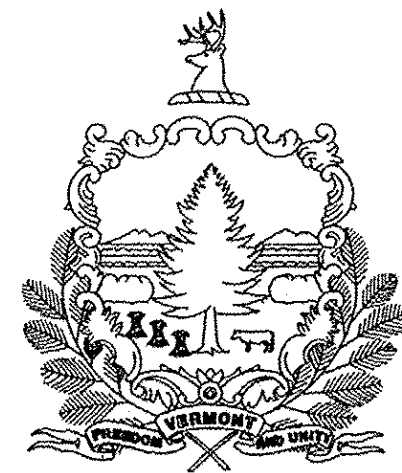
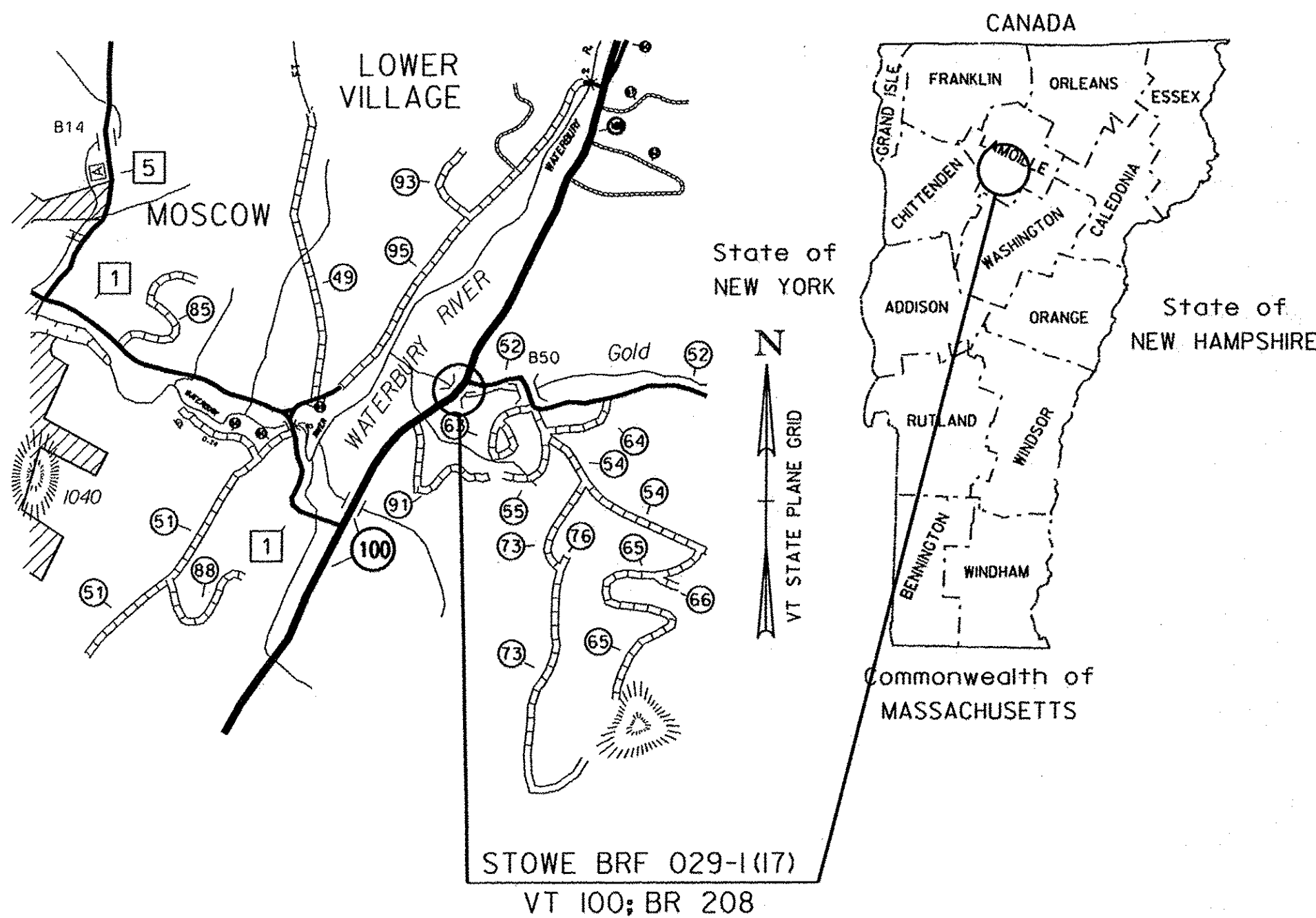


STATE OF VERMONT
AGENCY OF TRANSPORTATION



PROPOSED IMPROVEMENT
BRIDGE PROJECT
TOWN OF STOWE
COUNTY OF LAMOILLE



RECORD PLANS

CONTRACTOR:	AUSTIN CONSTRUCTION, INC. - CONCORD, VT
RESIDENT ENGINEER:	RICK HALE
CONSTRUCTION BEGAN:	APRIL 14, 2014
CONSTRUCTION COMPLETE:	SEPTEMBER 26, 2014
RECORD PLANS BY:	RICK HALE & KEVIN KING

I HEREBY CERTIFY THAT ALL THE CONSTRUCTION REQUIRED BY THIS SET OF DRAWINGS HAS BEEN ACCOMPLISHED AS INDICATED HEREIN.

BY *Rick Hale* RESIDENT ENGINEER
DATE 6/1/16

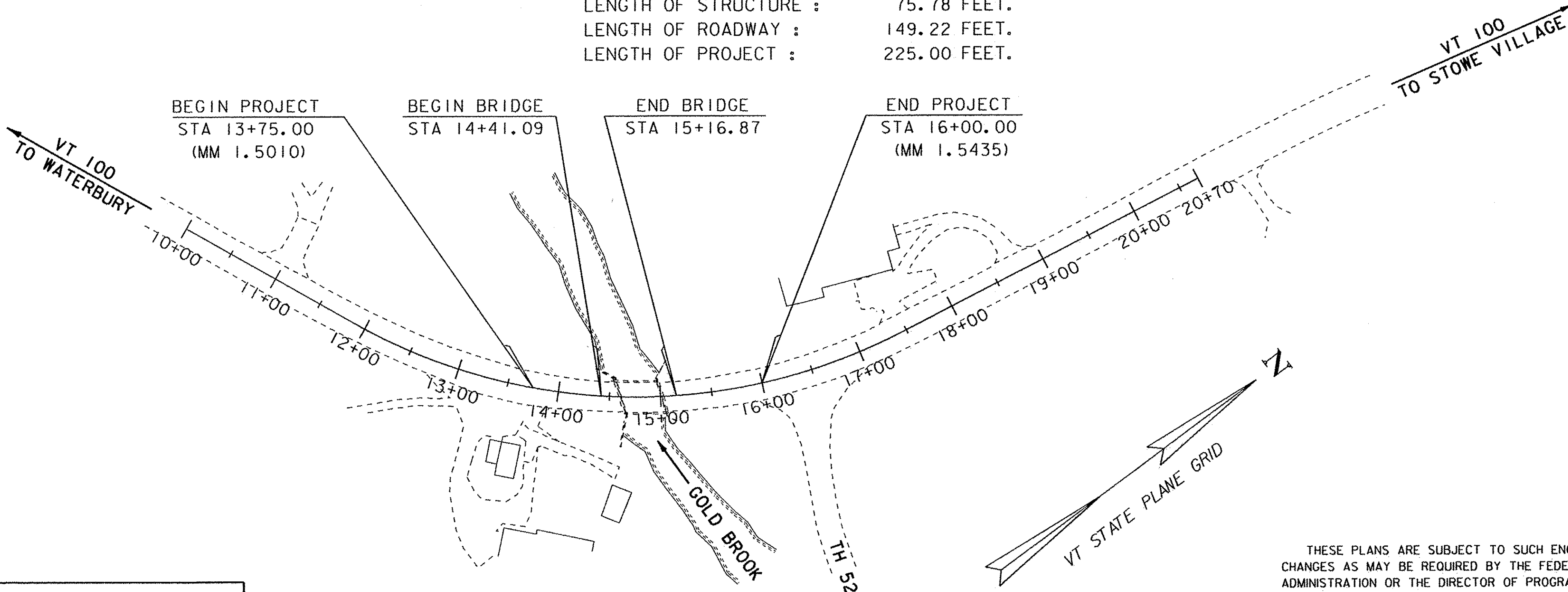
NOTE: Any further information concerning final quantities, amounts or other details relative to this project may be found at Central Files in the electronic archives.

ROUTE NO : VT 100 (MINOR ARTERIAL) BRIDGE NO : 208

PROJECT LOCATION : BEGINNING AT A POINT APPROXIMATELY 300 FEET SOUTH OF THE JUNCTION OF VT 100 AND TH 52 (GOLD BROOK ROAD) AND EXTENDING NORTHERLY ALONG VT 100 FOR 225 FEET.

PROJECT DESCRIPTION : THE PROJECT SHALL CONSIST OF REPLACEMENT OF THE EXISTING STRUCTURE WITH A NEW INTEGRAL ABUTMENT STRUCTURE INCLUDING RELATED ROADWAY AND CHANNEL WORK.

LENGTH OF STRUCTURE : 75.78 FEET.
LENGTH OF ROADWAY : 149.22 FEET.
LENGTH OF PROJECT : 225.00 FEET.



QUALITY ASSURANCE PROGRAM: LEVEL 2

CONVENTIONAL SYMBOLS	
COUNTY LINE	
TOWN LINE	
LIMITS OF ACCESS	
POINT OF ACCESS	
FENCE LINE	
STONE WALL	
TRAVELED WAY	
GUARD RAIL	
RAILROAD	
SURVEY LINE	
CULVERT	
POWER POLE	
TELEPHONE POLE	
TREES	
CONTROL OF ACCESS	
PROPERTY LINE	
R.O.W. TAKING LINE	
SLOPE RIGHTS	
TOP OF CUT	
TOE OF SLOPE	

SURVEYED BY : R. GILMAN
SURVEYED DATE : 7/27/2007

DATUM
VERTICAL NAVD88
HORIZONTAL NAD83

SCALE: 1" = 80'-0"

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROGRAM DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JULY 20, 2011 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

DIRECTOR OF PROGRAM DEVELOPMENT
APPROVED <u><i>Richard Schmidt</i></u> DATE <u>6-12-13</u>
PROJECT MANAGER : CAROLYN CARLSON P.E.
PROJECT NAME : STOWE
PROJECT NUMBER : BRF 029-1 (17)
SHEET 1 OF 70 SHEETS

STATE OF VERMONT
AGENCY OF TRANSPORTATION

PRELIMINARY INFORMATION SHEET (BRIDGE)

LRFD

Version 11.06.15

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E-100

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01-02-2004

E-100A

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01-02-2004

E-101

CONSTRUCTION SIGN DETAILS

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E-102

CONSTRUCTION SIGN DETAILS

06-30-2003

E-102A

CONSTRUCTION SIGN DETAILS

05-01-2004

E-106

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03-01-2004

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DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS

06-30-2003

E-107A

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06-08-2009

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06-08-2009

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08-08-1995

E-134

BRIDGE NUMBER PLAQUE

08-08-1995

E-138

MILE MARKER DETAILS - STATE & TOWN HIGHWAYS

05-30-2003

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E-164

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06-08-2009

E-191

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02-01-1999

E-193

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08-18-1995

G-1

STEEL BEAM GUARDRAIL DETAILS (POST, DELINEATOR, TYPICALS)

01-03-2000

G-19

GENERIC GRADING PLANS FOR GUARDRAIL END TERMINALS

11-15-2002

S-363

THRIE BEAM TO STANDARD STEEL BEAM TRANSITION SECTION

04-23-2012

HYDROLOGIC DATA

Date: January 2011

DRAINAGE AREA : 9.0 sq. mi.

CHARACTER OF TERRAIN : Hilly to mountainous, mostly forested with some open areas

STREAM CHARACTERISTICS : Perennial, incised, alluvial, sinuous with narrow floodplains

NATURE OF STREAMBED : Gravel, cobbles and boulders

PEAK FLOW DATA

Q 2.33 = 650 cfs

Q 50 = 2000 cfs

Q 10 = 1250 cfs

Q 100 = 2400 cfs

Q 25 = 1650 cfs

Q 500 = 3400 cfs

DATE OF FLOOD OF RECORD : Unknown

ESTIMATED DISCHARGE: Unknown

WATER SURFACE ELEV.: Unknown

NATURAL STREAM VELOCITY: @ Q50 = 8.3 fps

ICE CONDITIONS : Moderate

DEBRIS: Moderate

DOES THE STREAM REACH MAXIMUM HIGHWATER ELEV. RAPIDLY? Yes

IS ORDINARY RISE RAPID? Yes

IS STAGE AFFECTED BY UPSTREAM OR DOWNSTREAM CONDITIONS? No

IF YES, DESCRIBE:

WATERSHED STORAGE: <1% HEADWATERS:

UNIFORM: X

IMMEDIATELY ABOVE SITE:

EXISTING STRUCTURE INFORMATION

STRUCTURE TYPE: Single span concrete T-beam bridge

YEAR BUILT: built in 1931 and widened in 1951

CLEAR SPAN(NORMAL TO STREAM): 37'

VERTICAL CLEARANCE ABOVE STREAMBED: 16'

WATERWAY OF FULL OPENING: 580 sq. ft.

DISPOSITION OF STRUCTURE: Remove

TYPE OF MATERIAL UNDER SUBSTRUCTURE: See boring logs

WATER SURFACE ELEVATIONS AT:

Q2.33 = 666.2'

VELOCITY = 6.1 fps

Q10 = 667.7'

" 8.2 fps

Q25 = 668.7'

" 9.4 fps

Q50 = 669.5'

" 10.4 fps

Q100 = 670.4'

" 11.4 fps

LONG TERM STREAMBED CHANGES: Approximately 1' of channel degradation and local scour along the south abutment and some aggradation in front of the north abutment since 1931.

IS THE ROADWAY OVERTOPPED BELOW Q100: No

FREQUENCY: Above Q100

RELIEF ELEVATION: 678.2'

DISCHARGE OVER ROAD @Q100: None

UPSTREAM STRUCTURE

TOWN: Stowe DISTANCE: 1500'

HIGHWAY #: T.H. 7 STRUCTURE #: 50

CLEAR SPAN: 55' CLEAR HEIGHT: >20'

YEAR BUILT: 1971 FULL WATERWAY:

STRUCTURE TYPE: Bridge

DOWNSTREAM STRUCTURE

TOWN: N.A. - Confluence with Little River DISTANCE: 1800'

HIGHWAY #: STRUCTURE #:

CLEAR SPAN: CLEAR HEIGHT:

YEAR BUILT: FULL WATERWAY:

STRUCTURE TYPE:

PROPOSED STRUCTURE

STRUCTURE TYPE: Single span integral abutment bridge

CLEAR SPAN(NORMAL TO STREAM): 66'

VERTICAL CLEARANCE ABOVE STREAMBED: 18' at inlet, 16' at outlet

WATERWAY OF FULL OPENING: 760 sq. ft.

WATER SURFACE ELEVATIONS AT:

Q2.33 = 666.2'

VELOCITY= 6.1 fps

Q10 = 667.8'

" 8.0 fps

Q25 = 668.7'

" 9.0 fps

Q50 = 669.5'

" 9.7 fps

Q100 = 670.3'

" 10.5 fps

IS THE ROADWAY OVERTOPPED BELOW Q100: No

FREQUENCY: Above Q100

RELIEF ELEVATION: 678.2'

DISCHARGE OVER ROAD @Q100: None

AVERAGE LOW ELEVATION OF SUPERSTRUCTURE: 680.5' upstream, 677.5' downstr.

VERTICAL CLEARANCE: @ Q100 = 10.2' upstream

SCOUR: 2' of contraction scour and long term degradation through the proposed bridge up to Q500.

REQUIRED CHANNEL PROTECTION: Stone Fill, Type IV

PERMIT INFORMATION

AVERAGE DAILY FLOW: 20 cfs DEPTH OR ELEVATION:

ORDINARY LOW WATER: 10 cfs 0.5'

ORDINARY HIGH WATER: 280 cfs 2.5'

TEMPORARY BRIDGE REQUIREMENTS

STRUCTURE TYPE: Single span bridge

CLEAR SPAN (NORMAL TO STREAM): 40' minimum

VERTICAL CLEARANCE ABOVE STREAMBED: Elevation 670' minimum

WATERWAY AREA OF FULL OPENING: 280 sq. ft. minimum

ADDITIONAL INFORMATION

TRAFFIC MAINTENANCE NOTES

1. MAINTAIN TWO-WAY TRAFFIC ON A TEMPORARY BRIDGE.

2. TRAFFIC SIGNALS ARE NOT NECESSARY.

3. SIDEWALKS ARE NOT NECESSARY

4. THE APPROACHES FOR THE TEMPORARY BRIDGE SHALL BE PAVED.

DESIGN VALUES

1. DESIGN LIVE LOAD HL-93

2. FUTURE PAVEMENT dp: 3.0 INCH

3. DESIGN SPAN L: 74.00 FT

4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS) Δ: 1.69 INCH

5. PRESTRESSING STRAND (0.60 INCH DIAMETER - LOW RELAX) fy: 270 KSI

6. PRESTRESSED CONCRETE STRENGTH f'c: 6.0 KSI

7. PRESTRESSED CONCRETE RELEASE STRENGTH f'ci: 5.0 KSI

8. CONCRETE, HIGH PERFORMANCE CLASS AA f'c: ---

9. CONCRETE, HIGH PERFORMANCE CLASS A f'c: 4.0 KSI

10. CONCRETE, HIGH PERFORMANCE CLASS B f'c: 3.5 KSI

11. CONCRETE, CLASS C f'c: ---

12. REINFORCING STEEL fy: 60 KSI

13. STRUCTURAL STEEL AASHTO M270 fy: ---

14. SOIL UNIT WEIGHT γ: 0.140 KCF

15. NOMINAL BEARING RESISTANCE OF SOIL qn: ---

16. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD) φ: ---

17. NOMINAL BEARING RESISTANCE OF ROCK qn: ---

18. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD) φ: ---

19. NOMINAL AXIAL PILE RESISTANCE qp: 525.0 KIPS

20. PILE YIELD STRENGTH ASTM A572 fy: 50 KSI

21. PILE SIZE HP 12X74

22. EST. PILE LENGTHS (TWO SUBSTRUCTURES) Lp: ---

(ABUTMENT 1 = 23 AND ABUTMENT 2 = 39) FT

23. PILE RESISTANCE FACTOR φ: 0.65

24. LATERAL PILE DEFLECTION Δ: 0.30 INCH

25. BASIC WIND SPEED V3s: ---

26. MINIMUM GROUND SNOW LOAD pg: ---

27. SEISMIC DATA PGA: --- Ss: --- S1: ---

PROJECT NAME: STOWE

PROJECT NUMBER: BRF 029-1(17)

FILE NAME: s85e037pi.dgn PLOT DATE: 17 - JUN - 2013

PROJECT LEADER: C. CARLSON DRAWN BY: G. ROY

DESIGNED BY: H. I. SALLS CHECKED BY: H. I. SALLS

PRELIMINARY INFORMATION SHEET SHEET 2 OF 70

TRAFFIC DATA

YEAR

ADT

DHV

% D

% T

ADTT

2013

11000

1200

55

6

1000

2033

13500

1500

55

8

1900

20 year ESAL for flexible pavement from 2013 to 2033 : 7414000

40 year ESAL for flexible pavement from 2013 to 2053 : 17923000

Design Speed : 40 mph

AS BUILT "REBAR" DETAIL

LEVEL I

LEVEL II

LEVEL III

TYPE:

TYPE:

TYPE:

GRADE:

GRADE:

GRADE:

TEMPORARY BRIDGE PROFILE ALONG TEMP CL

BOTTOM OF BEAMS ELEV. = 670.00 FT

40.00 FT (MIN)

7.00 FT (MIN)

OPENING 280.00 FT (MIN)

PILE DRIVING AND TESTING REQUIREMENTS

1. NOMINAL PILE DRIVING CAPACITY Pile: 525.00 KIP

2. PILE TEST RESISTANCE FACTOR φ: 0.65

3. REQUIRED PILE PENETRATION DEPTH 20.00 FT

4. PERFORM ONE DYNAMIC PILE LOADING TEST AT EACH ABUTMENT.

GENERAL

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2011 AND ITS LATEST REVISIONS, THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FIFTH EDITION, DATED 2010 AND ITS LATEST REVISIONS AND THE AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS THIRD EDITION, DATED 2010 AND ITS LATEST REVISIONS.
- THE BRIDGE WAS DESIGNED FOR THE HL-93 LIVE LOADS.
- ITEM 529.15 “REMOVAL OF STRUCTURE” SHALL BE USED FOR THE REMOVAL OF THE EXISTING STRUCTURE INCLUDING THE SUPERSTRUCTURE, ALONG WITH THE ABUTMENTS AND WINGWALLS OUTSIDE THE LIMITS OF STRUCTURE EXCAVATION OR UNCLASSIFIED CHANNEL EXCAVATION. THE ABUTMENTS SHALL BE REMOVED TO STREAM BED ELEVATION.
- ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS OTHERWISE NOTED.

EARTHWORK AND RELATED ITEMS

- THE TEMPORARY BRIDGE AND ITS APPROACHES SHALL BE CONSTRUCTED AND PAID FOR IN ACCORDANCE WITH ITEM 528.11 “TWO-WAY TEMPORARY BRIDGE”. THE APPROACHES TO THE TEMPORARY BRIDGE SHALL BE PAVED WITH 2 INCHES OF PAVEMENT.
- TEMPORARY CONSTRUCTION FILLS WITHIN THE WATERCOURSE FOR ANY PURPOSE SHALL CONSIST OF CLEAN STONE FILL ONLY. NO OTHER FILLING IN THE STREAM SHALL OCCUR WITHOUT THE APPROVAL OF THE STREAM ALTERATION ENGINEER.
- THE BACKFILL BEHIND THE ABUTMENTS SHALL NOT BE PLACED HIGHER THAN THE BRIDGE SEATS UNTIL THE ABUTMENTS AND DECK CONSTRUCTION IS COMPLETED. THE DIFFERENCE IN ELEVATION OF FILL BEHIND THE TWO ABUTMENTS AT ANY TIME DURING BACKFILLING OPERATIONS SHALL NOT EXCEED 2 FEET.
- THE “STONE FILL, TYPE IV” UNDER THE BRIDGE AS SHOWN IN THE PLANS SHALL BE PLACED BEFORE THE NEXT BEAMS ARE SET.

PILES

- TO PREVENT DAMAGE TO THE PILES, PILE SHOES ARE REQUIRED AND SHALL CONFORM TO SUBSECTION 505.04(f).
- THE PILES SHALL BE DRIVEN TO A NOMINAL PILE DRIVING RESISTANCE OF 525 KIPS.
- TO ENSURE THAT THE NOMINAL CAPACITY HAS BEEN ATTAINED AND TO PREVENT THE OVERSTRESSING OF THE PILE DURING OPERATIONS, DYNAMIC PILE TESTING SHALL BE PERFORMED IN ACCORDANCE WITH SUBSECTION 505.04 OF THE STANDARD SPECIFICATIONS. PAYMENT FOR PILE TESTING SHALL BE MADE UNDER ITEM 505.45 “DYNAMIC PILE LOADING TEST”. A MINIMUM OF ONE DYNAMIC PILE TEST SHALL BE CONDUCTED ON THE FIRST PILE AT EACH ABUTMENT FOR A TOTAL OF 2 TESTS. MORE TESTS MAY BE REQUIRED BY THE ENGINEER.
- THE TOP OF THE PILES AFTER DRIVING SHALL NOT VARY FROM THE POSITION SHOWN ON THE PLANS BY MORE THAN 3 INCHES. THE PILE ORIENTATION SHALL NOT VARY BY MORE THAN 5 DEGREES. THE CONTRACTOR SHALL DEMONSTRATE HOW THE TOLERANCE WILL BE MET TO THE SATISFACTION OF THE ENGINEER.
- FOR ESTIMATING PURPOSES, THE PILE TIP ELEVATIONS WERE ASSUMED AS SHOWN ON THE BORING LOGS. THE ACTUAL IN PLACE LENGTHS MAY VARY.
- THE PILES SHALL BE HP 12 X 74.
- ALL MATERIALS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY FOR PLACING THE PILES IN THEIR ACCEPTED FINAL POSITION SHALL BE CONSIDERED INCIDENTAL TO ITEM 505.16 “STEEL PILING, HP 12 X 74”. THE CONTRACTOR MAY SUBMIT AN ALTERNATIVE METHOD OF DRIVING FOR APPROVAL BY THE ENGINEER.

CONCRETE

- SUBSTRUCTURE CONCRETE AND APPROACH SLABS SHALL BE HIGH PERFORMANCE CLASS B AND SHALL BE PAID FOR UNDER ITEM 501.34, “CONCRETE, HIGH PERFORMANCE CLASS B”. ALL CURB, OVERLAY AND ALL CONCRETE PLACED INTEGRALLY WITH THE SUPERSTRUCTURE SHALL BE ITEM 501.33 “CONCRETE, HIGH PERFORMANCE CLASS A”.
- THE ABUTMENT AND WINGWALL CONCRETE ABOVE THE HORIZONTAL CONSTRUCTION JOINTS SHALL BE PLACED MONOLITHICALLY WITH THE DECK POUR.

- INDIVIDUAL POURED SEGMENTS ARE TO BE PLACED IN ONE CONTINUOUS POUR WITH A MAXIMUM DURATION OF EIGHT HOURS. IF CIRCUMSTANCES BEYOND THE CONTRACTOR’S CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A CONSTRUCTION JOINT SHALL BE USED BETWEEN ADJACENT POURS. A MINIMUM 96 HOUR DELAY BETWEEN ADJACENT POURS SHALL BE OBSERVED.
- WATER REPELLENT, SILANE SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES, EXCEPT THE UNDERSIDE OF THE DECK BETWEEN DRIP NOTCHES.
- JOINTS AND SCORE MARKS IN CONCRETE SHALL BE CONSTRUCTED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.
- EXCLUDING REINFORCING STEEL IN WINGWALLS, ALL REINFORCING STEEL ABOVE THE CONSTRUCTION JOINT WILL BE CORROSION PROTECTION LEVEL II AND ALL REINFORCING STEEL BELOW THE CONSTRUCTION JOINT AND IN THE APPROACH SLABS WILL BE CORROSION PROTECTION LEVEL I. PAYMENT WILL BE MADE UNDER THE APPROPRIATE SECTION 507 CONTRACT ITEM.
- LEVEL I REINFORCING STEEL SHALL BE EPOXY COATED.

TRAFFIC CONTROL

- FULL ACCESS TO ALL SIDE ROADS AND DRIVES WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED AT ALL TIMES. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 900.645 “SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)”.
- ANY TEMPORARY MEANS OF SUPPORTING FILL SHALL BE INCIDENTAL TO THE ITEM 528.11 “TWO-WAY TEMPORARY BRIDGE”. CONSTRUCTION DRAWINGS SHALL BE INCIDENTAL TO THE ITEM 528.11 “TWO-WAY TEMPORARY BRIDGE”. CONSTRUCTION DRAWINGS SHALL BE REQUIRED AS PER SUBSECTION 105.03.
- THE CONTRACTOR SHALL ADD SIGN G20-5AP TO THE TOP OF ALL TEMPORARY SPEED LIMIT SIGNS AS DETAILED IN THE MUTCD.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF A SITE SPECIFIC TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL A DETAILED TRAFFIC CONTROL PLAN TO THE ENGINEER FOR ALL STAGES OF CONSTRUCTION. NO WORK SHALL BEGIN UNTIL THE TRAFFIC CONTROL PLAN HAS BEEN APPROVED. SEE SPECIAL PROVISIONS FOR DETAILS. ALL COST SHALL BE INCLUDED IN ITEM 900.645 “SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)”.
- PAYMENT FOR ALL ON AND OFF-PROJECT CONSTRUCTION SIGNING AND TRAFFIC CONTROL DEVICES, INCLUDING DRUMS AND BARRICADES, WILL BE PAID FOR UNDER ITEM 900.645 “SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)”.

NEXT F BEAMS

- THE NEXT F BEAMS ARE A NON-PROPRIETARY SHAPE DEVELOPED BY PCI NORTHEAST (PCINE). STANDARDIZED SECTION PROPERTIES AND DETAILS MAY BE FOUND AT [HTTP://WWW.PCINE.ORG](http://www.pcine.org).
- DESIGN VALUES
 - CONCRETE COMPRESSIVE STRENGTH: $f'c = 8,000$ PSI
 - CONCRETE COMPRESSIVE STRENGTH AT RELEASE: $f'c = 6,000$ PSI
 - PRESTRESSING STRANDS: 0.6 INCH DIAMETER, 270 KSI, LOW-RELAXATION 7-WIRE STRANDS
 - ASSUMED MODULUS OF ELASTIC = 28,500 KSI
 - JACKING FORCE PER STRAND = 47 KIPS
 - SERVICE LOADS:

MEMBER MOMENT:	995 K-FT
SUPERIMPOSED DEAD LOAD MOMENT:	80 K-FT
LIVE LOAD AND IMPACT MOMENT:	1838 K-FT
DEAD LOAD REACTION:	59 K-FT
LIVE LOAD AND IMPACT REACTION:	108 K-FT
TOTAL REACTION:	167 K-FT
FINAL CAMBER:	1 11/16 INCHES

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1 (17)

FILE NAME: s85e037notes.dgn	PLOT DATE: 17-JUN-2013
PROJECT LEADER: C. CARLSON	DRAWN BY: G. ROY
DESIGNED BY: H. I. SALLS	CHECKED BY: H. I. SALLS
PROJECT NOTES	SHEET 3 OF 70

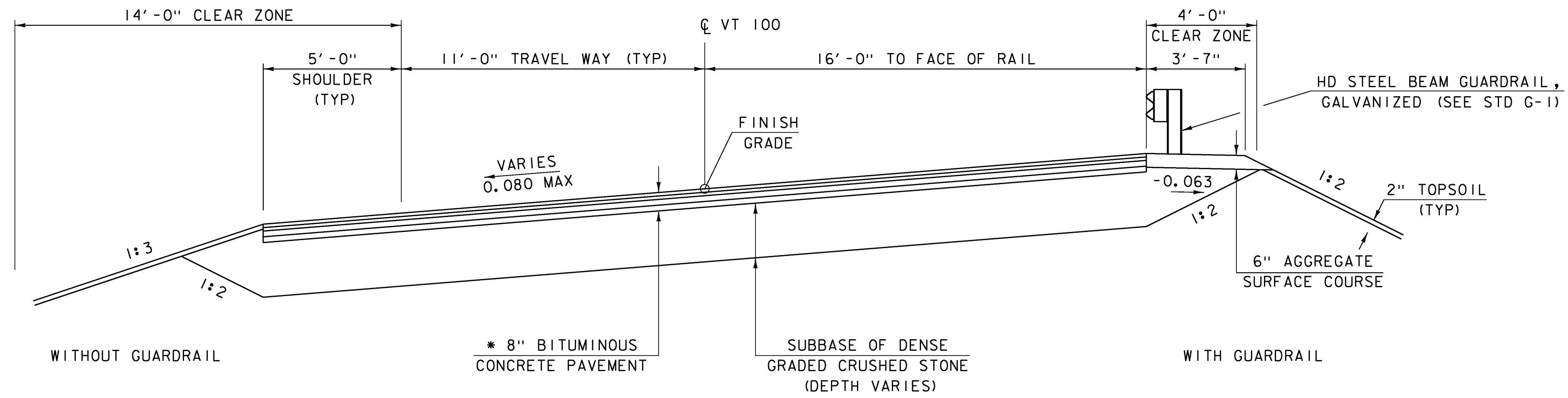
STATE OF VERMONT AGENCY OF TRANSPORTATION														QUANTITY SHEET 1												
SUMMARY OF ESTIMATED QUANTITIES														TOTALS		DESCRIPTIONS						DETAILED SUMMARY OF QUANTITIES				
									ROADWAY	EROSION CONTROL	BRIDGE		FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS				
									1					1		LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10				EARTHWORKS SUMMARY				
									820					820		CY	COMMON EXCAVATION	203.15				FILL AVAILABLE				
											1300			1300		CY	UNCLASSIFIED CHANNEL EXCAVATION	203.27		820	CY	COMMON EXCAVATION (820 x 1.0)				
									32					32		CY	TRENCH EXCAVATION OF EARTH	204.20		390	CY	UNCLASSIFIED CHANNEL EXCAVATION (1300 x 0.3)				
									1					1		CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22		219	CY	STRUCTURE EXCAVATION (730 x 0.3)				
											730			730		CY	STRUCTURE EXCAVATION	204.25		0.9	CY	TRENCH EXCAVATION OF EARTH (1 x 0.9)				
											340			340		CY	GRANULAR BACKFILL FOR STRUCTURES	204.30		0.1	CY	ROUNDING				
									760					760		SY	COLD PLANING, BITUMINOUS PAVEMENT	210.10		1430	CY	TOTAL FILL AVAILABLE				
									640					640		CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35		368	CY	FILL REQUIRED				
									35					35		CY	AGGREGATE SURFACE COURSE	401.10		2	CY	FACTORED FILL (320 x 1.15)				
									75					75		CWT	EMULSIFIED ASPHALT	404.65				ROUNDING				
									1					1		LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50		370	CY	TOTAL FILL REQUIRED				
											119			119		CY	CONCRETE, HIGH PERFORMANCE CLASS A	501.33		1060	CY	TOTAL WASTE				
											186			186		CY	CONCRETE, HIGH PERFORMANCE CLASS B	501.34								
											1			1		LS	FURNISHING EQUIPMENT FOR DRIVING PILING	504.10								
											330			330		LF	STEEL PILING, HP 12 X 74	505.16								
											2			2		EACH	DYNAMIC PILE LOADING TEST	505.45								
											30380			30380		LB	REINFORCING STEEL, LEVEL I	507.11								
											26050			26050		LB	REINFORCING STEEL, LEVEL II	507.12								
											275			275		SY	LONGITUDINAL DECK GROOVING	509.10								
											33			33		GAL	WATER REPELLENT, SILANE	514.10								
											70			70		LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10								
											70			70		LF	JOINT SEALER, HOT POURED	524.11								
											155			155		LF	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM	525.335								
											1			1		LS	TWO-WAY TEMPORARY BRIDGE (960 SF - EST.)	528.11								
											1			1		EACH	REMOVAL OF STRUCTURE (1320 SF - EST.)	529.15								
											16			16		EACH	BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD	531.17								
																	BEGIN OPTION AA									
									54					54		LF	18" CAAP .060 (2-2/3 X 1/2)	601.0215								
									54					54		LF	18" PCCSP .064 (2-2/3 X 1/2)	601.0415								
									54					54		LF	18" CPEP(SL)	601.2615								
																	END OPTION AA									
										10				10		HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25								
										1				1		TON	DUST AND ICE CONTROL WITH CALCIUM CHLORIDE	609.15								
									50	10				60		CY	STONE FILL, TYPE I	613.10								
											980			980		CY	STONE FILL, TYPE IV	613.13								
									130					130		LF	CAST-IN-PLACE CONCRETE CURB, TYPE B	616.28								
									270					270		LF	HD STEEL BEAM GUARDRAIL, GALVANIZED	621.21								
									4					4		EACH	MANUFACTURED TERMINAL SECTION, TANGENT	621.51								
									4					4		EACH	GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM	621.725								
																				PROJECT NAME: STOWE						
																				PROJECT NUMBER: BRF 029 - 1(17)						
																				FILE NAME: s85e037qty.dgn						
																				PROJECT LEADER: C. CARLSON						
																				DESIGNED BY: H. I. SALLS						
																				QUANTITY SHEET #1						
																				PLOT DATE: 06/17/2013						
																				DRAWN BY: G. ROY						
																				CHECKED BY: H. I. SALLS						
																				SHEET 4 OF 70						

