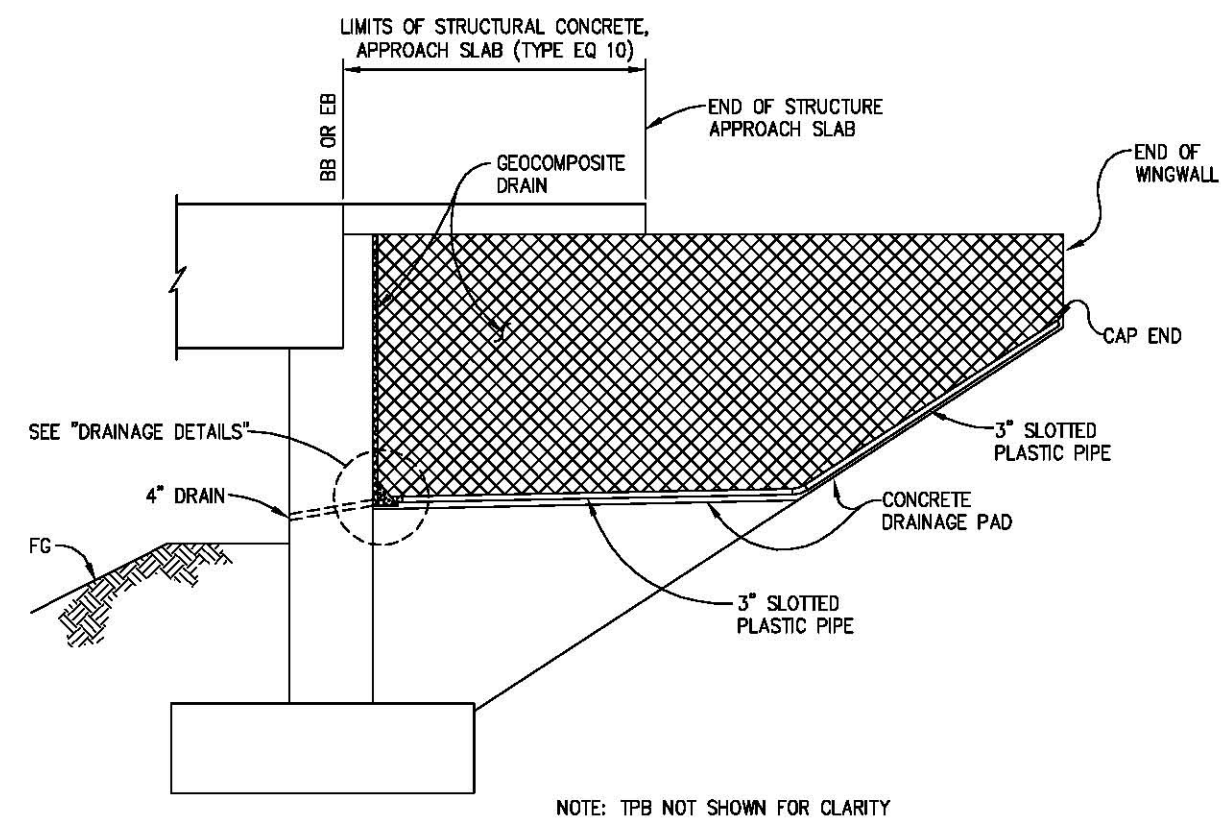
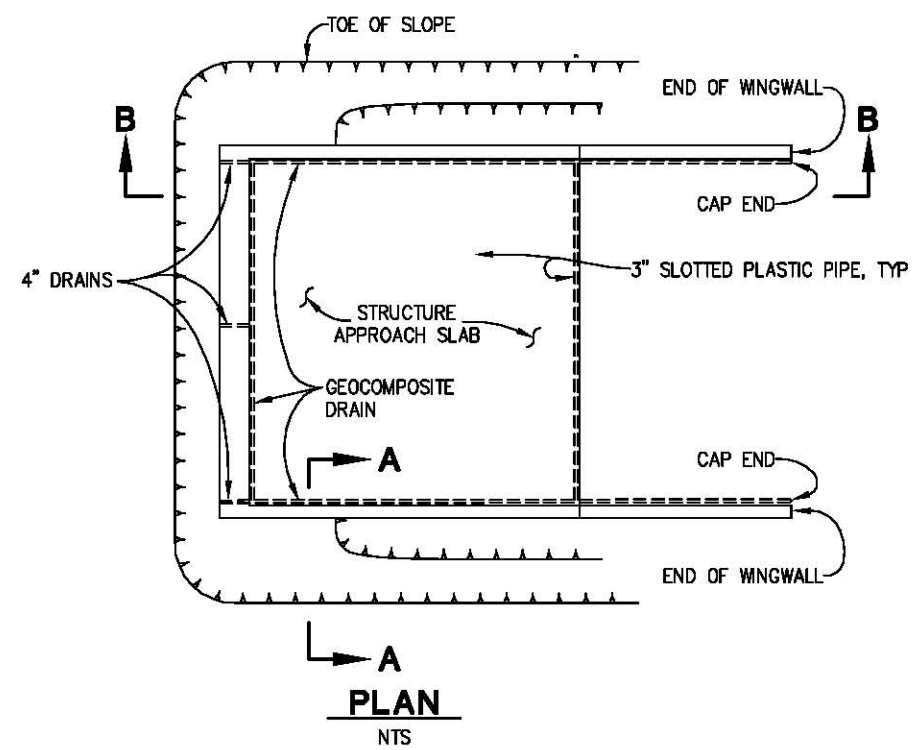


**COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION**

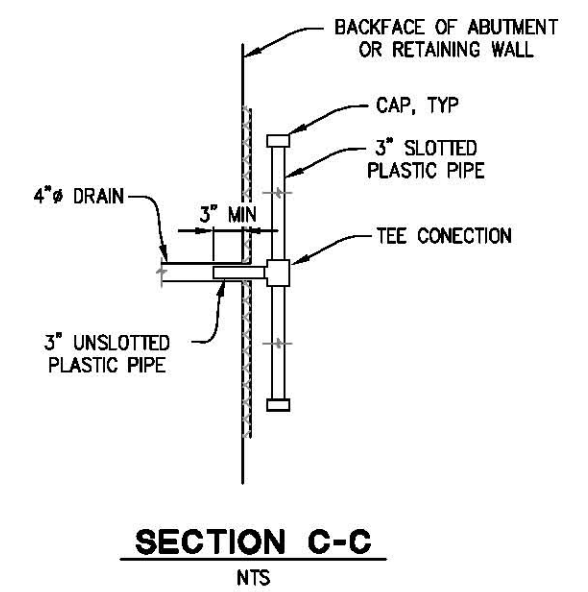
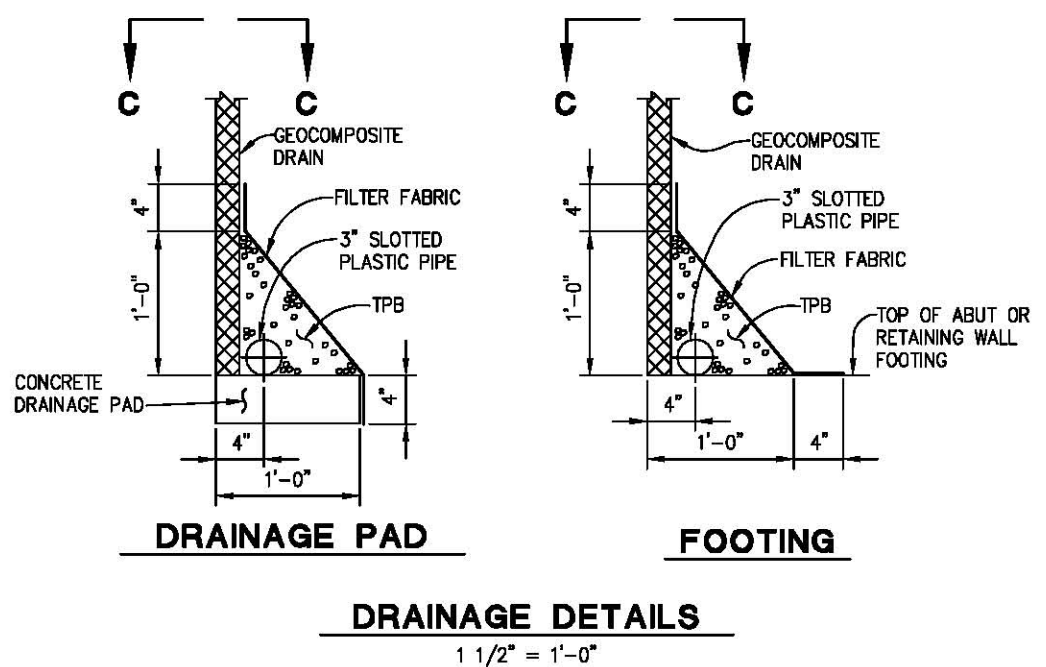
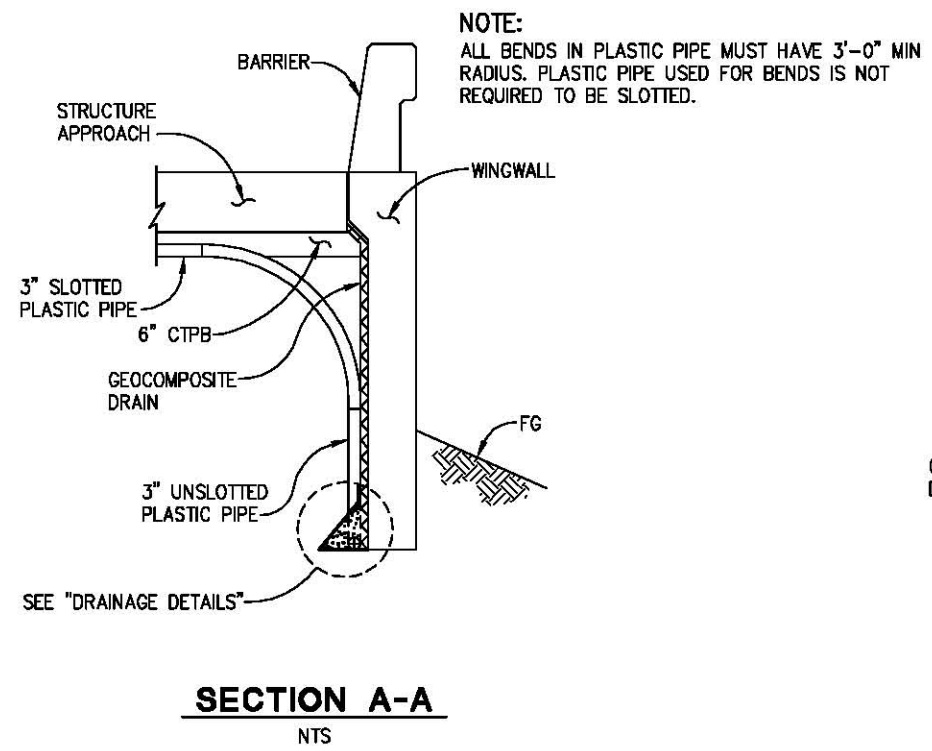
**BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT**

