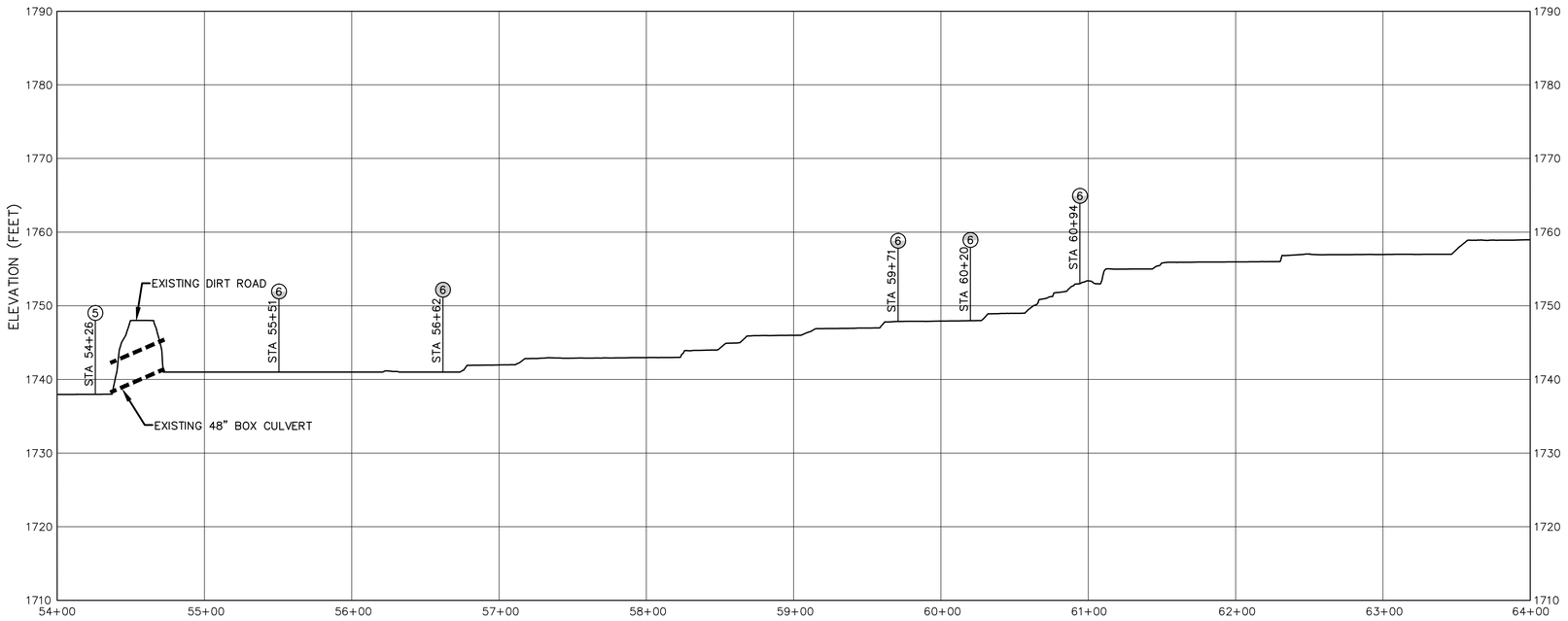
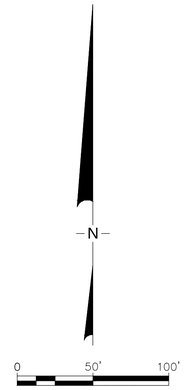


PROFILE VIEW

SCALE: HORIZ: 1"=50'
VERT:1" = 10'

PLAN VIEW



LEGEND

- 730 — EXISTING MAJOR CONTOUR (FEET)
- EXISTING MINOR CONTOUR
- EXISTING ROAD
- PROPERTY BOUNDARY
- EXISTING 48" BOX CULVERT
- THALWEG LINE
- ENERGY DISSIPATER
- CHECK STRUCTURE
- ACCESS POINT
- SLOPE STABILIZATION ON NORTH & SOUTH BANKS
- SLOPE STABILIZATION ON NORTH BANK
- SLOPE STABILIZATION ON SOUTH BANK
- CONTROL MEASURE IN THALWEG