STATE OF VERMONT AGENCY OF TRANSPORTATION														QUANTITY SHEET 2									
SUMMARY OF ESTIMATED QUANTITIES													TOTALS		DESCRIPTIONS					DETAILED SUMMARY OF QUANTITIES			
									ROADWAY	EROSION CONTROL	BRIDGE	FULL C.E. ITEMS	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	ROUND	QUANTITIES	UNIT	ITEMS		
									350				350		LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80						
									50				50		HR	UNIFORMED TRAFFIC OFFICERS	630.10						
									500				500		HR	FLAGGERS	630.15						
												1	1		LS	FIELD OFFICE, ENGINEERS	631.10						
												1	1		LS	TESTING EQUIPMENT, CONCRETE	631.16						
												1	1		LS	TESTING EQUIPMENT, BITUMINOUS	631.17						
												3000	3000		DL	FIELD OFFICE TELEPHONE (N.A.B.I.)	631.26						
									1				1		LS	MOBILIZATION/DEMOBILIZATION	635.11						
									850				850		LF	4 INCH WHITE LINE	646.20						
									850				850		LF	4 INCH YELLOW LINE	646.21						
									20				20		LF	DURABLE 24 INCH STOP BAR	646.480						
									4				4		EACH	DURABLE LETTER OR SYMBOL	646.490						
									170		970		1140		SY	GEOTEXTILE UNDER STONE FILL	649.31						
										183			183		SY	GEOTEXTILE FOR SILT FENCE, WOVEN WIRE REINFORCED	649.515						
										110			110		SY	GEOTEXTILE FOR FILTER CURTAIN	649.61						
										30			30		LB	SEED	651.15						
										250			250		LB	FERTILIZER	651.18						
										1			1		TON	AGRICULTURAL LIMESTONE	651.20						
										1			1		TON	HAY MULCH	651.25						
										10			10		CY	TOPSOIL	651.35						
											390		390		SY	GRUBBING MATERIAL	651.40						
										1			1		LS	EPSC PLAN	652.10						
										50			50		HR	MONITORING EPSC PLAN	652.20						
										1			1		LU	MAINTENANCE OF EPSC PLAN (N.A.B.I.)	652.30						
									1280				1280		SY	TEMPORARY EROSION MATTING	653.20						
										10			10		CY	TEMPORARY STONE CHECK DAM, TYPE I	653.25						
										18			18		CY	VEHICLE TRACKING PAD	653.35						
										1			1		EACH	INLET PROTECTION DEVICE, TYPE I	653.40						
										370			370		LF	BARRIER FENCE	653.50						
										780			780		LF	PROJECT DEMARCATION FENCE	653.55						
									11.08				11.08		SF	TRAFFIC SIGNS, TYPE A	675.20						
									132				132		LF	SQUARE TUBE SIGN POST AND ANCHOR	675.341						
									8				8		EACH	REMOVING SIGNS	675.50						
									3				3		EACH	ERECTING SALVAGED SIGNS	675.60						
									1				1		LU	PRICE ADJUSTMENT, FUEL (N.A.B.I.)	690.50						
											304		304		LF	SPECIAL PROVISION (PRESTRESSED CONCRETE NEXT F BEAMS)(NEXT 36 F)	900.640						
									1				1		LS	SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE)	900.645						
									1				1		LU	SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY)(N.A.B.I.)	900.650						
									1				1		LU	SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT)(N.A.B.I.)	900.650						
									562		24		586		TON	SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680						
																			PROJECT NAME: STOWE				
																			PROJECT NUMBER: BRF 029 - 1(17)				
																			FILE NAME: s85e037qty.dgn				
																			PLOT DATE: 07/12/2013				
																			PROJECT LEADER: C. CARLSON				
																			DRAWN BY: G. ROY				
																			DESIGNED BY: H. I. SALLS				
																			CHECKED BY: H. I. SALLS				
																			QUANTITY SHEET #2				
																			SHEET 5 OF 70				

**STATE OF VERMONT
AGENCY OF TRANSPORTATION**

BRIDGE QUANTITY SHEET 1

[illegible]

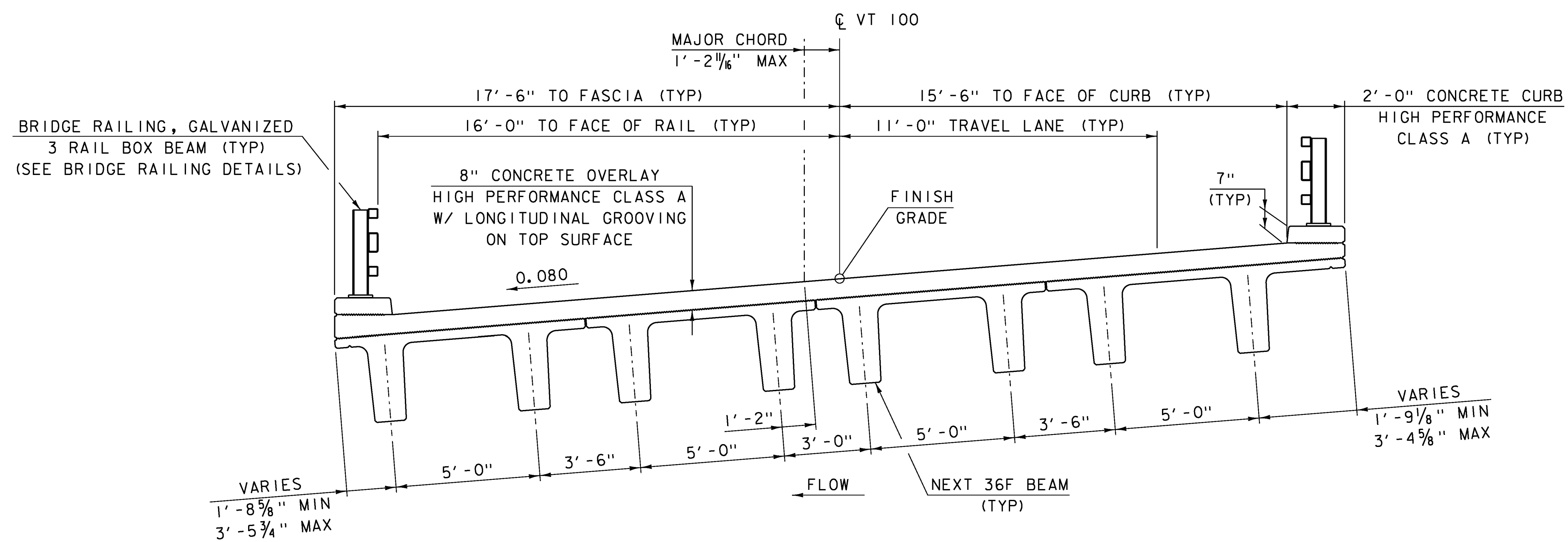


VT ROUTE 100 ROADWAY TYPICAL SECTION
SCALE: $\frac{3}{8}" = 1'-0"$

- * 1 1/2" TYPE IVS OVER
- 1 1/2" TYPE IVS OVER
- 2 1/2" TYPE IIS OVER
- 2 1/2" TYPE IIS

PAVEMENT SHALL BE PAID FOR UNDER ITEM 900.680 "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)".

TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT A RATE OF 0.025 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.



BRIDGE TYPICAL SECTION
SCALE: $\frac{3}{8}" = 1'-0"$

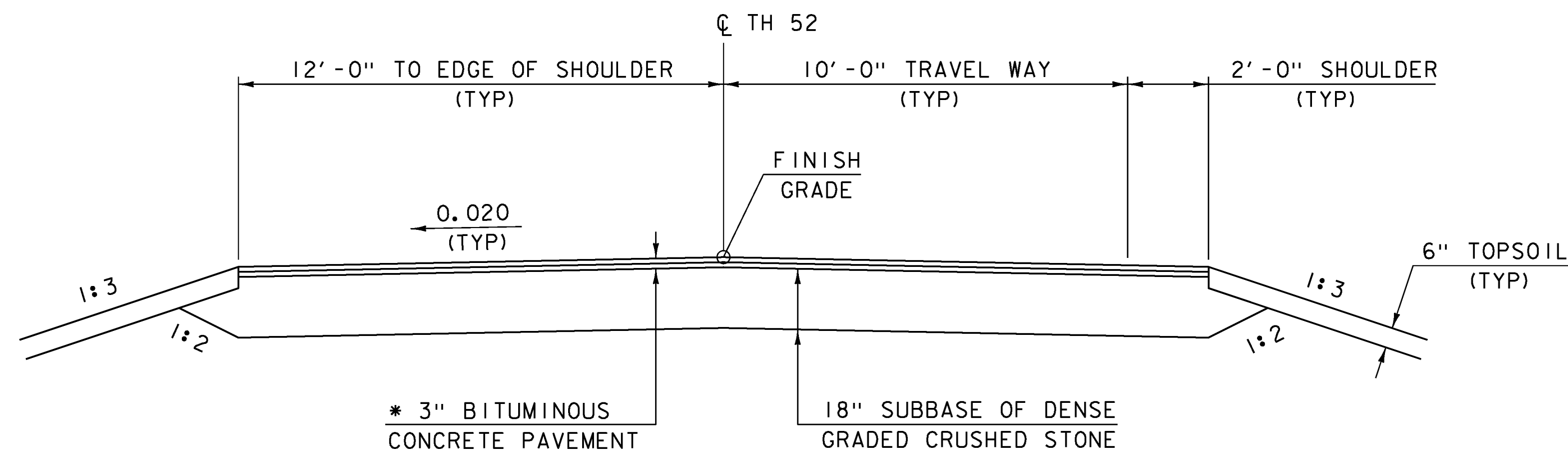
MATERIAL TOLERANCES
(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	
	+/- 1"
SAND BORROW	
	+/- 1"

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1(17)

FILE NAME: s85e037+yp.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
TYPICAL SECTIONS

PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 7 OF 70



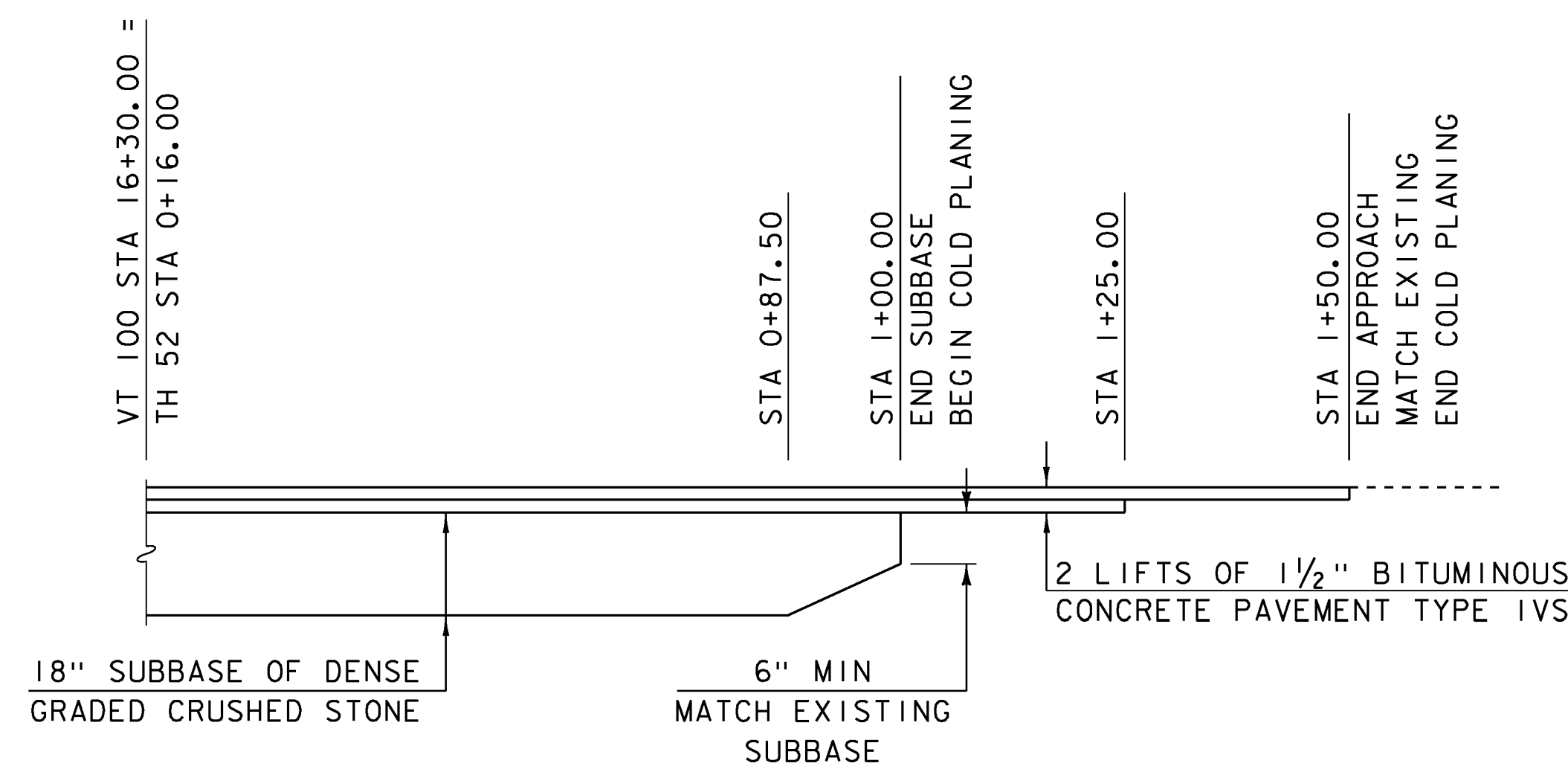
TH 52 ROADWAY TYPICAL SECTION

SCALE: $\frac{3}{8}$ " = 1'-0"

* 1 1/2" TYPE IVS OVER
1 1/2" TYPE IVS

PAVEMENT SHALL BE PAID FOR UNDER ITEM 900.680 "SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)".

TACK COAT: EMULSIFIED ASPHALT IS TO BE APPLIED AT A RATE OF 0.025 GAL/SY BETWEEN SUCCESSIVE COURSES OF PAVEMENT AS DIRECTED BY THE ENGINEER.



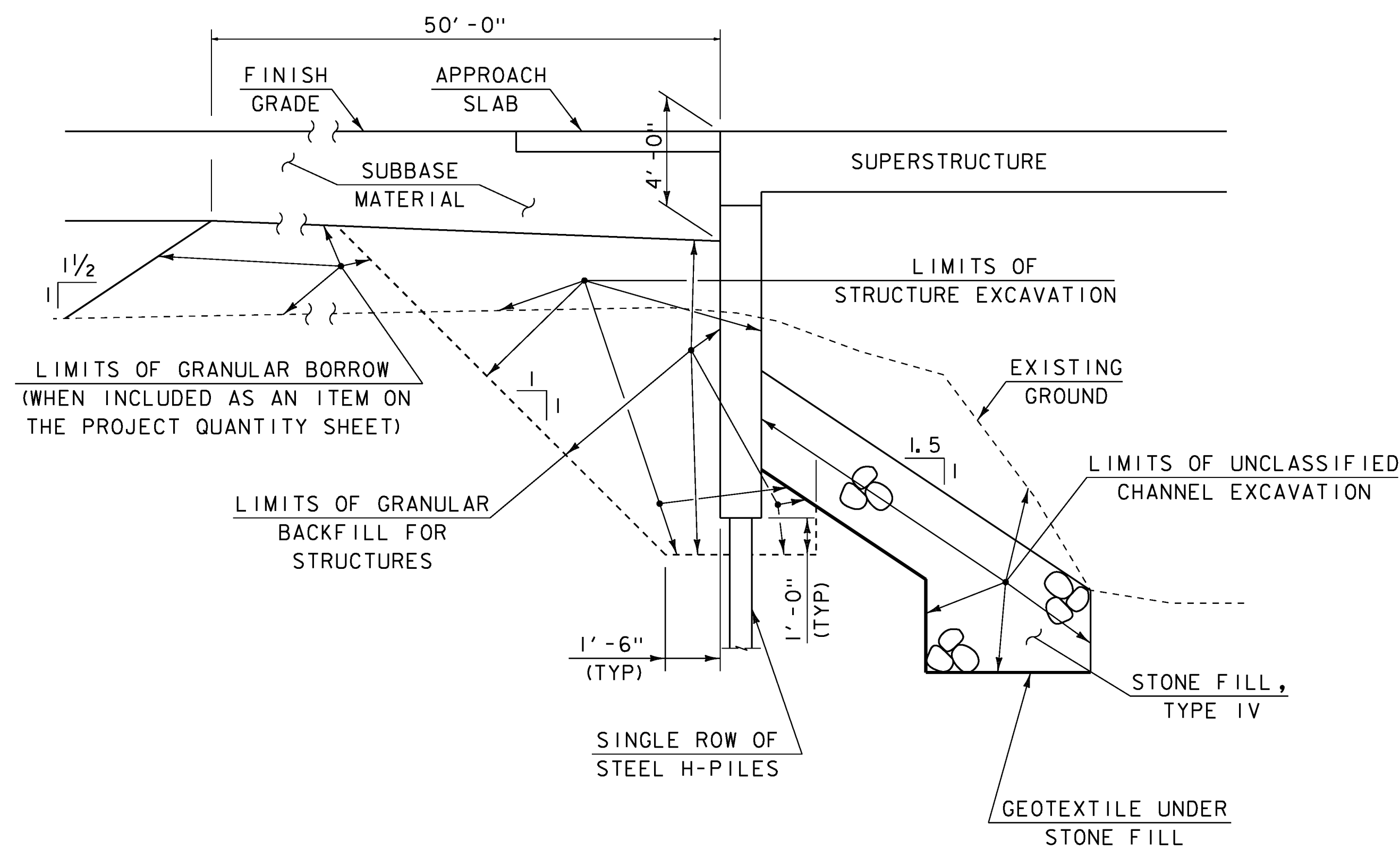
TH 52 MATERIAL TRANSITION

(NOT TO SCALE)

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1(17)

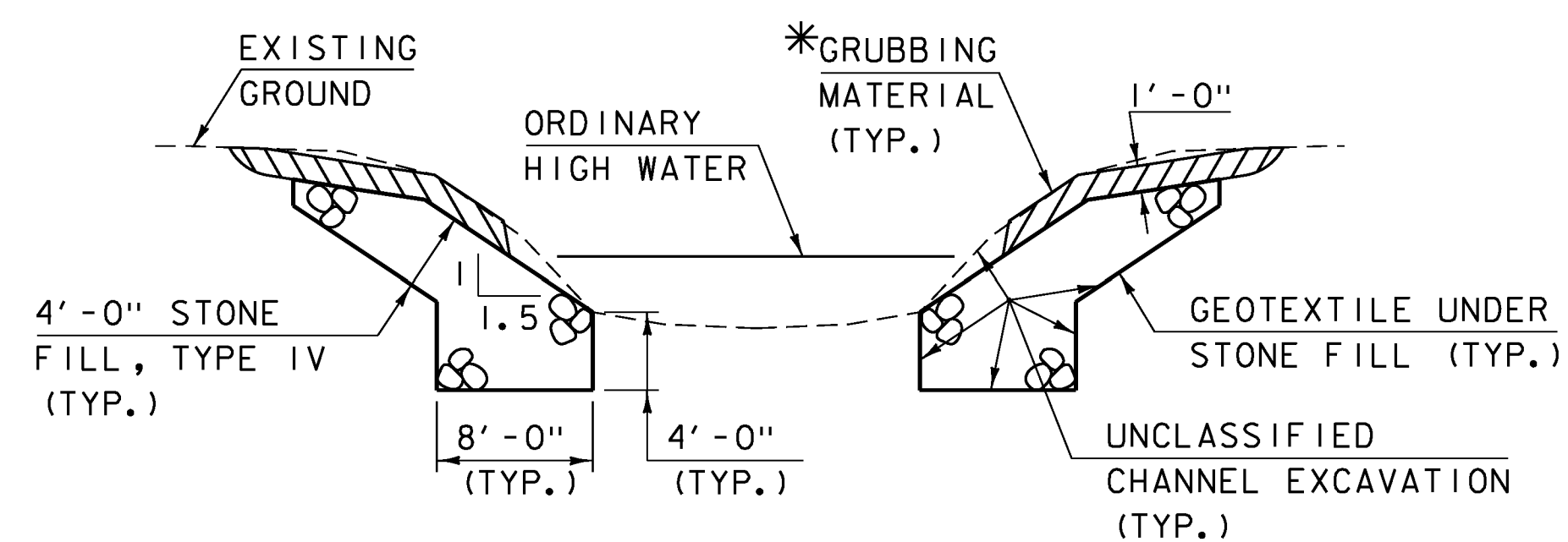
FILE NAME: s85e037+yp.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
TH 52 TYPICAL SECTIONS

PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 8 OF 70



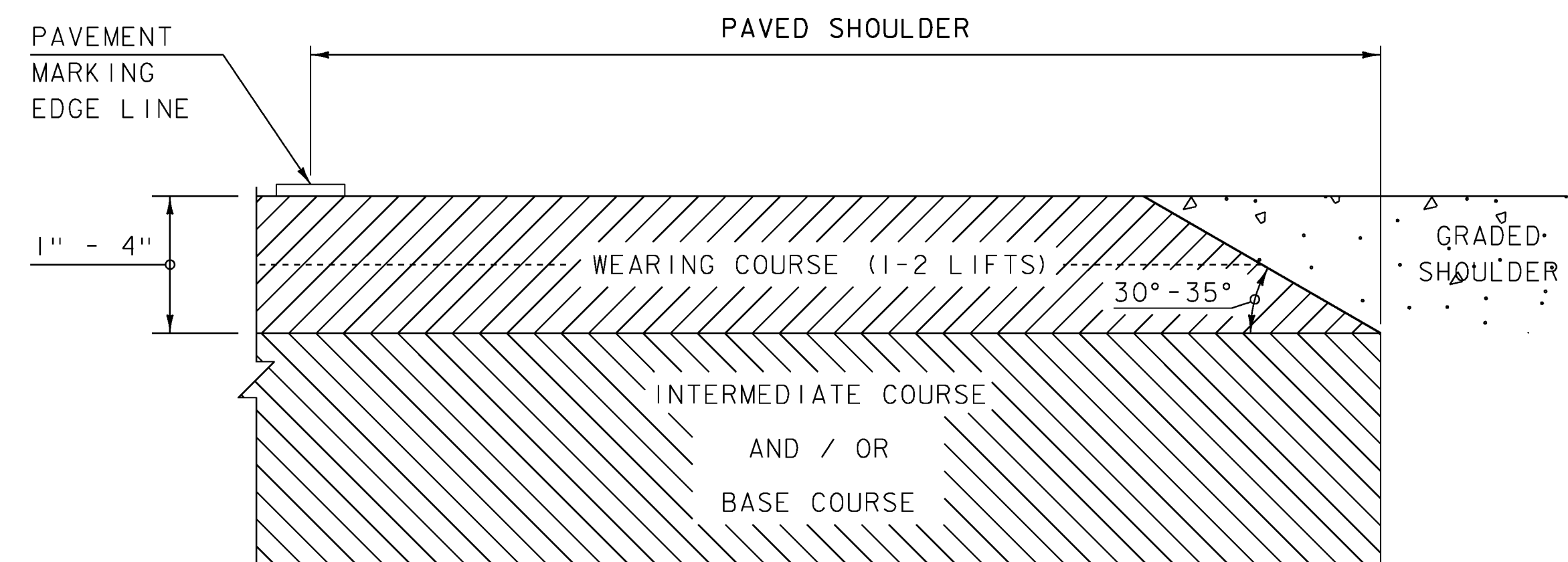
TYPICAL INTEGRAL ABUTMENT SECTION
(NOT TO SCALE)

NOTE. ACTUAL EXCAVATION LIMITS SHALL BE DETERMINED BY THE CONTRACTOR. HOWEVER, ONLY THE EXCAVATION BETWEEN THE LIMITS SHOWN WILL BE PAID FOR UNDER ITEM 204.25 "STRUCTURE EXCAVATION".



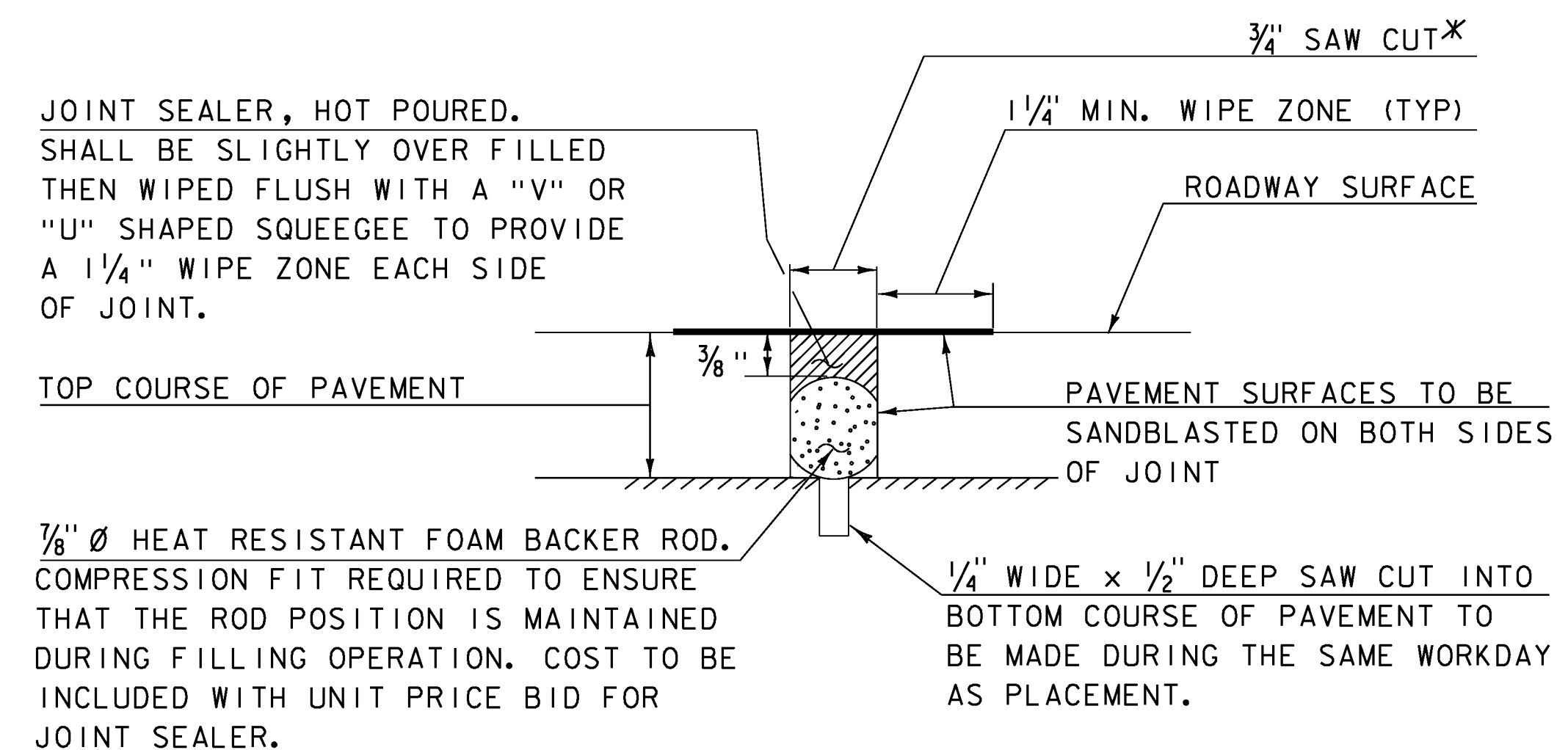
TYPICAL CHANNEL SECTION
(NOT TO SCALE)

*GRUBBING MATERIAL SHALL NOT BE PLACED ON THE STONE FILL IN THE AREA UNDER THE BRIDGE. WHENEVER CHANNEL SLOPE INTERSECTS ROADWAY SUBBASE, GRUBBING MATERIAL SHALL BEGIN AT THE BOTTOM OF SUBBASE.



SAFETY EDGE DETAIL
(NOT TO SCALE)

- NOTES:
1. LEVELING COURSE MAY INCLUDE THE "SAFETY EDGE" AT THE CONTRACTOR'S CHOICE.
 2. THE EDGE OF PAVEMENT SHALL BE FORMED IN SUCH A WAY THAT THE BITUMINOUS CONCRETE PAVEMENT IS EXTRUDED OR COMPRESSED TO FORM THE 30 TO 35 DEGREE ANGLE. DEVICES THAT SIMPLY STRIKE-OFF THE MIX WITHOUT PROVIDING ANY COMPACTIVE EFFORT WILL NOT BE ALLOWED.



SAWED PAVEMENT JOINT DETAIL
(NOT TO SCALE)

*JOINT IS TO BE LOCATED ACCURATELY BY STRING LINING, OR OTHER MEANS, PRIOR TO PAVING, SO THAT THE SAW CUTS WILL BE MADE DIRECTLY OVER THE END OF CONCRETE DECK. JOINT SHALL BE CUT DRY IN A SINGLE PASS AND BE SEALED WITHIN 24 HOURS OR PRIOR TO EXPOSURE TO TRAFFIC. JOINT SHALL BE CLEANED PRIOR TO APPLYING THE JOINT SEALER.

PROJECT NAME: STOWE
PROJECT NUMBER: BRP 029-1(17)

FILE NAME: s85e037+yp.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
MISCELLANEOUS DETAILS

PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 9 OF 70

GPS CONTROL POINTS

HVCTRL #1

STOWE AZ MK

NORTH = 706904.45
EAST = 1585797.31
ELEV. = 672.55

DESCRIBED BY VERMONT AGENCY OF TRANSPORTATION 1994 (CHR) TO REACH FROM THE INTERSECTION OF VT. ROUTES 100 AND 108 IN STOWE GO SOUTH ALONG ROUTE 100 FOR 2.2 MI (3.5 KM) TO THE MARK ON THE LEFT IN THE NORTH END OF A LEDGE CUT. THE MARK IS 7.7 M (25.3 FT) SOUTHEAST OF AND ABOUT 2 M (6.6 FT) HIGHER THAN THE CENTERLINE OF ROUTE 100, 27.9 M (91.5 FT) NORTHEAST OF POLE NO. 58, 0.5 M (1.6 FT) SOUTHEAST OF THE FACE OF THE LEDGE CUT, 1.7 M (5.6 FT) SOUTH OF THE NORTH END OF THE LEDGE, 2.1 M (6.9 FT) NORTHEAST OF A METAL WITNESS POST.

HVCTRL #2

STOWE RIVER

NORTH = 708261.85
EAST = 1585037.78
ELEV. = 692.93

DESCRIBED BY VERMONT AGENCY OF TRANSPORTATION 1994 (CHR) TO REACH FROM THE INTERSECTION OF VT. ROUTES 100 AND 108 IN STOWE GO SOUTH ALONG ROUTE 100 FOR 2.5 MI TO THE INTERSECTION OF MOSCOW ROAD RIGHT. TURN RIGHT AND GO NORTHWEST FOR 0.5 MI TO THE INTERSECTION OF RIVER ROAD RIGHT. TURN RIGHT AND GO NORTHEAST ALONG RIVER ROAD FOR 0.2 MI TO THE SITE OF THE MARK ON THE RIGHT IN A SMALL FIELD. IT IS ABOUT .05 MI WEST SOUTHWEST OF A POWER SUB STATION. THE MARK IS SET 1" BELOW GROUND SURFACE IN THE TOP OF A 12" DIA. CONCRETE MONUMENT POURED 4.6' DEEP. IT IS 20' SOUTH SOUTHEAST OF AND ABOUT 4.9' LOWER THAN THE CENTERLINE OF RIVER ROAD, 67.6' EAST NORTHEAST OF POLE #151/315/43 (W/ METER BOX), 89.2' WEST SOUTHWEST OF POLE #42, 96.8' EAST OF THE EAST NORTHEAST END OF A WOODEN RAIL FENCE, AND 2' NORTH NORTHWEST OF A FIBERGLASS WITNESS POST.

TRAVERSE TIES

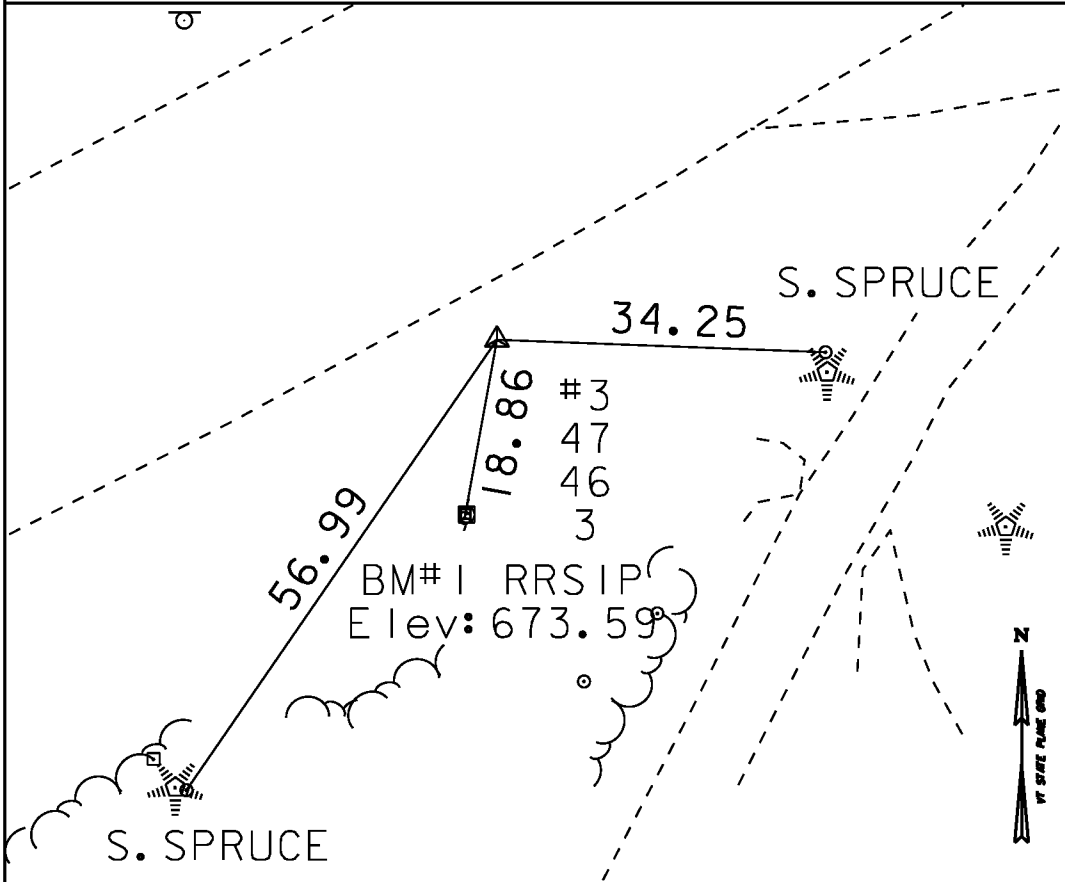
HVCTRL #3

NORTH = 707810.31
EAST = 1586663.71
ELEV. = 672.68

NOT TIED

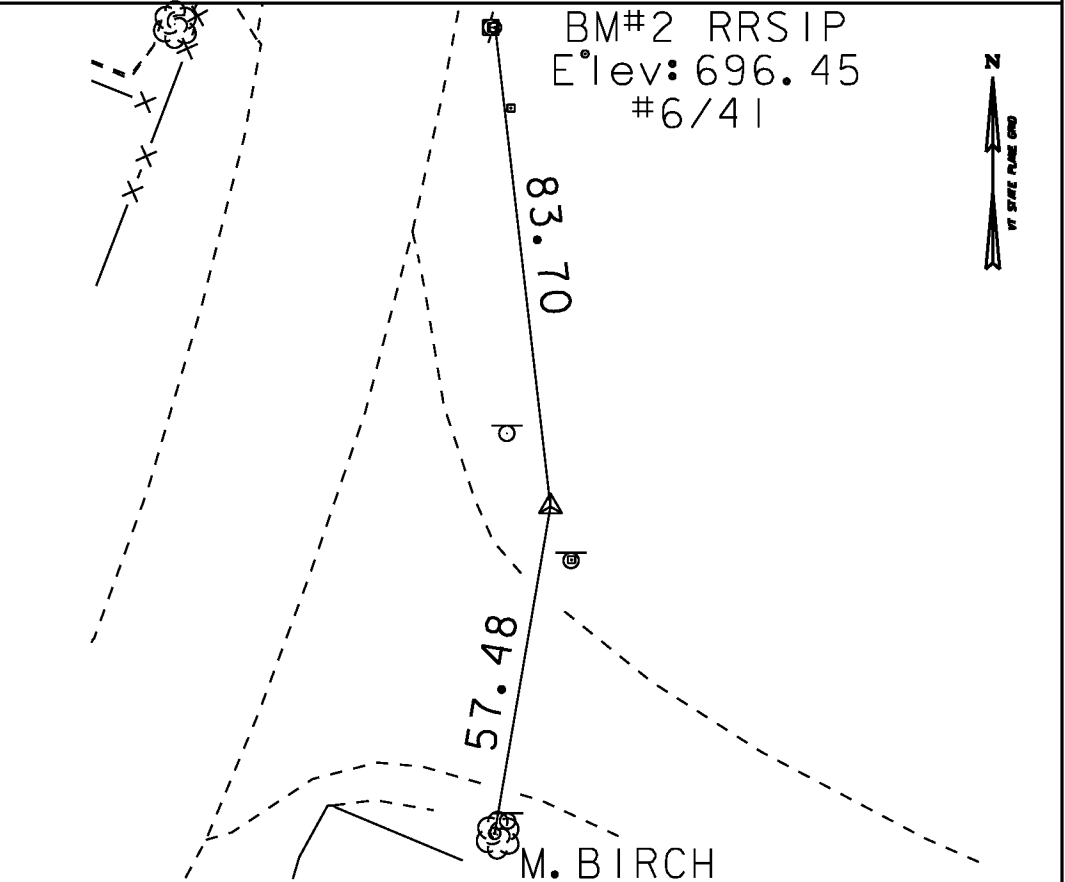
HVCTRL #4

NORTH = 708055.57
EAST = 1587223.17
ELEV. = 673.93



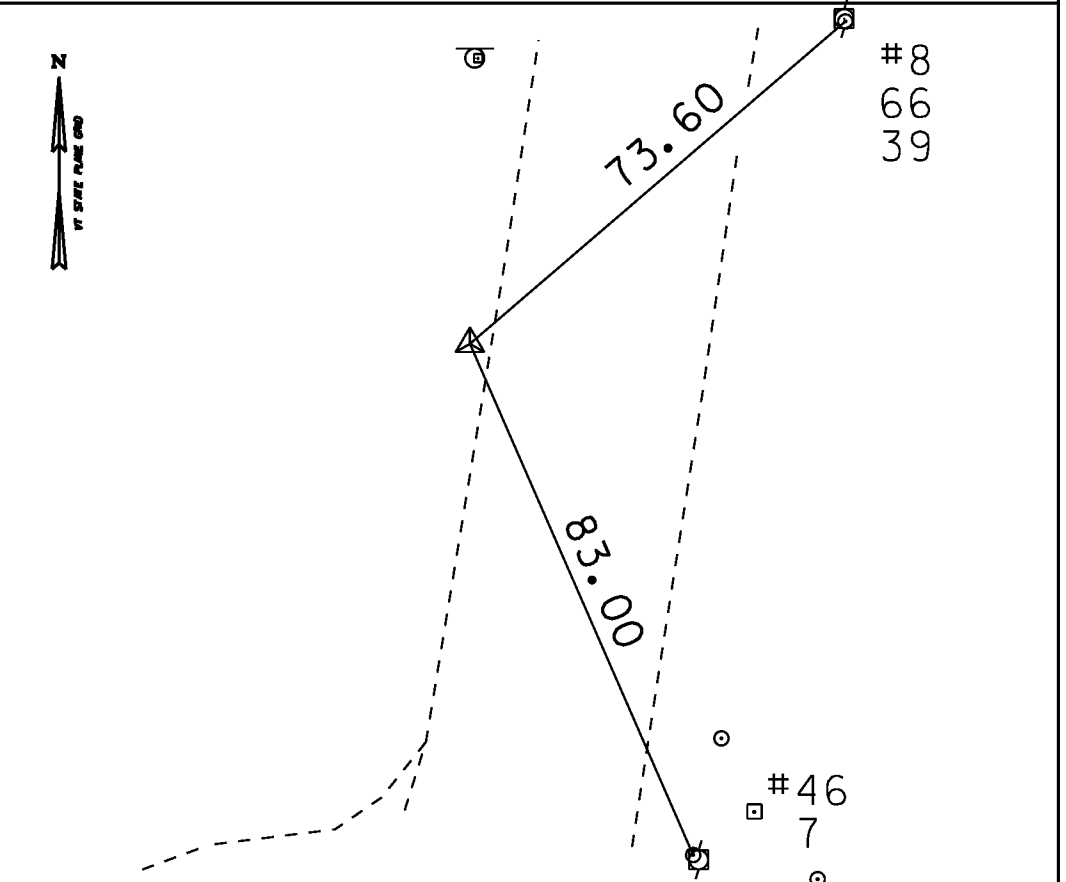
HVCTRL #5

NORTH = 708379.78
EAST = 1587528.47
ELEV. = 693.67



HVCTRL #6

NORTH = 708682.92
EAST = 1587512.27
ELEV. = 694.39



NORTH =
EAST =
ELEV. =

* Main Traverse Completed 07/27/07 by R.Gilman P.C & P.Winters...T.Parker

ALIGNMENT DATA

VT 100

	STATION	NORTHING	EASTING
POB	10+00.00	707975.243	1586997.414
PC	11+89.05	708051.288	1587170.499
PI	14+92.51	708173.349	1587448.322