SHEET
S-12
35 OF 41
W.O. No. **77128**

ORIGINAL SCALE IS IN INCHES
 Drawing name: C:\Civil 3D\Projects\77128 Bassi Road at Granite C\AADD Files\Sheets\S-Sheets.dwg Layout Tab: S-13 Jul 19, 2018 10:29am SMeley
 FOR REDUCED PLANS
 2
 1
 0



SECTION B-B
NTS



PRELIMINARY

STRUCTURE APPROACH DRAINAGE DETAILS
SCALE: AS SHOWN



PREPARED UNDER THE SUPERVISION OF:
 REGISTERED CIVIL ENGINEER
 DATE:

DESIGNED: MSF
 DRAWN: SGM
 CHECKED: LLK
 DATE: 07/19/18
 ROAD NUMBER: 023

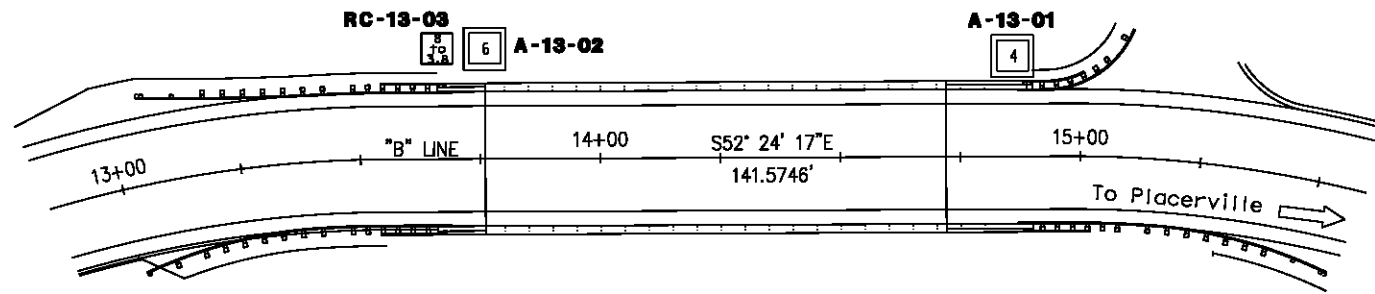


COUNTY OF EL DORADO
DEPARTMENT OF TRANSPORTATION

BASSI RD AT GRANITE CREEK
BRIDGE REPLACEMENT

SHEET
S-13
 36 OF 41
 W.D. No. **77128**

BENCHMARK
 (Temporary)
 Fnd 10" spike on east side of Granite Creek Bridge
 43.12' Lt "B" Line @ Bassi Rd
 Sta 14+70.99
 N 5494.7736
 E 4665.0810
 Elev = 718.96' (NGVD29)



PLAN
 1" = 20'