CONSTRUCTION NOTES

1. INSTALL NEW RIPRAP CHECK STRUCTURE WITH CALTRANS CLASS FACING (METHOD A) RIPRAP PER DETAIL 4/10
2. REMOVE EXISTING RIPRAP CHECK STRUCTURE, (REMOVE THE EXISTING ROCK AND PLACE THE THALWEG TO THE SIDE AT THE TOE OF THE SLOPES).
3. RETROFIT EXISTING RIPRAP CHECK STRUCTURE, INSTALL CALTRANS CLASS FACING (METHOD A) RIPRAP TO CREATE A STRUCTURE THAT IS CONSISTENT WITH THE RIPRAP CHECK STRUCTURE DETAIL 4/10
4. BREAK UP INSTREAM BOULDERS, (BREAKING INSTREAM BOULDERS SHALL INCLUDE BREAKING THE BOULDERS TO A ROCK SIZE, ON AVERAGE, LESS THAN 11 INCHES IN DIAMETER. ROCK SHALL BE MOVED FROM THE THALWEG TO THE SIDE AT THE TOE OF THE SIDE SLOPES).
5. INSTALL GROUTED AND VEGETATED RIPRAP ENERGY DISSIPATION STRUCTURE PER DETAIL 1/10
6. INSTALL EROSION CONTROL BLANKET PER DETAIL 2/10
7. INSTALL TURF REINFORCEMENT MAT PER DETAIL 2/10
8. INSTALL NEW RIPRAP CHECK STRUCTURE WITH CALTRANS CLASS LIGHT (METHOD A) RIPRAP PER DETAIL 4/10

APPROXIMATE CONSTRUCTION QUANTITY

STATION	CONTROL MEASURE ID	QUANTITY	UNITS
54+26	⑤	59	TONS–GROUTED RIPRAP
54+26	⑤	82	TONS–VEGETATED RIPRAP
55+51	⑥	75	SQ YD ECB
56+62	⑥	52	SQ YD ECB
59+71	⑥	21	SQ YD ECB
60+20	⑥	32	SQ YD ECB
60+94	⑥	20	SQ YD ECB

REV	DATE	DESCRIPTION	DRN	APP

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PHONE: 805.897.3800.

BOEING
SANTA SUSANA FIELD LABORATORY
VENTURA COUNTY, CALIFORNIA

TITLE: PLAN & PROFILE STA 54+00 TO 64+00

PROJECT: NORTHERN DRAINAGE RESTORATION

SITE: BOEING SANTA SUSANA FIELD LABORATORY (SSFL)

THIS DRAWING MAY NOT BE ISSUED FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

SIGNATURE

DATE

DESIGN BY: JG	DATE: JULY 2011
DRAWN BY: BP	PROJECT NO.: SB0363
CHECKED BY: DB	FILE: SB0363 C07
REVIEWED BY: BS	DRAWING NO.: 7 OF 10
APPROVED BY: RJ	