Delta: 56°59'32.02" Left
Degree of Curvature (Arc): 10°15'00.00"
Length: 556.02
Tangent: 303.45
Chord: 533.38
Middle Ordinate: 67.72
External: 77.06

PT	17+45.08	708472.823	1587497.306
POE	20+69.96	708793.447	1587549.750

TOWN HIGHWAY 52

	STATION	NORTHING	EASTING
POB	0+00.00	708361.963	1587467.213
PC	0+62.86	708339.349	1587525.864
PI	0+90.00	708329.586	1587551.187

Radius: 716.20
Delta: 4°20'25.42" Right
Degree of Curvature (Arc): 8°00'00.00"
Length: 54.25
Tangent: 27.14
Chord: 54.24
Middle Ordinate: 0.51
External: 0.51

PT	1+17.11	708317.933	1587575.699
POE	1+50.00	708793.447	1587549.750

DATUM

VERTICAL NAVD 88

HORIZONTAL NAD 83 (Conus)

ADJUSTMENT Compass

PROJECT NAME: STOWE

PROJECT NUMBER: BRF 029-1(17)

FILE NAME: s85e037tie.dgn

PROJECT LEADER: C. CARLSON

DESIGNED BY: H. SALLS

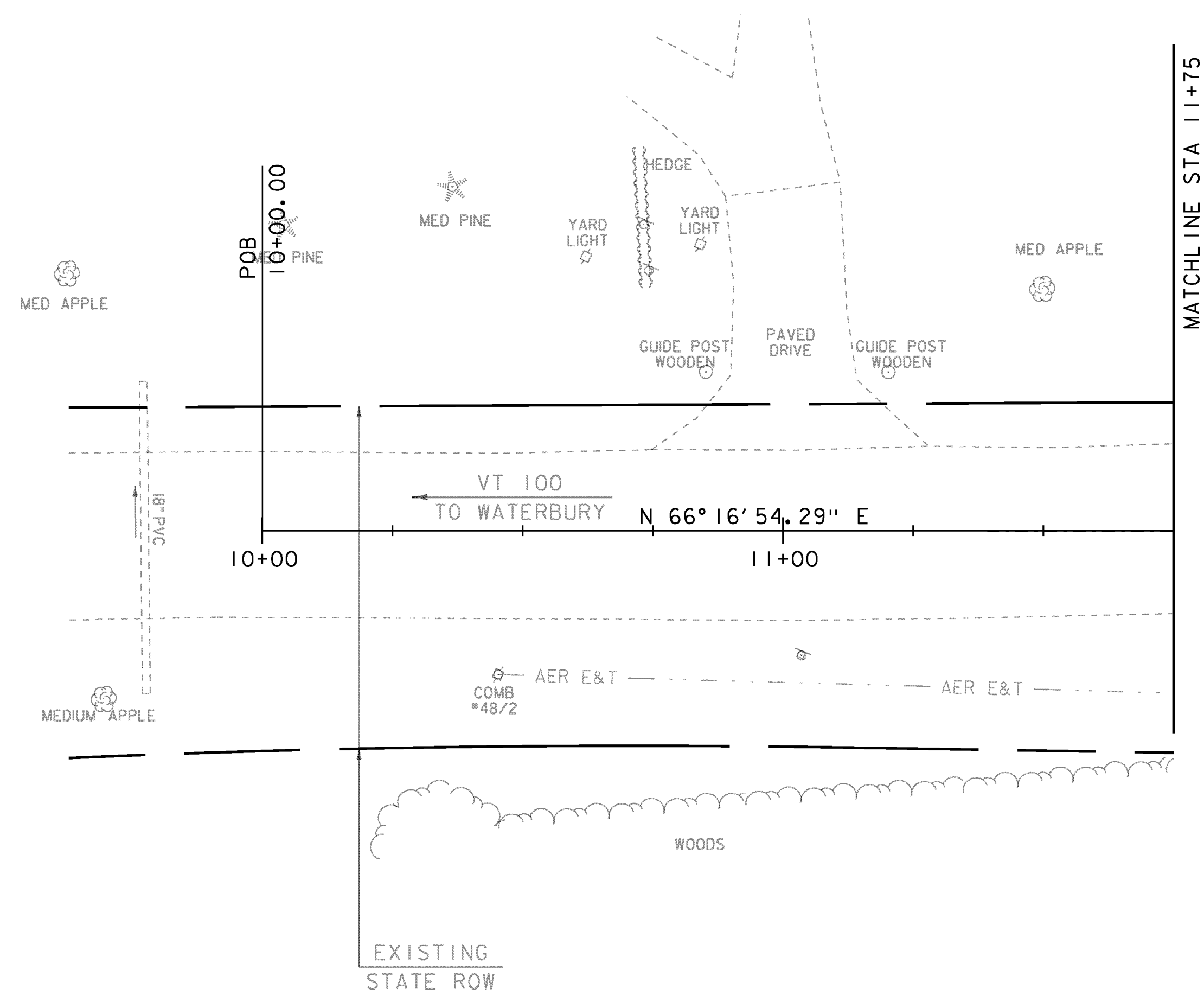
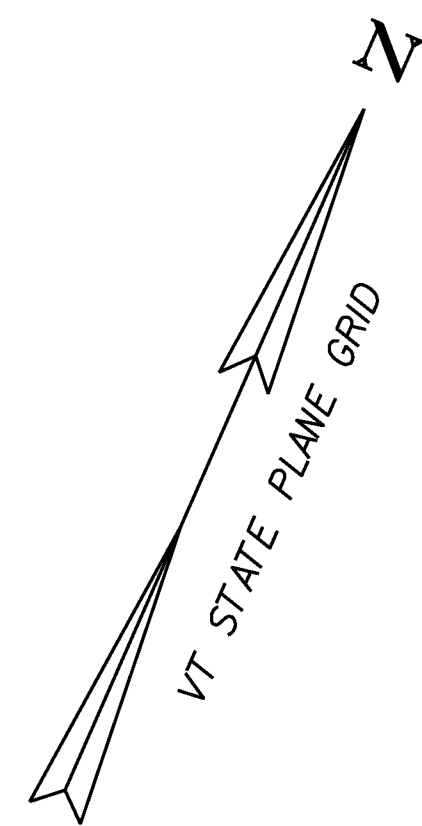
TIE SHEET

PLOT DATE: 17-JUN-2013

DRAWN BY: R. BULLOCK

CHECKED BY: G. ROY

SHEET 10 OF 70



SCALE: 1" = 20'-0"

20 0 20

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1(17)

FILE NAME: s85e037bdr.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
LAYOUT 1

PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 11 OF 70

REMOVAL AND DISPOSAL OF GUARDRAIL

STA 13+60 LT - STA 14+50 LT
STA 14+10 RT - STA 14+60 RT
STA 15+00 LT - STA 16+20 LT
STA 15+10 RT - STA 15+98 RT

CONSTRUCT 5' PAVED APRON

STA 13+10.0 RT - STA 13+58.0 RT

CONSTRUCT GRASS-LINED DITCH

STA 16+54.6 RT - STA 17+00.0 RT
STA 0+45.0 LT - STA 1+50.0 LT

BRIDGE RAILING, GALVANIZED

3 RAIL BOX BEAM

STA 14+33.0 LT - STA 15+12.8 LT
STA 14+47.3 RT - STA 15+22.0 RT

CAST-IN-PLACE CONCRETE CURB, TYPE B

STA 13+99.8 LT - STA 14+33.3 LT
STA 14+15.4 RT - STA 14+47.0 RT
STA 15+13.0 LT - STA 15+46.6 LT
STA 15+21.9 RT - STA 15+53.5 RT

HD STEEL BEAM GUARDRAIL, GALVANIZED

STA 13+06.6 LT - STA 14+03.1 LT
STA 15+42.8 LT - STA 15+94.2 LT
VT 100 STA 15+50.3 RT - TH 52 STA 0+84.7 RT

MANUFACTURED TERMINAL SECTION, TANGENT

STA 12+65.9 LT - STA 13+06.6 LT
13+71.0 STA 13+80.8 RT - STA 14+19.0 RT
STA 15+94.2 LT - STA 16+34.8 LT
STA 0+84.7 RT - STA 1+24.6 RT

GUARDRAIL APPROACH SECTION,

GALVANIZED 3 RAIL BOX BEAM

STA 14+03.1 LT - STA 14+33.0 LT
STA 14+19.0 RT - STA 14+47.3 RT
STA 15+12.8 LT - STA 15+42.8 LT
STA 15+22.0 RT - STA 15+50.3 RT

VT 100 CURVE DATA

$\Delta = 56^{\circ}59'32''$ LT
D = 10°15'00"
R = 558.98'
T = 303.45'
L = 556.02'
E = 77.06'
BANKING = 0.080

STONE FILL
TYPE IV (TYP)

STA 16+00.00
END PROJECT
BEGIN APPROACH

STA 15+16.87
END BRIDGE
RESUME ROADWAY

VT 100 STA 16+30.00 =
TH 52 STA 0+00.00
 $\Delta = 90^{\circ}$ RT

TH 52 CURVE DATA

$\Delta = 4^{\circ}20'25.42''$ RT
D = 8°00'00"
R = 716.20'
T = 27.14'
L = 54.25'
E = 0.51'

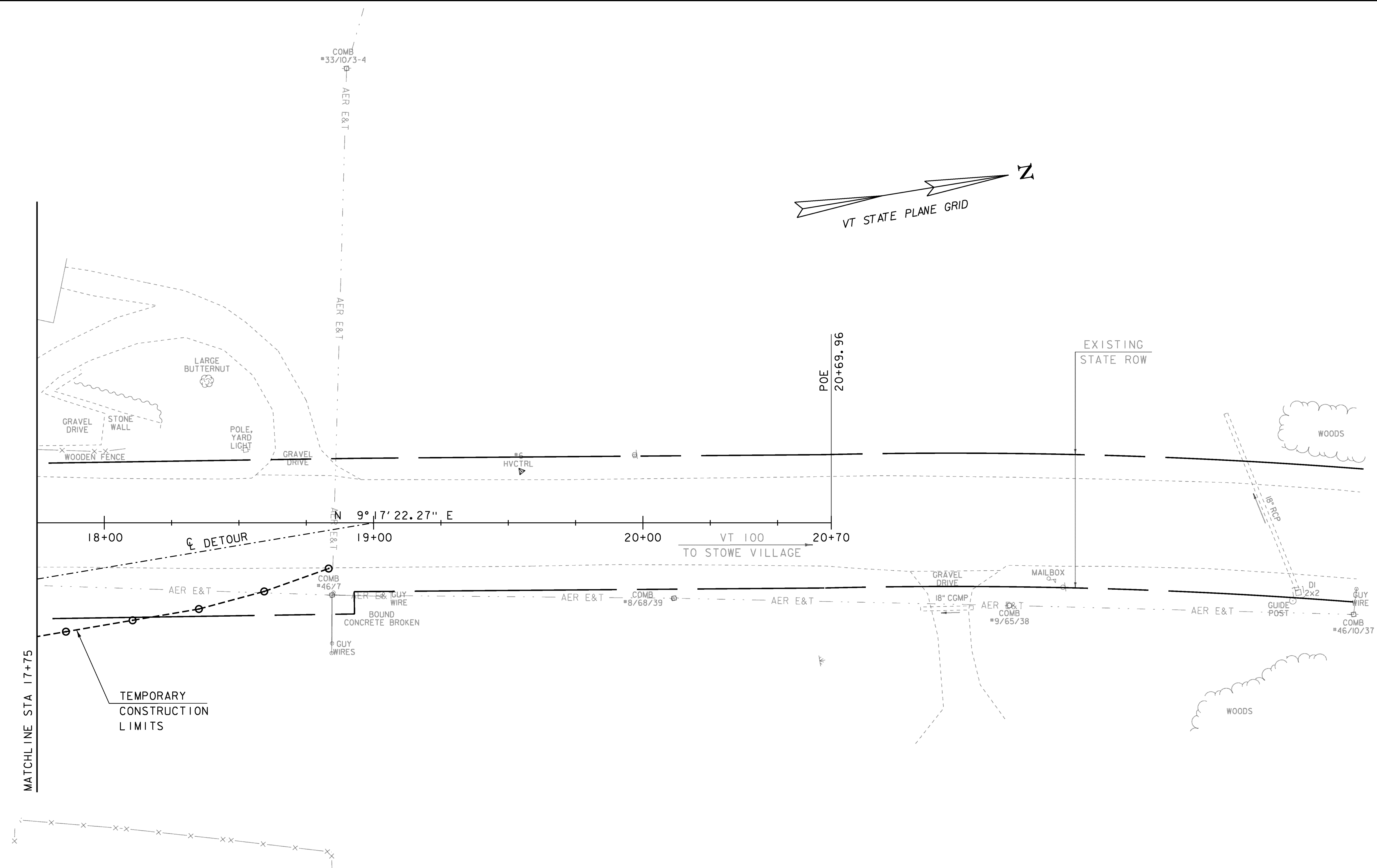
SCALE: 1" = 20'-0"

20 0 20

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1(17)

FILE NAME: s85e037bdr.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
LAYOUT 2

PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 12 OF 70

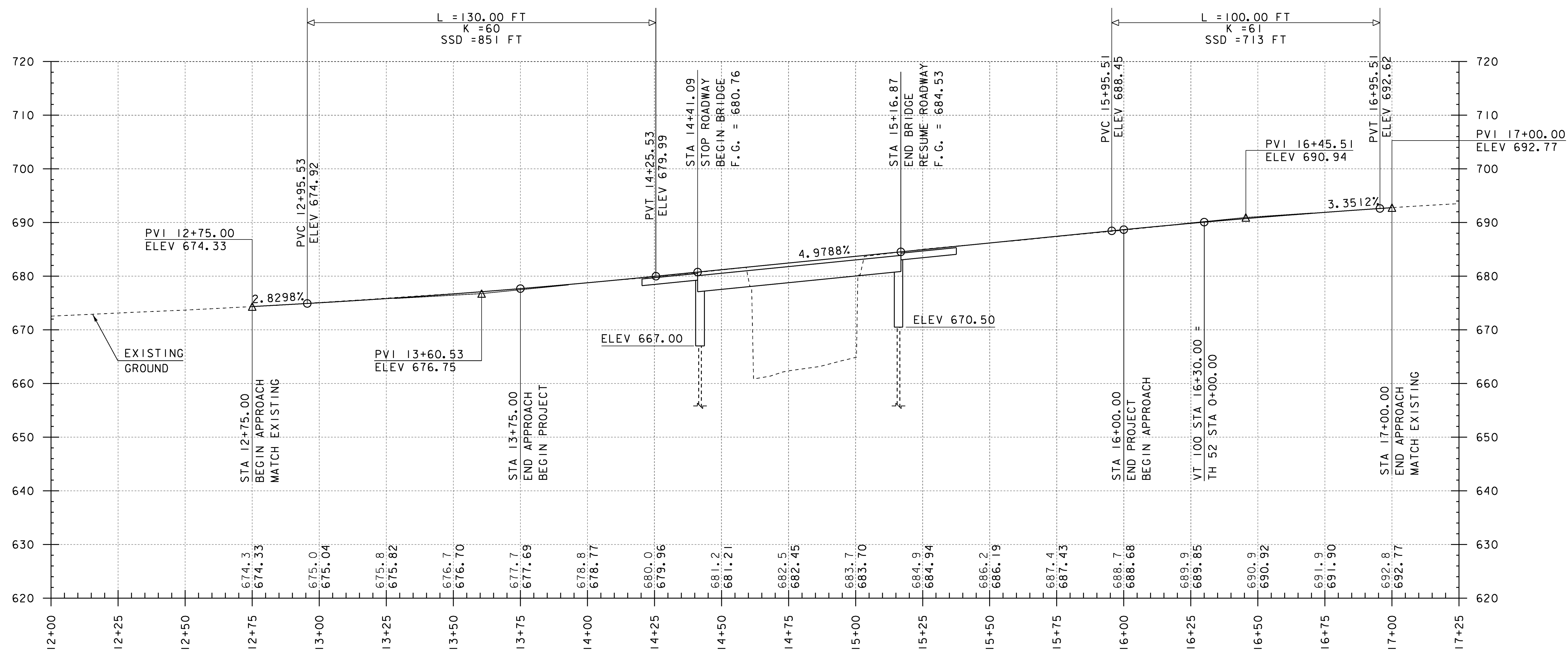


SCALE: 1" = 20'-0"
20 0 20

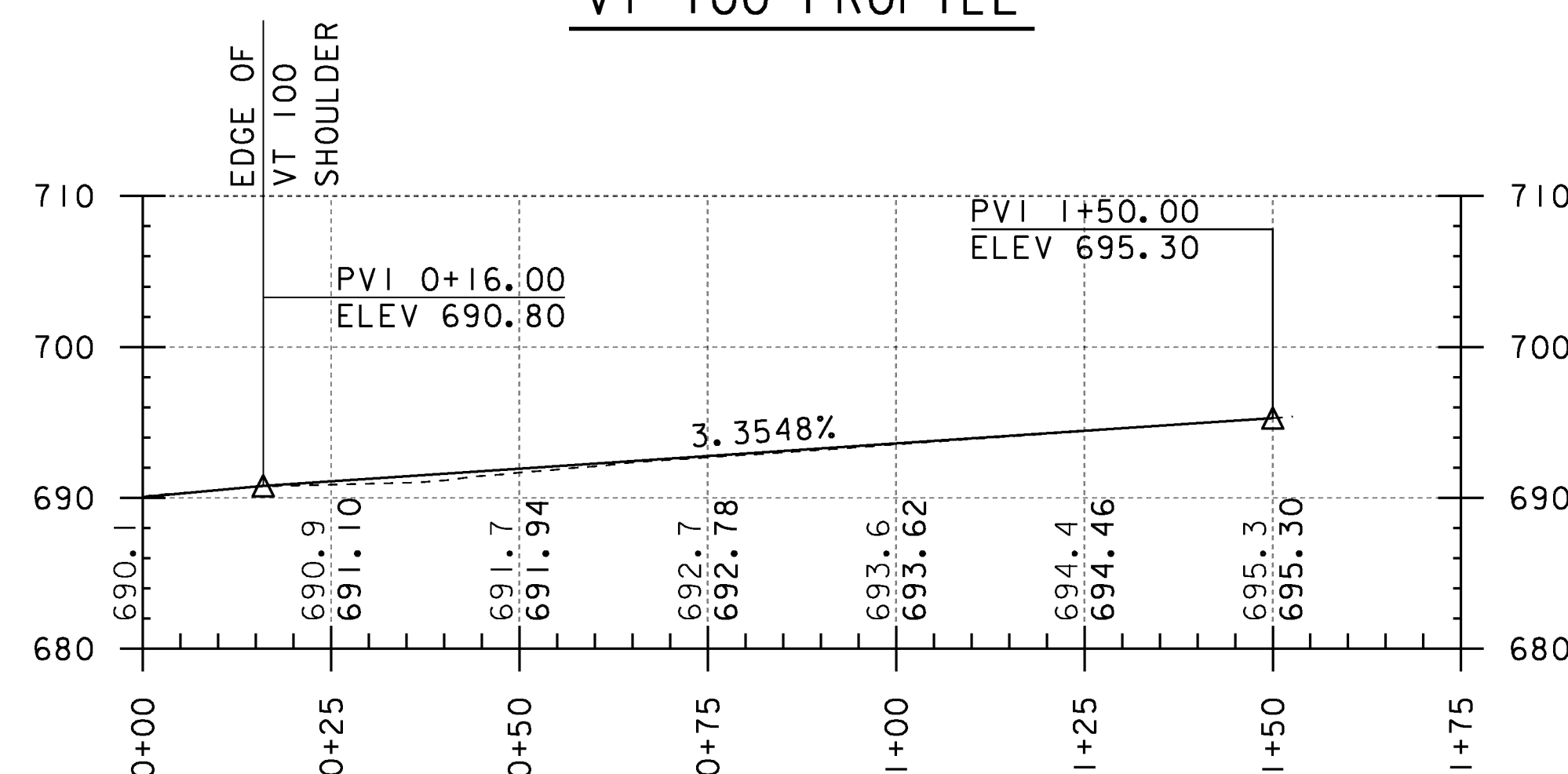
PROJECT NAME: STOWE
PROJECT NUMBER: BR 029-1(17)

FILE NAME: s85e037bdr.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
LAYOUT 3

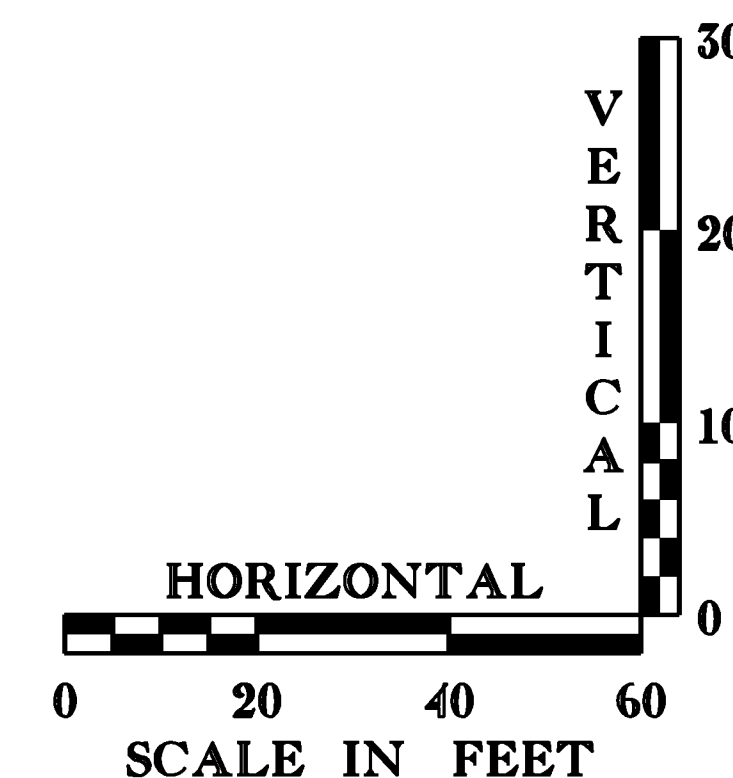
PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 13 OF 70



VT 100 PROFILE



TH 52 PROFILE



NOTES:

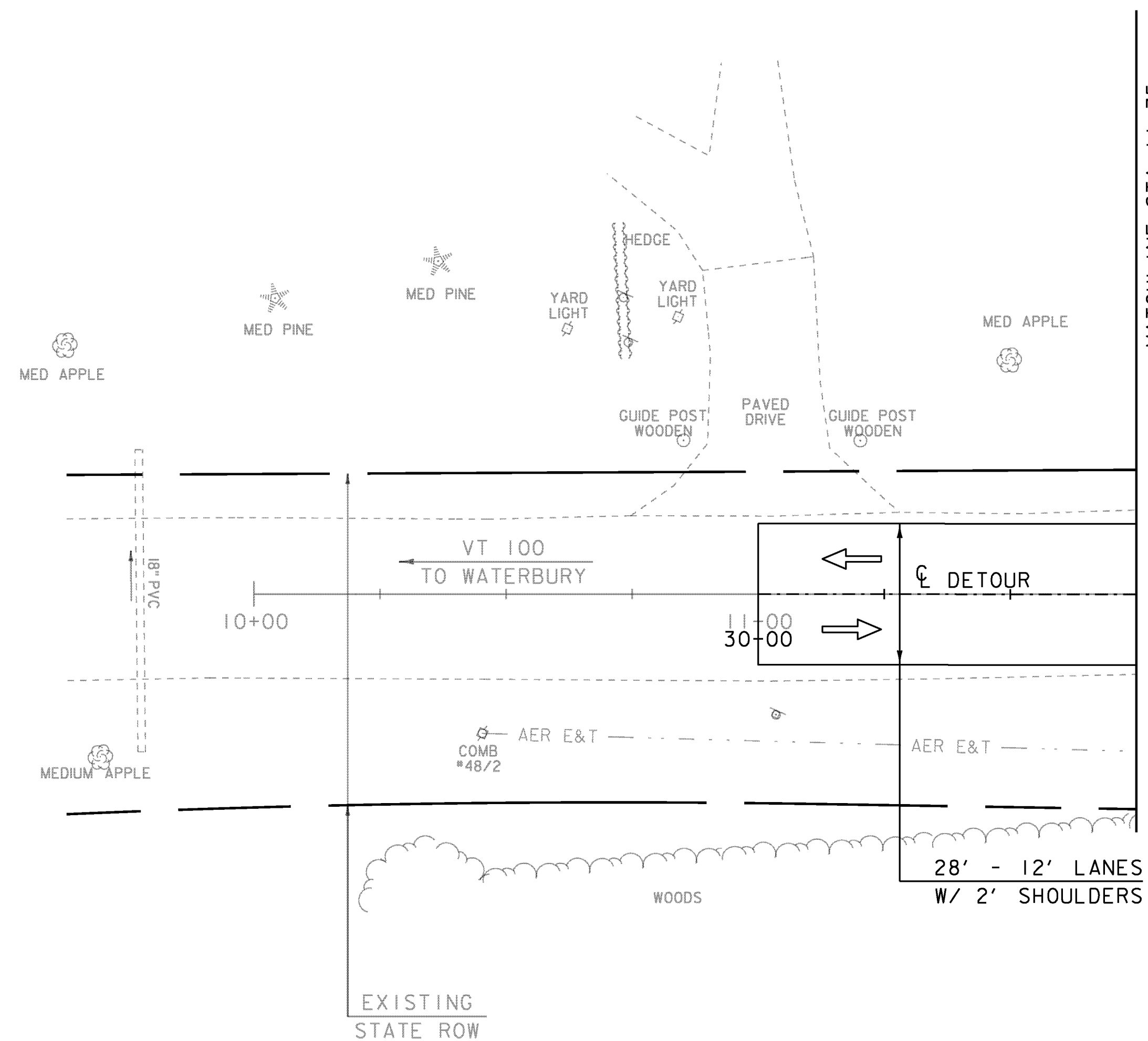
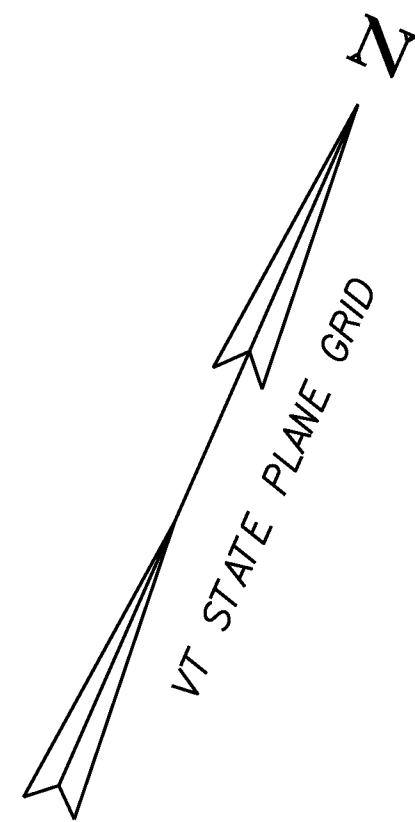
GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG CL.

GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG CL.

PROJECT NAME: STOWE
 PROJECT NUMBER: BR 029-1(17)

FILE NAME: s85e037pro.dgn
 PROJECT LEADER: C. CARLSON
 DESIGNED BY: H. SALLS
 PROFILES

PLOT DATE: 17-JUN-2013
 DRAWN BY: R. PELLETT
 CHECKED BY: G. ROY
 SHEET 14 OF 70



LEGEND

← - FLOW OF TRAFFIC

SCALE: 1" = 20'-0"

20 0 20

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1(17)

FILE NAME: s85e037bdr.tcdgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
DETOUR LAYOUT 1

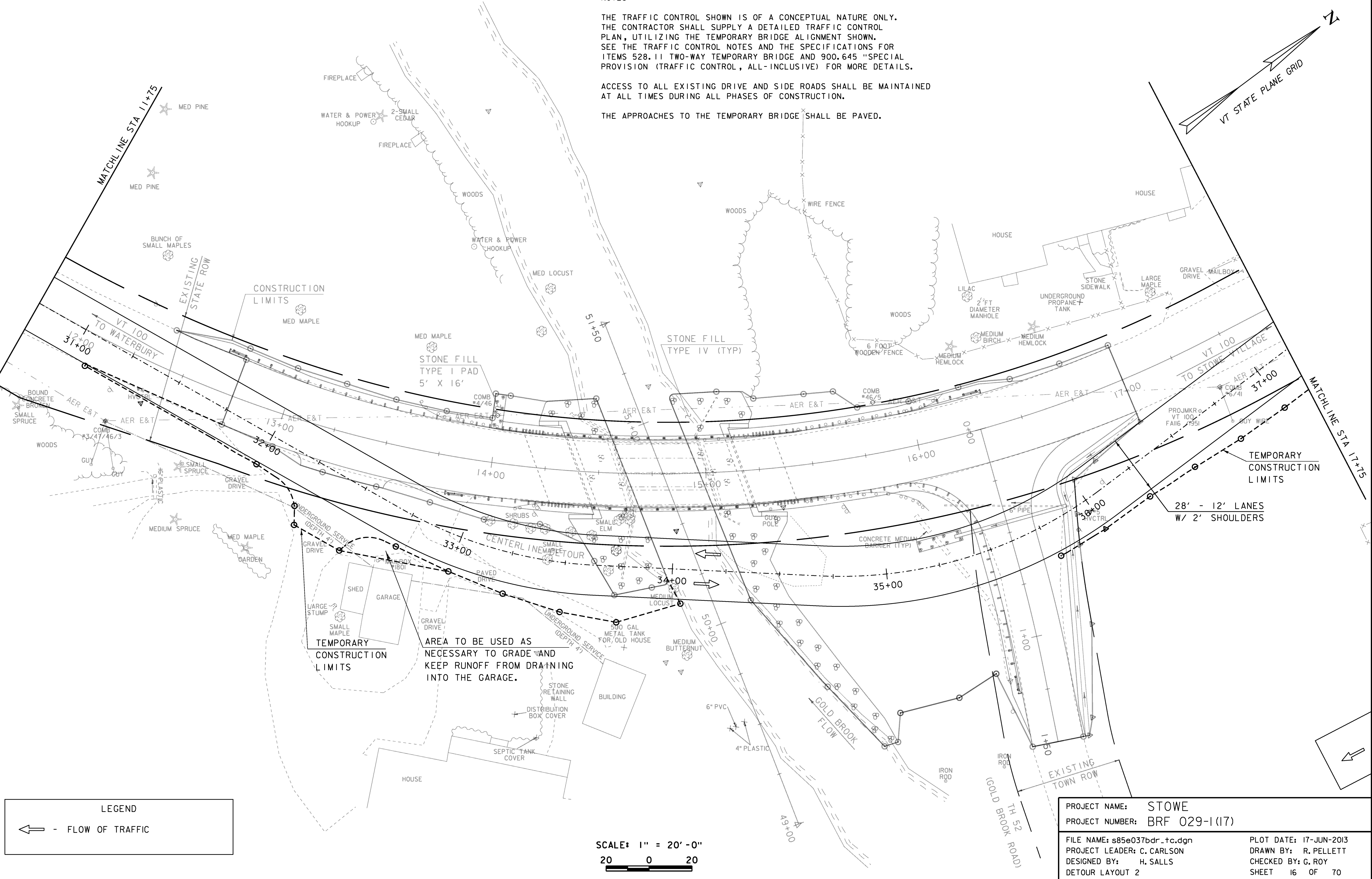
PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 15 OF 70

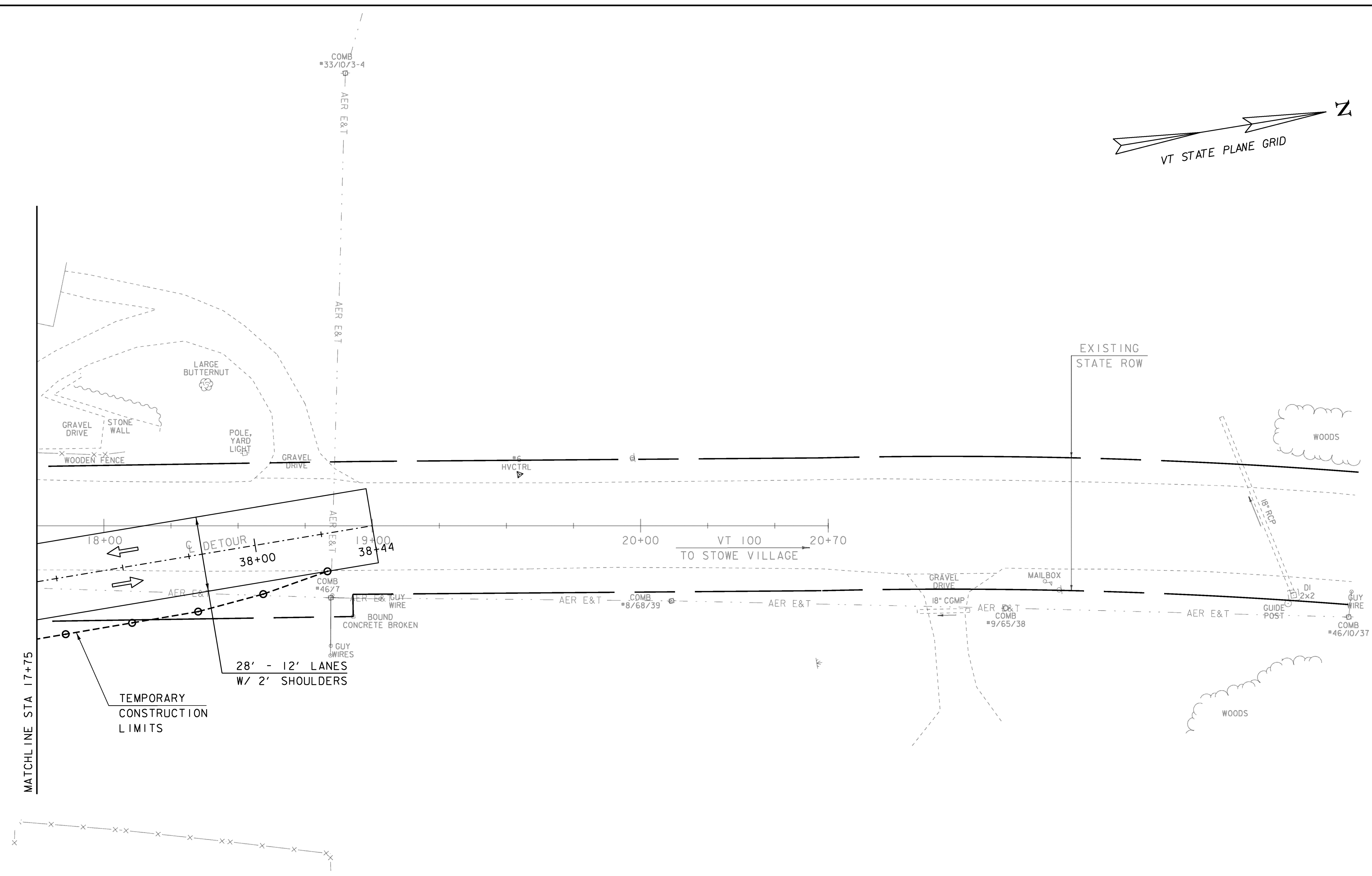
NOTES:

THE TRAFFIC CONTROL SHOWN IS OF A CONCEPTUAL NATURE ONLY. THE CONTRACTOR SHALL SUPPLY A DETAILED TRAFFIC CONTROL PLAN, UTILIZING THE TEMPORARY BRIDGE ALIGNMENT SHOWN. SEE THE TRAFFIC CONTROL NOTES AND THE SPECIFICATIONS FOR ITEMS 528.11 TWO-WAY TEMPORARY BRIDGE AND 900.645 "SPECIAL PROVISION (TRAFFIC CONTROL, ALL-INCLUSIVE) FOR MORE DETAILS.