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	ED	--	--	37	41

07/12/13
 REGISTERED PROFESSIONAL GEOLOGIST DATE

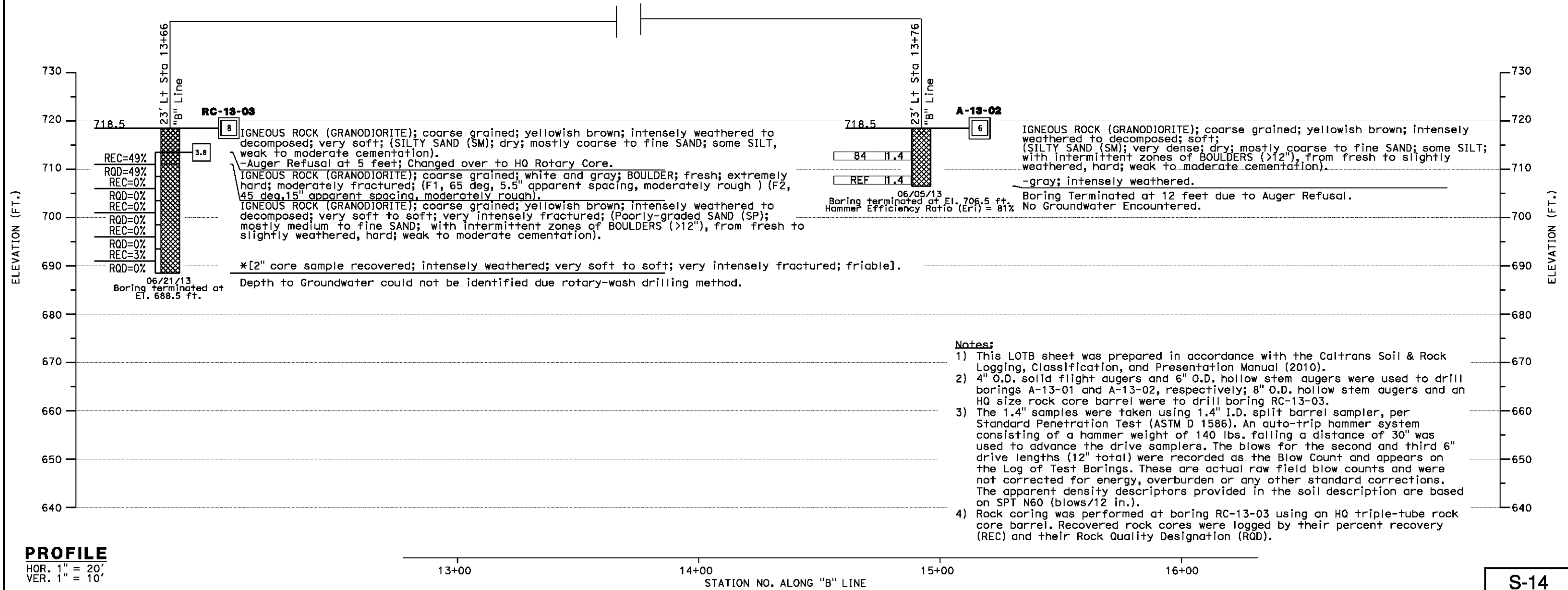
JOSHUA D. MUNN
 No. P.G. 8892
 Exp. 02/28/14
 STATE OF CALIFORNIA

PLANS APPROVAL DATE

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EL DORADO COUNTY, DEPT OF TRANSPORTATION
 2850 FAIRLANE COURT
 PLACERVILLE, CA 95667

GROUP DELTA CONSULTANTS, INC.
 4095 DELMAR AVE. SUITE 6
 ROCKLIN, CA 95677 GDC JOB NO. SC-115



PROFILE
 HOR. 1" = 20'
 VER. 1" = 10'

S-14

DESIGN OVERSIGHT	DRAWN BY K. FERNANDES	J. MUNN FIELD INVESTIGATION BY	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	D. HARRINGTON PROJECT ENGINEER	BRIDGE NO. 25C0071	BASSI RD AT GRANITE CREEK BRIDGE REPLACEMENT	
SIGN OFF DATE	CHECKED BY R. LAWRENCE	DATE: 03/21/13	UNIT: PROJECT NUMBER & PHASE: 77128	CONTRACT NO.: --	POST MILES --	LOG OF TEST BORINGS NO. 1 OF 5	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS						REVISION DATES	SHEET OF
0 1 2 3						7/12/13	

BENCHMARK
 (Temporary)
 Fnd 10" spike on east side of Granite Creek Bridge
 43.12' Lt "B" Line @ Bassi Rd
 Sta 14+70.99
 N 5494.7736
 E 4665.0810
 Elev = 718.96' (NGVD29)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	ED	--	--	38	41