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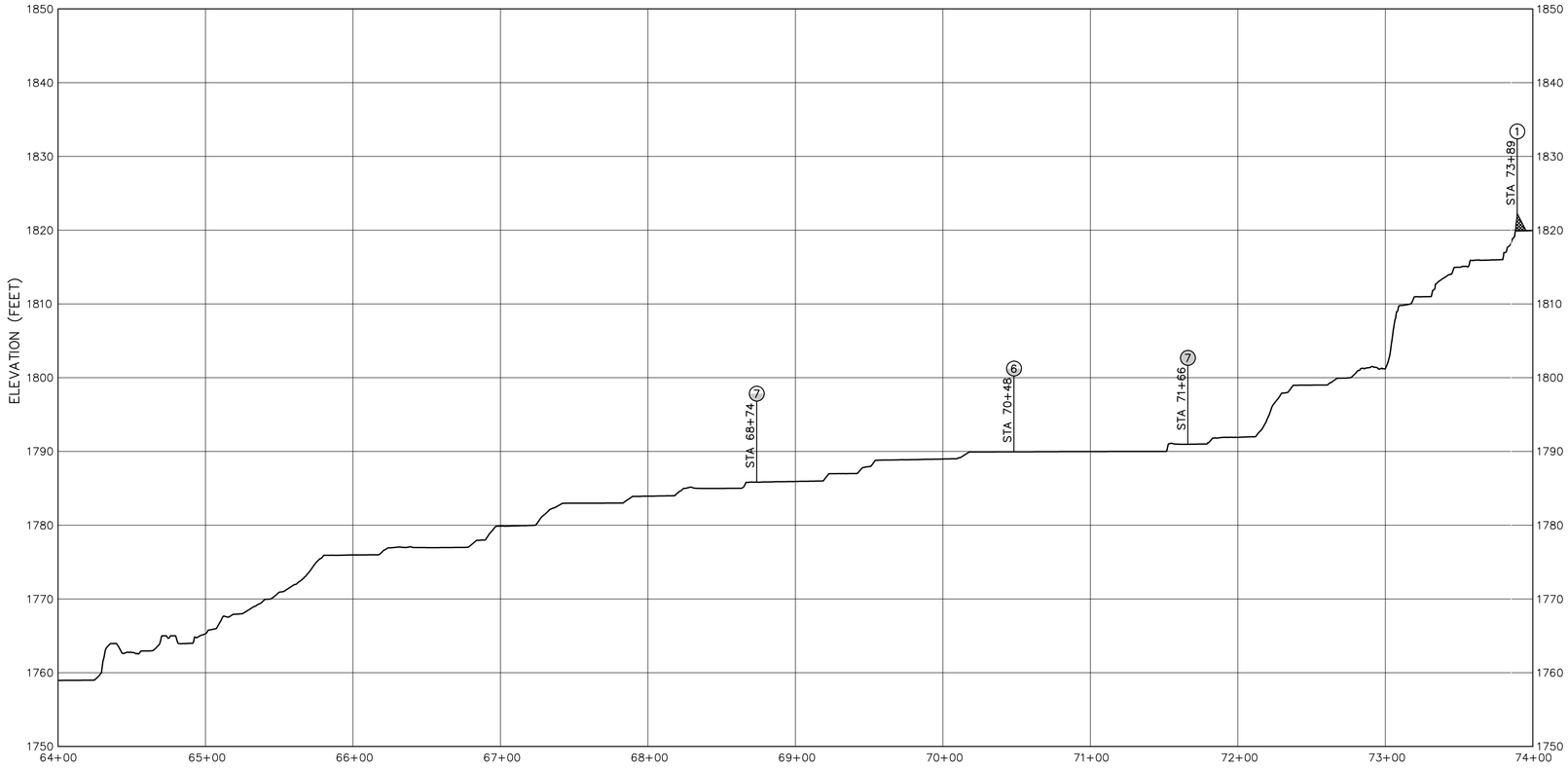
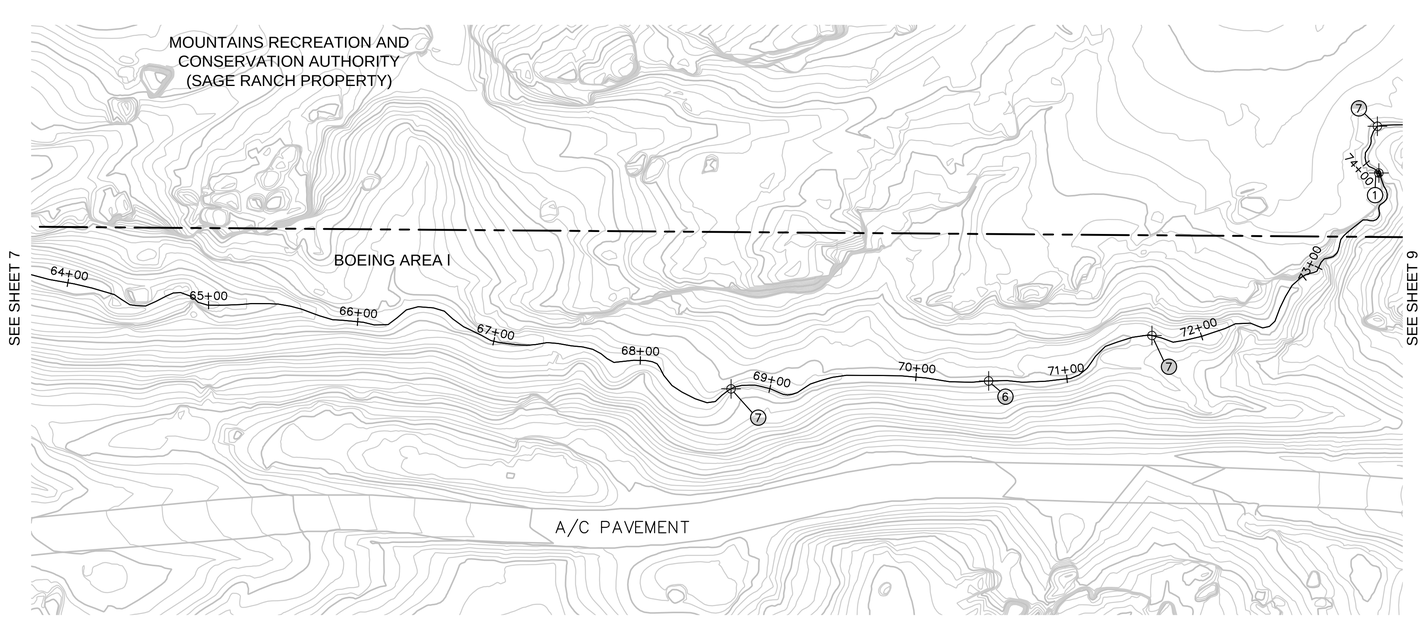