ACCESS TO ALL EXISTING DRIVE AND SIDE ROADS SHALL BE MAINTAINED AT ALL TIMES DURING ALL PHASES OF CONSTRUCTION.

THE APPROACHES TO THE TEMPORARY BRIDGE SHALL BE PAVED.





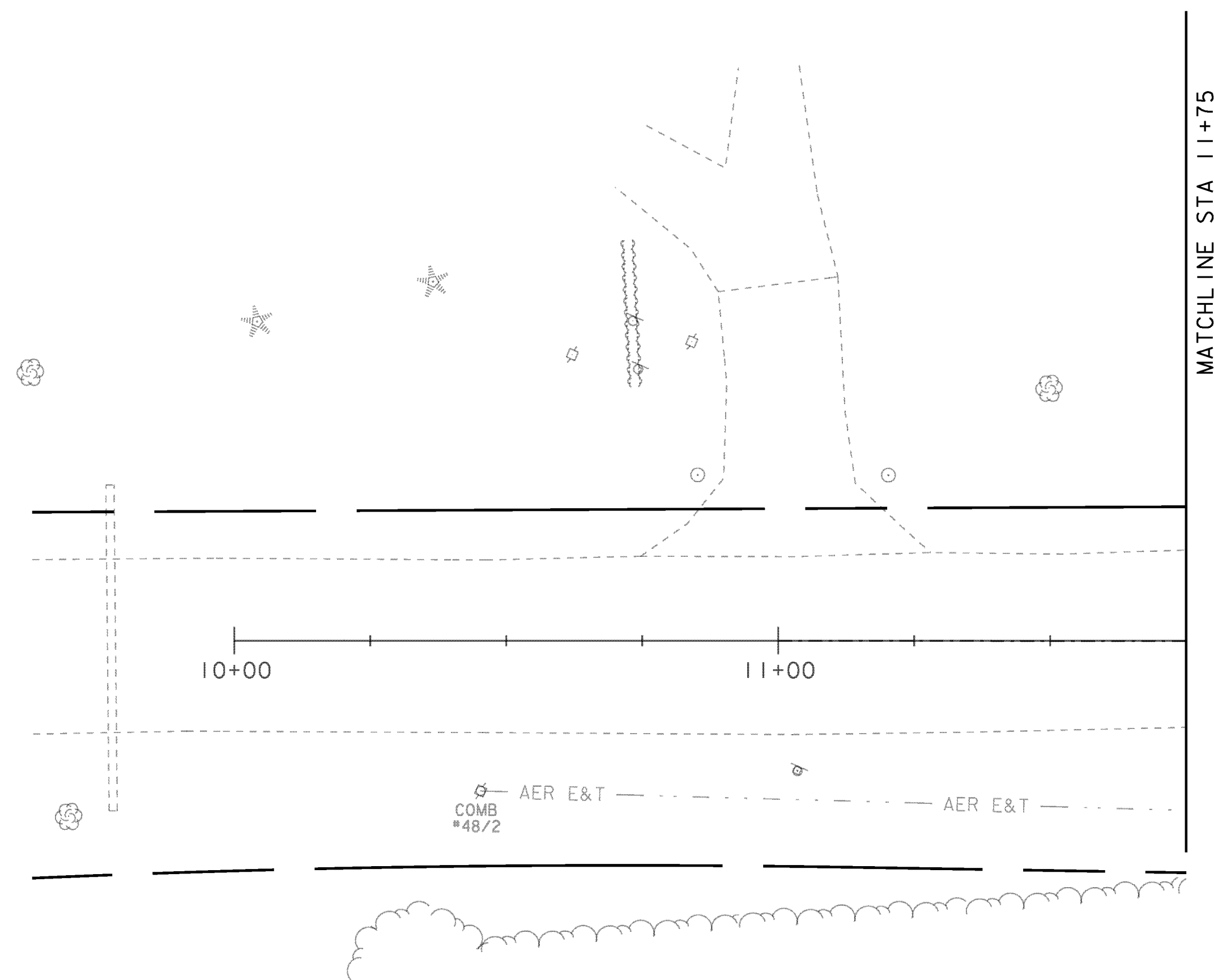
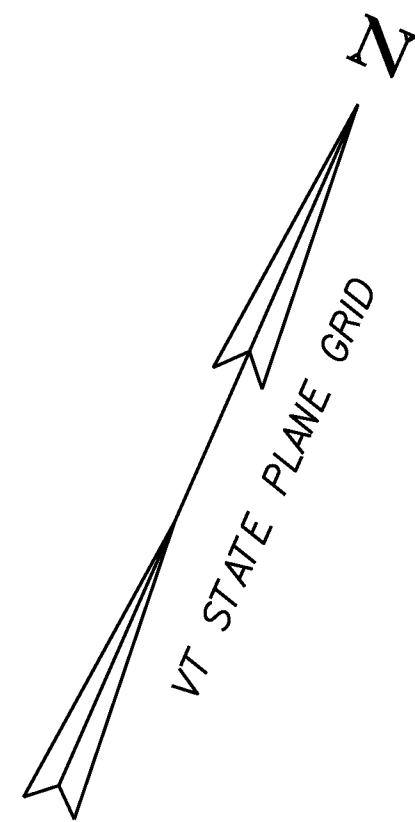
LEGEND

← - FLOW OF TRAFFIC

SCALE: 1" = 20'-0"

20 0 20

PROJECT NAME: STOWE	
PROJECT NUMBER: BRF 029-1(17)	
FILE NAME: s85e037bdr_.tcdgn	PLOT DATE: 17-JUN-2013
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: G. ROY
DETOUR LAYOUT 3	SHEET 17 OF 70



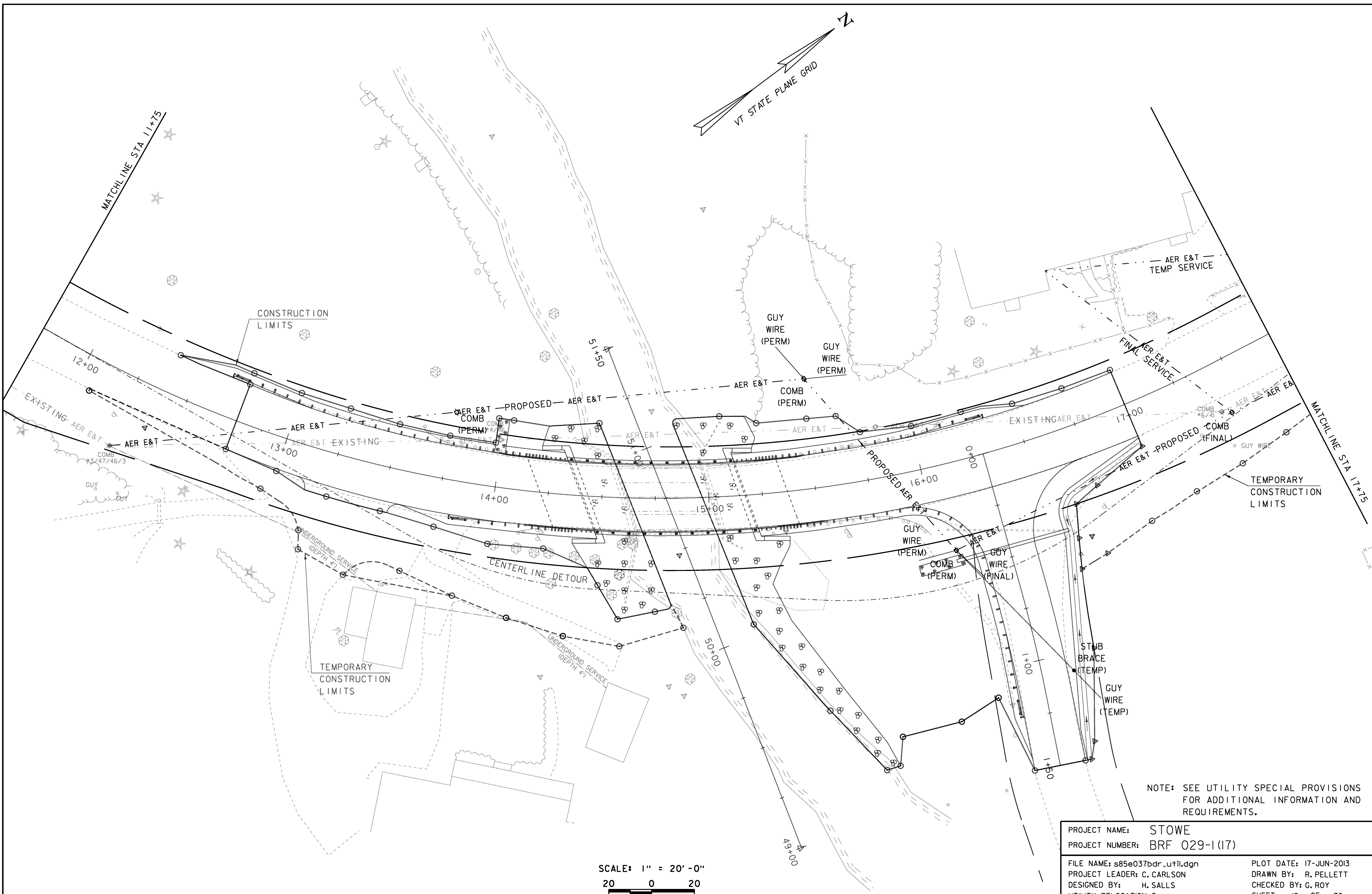
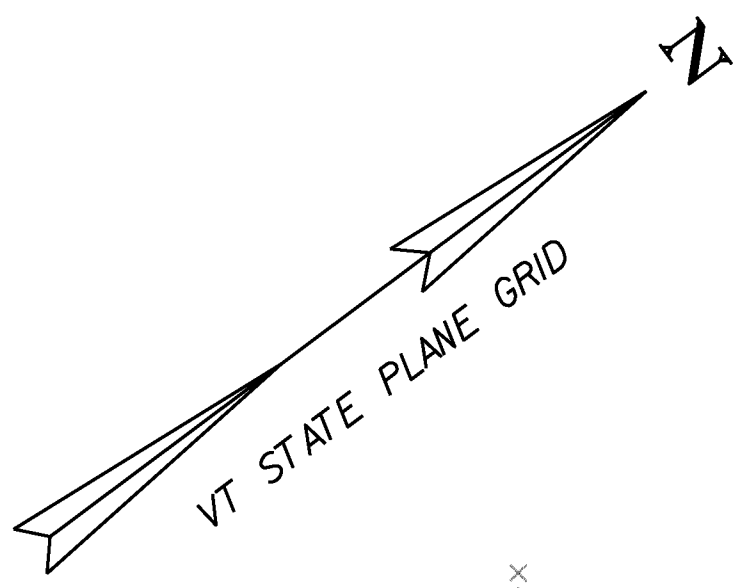
SCALE: 1" = 20'-0"
20 0 20

NOTE: SEE UTILITY SPECIAL PROVISIONS
FOR ADDITIONAL INFORMATION AND
REQUIREMENTS.

PROJECT NAME: STOWE
PROJECT NUMBER: BRP 029-1(17)

FILE NAME: s85e037bdr_util.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
UTILITY RELOCATION 1

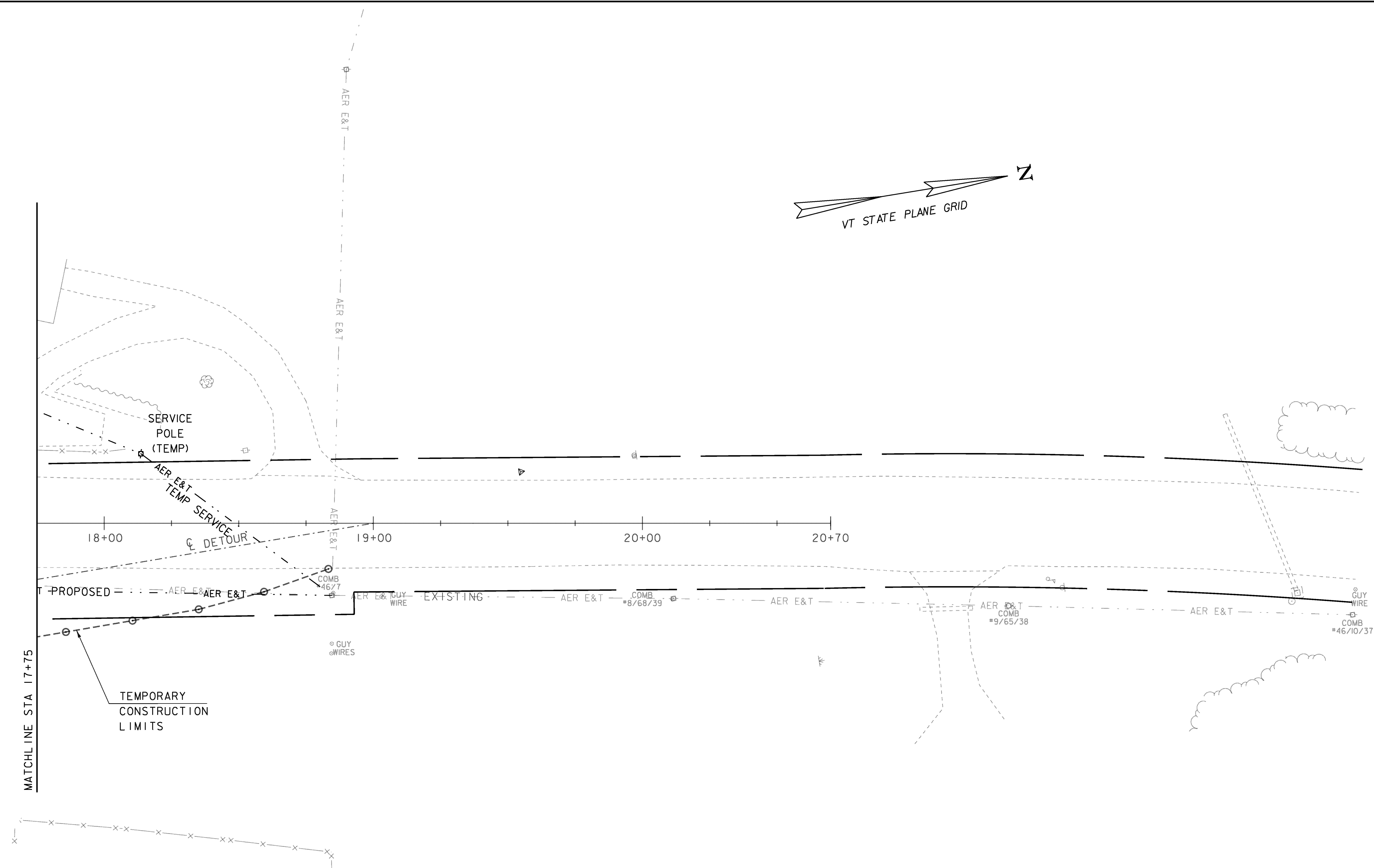
PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 18 OF 70



SCALE: 1" = 20'-0"
20 0 20

NOTE: SEE UTILITY SPECIAL PROVISIONS
FOR ADDITIONAL INFORMATION AND
REQUIREMENTS.

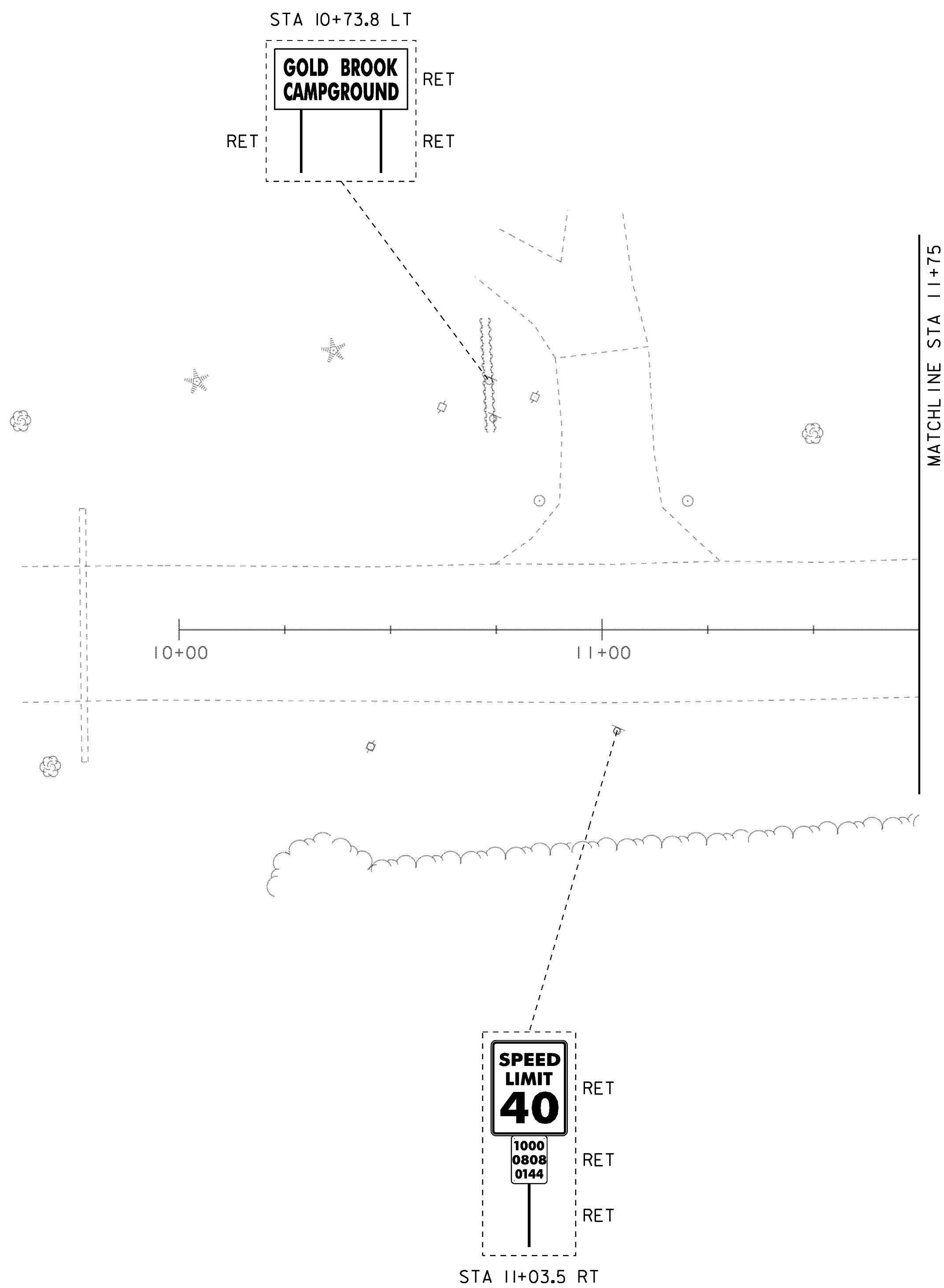
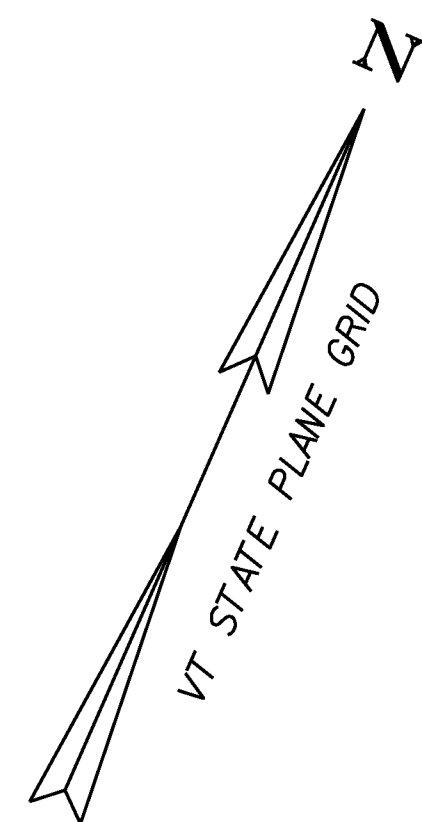
PROJECT NAME: STOWE	
PROJECT NUMBER: BRP 029-1(17)	
FILE NAME: s85e037bdr_util.dgn	PLOT DATE: 17-JUN-2013
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: G. ROY
UTILITY RELOCATION 2	SHEET 19 OF 70



NOTE: SEE UTILITY SPECIAL PROVISIONS
FOR ADDITIONAL INFORMATION AND
REQUIREMENTS.

SCALE: 1" = 20'-0"
20 0 20

PROJECT NAME: STOWE	
PROJECT NUMBER: BRF 029-1(17)	
FILE NAME: s85e037bdr_util.dgn	PLOT DATE: 17-JUN-2013
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: G. ROY
UTILITY RELOCATION 3	SHEET 20 OF 70



LEGEND

RET: RETAIN
N: NEW
R: REMOVE
R&S: REMOVE AND SALVAGE
S: SALVAGE SIGN

SCALE: 1" = 20'-0"
20 0 20

PROJECT NAME: STOWE	
PROJECT NUMBER: BRF 029-1(17)	
FILE NAME: s85e037sign.dgn	PLOT DATE: 17-JUN-2013
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: G. ROY
TRAFFIC SIGNS & PAVEMENT MARKINGS I	SHEET 21 OF 70

4 INCH WHITE LINE
VT 100 STA 12+75.0 LT - VT 100 STA 17+00.0 LT
VT 100 STA 12+75.0 RT - TH 52 STA 0+45.0 RT
TH 52 STA 0+45.0 LT - VT 100 STA 17+00.0 RT

4 INCH YELLOW LINE
VT 100 STA 12+75.0 - VT 100 STA 16+10.0 C (DOUBLE)
VT 100 STA 16+50.0 - VT 100 STA 17+00.0 C (DOUBLE)
TH 52 STA 0+21.0 - TH 52 STA 1+50.0 C (DOUBLE)

DURABLE 24 INCH STOP BAR

STA 0+21.0 LT
0+25.0

DURABLE LETTER OR SYMBOL

STA 0+35.0 LT (4 EA)
0+39.0

TRAFFIC SIGNS, TYPE A

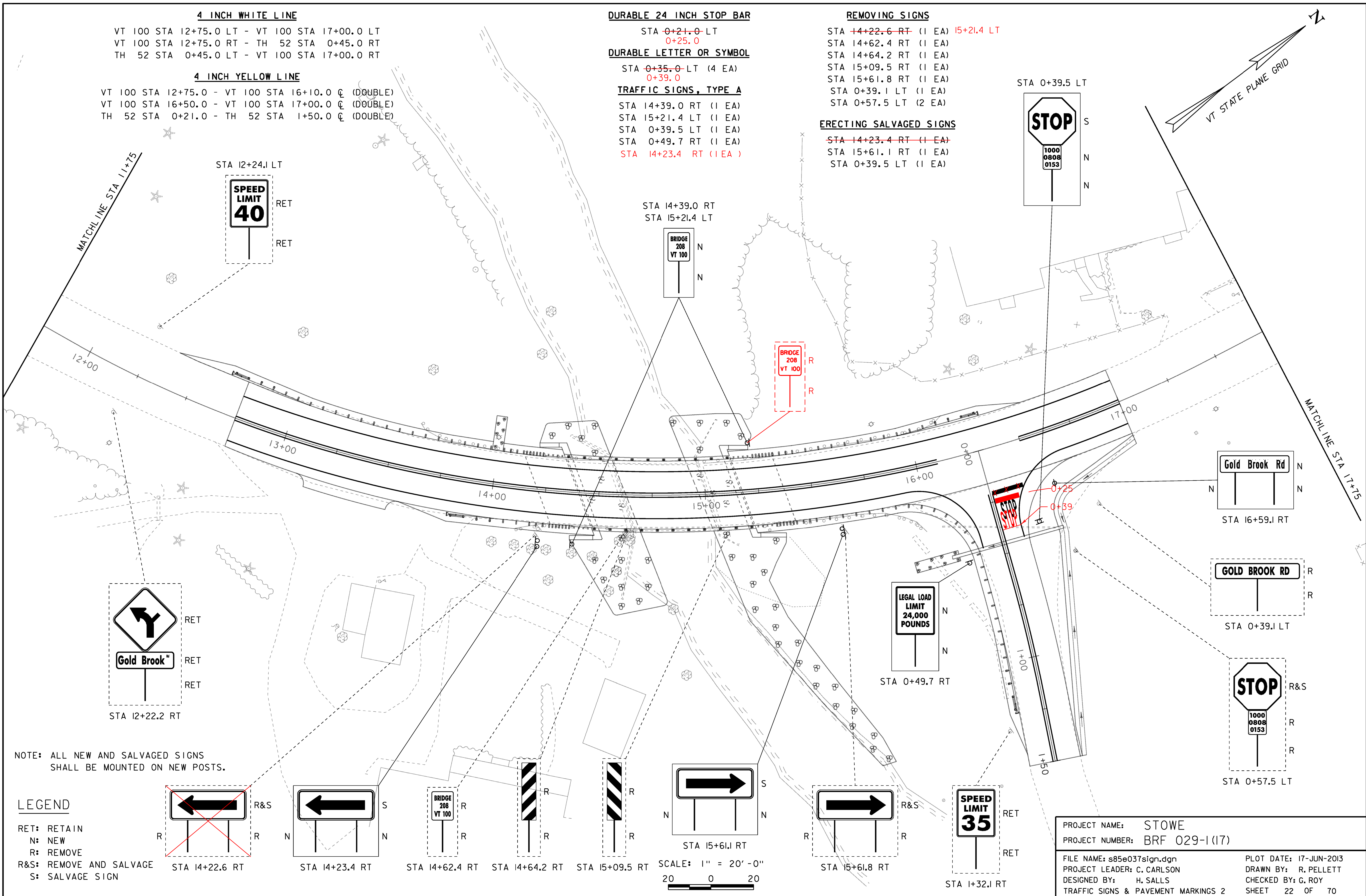
STA 14+39.0 RT (1 EA)
STA 15+21.4 LT (1 EA)
STA 0+39.5 LT (1 EA)
STA 0+49.7 RT (1 EA)
STA 14+23.4 RT (1 EA)

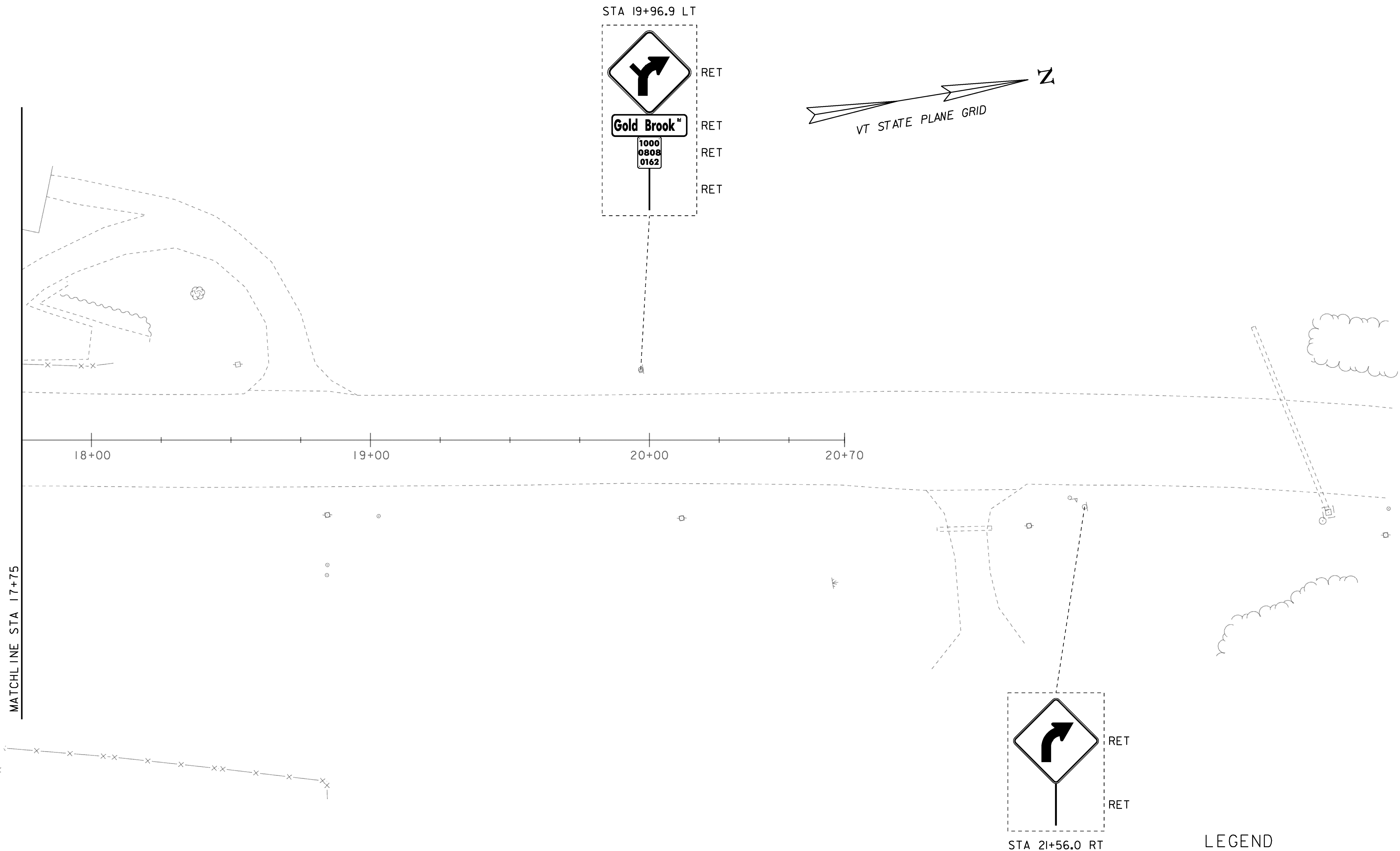
REMOVING SIGNS

STA 14+22.6 RT (1 EA) 15+21.4 LT
STA 14+62.4 RT (1 EA)
STA 14+64.2 RT (1 EA)
STA 15+09.5 RT (1 EA)
STA 15+61.8 RT (1 EA)
STA 0+39.1 LT (1 EA)
STA 0+57.5 LT (2 EA)

ERECTING SALVAGED SIGNS

STA 14+23.4 RT (1 EA)
STA 15+61.1 RT (1 EA)
STA 0+39.5 LT (1 EA)





LEGEND

RET: RETAIN
N: NEW
R: REMOVE
R&S: REMOVE AND SALVAGE
S: SALVAGE SIGN

SCALE: 1" = 20'-0"

20 0 20

PROJECT NAME: STOWE	
PROJECT NUMBER: BRF 029-1(17)	
FILE NAME: s85e037sign.dgn	PLOT DATE: 17-JUN-2013
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: EVANS-MONGEON
TRAFFIC SIGNS & PAVEMENT MARKINGS 3	SHEET 23 OF 70

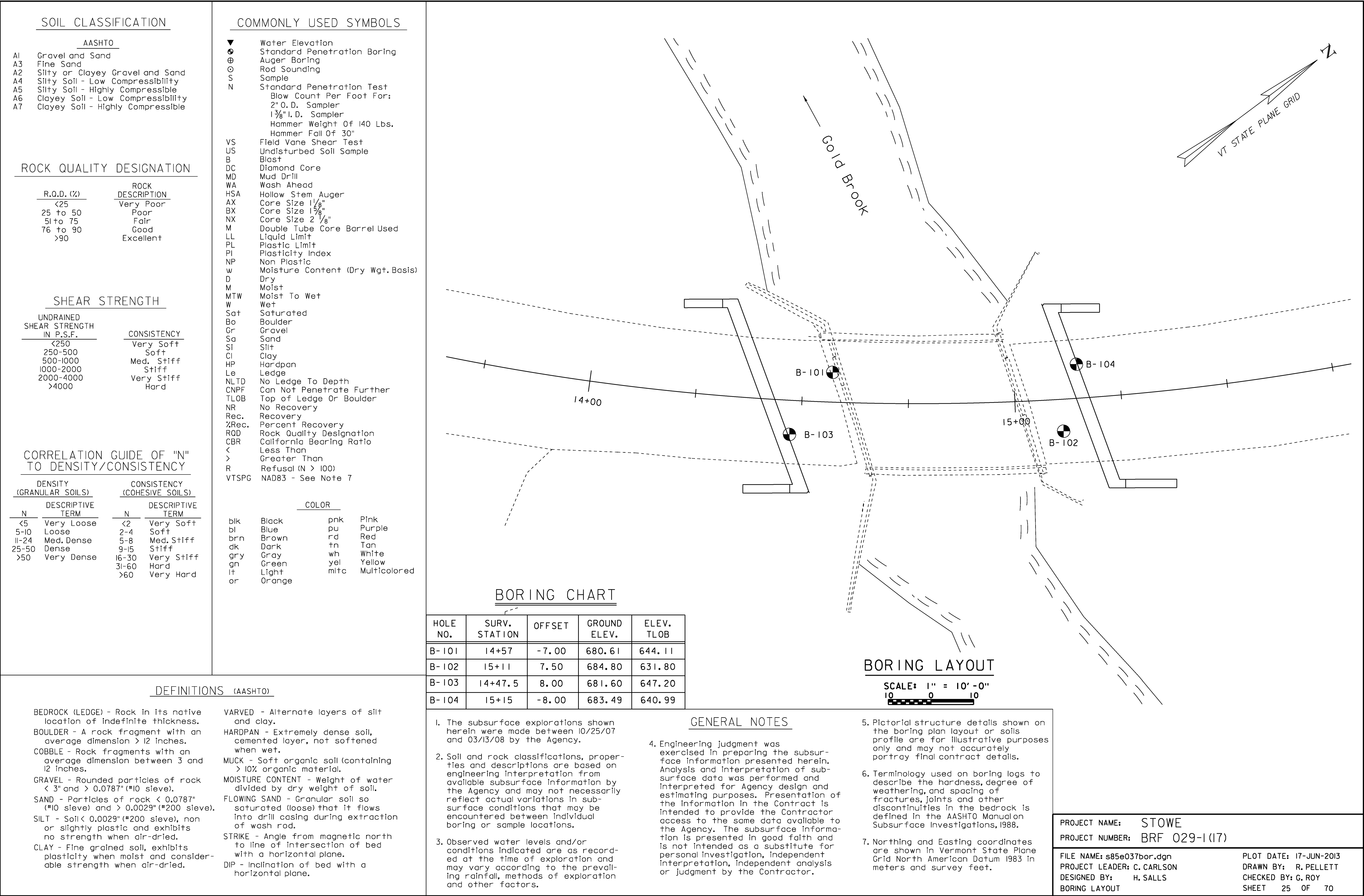
TRAFFIC SIGN SUMMARY SHEET

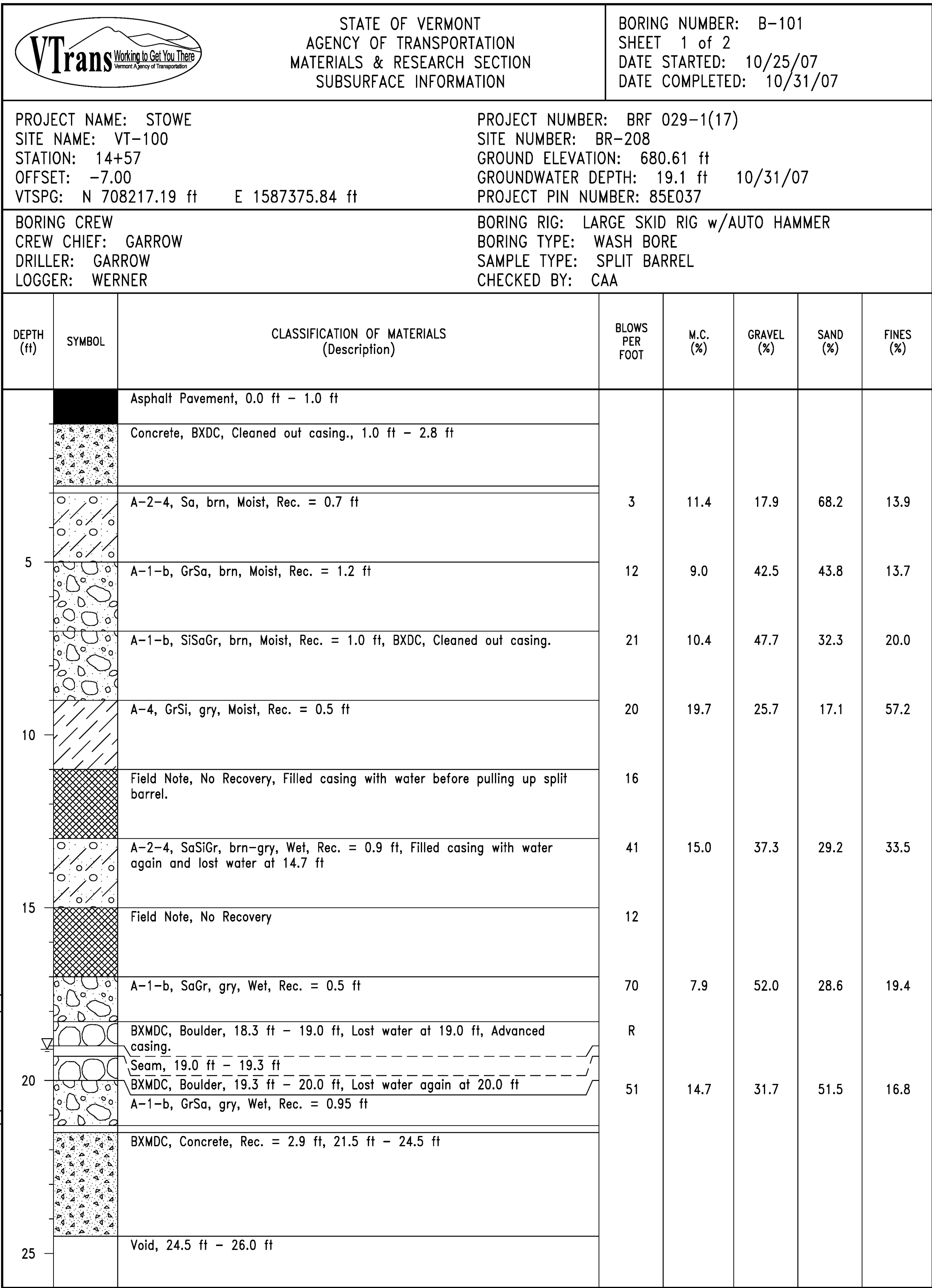
Technical drawing of a rectangular street sign for "Gold Brook Rd". The sign is white with a black border and black text. Dimensions are provided in feet and inches.