07/12/13
 REGISTERED PROFESSIONAL GEOLOGIST DATE

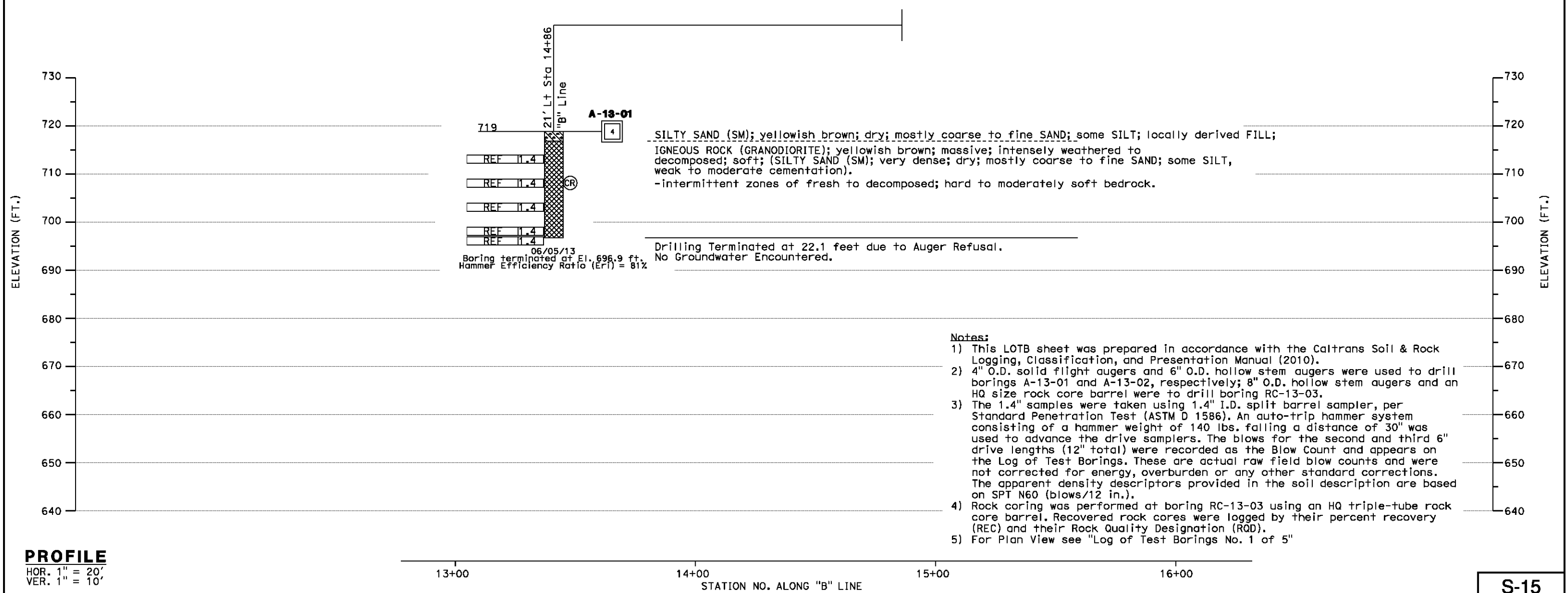
JOSHUA D. MUNN
 No. P.G. 8892
 Exp. 02/28/14
 REGISTERED PROFESSIONAL GEOLOGIST
 STATE OF CALIFORNIA

PLANS APPROVAL DATE

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GROUP DELTA CONSULTANTS, INC.
 4095 DELMAR AVE. SUITE 6
 ROCKLIN, CA 95677 GDC JOB NO. SC-115



DESIGN OVERSIGHT	DRAWN BY K. FERNANDES	J. MUNN FIELD INVESTIGATION BY	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	D. HARRINGTON PROJECT ENGINEER	BRIDGE NO. 25C0071	BASSI RD AT GRANITE CREEK BRIDGE REPLACEMENT			
SIGN OFF DATE	CHECKED BY R. LAWRENCE	DATE: 03/21/13			POST MILES --	LOG OF TEST BORINGS NO. 2 OF 5			
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS				UNIT: PROJECT NUMBER & PHASE: 77128	CONTRACT NO.: --	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES	SHEET	OF
				0 1 2 3			7/12/13		

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
03	ED	--	--	39	41

07/12/13
 REGISTERED PROFESSIONAL GEOLOGIST DATE
 JOSHUA D. MUNN
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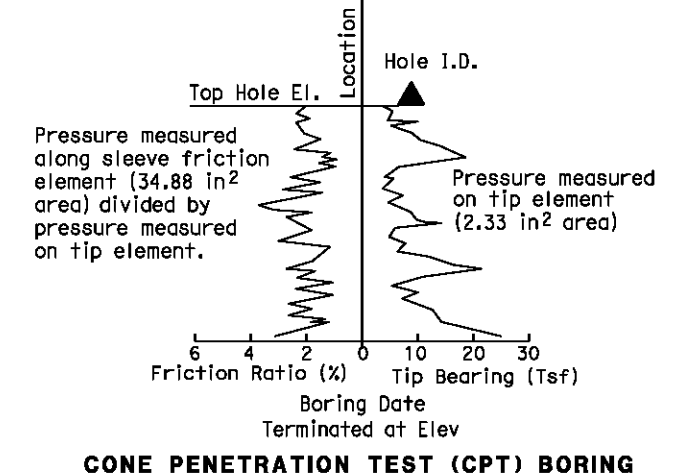
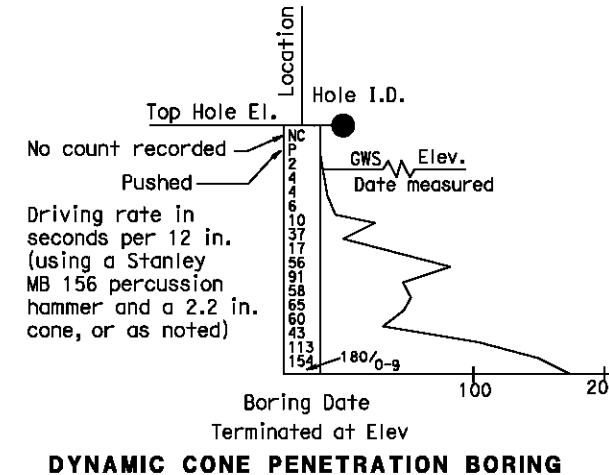
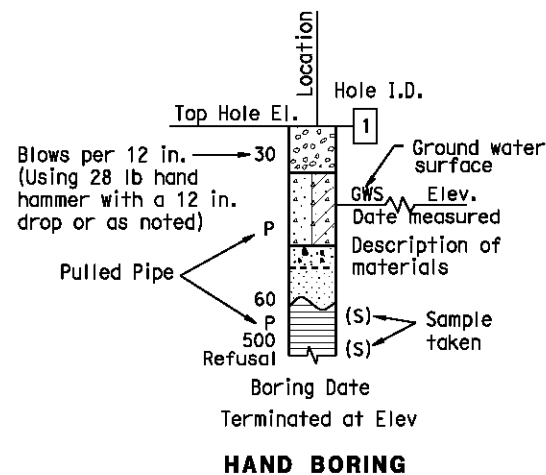
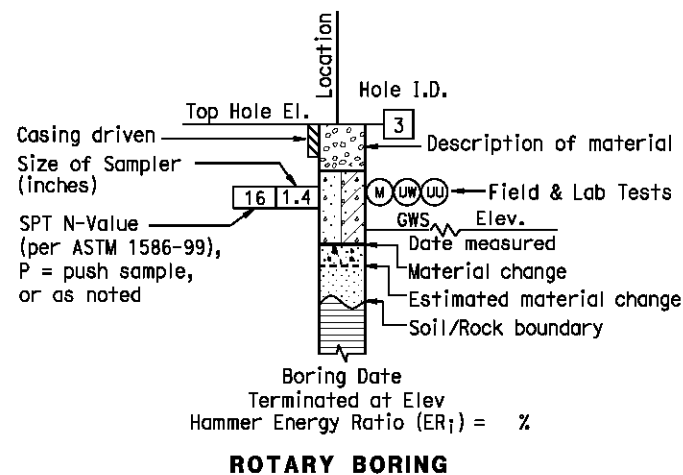
GROUP DELTA CONSULTANTS, INC.
 4095 DELMAR AVE. SUITE 6
 ROCKLIN, CA 95677 GDC JOB NO. SC-115