PROFILE VIEW

SCALE: HORIZ: 1"=50'
VERT:1" = 10'



PLAN VIEW

60% DESIGN DRAWINGS
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LEGEND

- 730 — EXISTING MAJOR CONTOUR (FEET)
- EXISTING MINOR CONTOUR
- EXISTING ROAD
- PROPERTY BOUNDARY
- THALWEG LINE
- CHECK STRUCTURE
- ACCESS POINT
- SLOPE STABILIZATION ON NORTH & SOUTH BANKS
- SLOPE STABILIZATION ON NORTH BANK
- SLOPE STABILIZATION ON SOUTH BANK
- CONTROL MEASURE IN THALWEG

CONSTRUCTION NOTES

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5. INSTALL GROUTED AND VEGETATED RIPRAP ENERGY DISSIPATION STRUCTURE PER DETAIL 1/10
6. INSTALL EROSION CONTROL BLANKET PER DETAIL 2/10
7. INSTALL TURF REINFORCEMENT MAT PER DETAIL 2/10
8. INSTALL NEW RIPRAP CHECK STRUCTURE WITH CALTRANS CLASS LIGHT (METHOD A) RIPRAP PER DETAIL 4/10

N

0 50' 100'
SCALE IN FEET

APPROXIMATE CONSTRUCTION QUANTITY			
STATION	CONTROL MEASURE ID	QUANTITY	UNITS
68+74	7	31	SQ YD TRM
70+48	6	21	SQ YD ECB
71+66	7	84	SQ YD TRM
73+89	1	12	TONS RIPRAP

REV	DATE	DESCRIPTION	DRN	APP

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BOEING
SANTA SUSANA FIELD LABORATORY
VENTURA COUNTY, CALIFORNIA

TITLE: PLAN & PROFILE STA 64+00 TO 74+00

PROJECT: NORTHERN DRAINAGE RESTORATION

SITE: BOEING SANTA SUSANA FIELD LABORATORY (SSFL)

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SIGNATURE

DATE

DESIGN BY: JG	DATE:	JULY 2011	
DRAWN BY: BP	PROJECT NO.:	SB0363	
CHECKED BY: DB	FILE:	SB0363 C08	
REVIEWED BY: BS	DRAWING NO.:	8 OF 10	
APPROVED BY: RJ			