- Overall width: 55
- Overall height: 12
- Side margins: $2\frac{1}{2}$ (on both sides)
- Top margin: 3
- Bottom margin: 3
- Text: "Gold Brook Rd"
- Bottom-left corner dimension: $1\frac{1}{2}$
- Bottom center dimension: $\frac{1}{2}$
- Bottom width dimension: 60

MATERIALS: 0.125" FLAT SHEET ALUMINUM

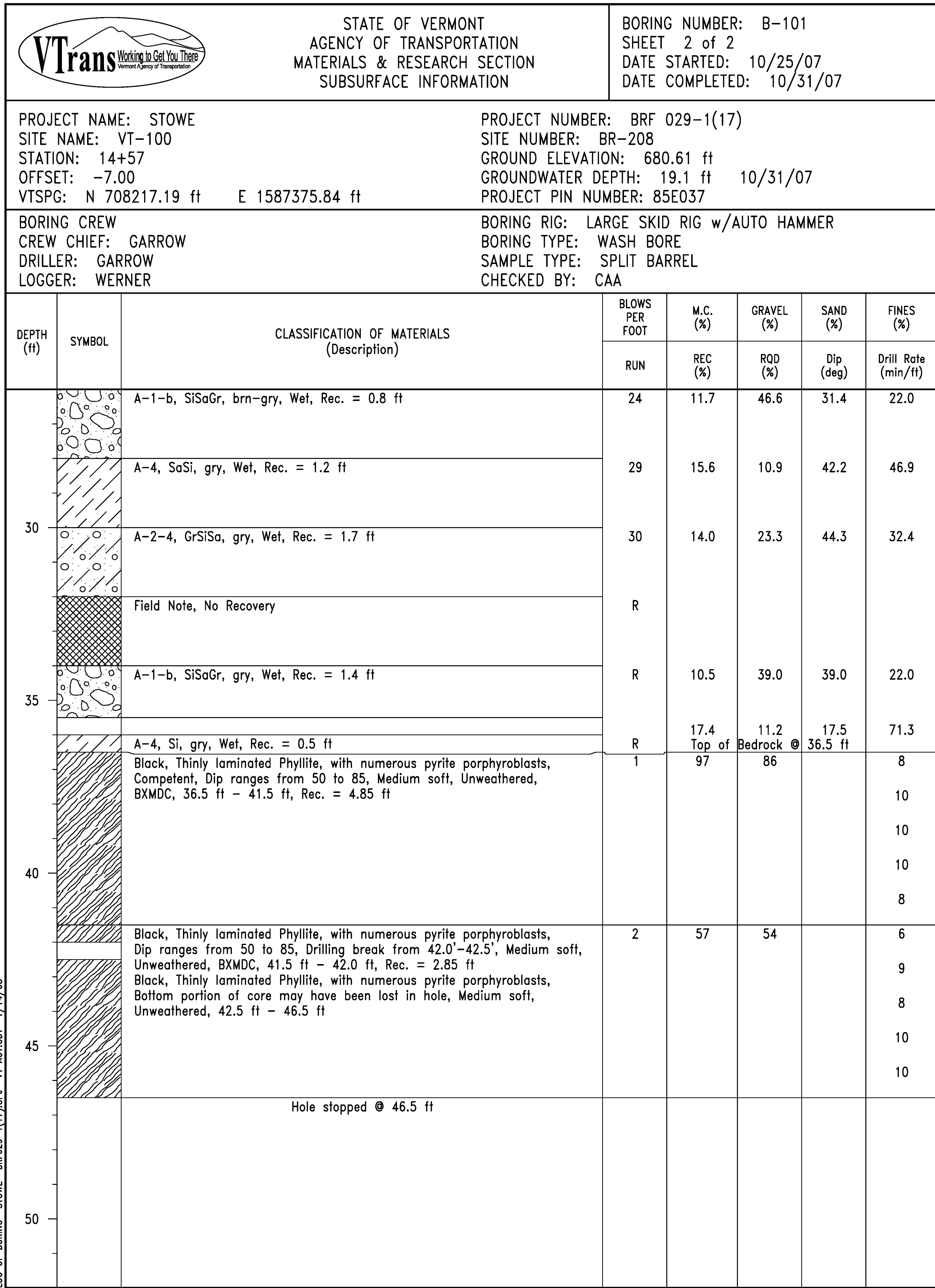
PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 029-1(17)
FILE NAME: s85e037sign.dgn	PLOT DATE: 17-JUN-2013
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. I. SALLS	CHECKED BY: G. ROY
TRAFFIC SIGN SUMMARY	SHEET 24 OF 70





ABUT. I BTM.
ELEV. 667.00

LOG OF BORING STOWE BRF029-1(17).GPJ VT AOT.GDT 1/14/08



EST. LENGTH = 23'

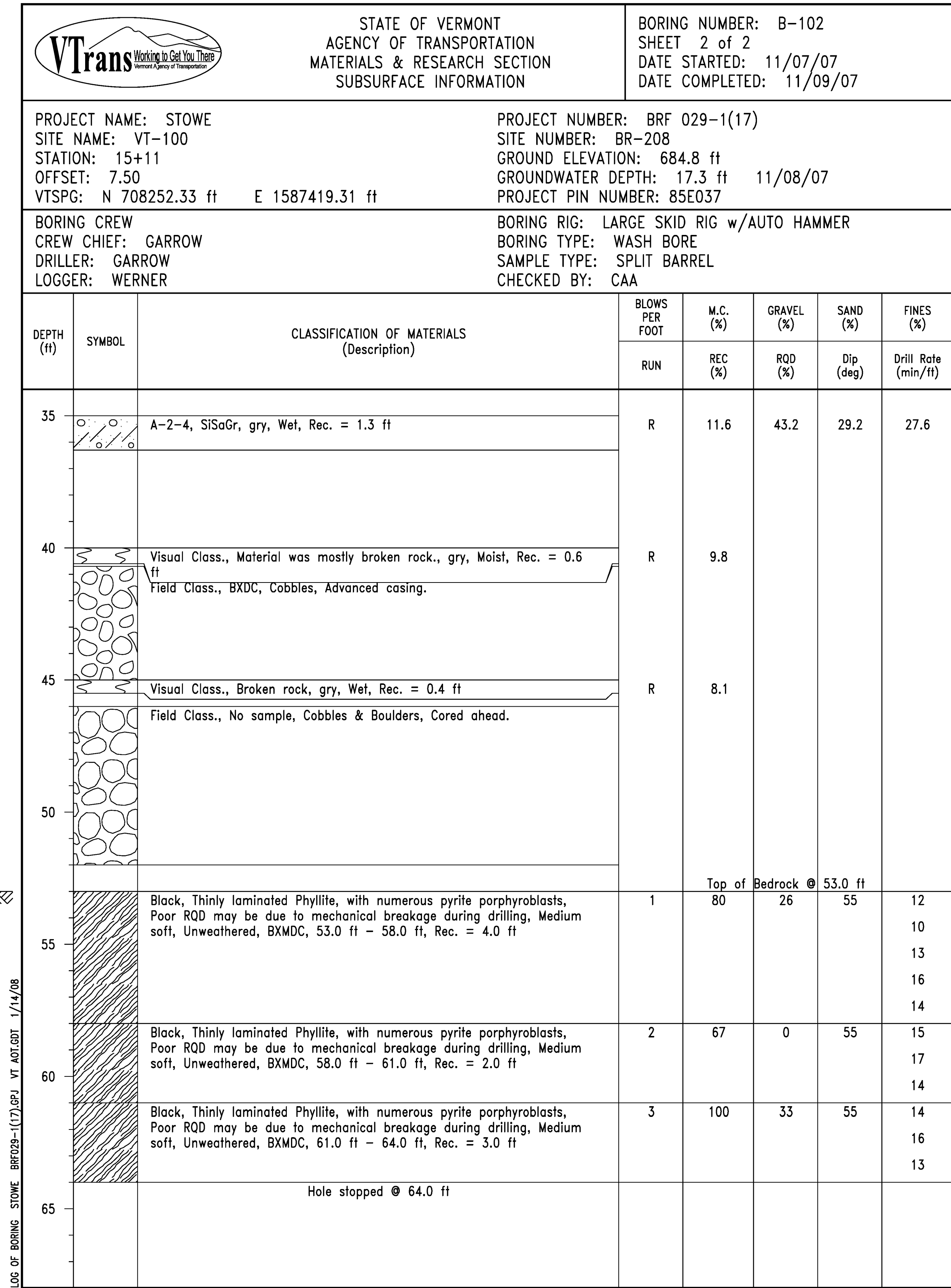
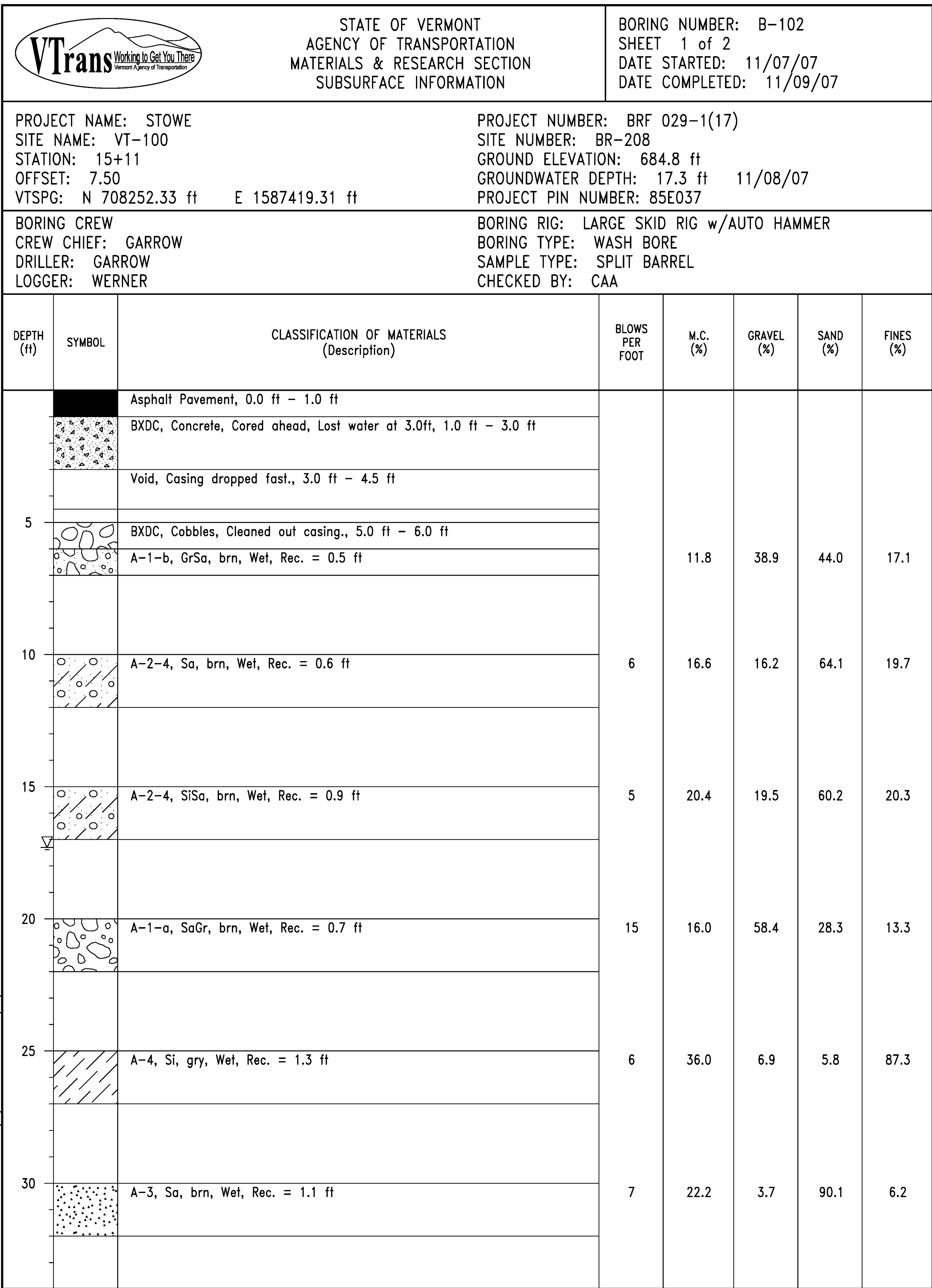
EST. PILE TIP

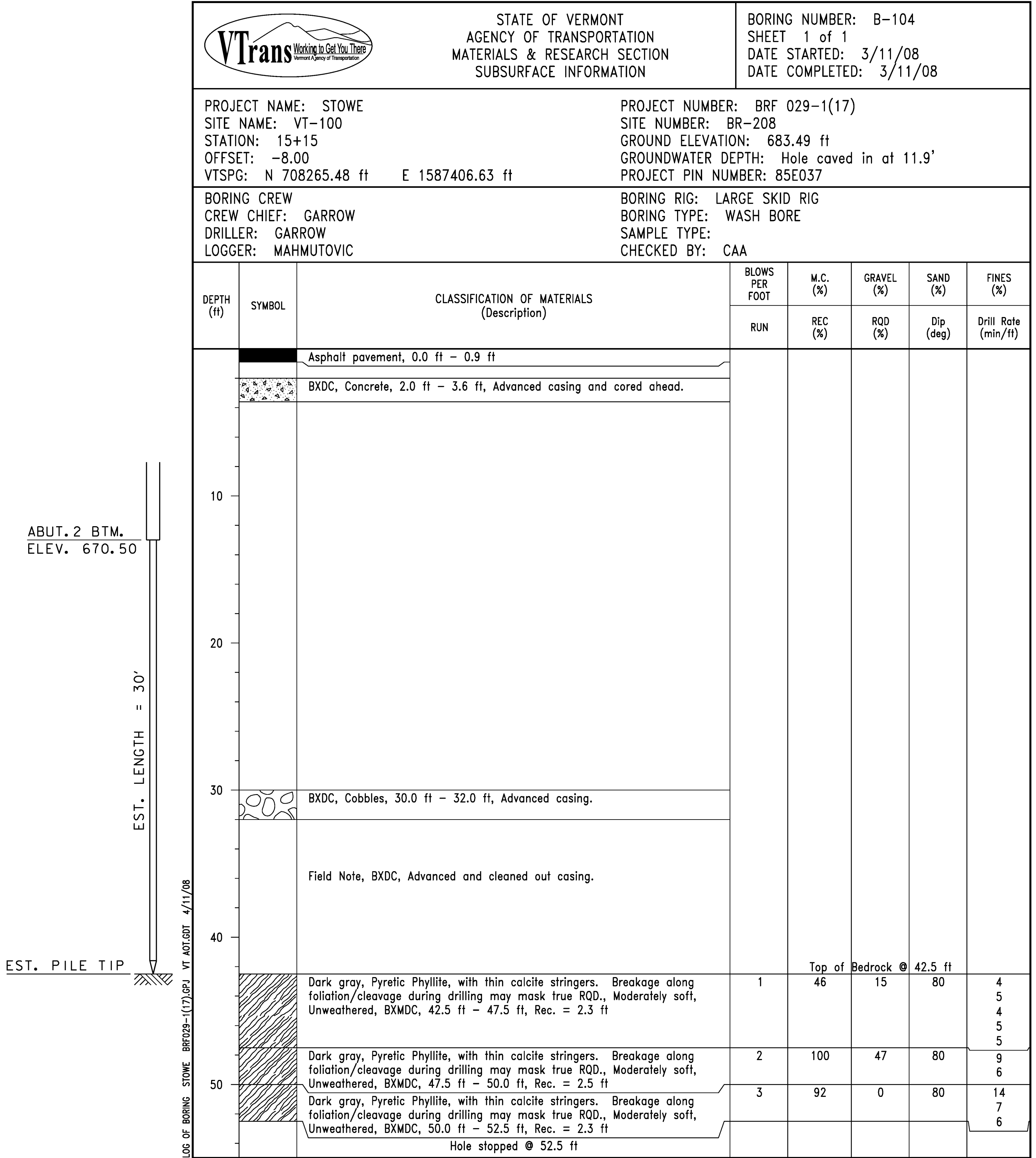
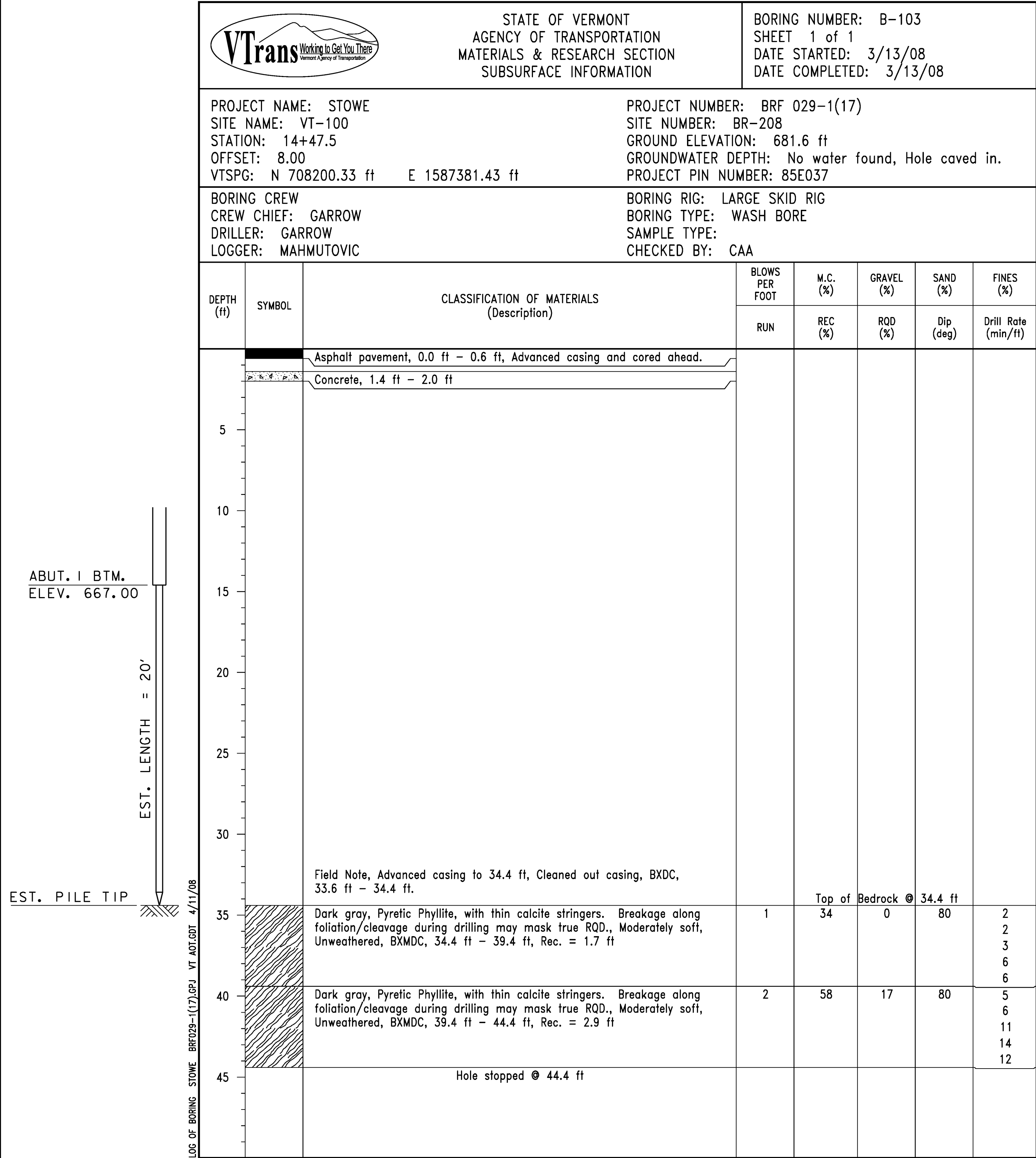
LOG OF BORING STOWE BRF029-1(17).GPJ VT AOT.GDT 1/14/08

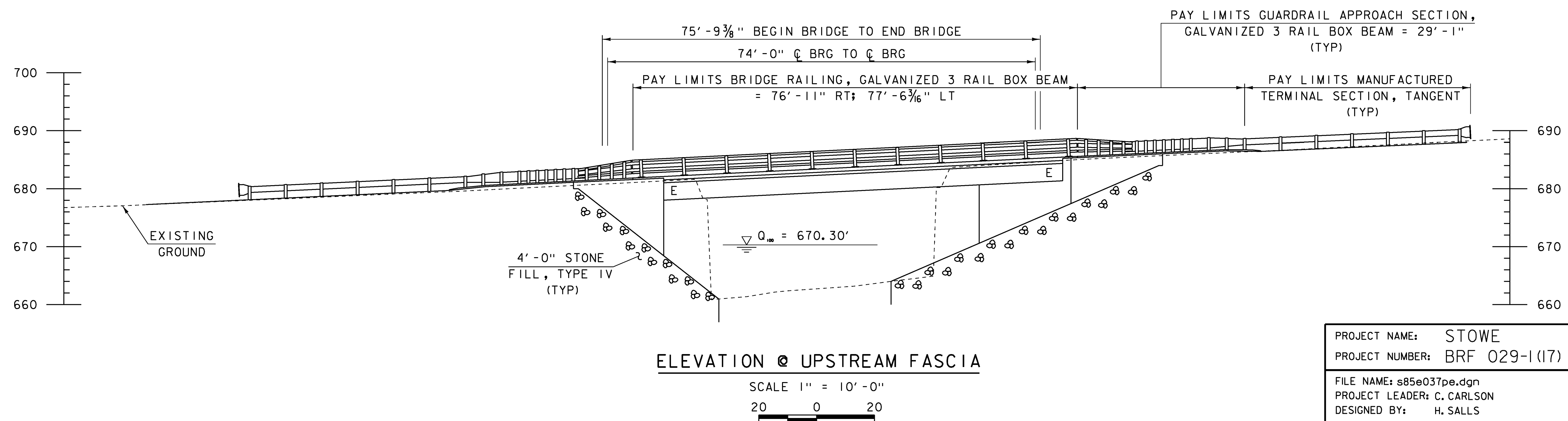
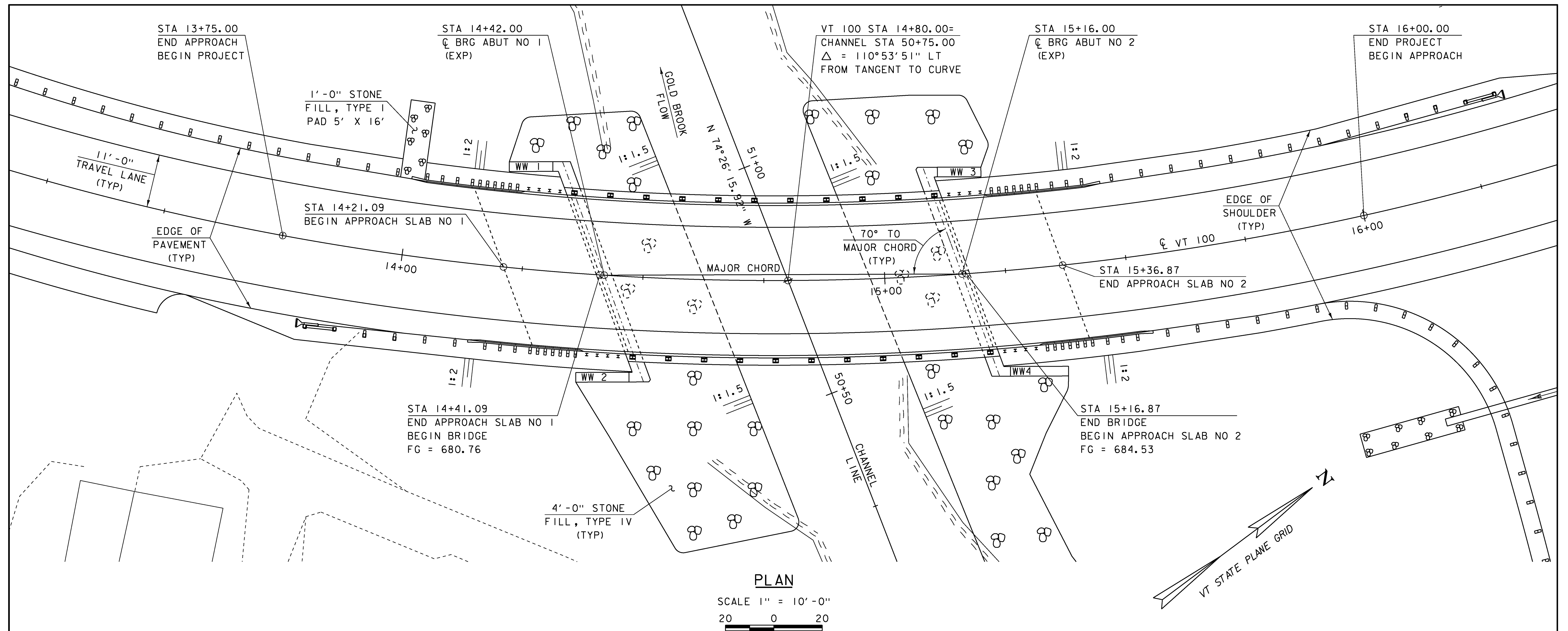
PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1(17)

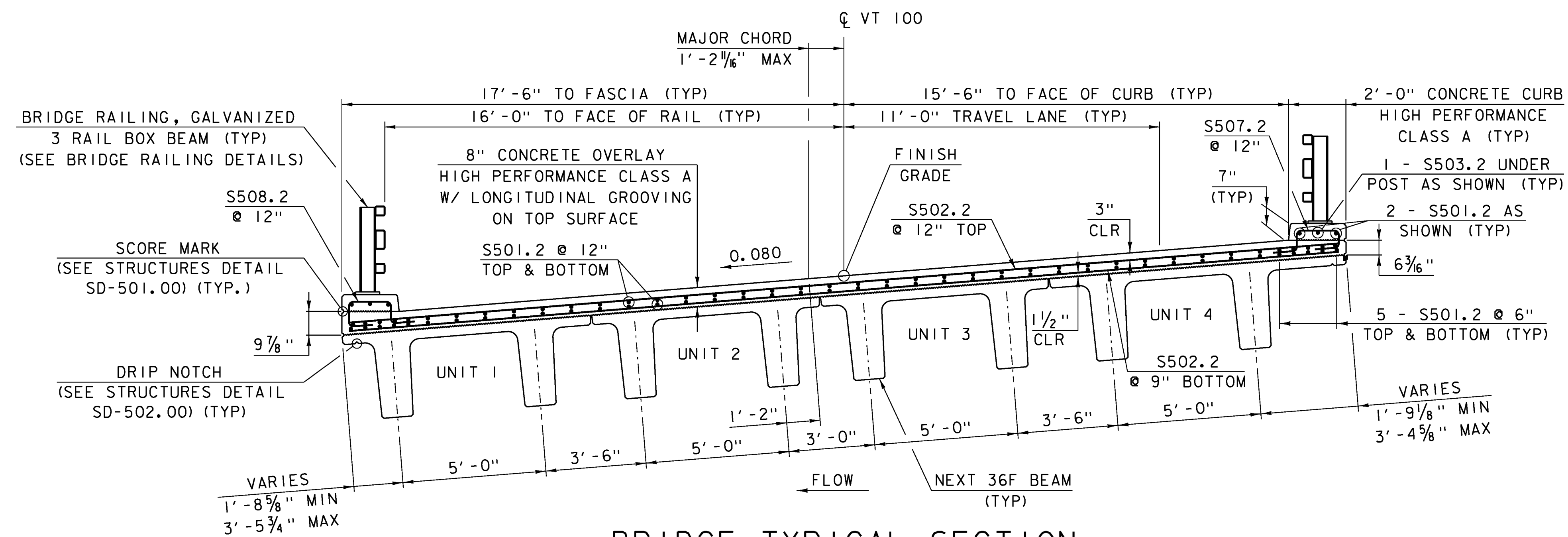
FILE NAME: s85e037bor.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
BORING LOGS I

PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLET
CHECKED BY: G. ROY
SHEET 26 OF 70



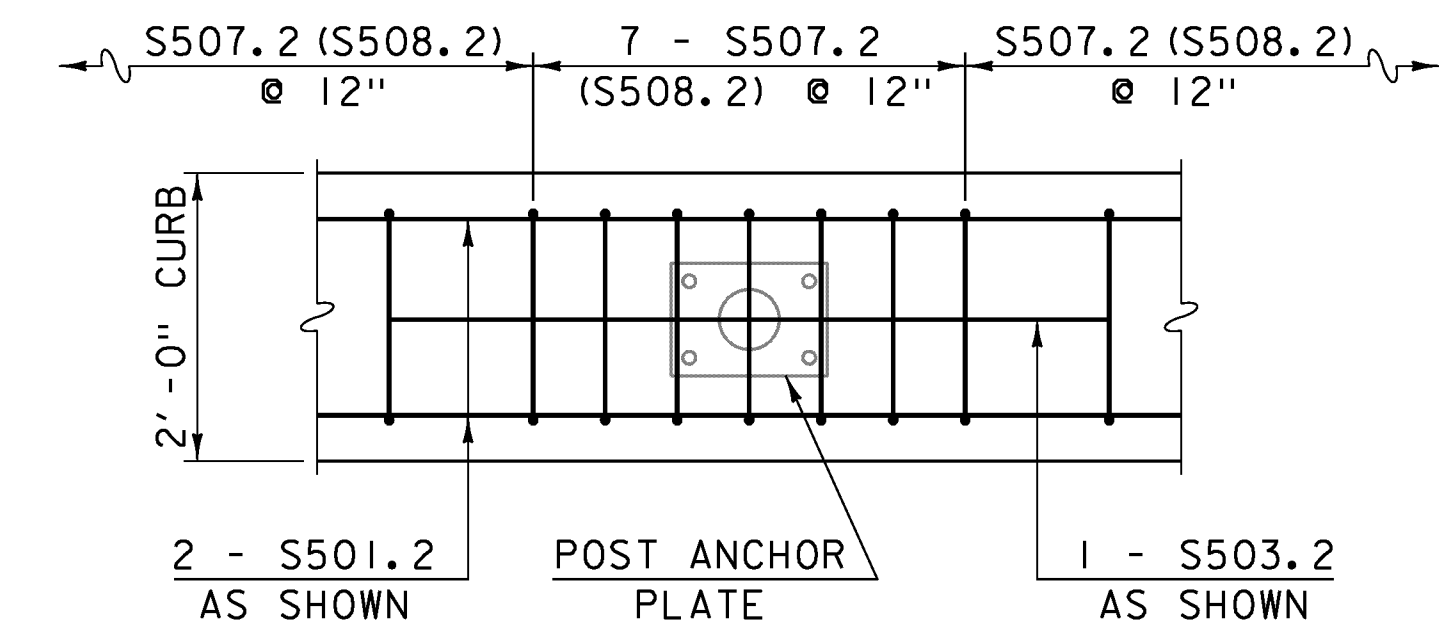






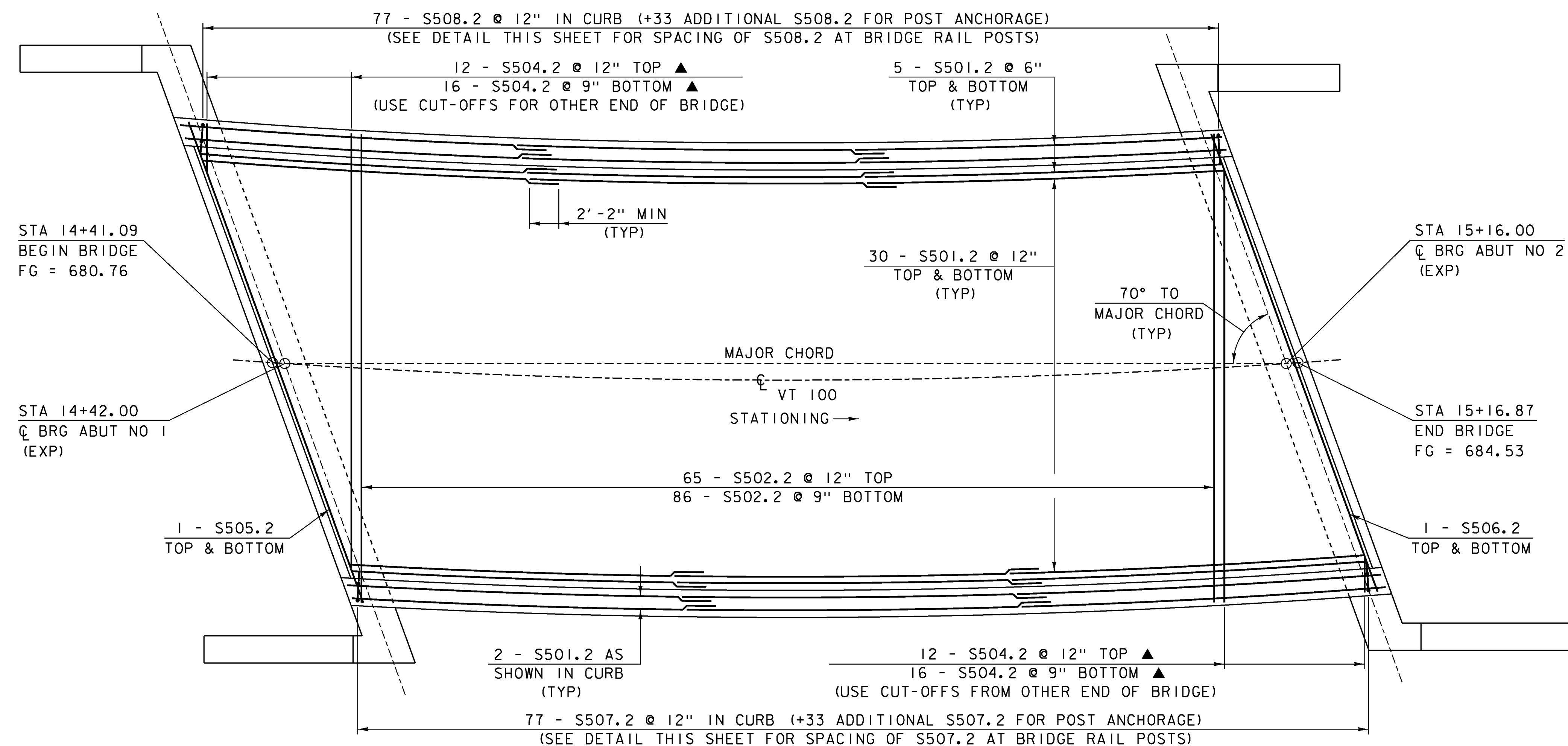
BRIDGE TYPICAL SECTION

SCALE: $\frac{3}{8}$ " = 1'-0"