CEMENTATION	
Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

BOREHOLE IDENTIFICATION		
Symbol	Hole Type	Description
	A	Auger Boring (hollow or solid stem bucket)
	R	Rotary drilled boring (conventional)
	RW	Rotary drilled with self-casing wire-line
	RC	Rotary core with continuously-sampled, self-casing wire-line
	P	Rotary percussion boring (air)
	R	Rotary drilled diamond core
	HD	Hand driven (1-inch soil tube)
	HA	Hand Auger
	D	Dynamic Cone Penetration Boring
	CPT	Cone Penetration Test (ASTM D 5778)
	O	Other (note on LOTB)

Note: Size in inches.

CONSISTENCY OF COHESIVE SOILS				
Description	Shear Strength (tsf)	Pocket Penetrometer Measurement, PP, (tsf)	Torvane Measurement, TV, (tsf)	Vane Shear Measurement, VS, (tsf)
Very Soft	Less than 0.12	Less than 0.25	Less than 0.12	Less than 0.12
Soft	0.12 - 0.25	0.25 - 0.5	0.12 - 0.25	0.12 - 0.25
Medium Stiff	0.25 - 0.5	0.5 - 1	0.25 - 0.5	0.25 - 0.5
Stiff	0.5 - 1	1 - 2	0.5 - 1	0.5 - 1
Very Stiff	1 - 2	2 - 4	1 - 2	1 - 2
Hard	Greater than 2	Greater than 4	Greater than 2	Greater than 2



DESIGN OVERSIGHT	DRAWN BY K. FERNANDES	J. MUNN FIELD INVESTIGATION BY DATE: 03/21/13	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	D. HARRINGTON PROJECT ENGINEER	BRIDGE NO. 25C0071	BASSI RD AT GRANITE CREEK BRIDGE REPLACEMENT
SIGN OFF DATE	CHECKED BY R. LAWRENCE				POST MILES --	LOG OF TEST BORINGS NO. 3 OF 5
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			UNIT: -- PROJECT NUMBER & PHASE: 77128		CONTRACT NO.: --	DISREGARD PRINTS BEARING EARLIER REVISION DATES