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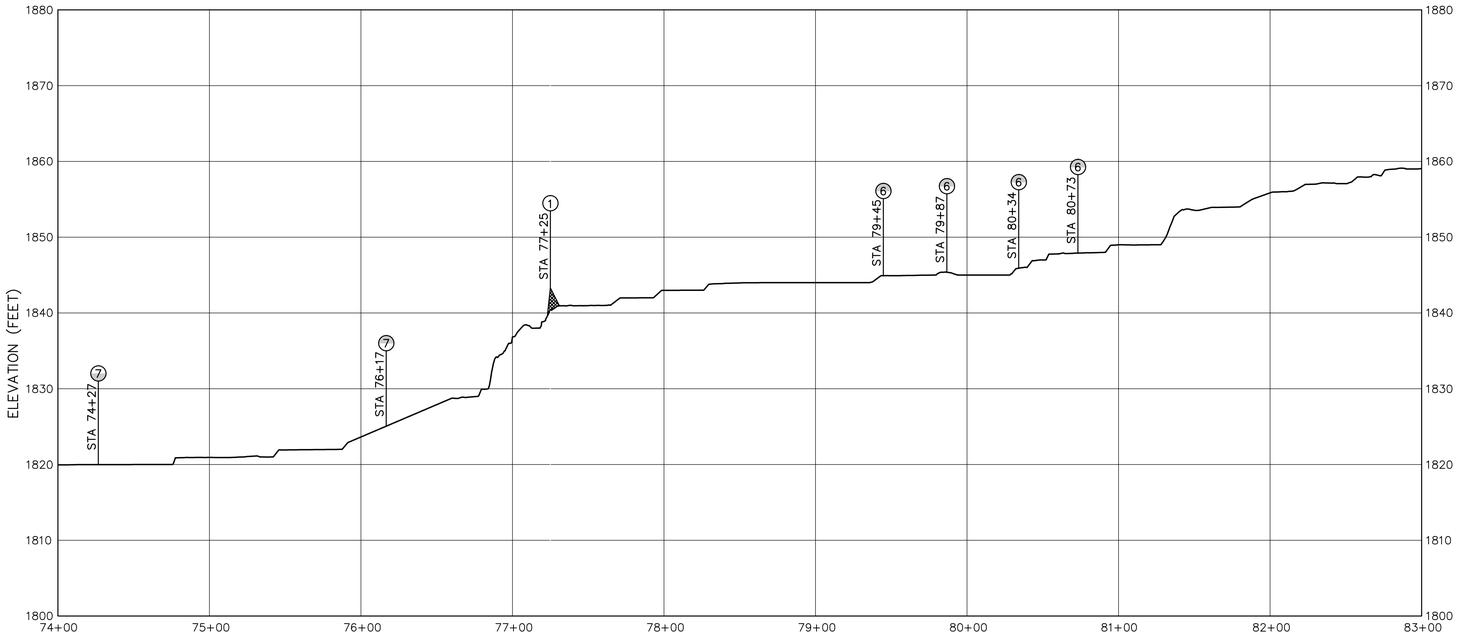
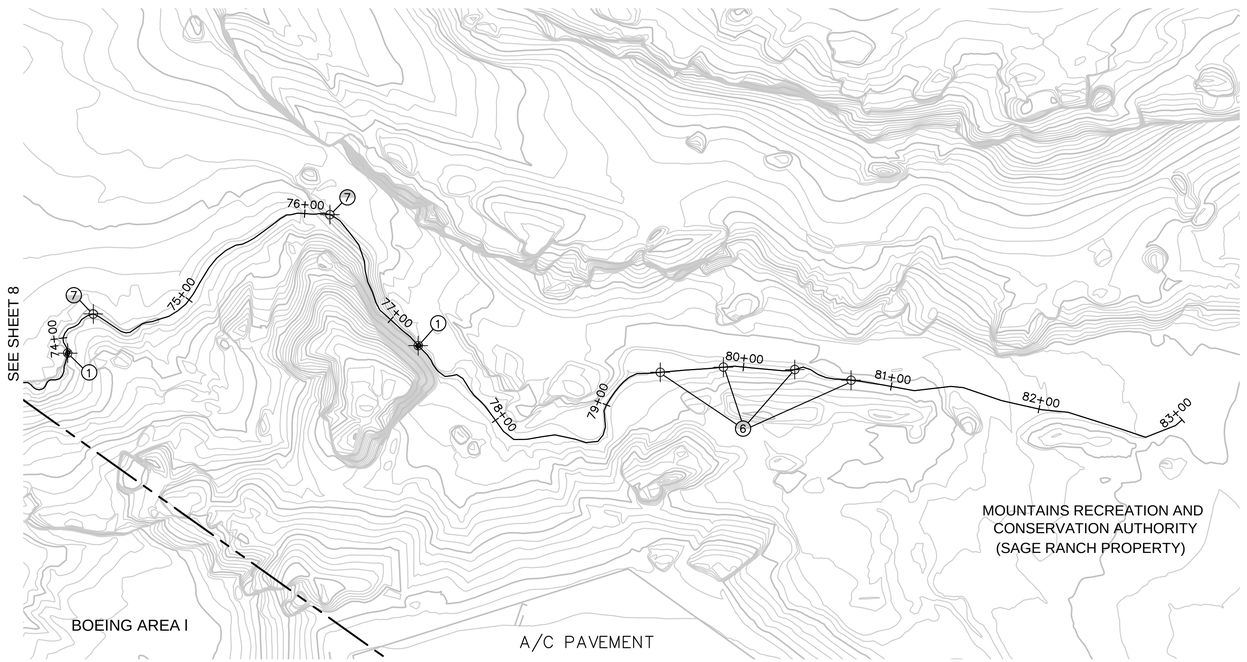


PROFILE VIEW

SCALE: HORIZ: 1"=50'
VERT:1" = 10'



PLAN VIEW

LEGEND

- EXISTING MAJOR CONTOUR (FEET) (730)
- EXISTING MINOR CONTOUR
- PAVED AREA
- PROPERTY BOUNDARY
- THALWEG LINE
- CHECK STRUCTURE
- ACCESS POINT
- SLOPE STABILIZATION ON NORTH & SOUTH BANKS
- SLOPE STABILIZATION ON NORTH BANK
- SLOPE STABILIZATION ON SOUTH BANK
- CONTROL MEASURE IN THALWEG

CONSTRUCTION NOTES

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7. INSTALL TURF REINFORCEMENT MAT PER DETAIL 2/10
8. INSTALL NEW RIPRAP CHECK STRUCTURE WITH CALTRANS CLASS LIGHT (METHOD A) RIPRAP PER DETAIL 4/10

N

0 50' 100'
SCALE IN FEET

APPROXIMATE CONSTRUCTION QUANTITY

STATION	CONTROL MEASURE ID	QUANTITY	UNITS
74+27	7	90	SQ YD TRM
76+17	7	85	SQ YD TRM
77+25	1	10	TONS RIPRAP
79+45 79+87 80+34 80+73	6	79	SQ YD ECB

REV	DATE	DESCRIPTION	DRN	APP

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PHONE: 805.897.3800.