**CURB REINFORCING PLAN
AT BRIDGE POST**

SCALE: $\frac{3}{4}$ " = 1'-0"



OVERLAY REINFORCING PLAN

SCALE: $\frac{3}{8}$ " = 1'-0"

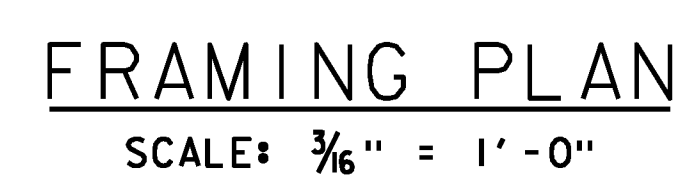
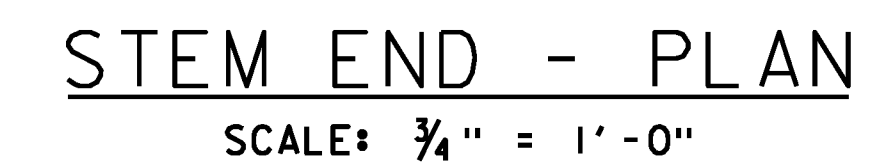
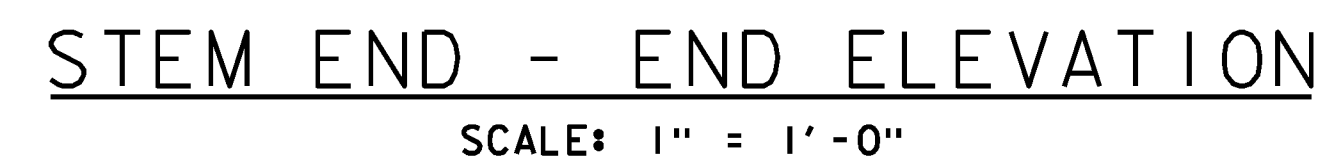
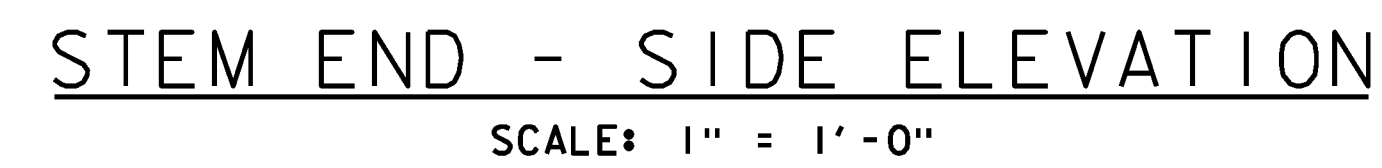
NOTES:

- ▲ = CUT TO FIT IN FIELD
- 3" CLR. UNLESS OTHERWISE NOTED
- 2'-2" BAR LAP UNLESS OTHERWISE NOTED

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1(17)

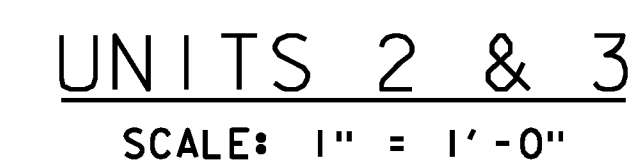
FILE NAME: s85e037sup.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. I. SALLS
BRIDGE DECK DETAILS

PLOT DATE: 17-JUN-2013
DRAWN BY: G. ROY
CHECKED BY: H. I. SALLS
SHEET 30 OF 70



1. FRAMING PLAN IS SHOWN WITH 1/2" JOINT BETWEEN UNITS.
2. UNITS IN THE FRAMING PLAN ARE SHOWN IN A FLAT AND HORIZONTAL PLANE IN ORDER TO DETERMINE TRUE DIMENSIONS. THEREFORE SOME DIMENSIONS MIGHT NOT AGREE WITH SIMILAR DIMENSIONS SHOWN ON OTHER SHEETS.

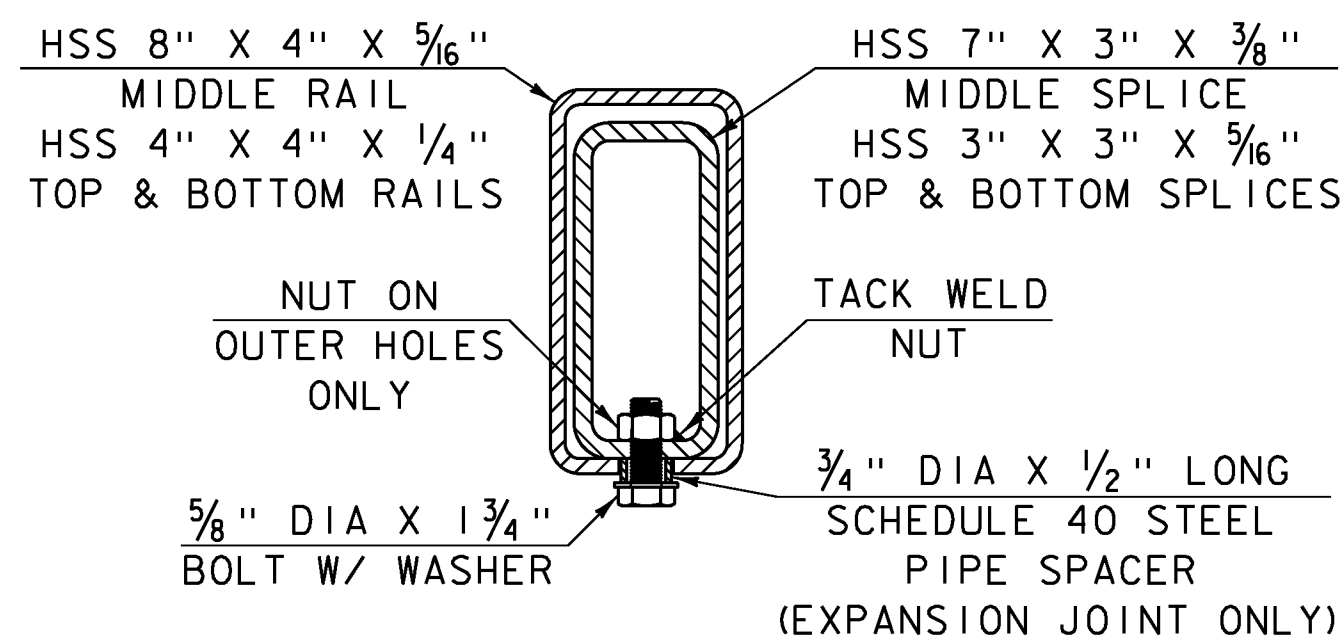
PROJECT NAME: STOWE	
PROJECT NUMBER: BRF 029-1 (17)	
FILE NAME: s85e037sup.dgn	PLOT DATE: 17-JUN-2013
PROJECT LEADER: C. CARLSON	DRAWN BY: C. ROY
DESIGNED BY: H. I. SALLS	CHECKED BY: H. I. SALLS
FRAMING PLAN AND STEM END DETAILS	SHEET 31 OF 70



●	NOT DEBONDED
△	DEBONDED 0' - 6"
◇	DEBONDED 4' - 0"
○	DEBONDED 8' - 0"
□	DEBONDED 10' - 0"

1. TOP SURFACE OF TOP FLANGE SHALL HAVE A RAKE FINISH.
SEE STRUCTURES DETAIL SHEET SD-501.00.
2. STRANDS IN THE TOP AND BOTTOM ROWS THAT ARE NOT
DEBONDED SHALL EXTEND 1'-6" FROM THE FINISHED
END OF EACH BEAM STEM.

PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 029-1(17)
FILE NAME: s85e037sup.dgn	PLOT DATE: 17-JUN-2013
PROJECT LEADER: C. CARLSON	DRAWN BY: G. ROY
DESIGNED BY: H. I. SALLS	CHECKED BY: H. I. SALLS
NEXT BEAM SECTIONS AND STRAND DETAILS	SHEET 32 OF 70



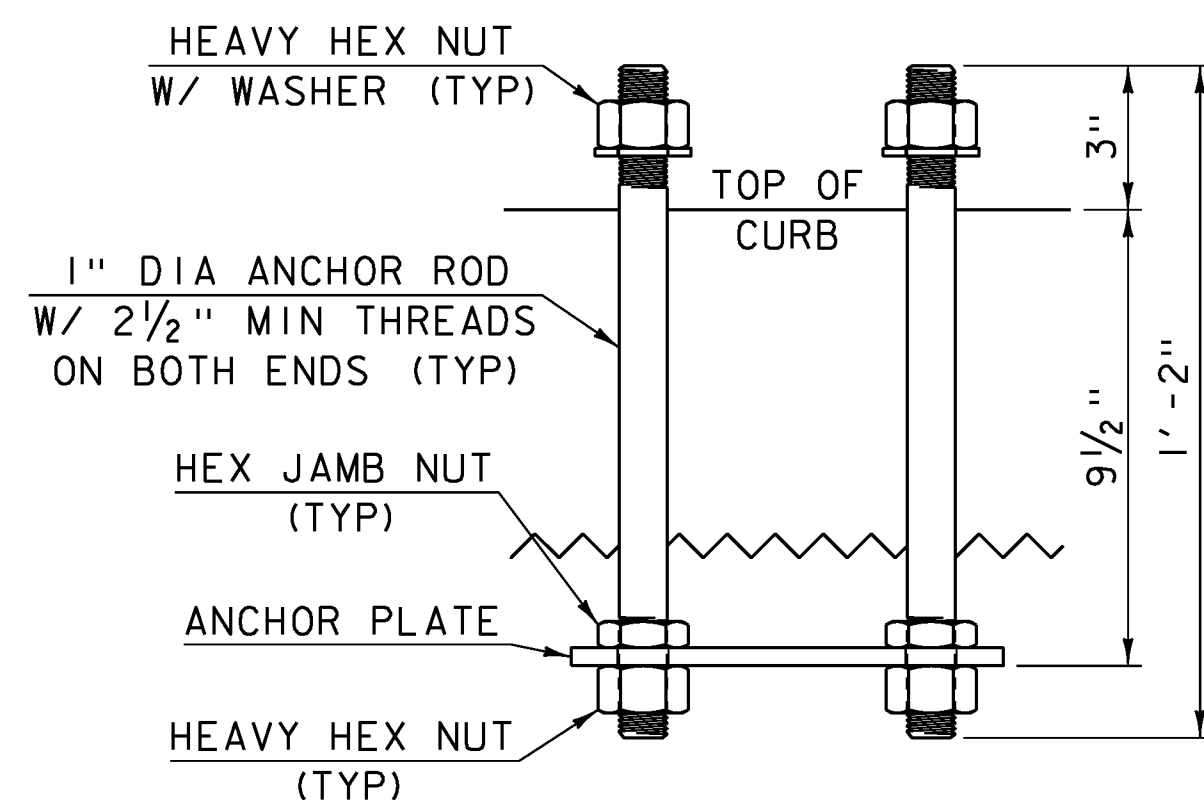
5/8" DIA TAPPED HOLES IN SPLICE TUBES.

1/8" X 3 1/2" SLOTTED HOLES IN RAIL TUBES AT EXPANSION JOINTS.

3/4" DIA HOLES IN RAIL TUBES AT FIXED JOINTS.

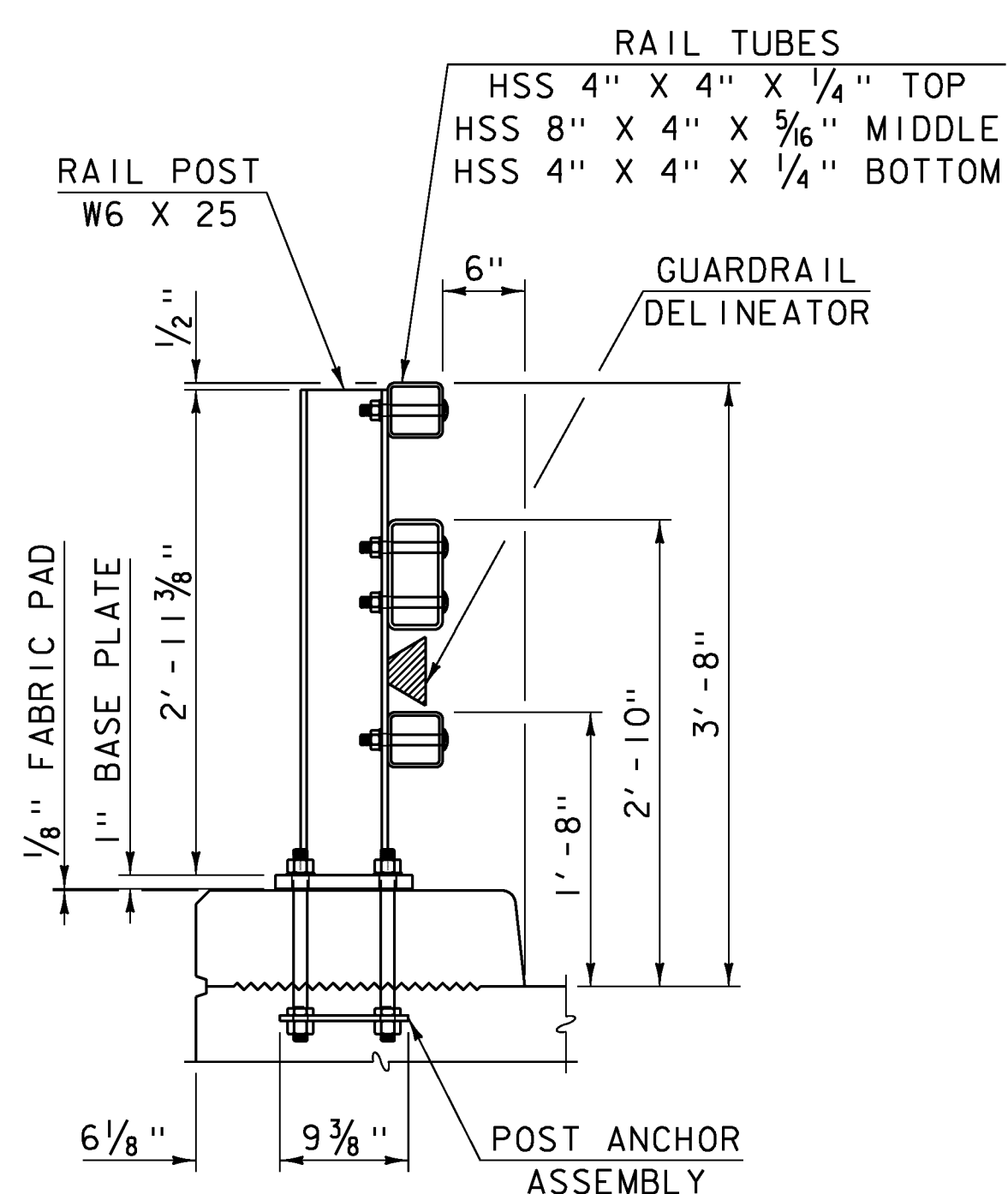
RAIL SPLICE SECTION

SCALE: 3" = 1'-0"



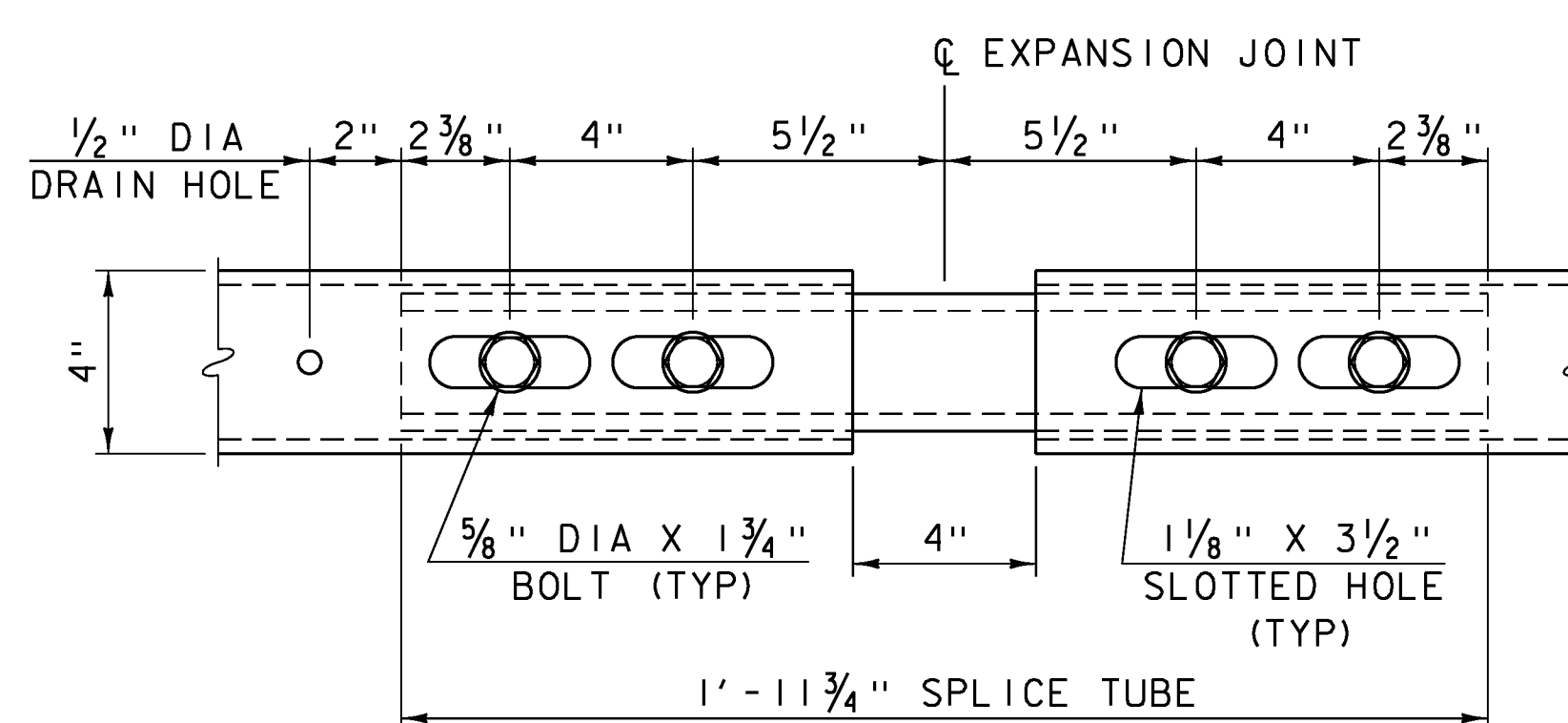
POST ANCHOR ASSEMBLY

SCALE: 3" = 1'-0"



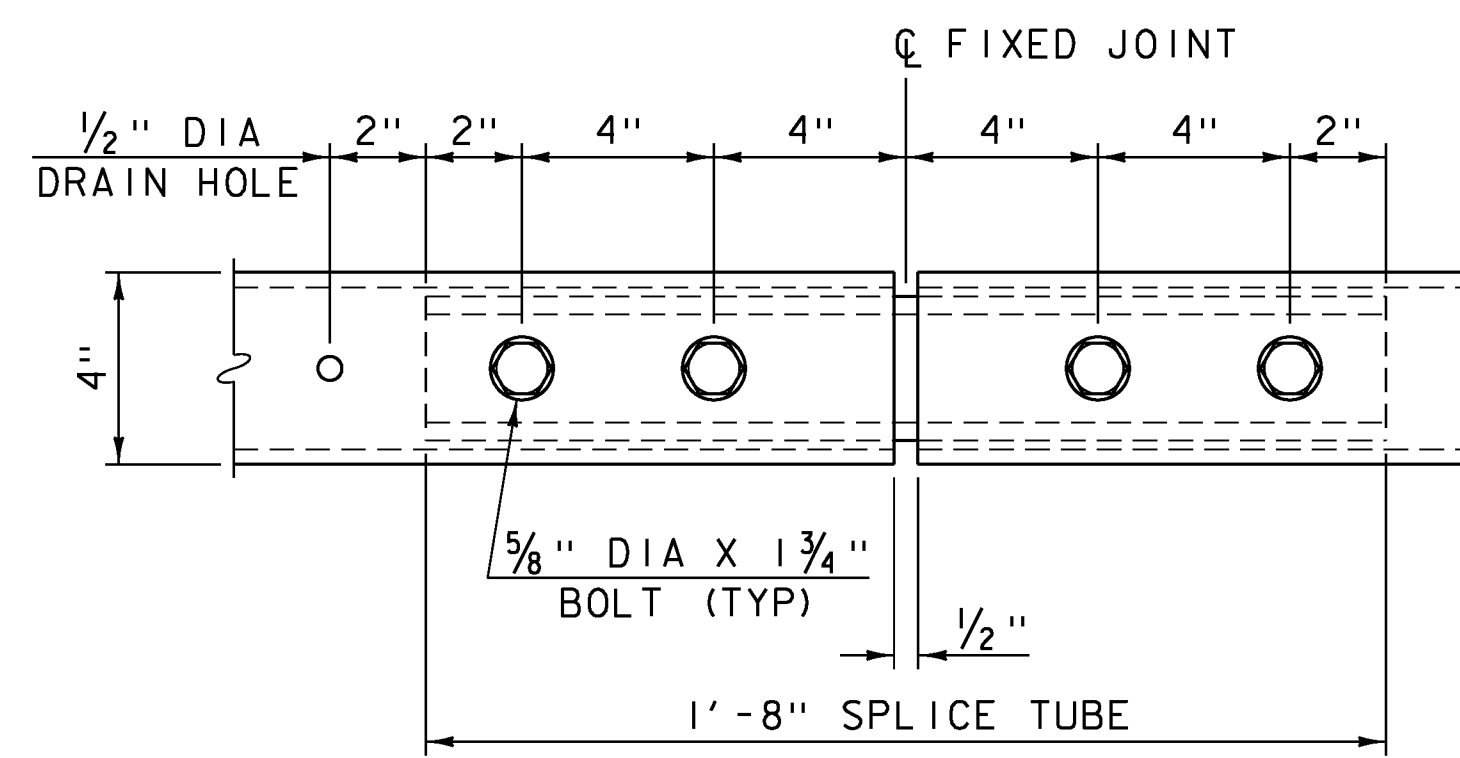
POST SECTION

SCALE: 1" = 1'-0"



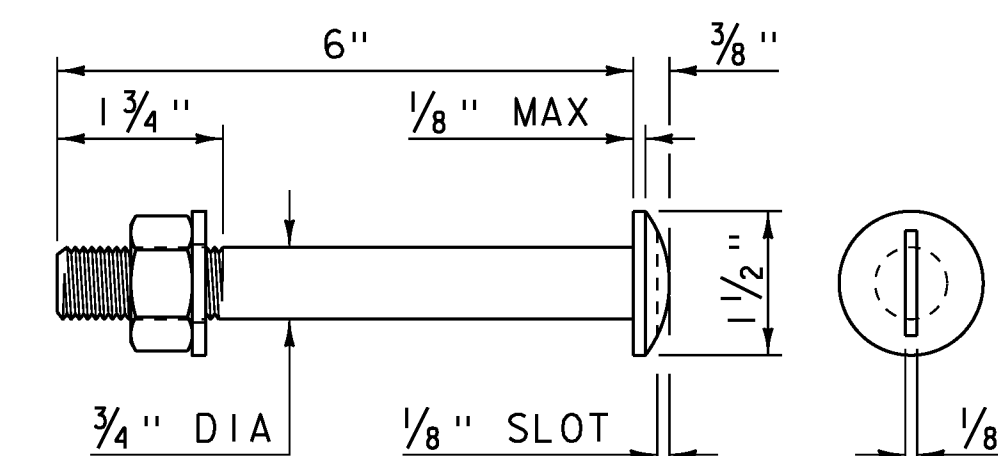
EXPANSION JOINT DETAIL

SCALE: 3" = 1'-0"
(BOTTOM VIEW)



FIXED JOINT DETAIL

SCALE: 3" = 1'-0"
(BOTTOM VIEW)

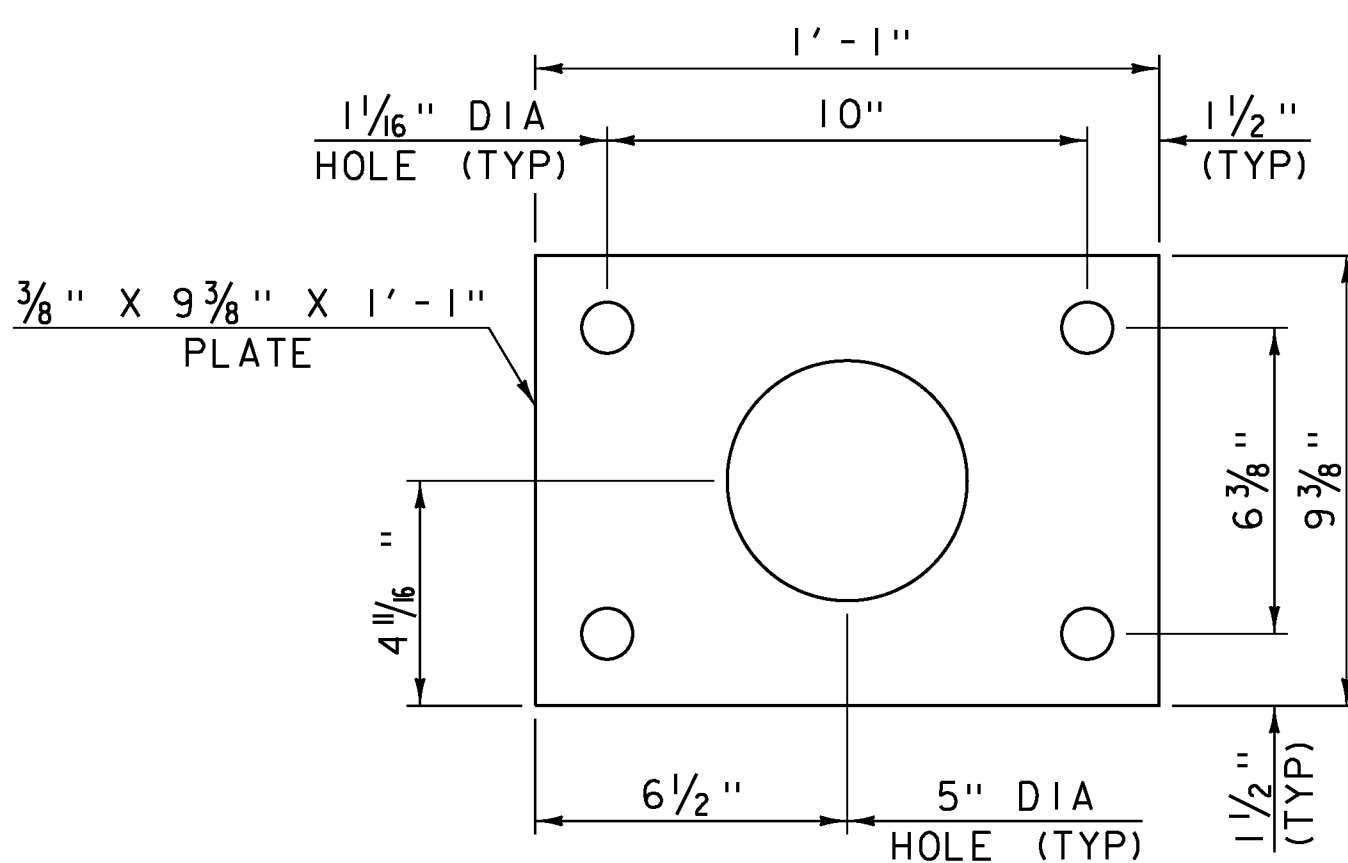


ROUND HEAD BOLT DETAIL

SCALE: 6" = 1'-0"

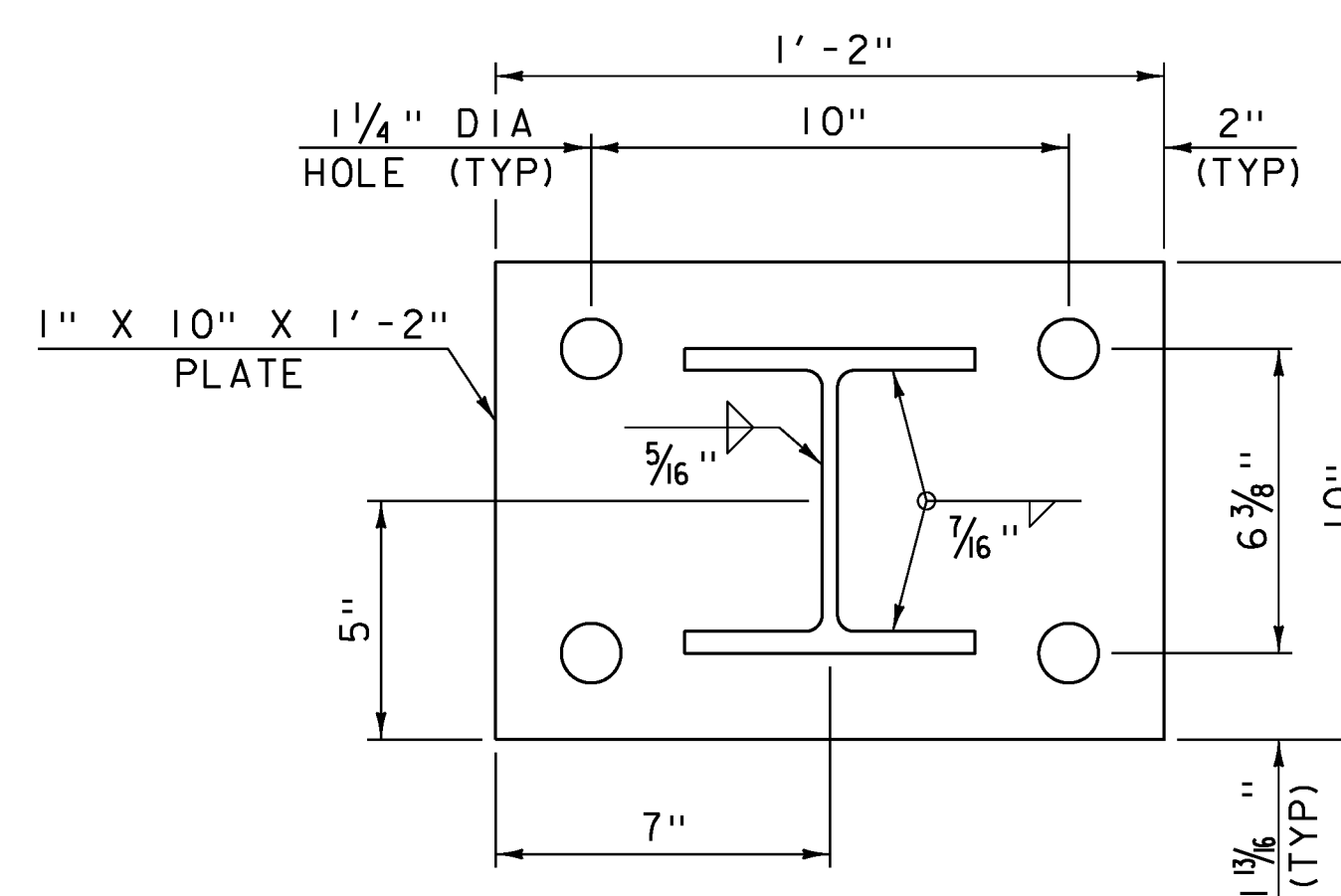
NOTES

- ALL WORK AND MATERIALS SHALL CONFORM TO SECTION 525.
- PRIOR TO GALVANIZING THE ASSEMBLED POST, GRIND ALL EDGES TO A MINIMUM RADIUS OF 1/16".
- ALL POSTS SHALL BE SET NORMAL TO GRADE.
- SECTIONS OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO BRIDGE RAIL POSTS AND PREFERABLY TO AT LEAST FOUR POSTS.
- RAIL TUBE EXPANSION JOINTS SHALL BE PROVIDED IN ANY RAIL BAY SPANNING THE END OF AN INTEGRAL ABUTMENT BRIDGE AND AT ALL SUPERSTRUCTURE EXPANSION JOINTS. EXPANSION JOINT WIDTH SHALL BE 4" AT 45°F AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
- HOLES IN RAILS FOR RAIL TUBE ATTACHMENT MAY BE FIELD DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO INSTALLATION.
- RAIL POST ANCHORING NUTS SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ONE-EIGHTH TURN.
- RAIL TUBES SHALL BE ATTACHED USING 3/4" FULL DIAMETER BODY ASTM A 449 (TYPE I) ROUND HEAD BOLTS WITH WASHER AND PREVAILING TORQUE TYPE LOCK NUT INSERTED THROUGH THE FACE OF THE TUBE. HOLES IN POSTS SHALL BE 1/16" LARGER THAN THE BOLT SIZE.
- ANY BENDING OF RAIL SHALL BE DONE AT A FABRICATION PLANT ACCORDING TO A PROCEDURE PROVIDED BY THE FABRICATOR.
- THE MINIMUM DISTANCE FROM THE POST TO AN EXPANSION JOINT SHALL BE DETERMINED BY THE MINIMUM EDGE DISTANCE OF 5" FROM ANY ANCHOR STUD TO THE END OF THE SLAB, OR TO THE EXPANSION JOINT RECESS POUR, IF ONE IS USED.
- SEE STANDARD DRAWING G-1 FOR DETAILS OF DELINEATORS. A DELINEATOR SHALL BE INSTALLED AT 30 FOOT SPACING OR THE NEAREST POST. WHITE IS TO BE INSTALLED ON THE DRIVER'S RIGHT. FOR ONE WAY BRIDGES, YELLOW IS TO BE INSTALLED ON THE DRIVER'S LEFT. PAYMENT SHALL BE INCIDENTAL TO OTHER ITEMS.
- THIS RAILING MEETS THE REQUIREMENTS FOR A TL-4 SERVICE LEVEL.