07/12/13
DATE

REGISTERED PROFESSIONAL GEOLOGIST

JOSHUA D. MUNN
No. P.G. 8892
Exp. 02/28/14
STATE OF CALIFORNIA

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PLACERVILLE, CA 95667

GROUP DELTA CONSULTANTS, INC.
4095 DELMAR AVE. SUITE 6
ROCKLIN, CA 95677 GDC JOB NO. SC-115

GROUP SYMBOLS AND NAMES			
Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
	Well-graded GRAVEL		Lean CLAY
	Well-graded GRAVEL with SAND		Lean CLAY with SAND
	Poorly-graded GRAVEL		SANDY lean CLAY
	Poorly-graded GRAVEL with SAND		SANDY lean CLAY with GRAVEL
	Well-graded GRAVEL with SILT		SILTY CLAY
	Well-graded GRAVEL with SILT and SAND		SILTY CLAY with SAND
	Well-graded GRAVEL with CLAY (or SILTY CLAY)		SILTY CLAY with GRAVEL
	Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		SANDY SILTY CLAY
	Poorly-graded GRAVEL with SILT		SANDY SILTY CLAY with GRAVEL
	Poorly-graded GRAVEL with SILT and SAND		GRAVELLY SILTY CLAY
	Poorly-graded GRAVEL with CLAY (or SILTY CLAY)		GRAVELLY SILTY CLAY with SAND
	Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
	SILTY GRAVEL		SILT
	SILTY GRAVEL with SAND		SILT with SAND
	CLAYEY GRAVEL		SILT with GRAVEL
	CLAYEY GRAVEL with SAND		SANDY SILT
	SILTY, CLAYEY GRAVEL		SANDY SILT with GRAVEL
	SILTY, CLAYEY GRAVEL with SAND		GRAVELLY SILT
	Well-graded SAND		GRAVELLY SILT with SAND
	Well-graded SAND with GRAVEL		
	Poorly-graded SAND		ORGANIC lean CLAY
	Poorly-graded SAND with GRAVEL		ORGANIC lean CLAY with SAND
	Well-graded SAND with SILT		ORGANIC lean CLAY with GRAVEL
	Well-graded SAND with SILT and GRAVEL		SANDY ORGANIC lean CLAY
	Well-graded SAND with CLAY (or SILTY CLAY)		SANDY ORGANIC lean CLAY with GRAVEL
	Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		GRAVELLY ORGANIC lean CLAY
	Poorly-graded SAND with SILT		GRAVELLY ORGANIC lean CLAY with SAND
	Poorly-graded SAND with SILT and GRAVEL		
	Poorly-graded SAND with CLAY (or SILTY CLAY)		ORGANIC SILT
	Poorly-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)		ORGANIC SILT with SAND
	SILTY SAND		ORGANIC SILT with GRAVEL
	SILTY SAND with GRAVEL		SANDY ORGANIC SILT
	CLAYEY SAND		SANDY ORGANIC SILT with GRAVEL
	CLAYEY SAND with GRAVEL		GRAVELLY ORGANIC SILT
	SILTY, CLAYEY SAND		GRAVELLY ORGANIC SILT with SAND
	SILTY, CLAYEY SAND with GRAVEL		
	PEAT		Fat CLAY
	COBBLES COBBLES and BOULDERS BOULDERS		Fat CLAY with SAND

FIELD AND LABORATORY TESTING	
(C)	Consolidation (ASTM D 2435)
(CL)	Collapse Potential (ASTM D 5333)
(CP)	Compaction Curve (CTM 216)
(CR)	Corrosivity Testing (CTM 643, CTM 422, CTM 417)
(CU)	Consolidated Undrained Triaxial (ASTM D 4767)
(DS)	Direct Shear (ASTM D 3080)
(EI)	Expansion Index (ASTM D 4829)
(M)	Moisture Content (ASTM D 2216)
(OC)	Organic Content-% (ASTM D 2974)
(P)	Permeability (CTM 220)
(PA)	Particle Size Analysis (ASTM D 422)
(PI)	Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
(PL)	Point Load Index (ASTM D 5731)
(PM)	Pressure Meter
(R)	R-Value (CTM 301)
(SE)	Sand Equivalent (CTM 217)
(SG)	Specific Gravity (AASHTO T 100)
(SL)	Shrinkage Limit (ASTM D 427)
(SW)	Swell Potential (ASTM D 4546)
(UC)	Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
(UU)	Unconsolidated Undrained Triaxial (ASTM D 2850)
(UW)	Unit Weight (ASTM D 4767)

APPARENT DENSITY OF COHESIONLESS SOILS	
Description	SPT N ₆₀ (Blows / 12 in.)
Very Loose	0 - 5
Loose	5 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Greater than 50

MOISTURE	
Description	Criteria
Dry	No discernable moisture
Moist	Moisture present, but no free water
Wet	Visible free water

PERCENT OR PROPORTION OF SOILS	
Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5% - 10%
Little	15% - 25%
Some	30% - 45%
Mostly	50% - 100%

PARTICLE SIZE		
Description	Size (in.)	
Boulder	Greater than 12	
Cobble	3 - 12	
Gravel	Coarse	3/4 - 3
	Fine	1/5 - 3/4
Sand	Coarse	1/16 - 1/5
	Medium	1/64 - 1/16
	Fine	1/300 - 1/64
Silt and Clay	Less than 1/300	

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DESIGN OVERSIGHT	DRAWN BY K. FERNANDES	J. MUNN FIELD INVESTIGATION BY	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	D. HARRINGTON PROJECT ENGINEER	BRIDGE NO. 25C0071	BASSI RD AT GRANITE CREEK BRIDGE REPLACEMENT	
SIGN OFF DATE	CHECKED BY R. LAWRENCE	DATE: 03/21/13			POST MILES --	LOG OF TEST BORINGS NO. 4 OF 5	
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS			UNIT: -- PROJECT NUMBER & PHASE: 77128		CONTRACT NO.: --		DISREGARD PRINTS BEARING EARLIER REVISION DATES

PERCENT CORE RECOVERY (REC) & ROCK QUALITY DESIGNATION (RQD)

$$REC = \frac{\sum \text{Length of the recovered core pieces (in.)}}{\text{Total length of core run (in.)}} \times 100\%$$

$$RQD = \frac{\sum \text{Length of intact core pieces} \geq 4 \text{ in.}}{\text{Total length of core run (in.)}} \times 100\%$$

RQD* Indicates soundness criteria not met.