BOEING
SANTA SUSANA FIELD LABORATORY
VENTURA COUNTY, CALIFORNIA

TITLE: PLAN & PROFILE STA 74+00 TO 84+00

PROJECT: NORTHERN DRAINAGE RESTORATION

SITE: BOEING SANTA SUSANA FIELD LABORATORY (SSFL)

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SIGNATURE

DATE

DESIGN BY: JG	DATE: JULY 2011
DRAWN BY: BP	PROJECT NO.: SB0363
CHECKED BY: DB	FILE: SB0363 C09
REVIEWED BY: BS	DRAWING NO.:
APPROVED BY: RJ	9 OF 10

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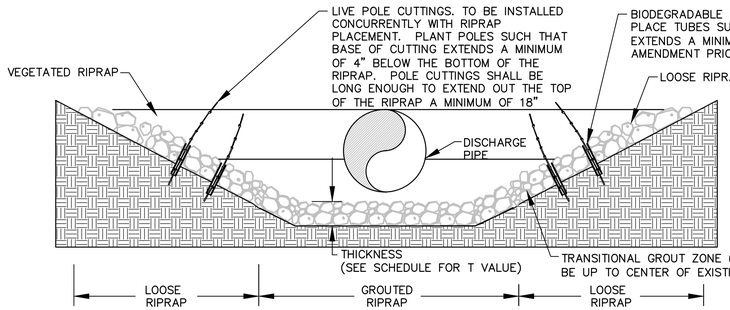
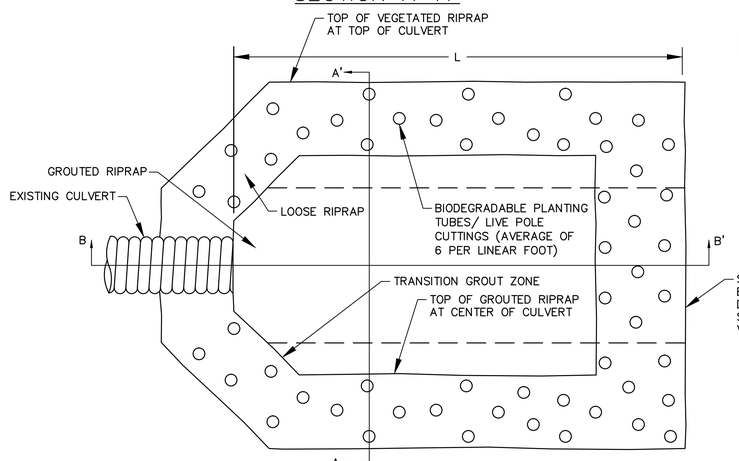


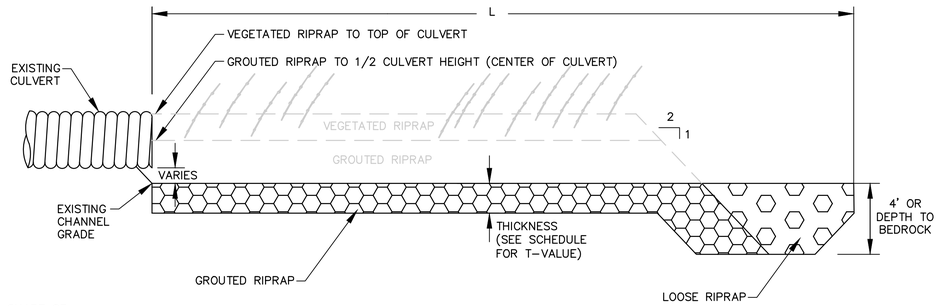
SECTION A–A'

GROUTED/VEGETATED ENERGY DISSIPATION SCHEDULE				
STATION	CULVERT	D50 (IN)	T (FT)	L (FT)
54+26	48" BOX	16	2.5	25
40+53	51" DIA.	16	2.5	25

NOTES:
1. APRON SHALL BE SET AT A ZERO GRADE AND ALIGNED STRAIGHT.
2. SEE GROUTED ENERGY DISSIPATION SCHEDULE FOR VALUES.