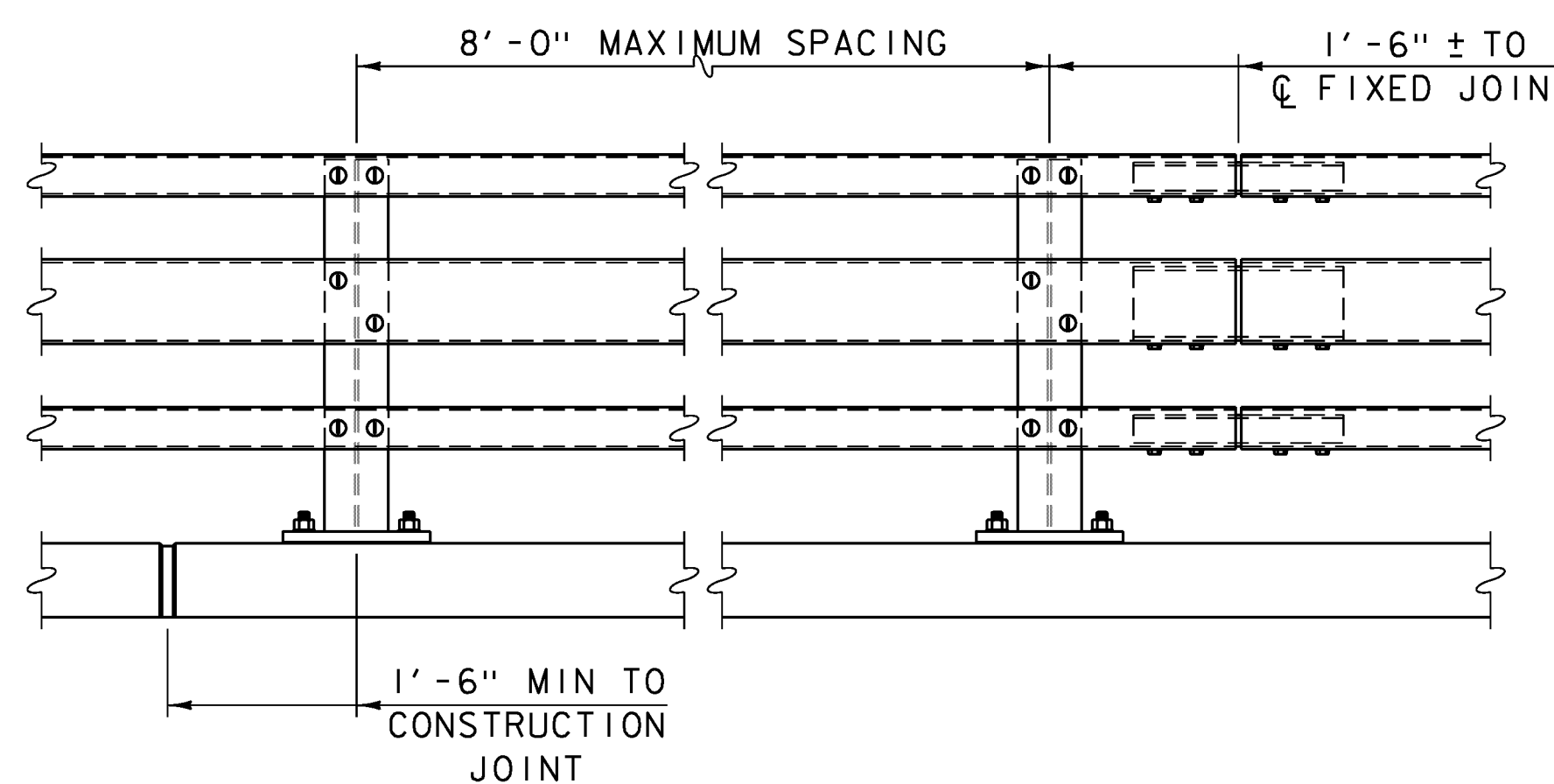
ANCHOR PLATE

SCALE: 3" = 1'-0"



POST BASE PLATE

SCALE: 3" = 1'-0"



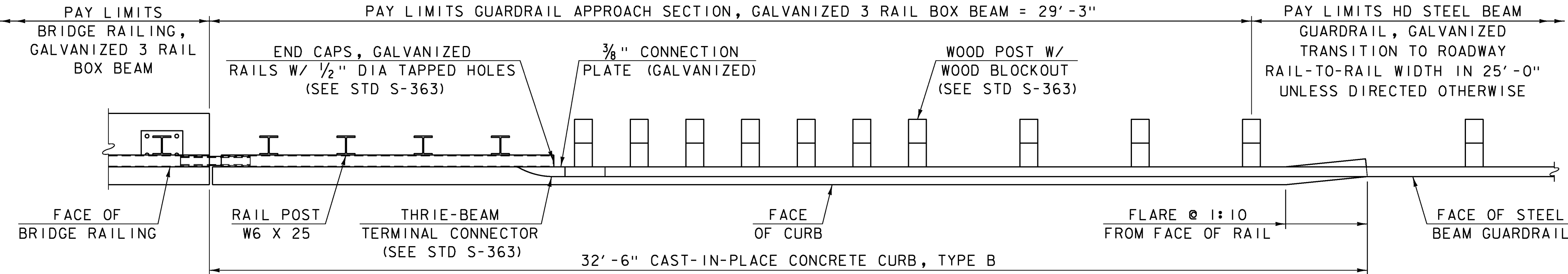
BRIDGE RAILING ELEVATION

SCALE: 1/2" = 1'-0"

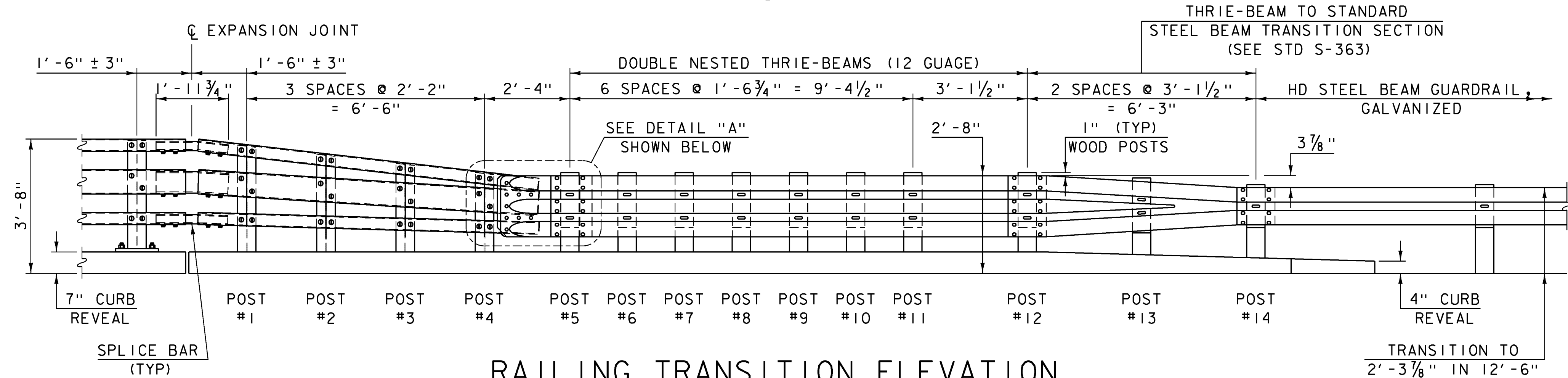
PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1(17)

FILE NAME: s85e037rail.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. I. SALLS
BRIDGE RAILING DETAILS

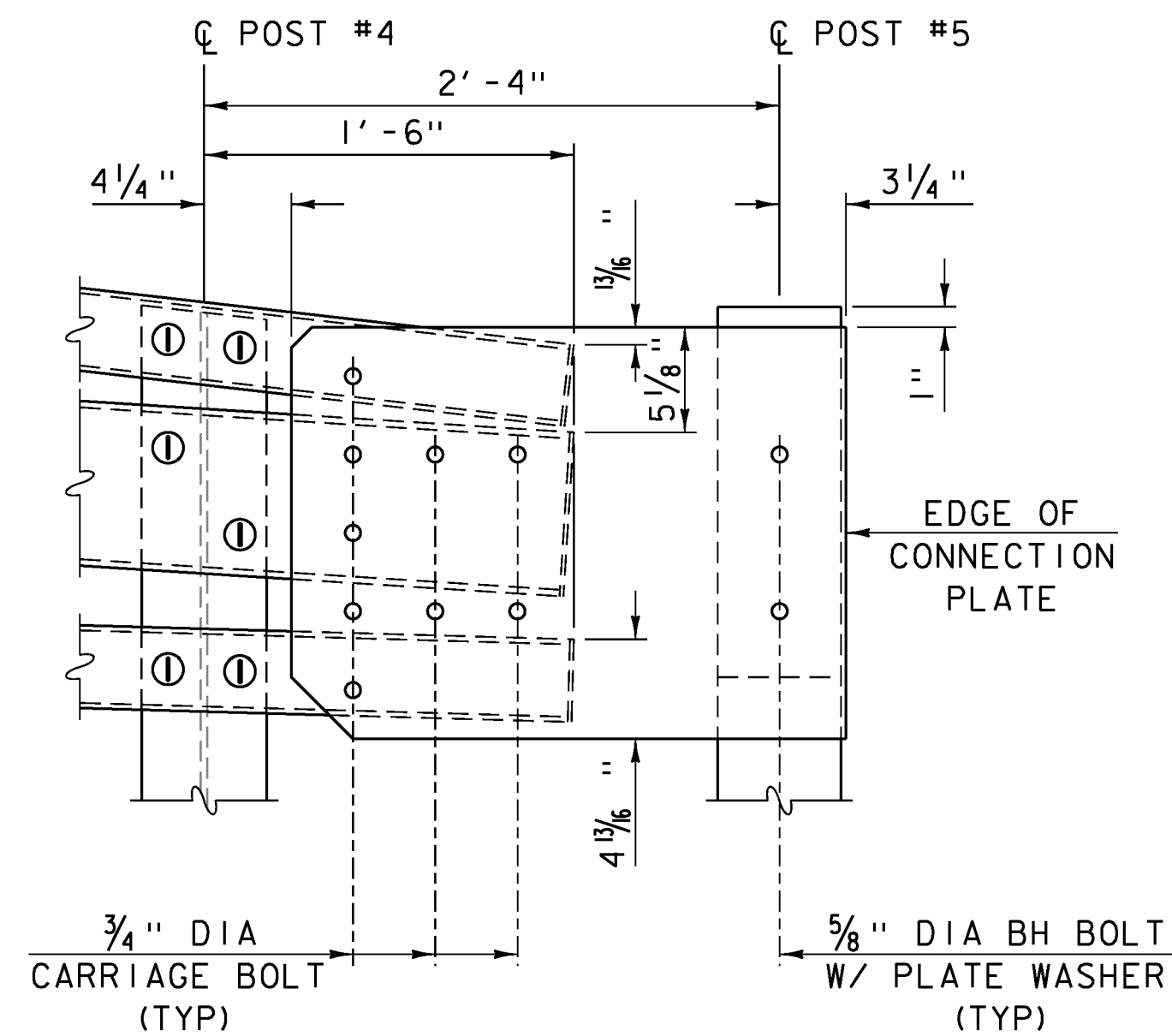
PLOT DATE: 17-JUN-2013
DRAWN BY: G. ROY
CHECKED BY: H. I. SALLS
SHEET 33 OF 70



RAILING TRANSITION PLAN
SCALE: 1/2" = 1'-0"

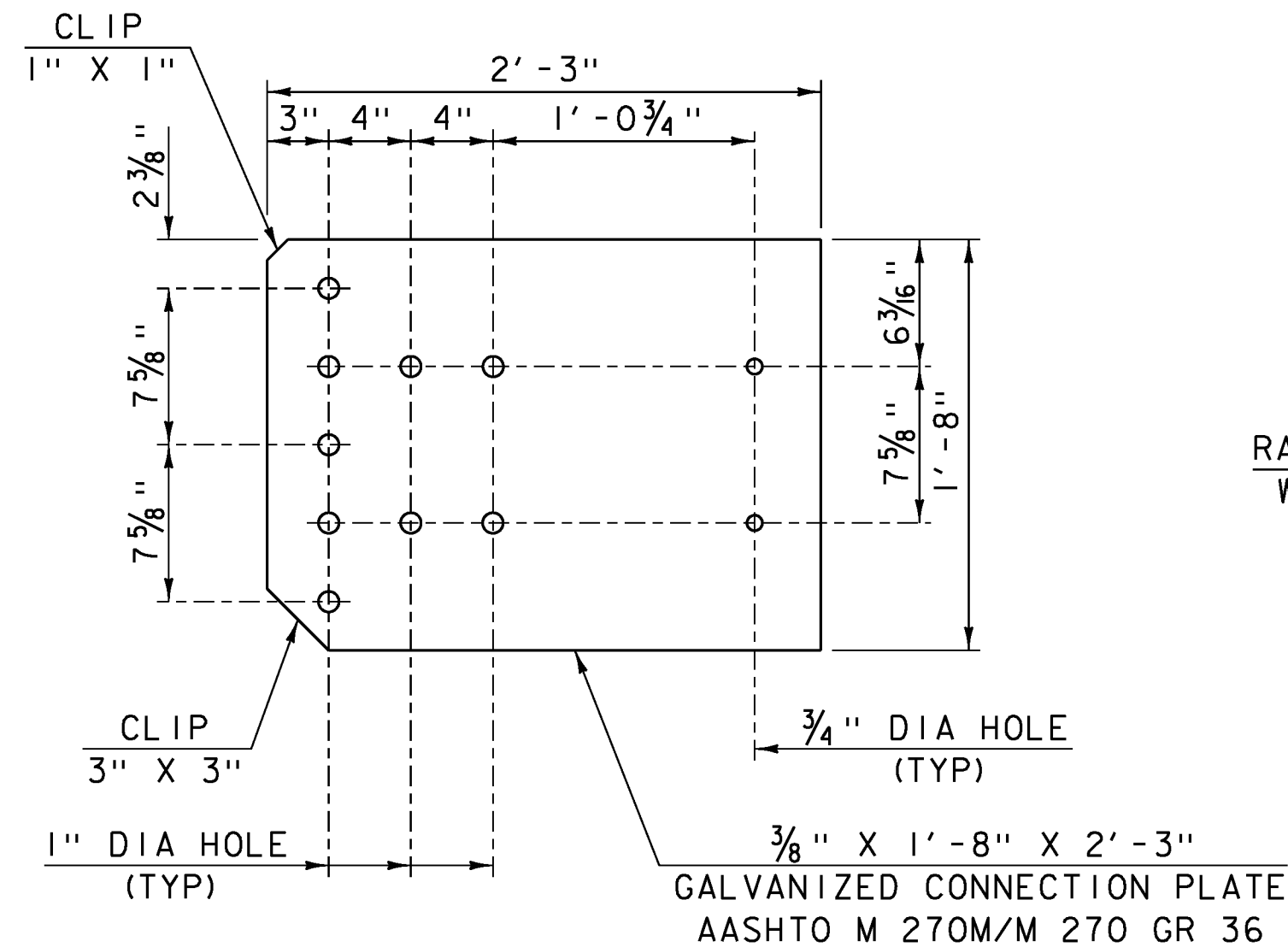


RAILING TRANSITION ELEVATION
SCALE: 1/2" = 1'-0"

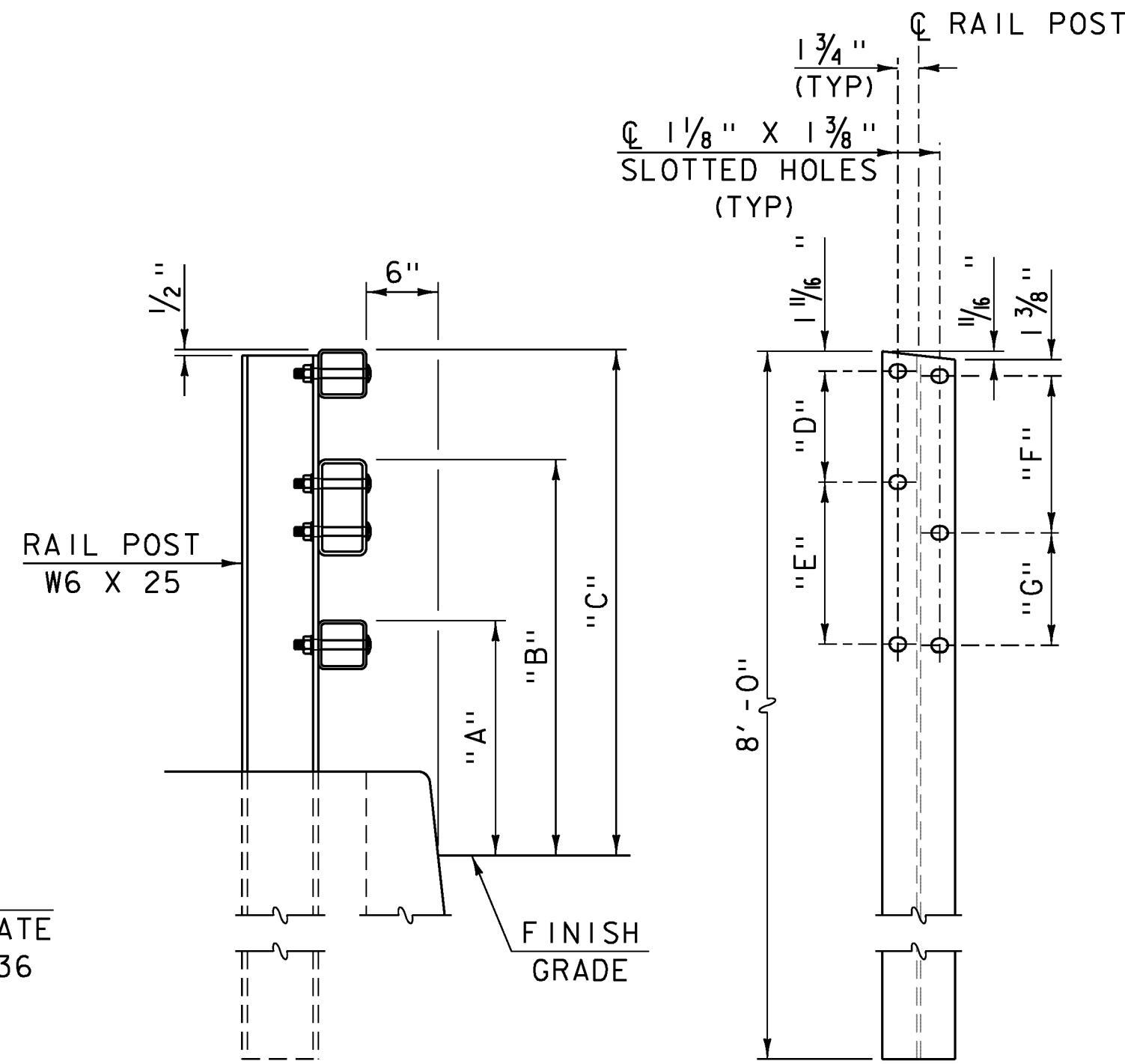


DETAIL "A"
SCALE: 1/2" = 1'-0"

NOTE:
THRIE-BEAM TERMINAL CONNECTOR
NOT SHOWN FOR CLARITY.



CONNECTION PLATE
SCALE: 1/2" = 1'-0"



SIDE VIEW
FRONT VIEW
RAIL POST DETAIL
SCALE: 1" = 1'-0"

NOTES

1. PAYMENT FOR GUARDRAIL APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM SHALL INCLUDE THE TERMINAL CONNECTOR, CONNECTION PLATE, RAIL, POSTS, BLOCKS AND ATTACHMENT HARDWARE.
2. ALL APPROACH RAIL SPLICES SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC FLOW.
3. TUBE AND STEEL POST MATERIALS, DIMENSION SIZES AND NOTES SHALL BE THE SAME AS THOSE OF THE BRIDGE RAIL, UNLESS OTHERWISE NOTED.
4. APPROACH RAIL BOLTS SHALL BE ASTM A307 GRADE A AND NUTS SHALL BE AASHTO M291 (ASTM A563 GRADE A OR BETTER) (GALVANIZED). WASHERS SHALL BE ASTM F844.
5. WELD SPLICE BARS TO FIT BEND. USE COMPLETE PENETRATION WELD (B-U2).

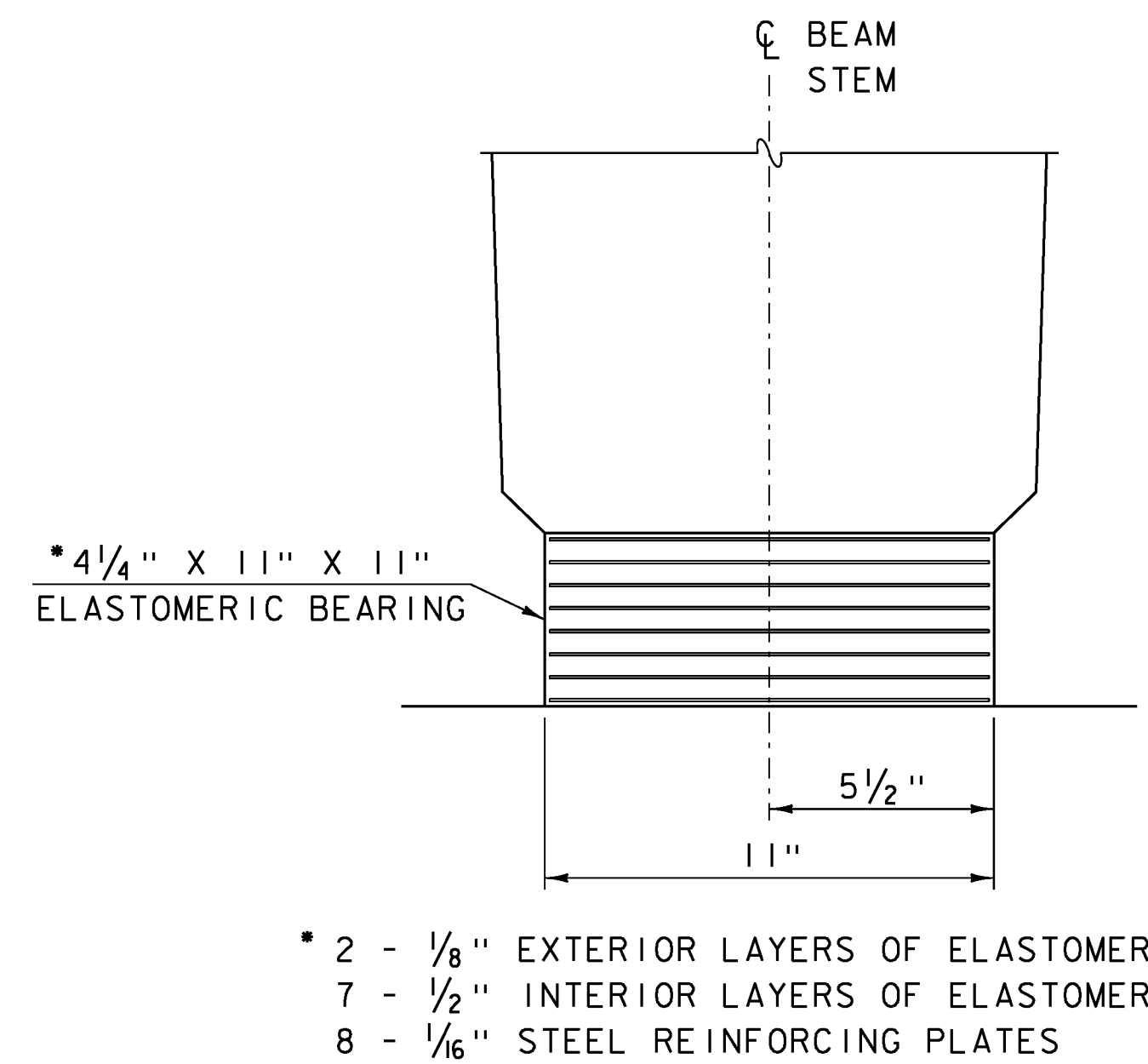
APPROACH RAIL DIMENSIONS

POST NO.	DIMENSION						
	"A"	"B"	"C"	"D"	"E"	"F"	"G"
1	1' - 7 9/16"	2' - 9"	3' - 5 11/16"	9 1/4"	1' - 1 1/2"	1' - 1 1/8"	9 3/8"
2	1' - 6 13/16"	2' - 7 3/8"	3' - 2 11/16"	7 15/16"	1' - 0 5/8"	11 3/4"	8 7/16"
3	1' - 6 1/16"	2' - 5 11/16"	2' - 11 11/16"	6 5/8"	11 1/16"	10 7/16"	7 3/16"
4	1' - 5 5/16"	2' - 4 1/16"	2' - 8 3/4"	5 1/4"	10 3/4"	9 1/8"	6 5/8"

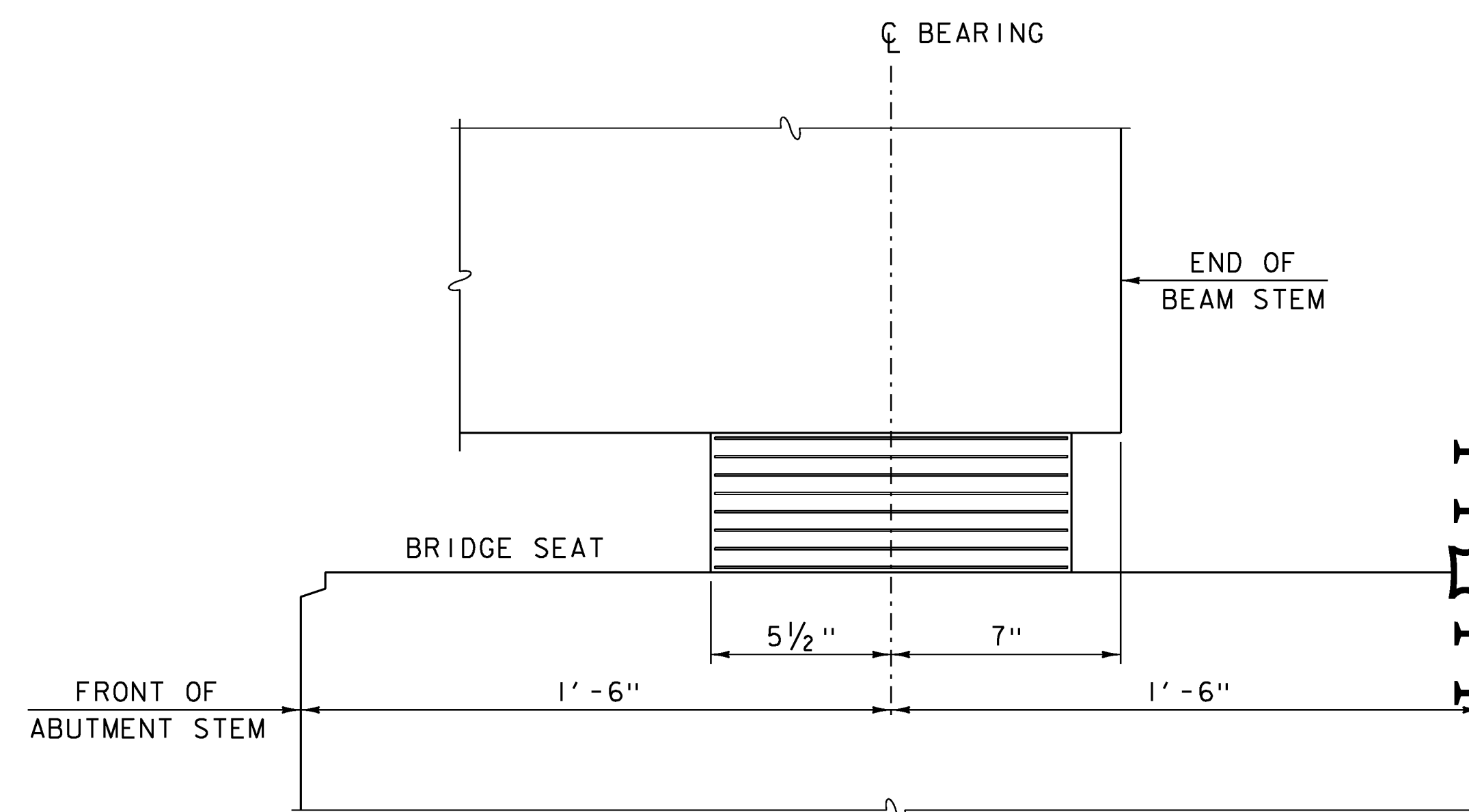
PROJECT NAME: STOWE
PROJECT NUMBER: BRf 029-1(17)

FILE NAME: s85e037rail.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. I. SALLS
APPROACH RAILING DETAILS

PLOT DATE: 17-JUN-2013
DRAWN BY: G. ROY
CHECKED BY: H. I. SALLS
SHEET 34 OF 70



FRONT VIEW



SIDE VIEW

ELASTOMERIC BEARING DETAILS

SCALE: 3" = 1' - 0"

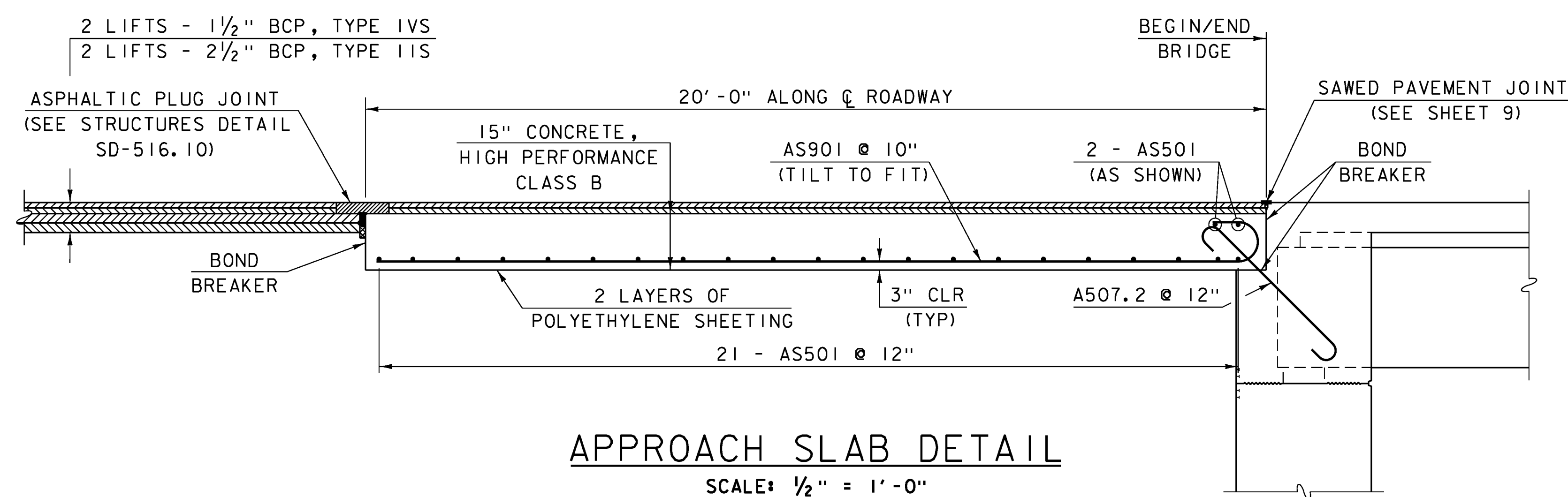
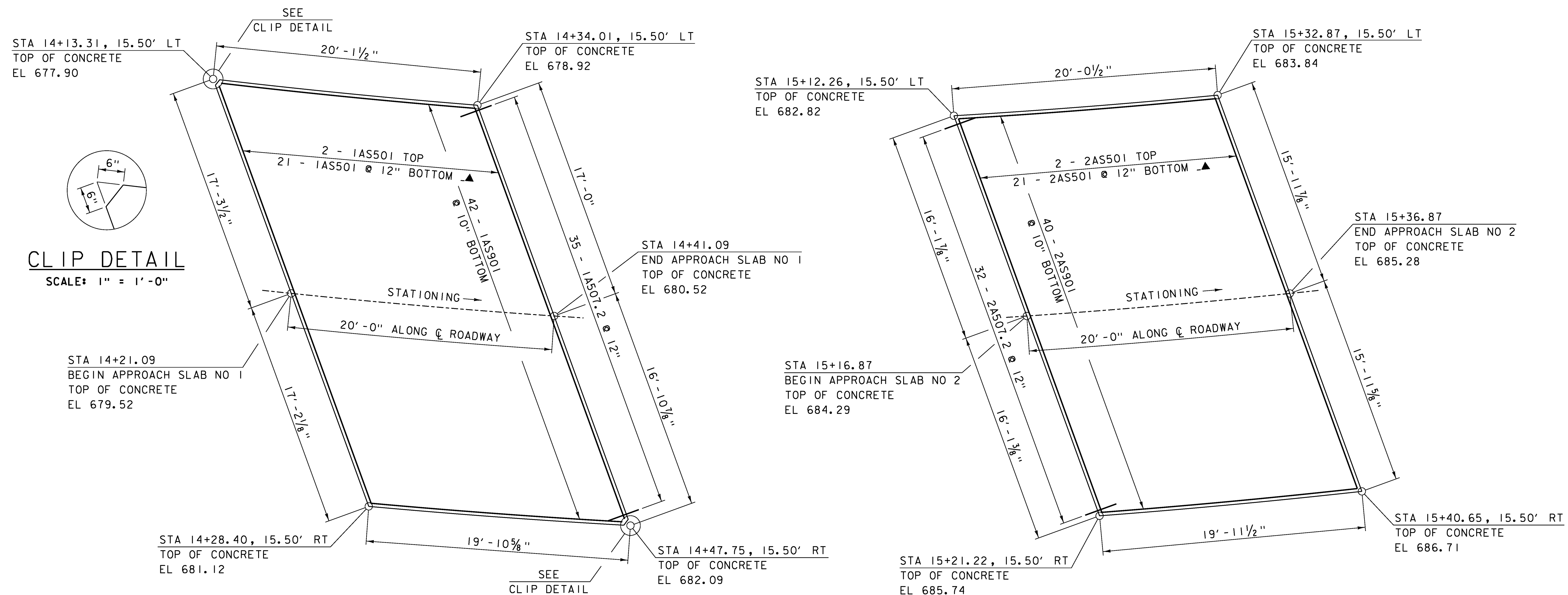
BEARING NOTES

1. BEARINGS SHALL CONFORM TO THE APPLICABLE SUBSECTIONS OF STANDARD SPECIFICATIONS SECTIONS 531 AND 731.
2. ALL REINFORCEMENT BETWEEN LAYERS OF ELASTOMER SHALL BE STEEL AASHTO M270M/M270 GRADE 36. ALL INTERNAL STEEL PLATES SHALL BE SAND BLASTED AND FREE OF COATINGS, RUST AND MILL SCALE. THE PLATES SHALL BE FREE OF SHARP EDGES AND BURRS.
3. STEEL REINFORCED ELASTOMERIC BEARINGS SHALL HAVE A MINIMUM 1/8" EDGE SEAL OF ELASTOMER INTEGRAL WITH BEARING OVER ALL INTERNAL PLATES.
4. THE ELASTOMER WAS DESIGNED WITH A SHEAR MODULUS OF 100 PSI +/- 15%.
5. THE CONTRACTOR MAY NEED TO BRACE THE BEAMS TO PREVENT EXCESSIVE LATERAL DISPLACEMENT OF THE BEARING PRIOR TO THE BRIDGE BECOMING INTEGRAL.
6. THE CONTRACTOR IS ADVISED TO HAVE SHIMS AVAILABLE FOR USE FOR ELEVATION ADJUSTMENTS UPON THE SETTING OF THE SUPERSTRUCTURE UNITS. THE SHIMS SHALL BE FABRICATED ACCORDING TO SECTION 531 AND SHALL BE INCLUDED UNDER ITEM 531.17, "BEARING DEVICE ASSEMBLY, STEEL REINFORCED ELASTOMERIC PAD".