BEDDING SPACING

Description	Thickness / Spacing
Massive	Greater than 10 ft
Very Thickly Bedded	3 ft - 10 ft
Thickly Bedded	1 ft - 3 ft
Moderately Bedded	4 in. - 1 ft
Thinly Bedded	1 in. - 4 in.
Very Thinly Bedded	1/4 in. - 1 in.
Laminated	Less than 1/4 in.

LEGEND OF ROCK MATERIALS

- IGNEOUS ROCK
- SEDIMENTARY ROCK
- METAMORPHIC ROCK

07/12/13
 REGISTERED PROFESSIONAL GEOLOGIST DATE
 JOSHUA D. MUNN
 No. P.G. 8892
 Exp. 02/28/14
 STATE OF CALIFORNIA

PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

EL DORADO COUNTY, DEPT OF TRANSPORTATION
 2850 FAIRLANE COURT
 PLACERVILLE, CA 95667

GROUP DELTA CONSULTANTS, INC.
 4095 DELMAR AVE. SUITE 6
 ROCKLIN, CA 95677 GDC JOB NO. SC-115

ROCK HARDNESS

Description	Criteria
Extremely Hard	Cannot be scratched with a pocketknife or sharp pick. Can only be chipped with repeated heavy hammer blows.
Very Hard	Cannot be scratched with a pocketknife or sharp pick. Breaks with repeated heavy hammer blows.
Hard	Can be scratched with a pocketknife or sharp pick with difficulty (heavy pressure). Breaks with heavy hammer blows.
Moderately Hard	Can be scratched with pocketknife or sharp pick with light or moderate pressure. Breaks with moderate hammer blows.
Moderately Soft	Can be grooved 1/16 in. deep with a pocketknife or sharp pick with moderate or heavy pressure. Breaks with light hammer blow or heavy manual pressure.
Soft	Can be grooved or gouged easily by a pocketknife or sharp pick with light pressure, can be scratched with fingernail. Breaks with light to moderate manual pressure.
Very Soft	Can be readily indented, grooved or gouged with fingernail, or carved with a pocketknife. Breaks with light manual pressure.

WEATHERING DESCRIPTORS FOR INTACT ROCK

Description	Diagnostic Features				General Characteristics	
	Chemical Weathering-Discoloration and/or Oxidation		Mechanical Weathering-Grain Boundary Conditions (Disaggregation) Primarily for Granitics and Some Coarse-Grained Sediments	Texture and Leaching		
	Body of Rock	Fracture Surfaces		Texture		Leaching
Fresh	No discoloration, not oxidized.	No discoloration or oxidation.	No separation, intact (tight).	No change	No leaching	Hammer rings when crystalline rocks are struck.
Slightly Weathered	Discoloration or oxidation is limited to surface of, or short distance from, fractures; some feldspar crystals are dull.	Minor to complete discoloration or oxidation of most surfaces.	No visible separation, intact (tight).	Preserved	Minor leaching of some soluble minerals.	Hammer rings when crystalline rocks are struck. Body of rock not weakened.
Moderately Weathered	Discoloration or oxidation extends from fractures usually throughout; Fe-Mg minerals are "rusty," feldspar crystals are "cloudy."	All fracture surfaces are discolored or oxidized.	Partial separation of boundaries visible.	Generally preserved	Soluble minerals may be mostly leached.	Hammer does not ring when rock is struck. Body of rock is slightly weakened.
Intensely Weathered	Discoloration or oxidation throughout; all feldspars and Fe-Mg minerals are altered to clay to some extent; or chemical alteration produces in-situ disaggregation, see grain boundary conditions.	All fracture surfaces are discolored or oxidized, surfaces friable.	Partial separation, rock is friable; in semiarid conditions granitics are disaggregated.	Texture altered by chemical disintegration (hydration, argillation).	Leaching of soluble minerals may be complete.	Dull sound when struck with hammer, usually can be broken with moderate to heavy manual pressure or by light hammer blow without reference to planes of weakness such as incipient or hairline fractures, or veinlets. Rock is significantly weakened.
Decomposed	Discolored or oxidized throughout, but resistant minerals such as quartz may be unaltered; all feldspars and Fe-Mg minerals are completely altered to clay.		Complete separation of grain boundaries (disaggregated).	Resembles a soil, partial or complete remnant rock structure may be preserved; leaching of soluble minerals usually complete.		Can be granulated by hand. Resistant minerals such as quartz may be present as "stringers" or "dikes."

FRACTURE DENSITY

Description	Observed Fracture Density
Unfractured	No fractures.
Very Slightly Fractured	Core lengths greater than 3 ft.
Slightly Fractured	Core lengths mostly from 1 to 3 ft.
Moderately Fractured	Core lengths mostly from 4 in. to 1 ft.
Intensely Fractured	Core lengths mostly from 1 to 4 in.
Very Intensely Fractured	Mostly chips and fragments.

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