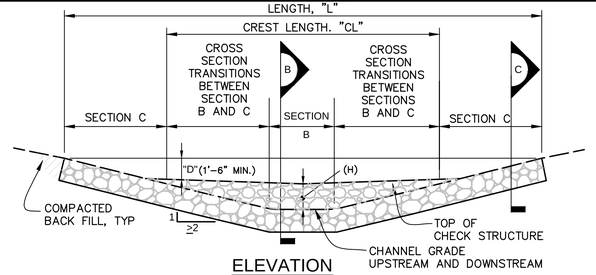


PLAN



SECTION B–B'

1 / 6,7 DETAIL
GROUTED/VEGETATED ENERGY DISSIPATION
SCALE: 1" = 2'
XREF: SB0363-X08 DET RIP RAP SPLASH.dwg



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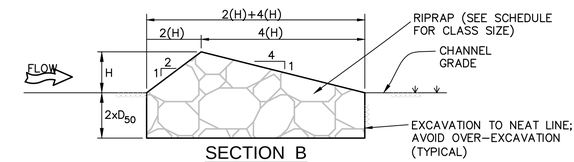
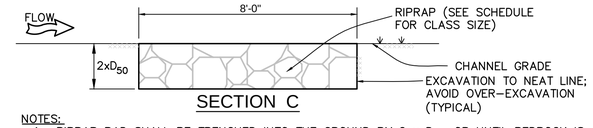


SECTION B

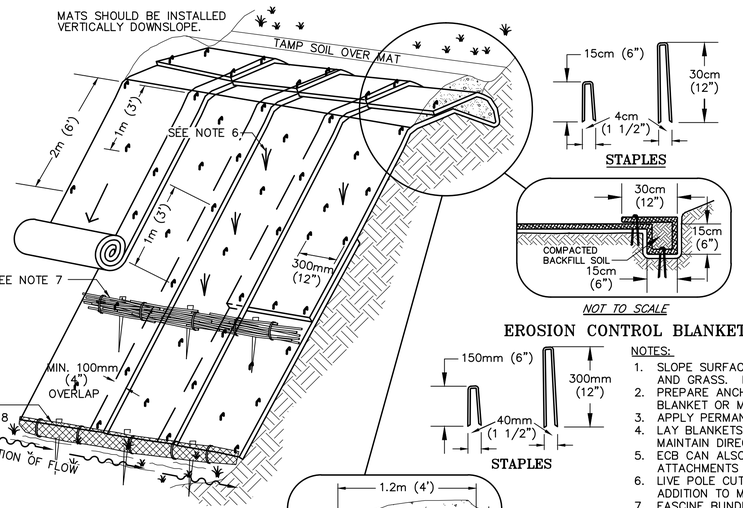


SECTION C

NOTES:
1. RIPRAP PAD SHALL BE TRENCHED INTO THE GROUND BY 2 x D_{50}, OR UNTIL BEDROCK IS ENCOUNTERED WHICH CAN NOT BE HAND EXCAVATED.
2. THE ENDS OF THE CHECK STRUCTURE SHALL BE A MINIMUM OF 1'–6" HIGHER THAN THE CENTER OF THE CHECK STRUCTURE.
3. RETROFITTING AN EXISTING CHECK STRUCTURE INCLUDES INSTALLING ADDITIONAL RIPRAP TO CREATE A STRUCTURE CONSISTENT WITH THIS DETAIL.

CHECK STRUCTURE SCHEDULE						
STATION	LENGTH, L (FT)	CREST LENGTH, CL (FT)	CENTER WIDTH, B (FT)	HEIGHT, H (FT)	CALTRANS CLASS	D_{50} (IN)
15+14	23.2	10	4	3	FACING	11
21+12	12.1	10	4	3	LIGHT	16
23+70	22.0	20	5	2.5	FACING	11
26+57	8.7	6	2	2.5	FACING	11
32+41	11.2	10	4	2	LIGHT	16
35+45	7.0	5	2	1.5	FACING	11
43+65	15.0	10	5	2.5	LIGHT	16
45+94	4.0	4	2	3	FACING	11
49+03	12.0	10	4	3	FACING	11
51+28	17.5	15	5	2.5	FACING	11
53+87	7.5	5	2	2	FACING	11
73+89	8.5	6	2	1	FACING	11
77+25	7	5	2	2	FACING	11

4 / 3,4,5,6,8,9 DETAIL
RIPRAP CHECK STRUCTURE
SCALE: N.T.S.
XREF: SB0363-X14 Grade Control Check Structure.dwg



ISOMETRIC VIEW

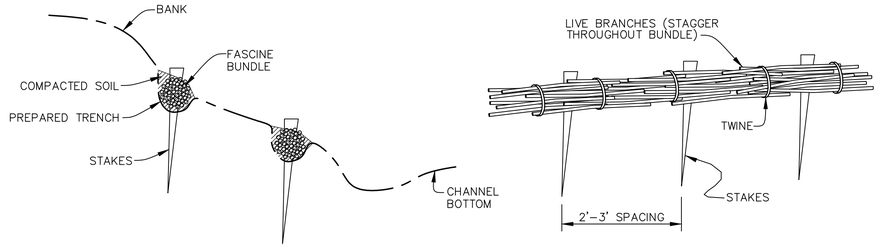
TYPICAL SLOPE SOIL STABILIZATION

EROSION CONTROL BLANKET

TURF REINFORCEMENT MAT

NOTES:
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. PREPARE ANCHOR TRENCHES ACCORDING TO TYPE OF BLANKET OR MAT.
3. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
4. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
5. ECB CAN ALSO USE FASCINES IN LIEU OF POINT ATTACHMENTS FOR BETTER CONTACT.
6. LIVE POLE CUTTINGS CAN BE USED TO SECURE BLANKET IN ADDITION TO MANUFACTURER RECOMMENDED STAPLES.
7. FASCINE BUNDLES PER DETAIL 3 CAN BE UTILIZED TO BREAKUP LONG SLOPES, GREATER THAN 5 FT OF VERTICAL DROP, AT THE DISCRETION OF THE ONSITE ENGINEER.
8. FIBERSCHINES PER DETAIL 5 SHALL BE UTILIZED FOR TOE OF SLOPE STABILIZATION.
9. ECB SHALL CONSIST OF 36 MONTH DOUBLE MAT BLANKET WITH PERMISSIBLE CRITICAL SHEAR STRESS EQUAL TO OR GREATER THAN 3 POUNDS PER SQUARE FOOT.
10. TRM SHALL CONSIST OF HEAVY DUTY MAT WITH PERMISSIBLE CRITICAL SHEAR STRESS EQUAL TO OR GREATER THAN 8 POUNDS PER SQUARE FOOT.
11. BLANKET APPLICATIONS ON SLOPES 1(H):1(V) OR STEEPER SHALL HAVE MECHANICAL ANCHORS INSTALLED IN ADDITION TO STAPLES RECOMMENDED BY THE MANUFACTURER.
12. STAPLES SHALL BE MILD STEEL.

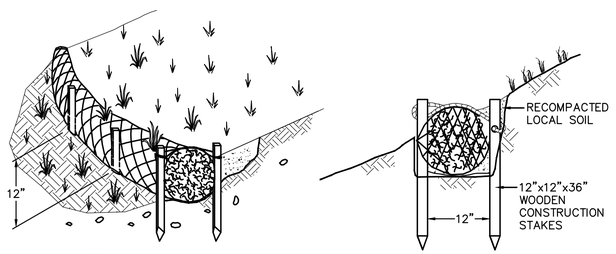
2 / 3,4,5,6,7,8,9 DETAIL
TYPICAL SLOPE SOIL STABILIZATION
SCALE: N.T.S.
XREF: SB0363-X12 TURF MAT.dwg
SOURCE: ESENSS



CROSS SECTION

FASCINE BUNDLE DETAIL

3 / 10 DETAIL
FASCINE BUNDLES
SCALE: N.T.S.
XREF: SB0363-X16 FACINE BUNDLES.dwg



5 / 10 DETAIL
FIBERSCHINE TOE PROTECTION
SCALE: N.T.S.
XREF: SB0363-X19 COCONUT FIBER ROLL.dwg

1) PLACE COCONUT FIBER ROLLS ALONG A HORIZONTAL CONTOUR, AND KEY IN AT EACH END OR ABUT TIGHTLY WITH ADJACENT ROLL.

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PHONE: 805.897.3800.

BOEING
SANTA SUSANA FIELD LABORATORY
VENTURA COUNTY, CALIFORNIA

TITLE: DETAILS

PROJECT: NORTHERN DRAINAGE RESTORATION

SITE: BOEING SANTA SUSANA FIELD LABORATORY (SSFL)

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DRAWN BY: BP	PROJECT NO.: SB0363
CHECKED BY: DB	FILE: SB0363 C10
REVIEWED BY: BS	DRAWING NO.: 10 OF 10
APPROVED BY: RJ	

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