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1(17)

FILE NAME: s85e037brg.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. I. SALLS
ELASTOMERIC BEARING DETAILS

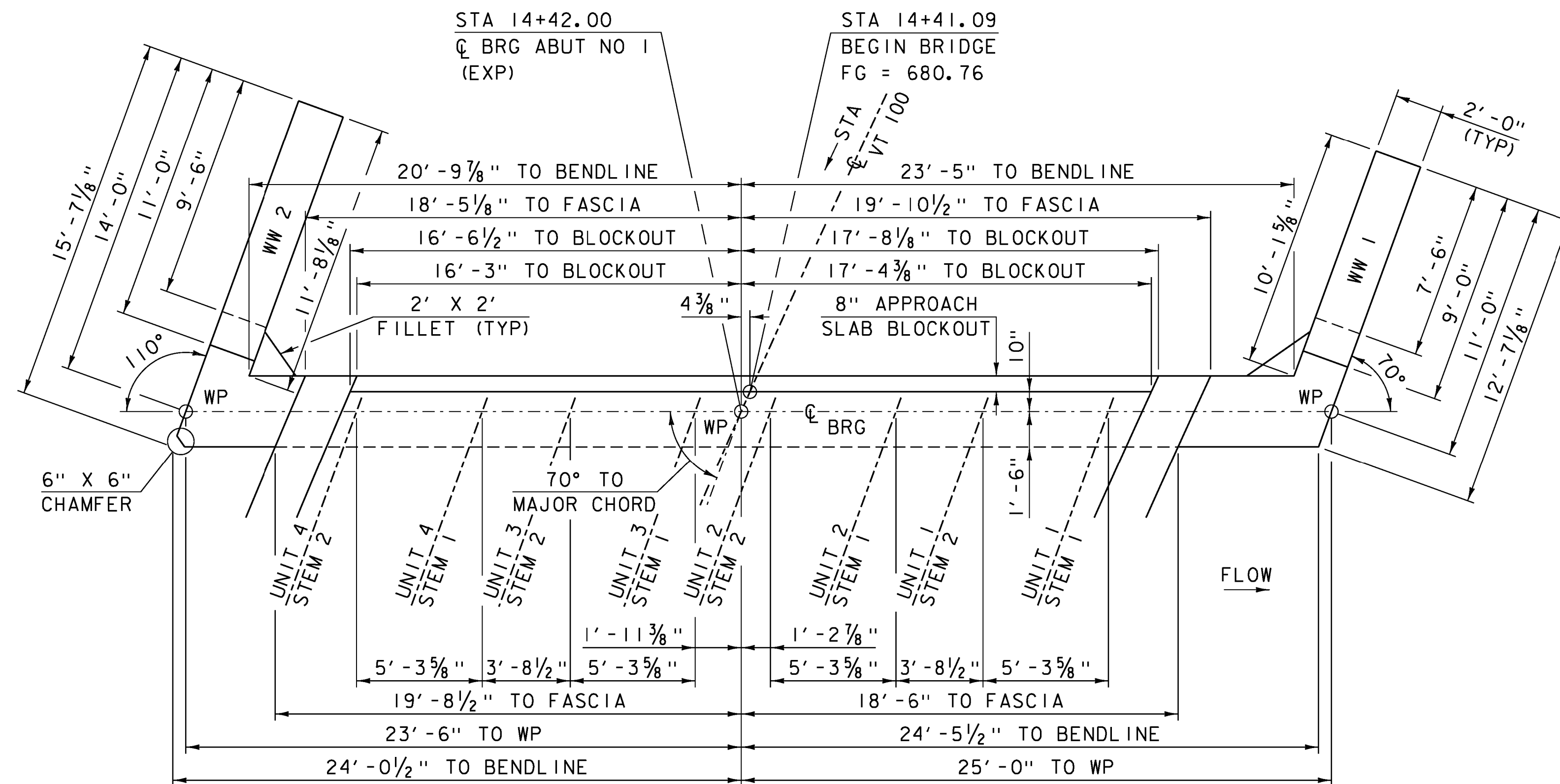
PLOT DATE: 17-JUN-2013
DRAWN BY: H. I. SALLS
CHECKED BY: G. ROY
SHEET 35 OF 70



NOTES:

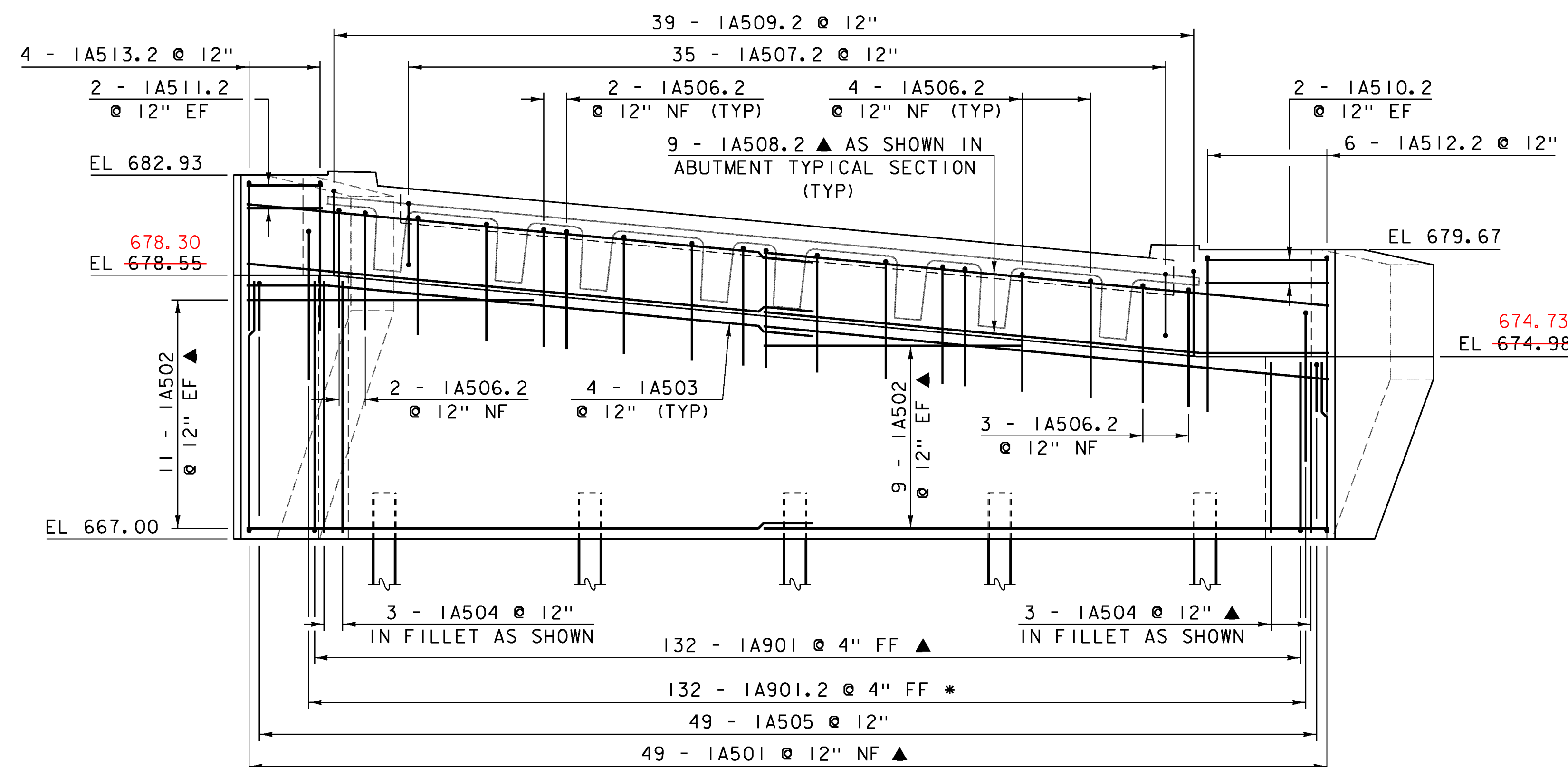
1. COMPACT THE SUBBASE IN THE AREA UNDER THE APPROACH SLAB TO A SMOOTH SURFACE.
2. MATERIAL FOR POLYETHYLENE SHEETING SHALL MEET THE REQUIREMENTS OF SUBSECTION 725.01 (c) OF THE STANDARD SPECIFICATIONS. THE SHEETING THICKNESS SHALL BE 12 MIL. PLACE THE SHEETING ON TOP OF THE FINISHED SUBBASE FOR THE FULL LENGTH AND WIDTH OF THE APPROACH SLAB, EXCEPT IN THE BRACKET AREA AT THE ABUTMENT. LAP SHEETING AT LEAST 2'-0". PAYMENT FOR SHEETING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 501.34 "CONCRETE, HIGH PERFORMANCE CLASS B".
3. PLACE HOOKED ENDS OF BOTTOM STEEL AT ABUTMENT END OF SLAB.

PROJECT NAME: STOWE	PLOT DATE: 17-JUN-2013
PROJECT NUMBER: BRF 029-1(17)	DRAWN BY: G. ROY
FILE NAME: s85e037sup.dgn	CHECKED BY: H. I. SALLS
PROJECT LEADER: C. CARLSON	SHEET 36 OF 70
DESIGNED BY: H. I. SALLS	
APPROACH SLAB DETAILS	



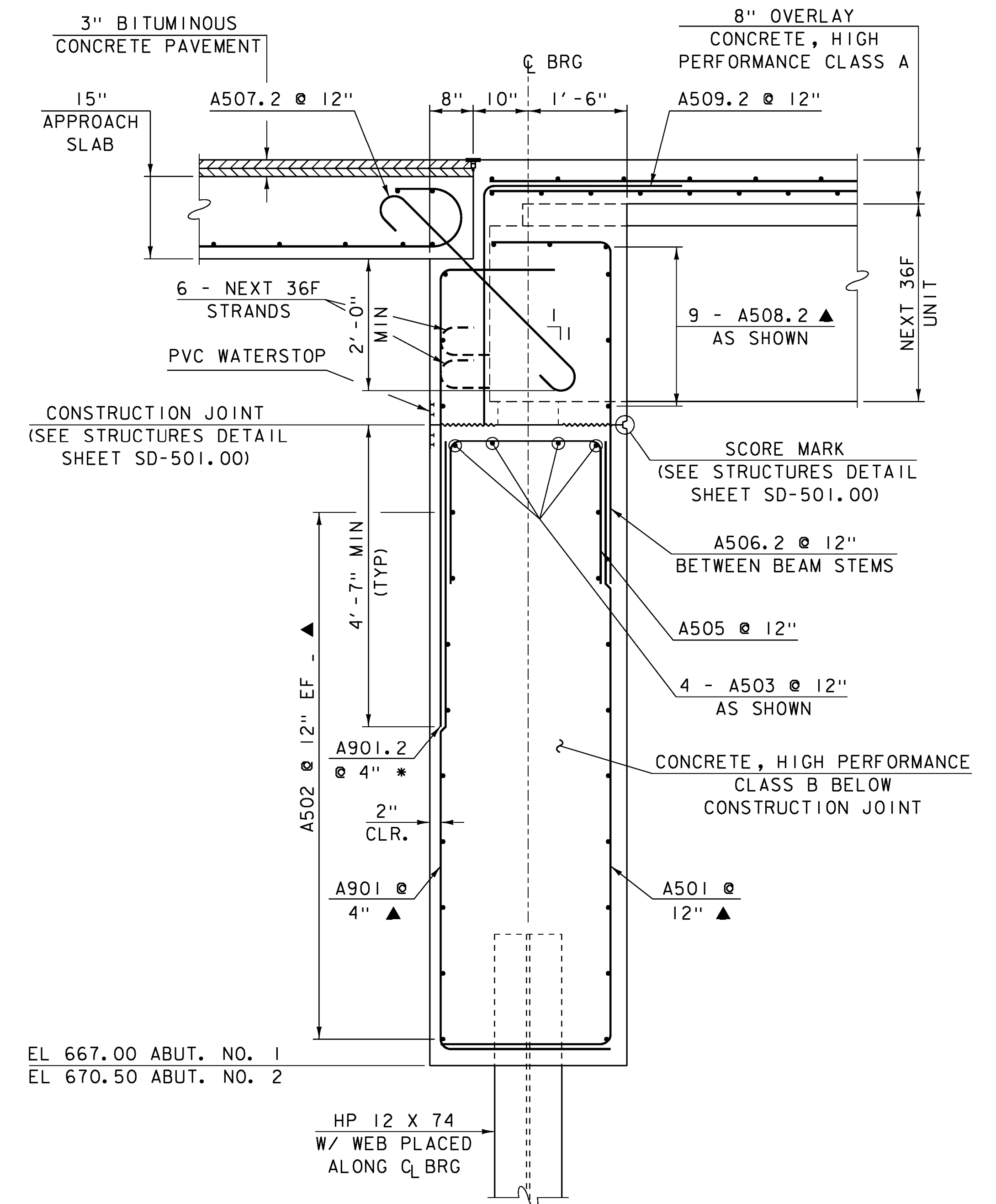
ABUTMENT NO. 1 PLAN

SCALE: 1/4" = 1'-0"



ABUTMENT NO. 1 ELEVATION

SCALE: 1/4" = 1'-0"



ABUTMENT TYPICAL SECTION

SCALE: 3/4" = 1'-0"

NOTE:

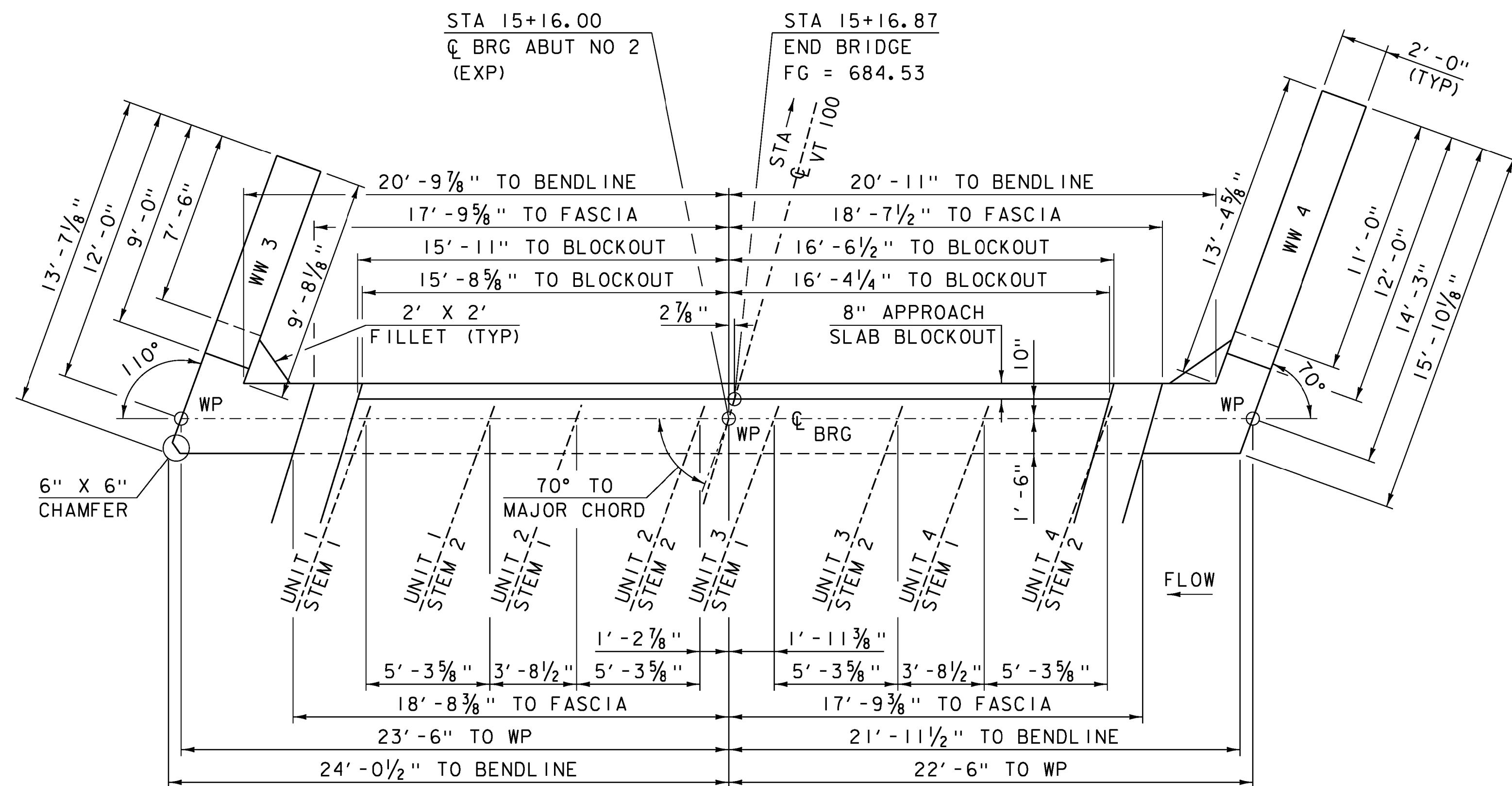
NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE NOTED
2'-2" BAR LAP UNLESS OTHERWISE NOTED
* THE HOOKS WILL NEED TO BE TURNED OR REMOVED WHEN IN CONFLICT WITH THE BEAM STEMS.

BRIDGE SEAT ELEVATIONS LOWERED PER C. CARLSON

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1(17)

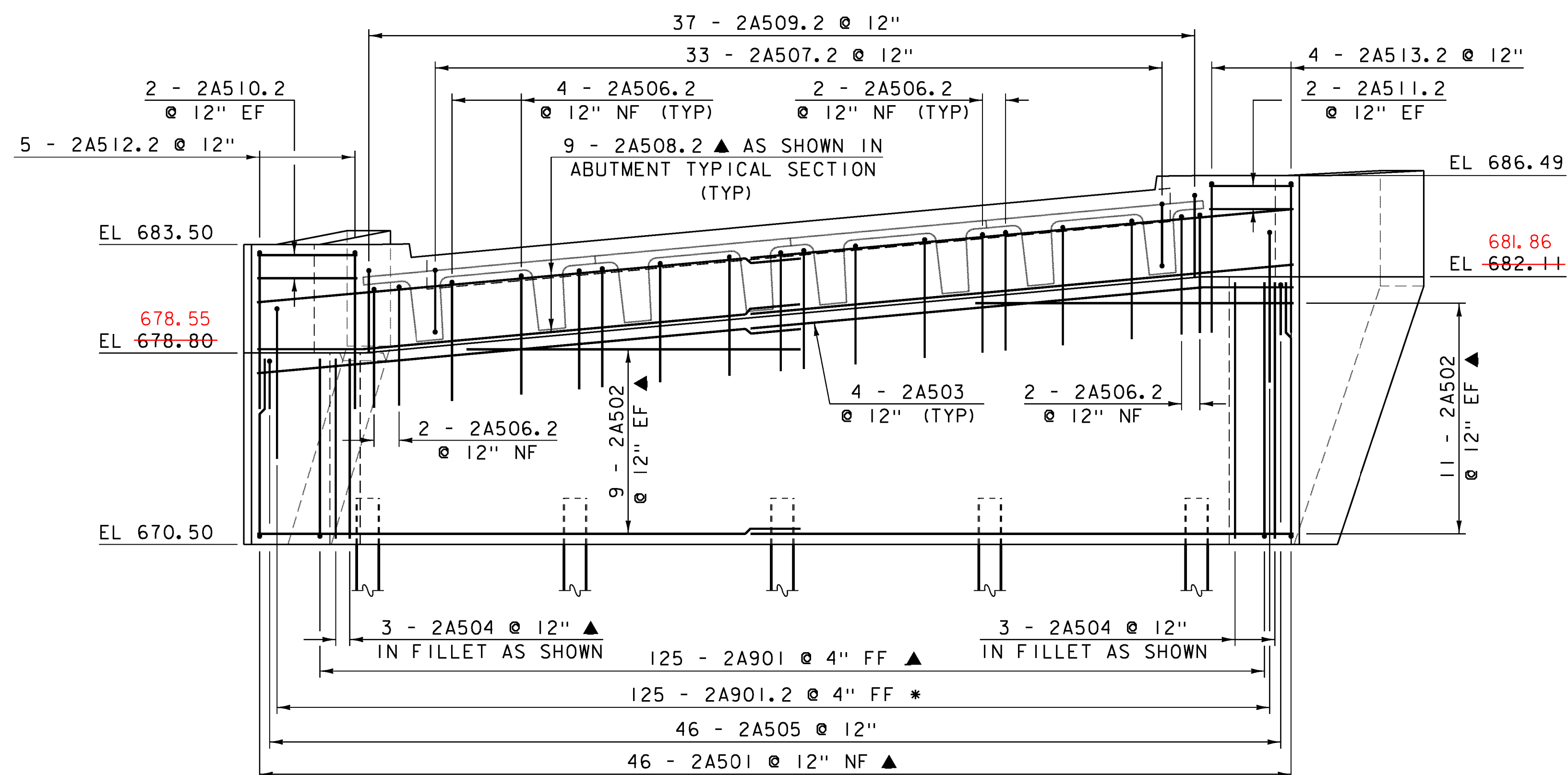
FILE NAME: s85e037sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. I. SALLS
ABUTMENT NO. 1 DETAILS

PLOT DATE: 17-JUN-2013
DRAWN BY: G. ROY
CHECKED BY: H. I. SALLS
SHEET 37 OF 70



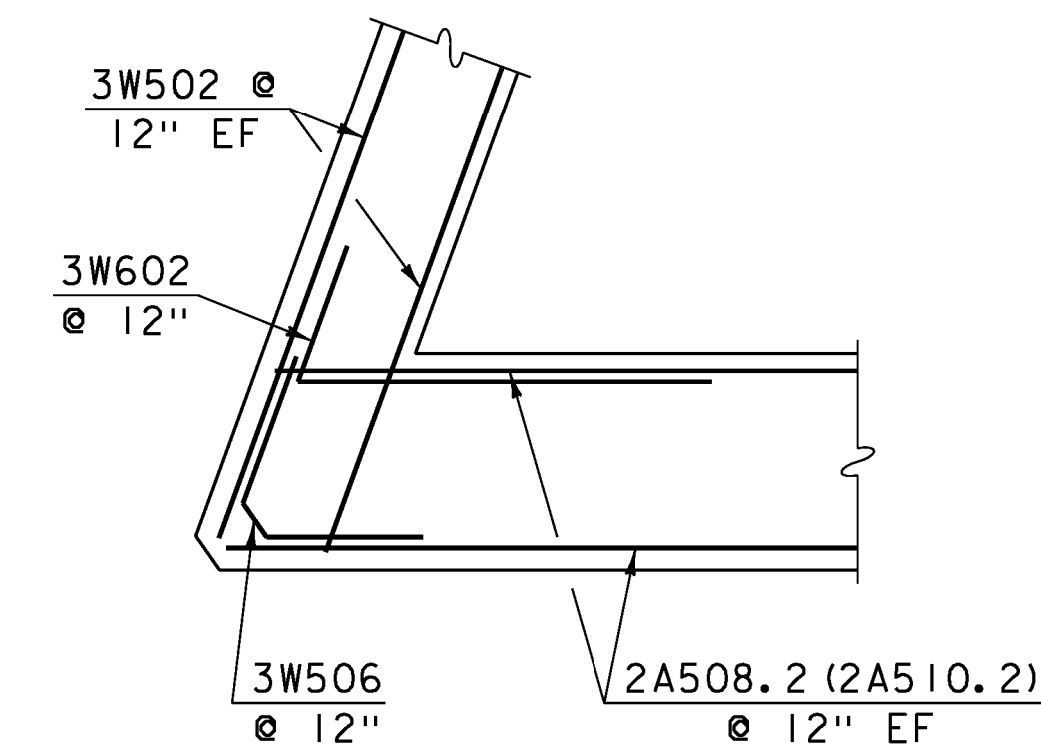
ABUTMENT NO. 2 PLAN

SCALE: 1/4" = 1'-0"



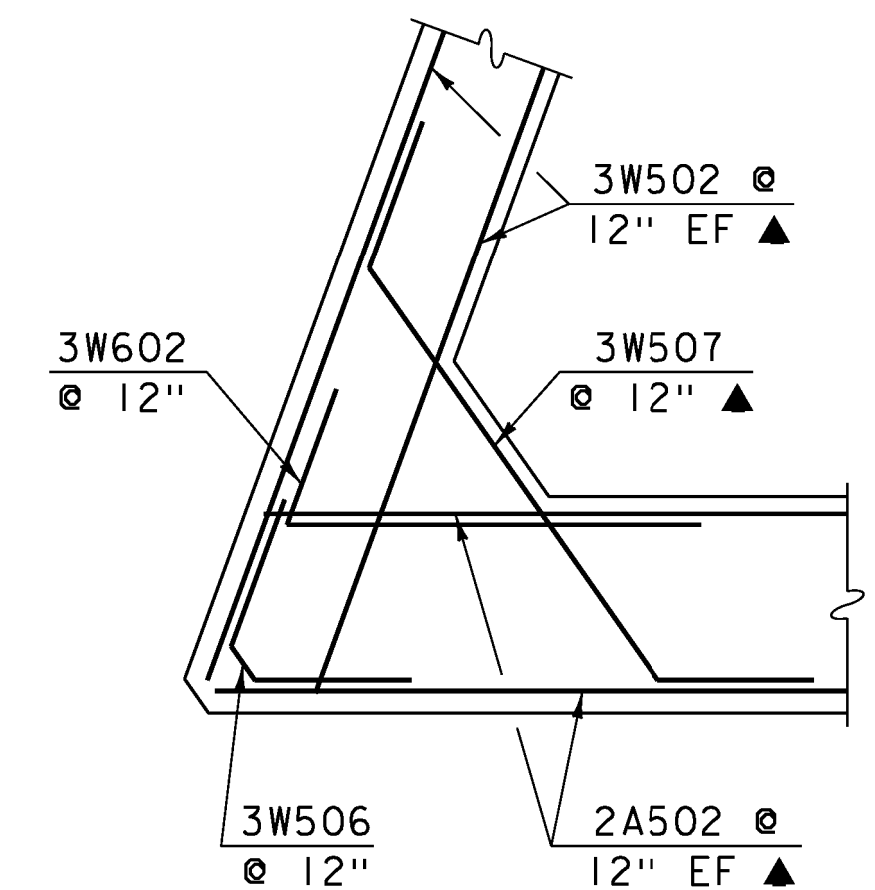
ABUTMENT NO. 2 ELEVATION

SCALE: 1/4" = 1'-0"



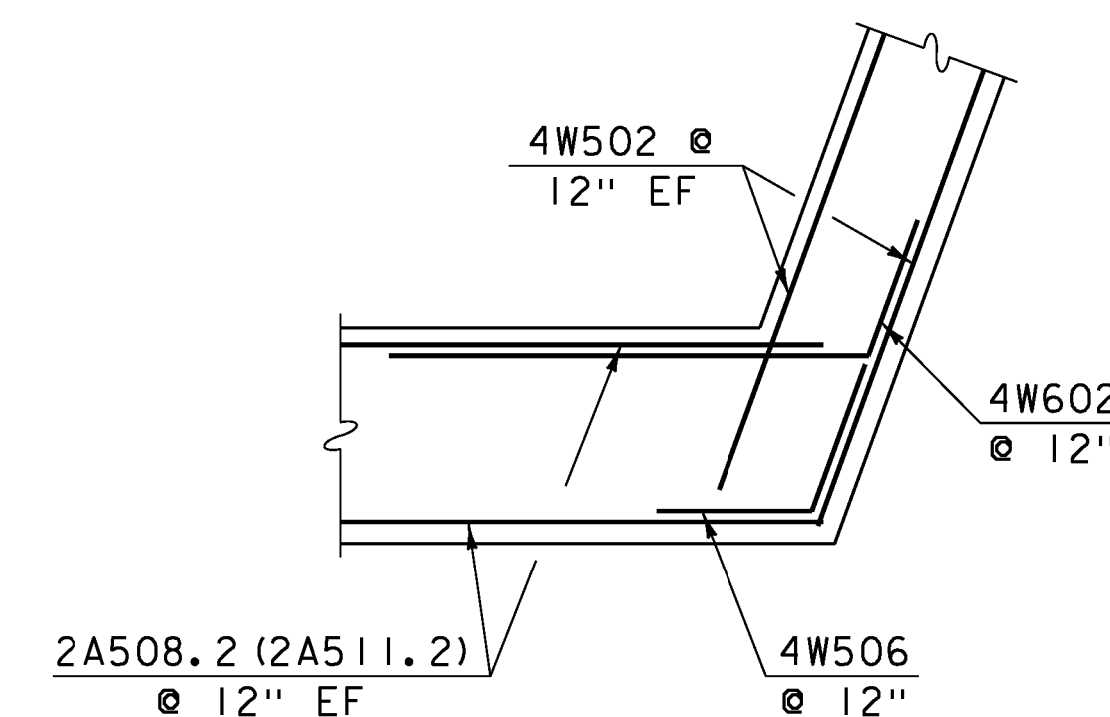
WINGWALL NO. 3 CORNER
REINFORCING ABOVE
CONSTRUCTION JOINT

SCALE: 3/8" = 1'-0"
(WINGWALL 2 SIMILAR)



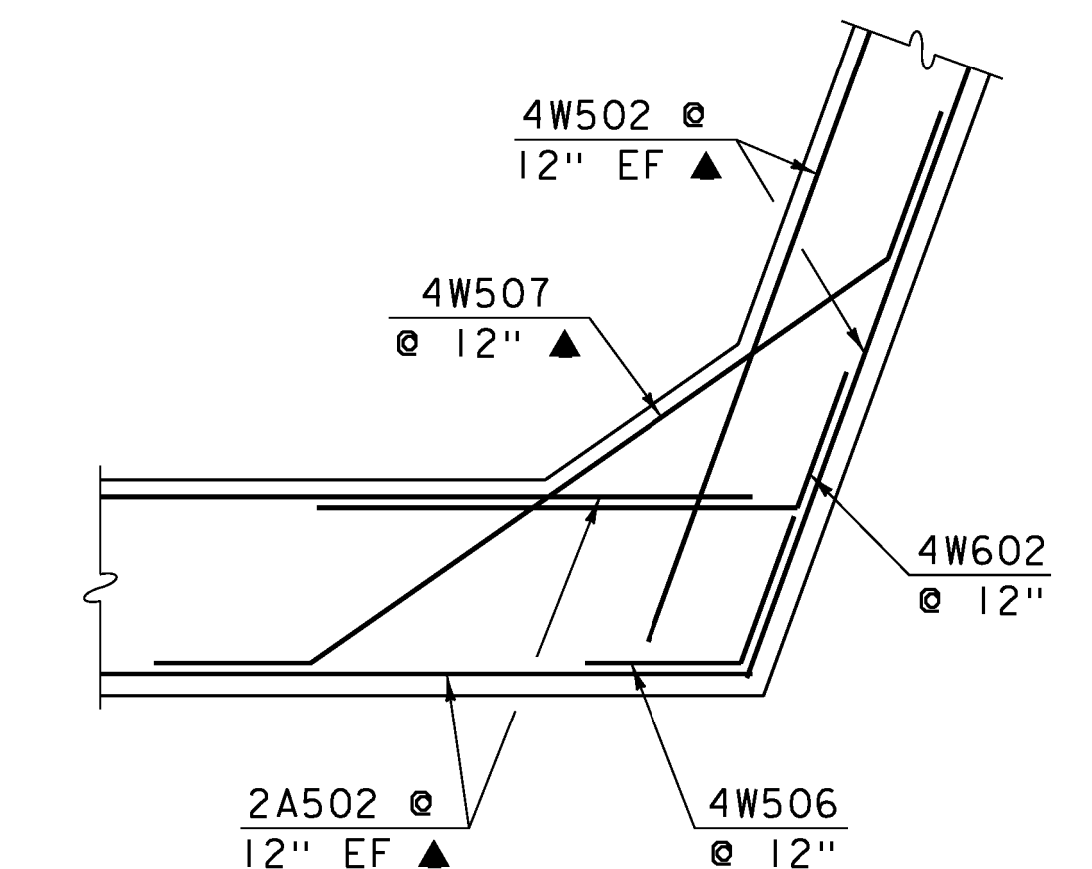
WINGWALL NO. 3 CORNER
REINFORCING BELOW
CONSTRUCTION JOINT

SCALE: 3/8" = 1'-0"
(WINGWALL 2 SIMILAR)



WINGWALL NO. 4 CORNER
REINFORCING ABOVE
CONSTRUCTION JOINT

SCALE: 3/8" = 1'-0"
(WINGWALL 1 SIMILAR)



WINGWALL NO. 4 CORNER
REINFORCING BELOW
CONSTRUCTION JOINT

SCALE: 3/8" = 1'-0"
(WINGWALL 1 SIMILAR)

NOTE:

NF = NEAR FACE
FF = FAR FACE
EF = EACH FACE
▲ = CUT TO FIT IN FIELD
3" CLR. UNLESS OTHERWISE NOTED
2'-2" BAR LAP UNLESS OTHERWISE NOTED
* THE HOOKS WILL NEED TO BE TURNED
OR REMOVED WHEN IN CONFLICT WITH
THE BEAM STEMS.

BRIDGE SEAT ELEVATIONS LOWERED PER C. CARLSON

PROJECT NAME: STOWE

PROJECT NUMBER: BRF 029-1(17)

FILE NAME: s85e037sub.dgn

PROJECT LEADER: C. CARLSON

DESIGNED BY: H. I. SALLS

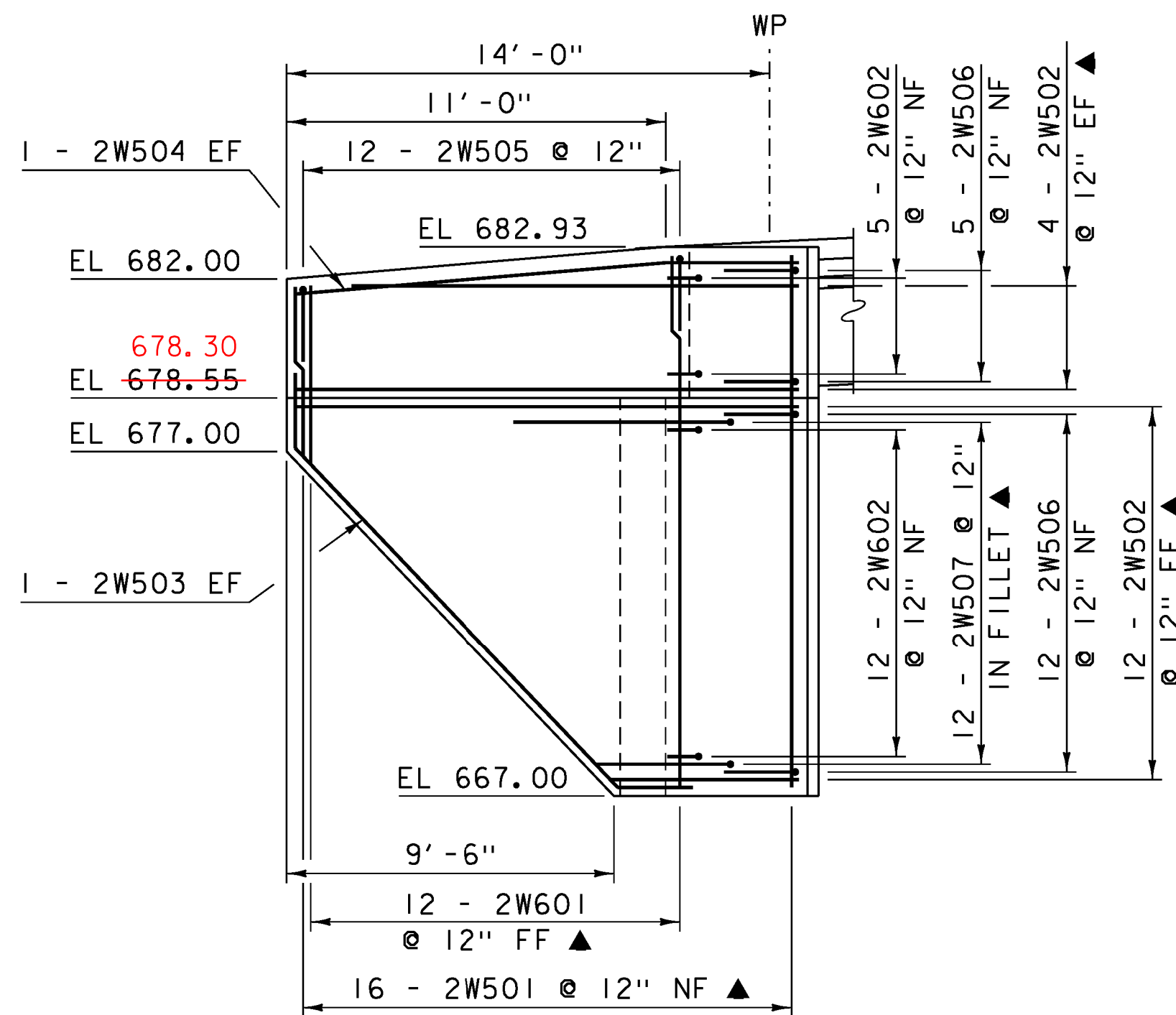
ABUTMENT NO. 2 DETAILS

PLOT DATE: 17-JUN-2013

DRAWN BY: G. ROY

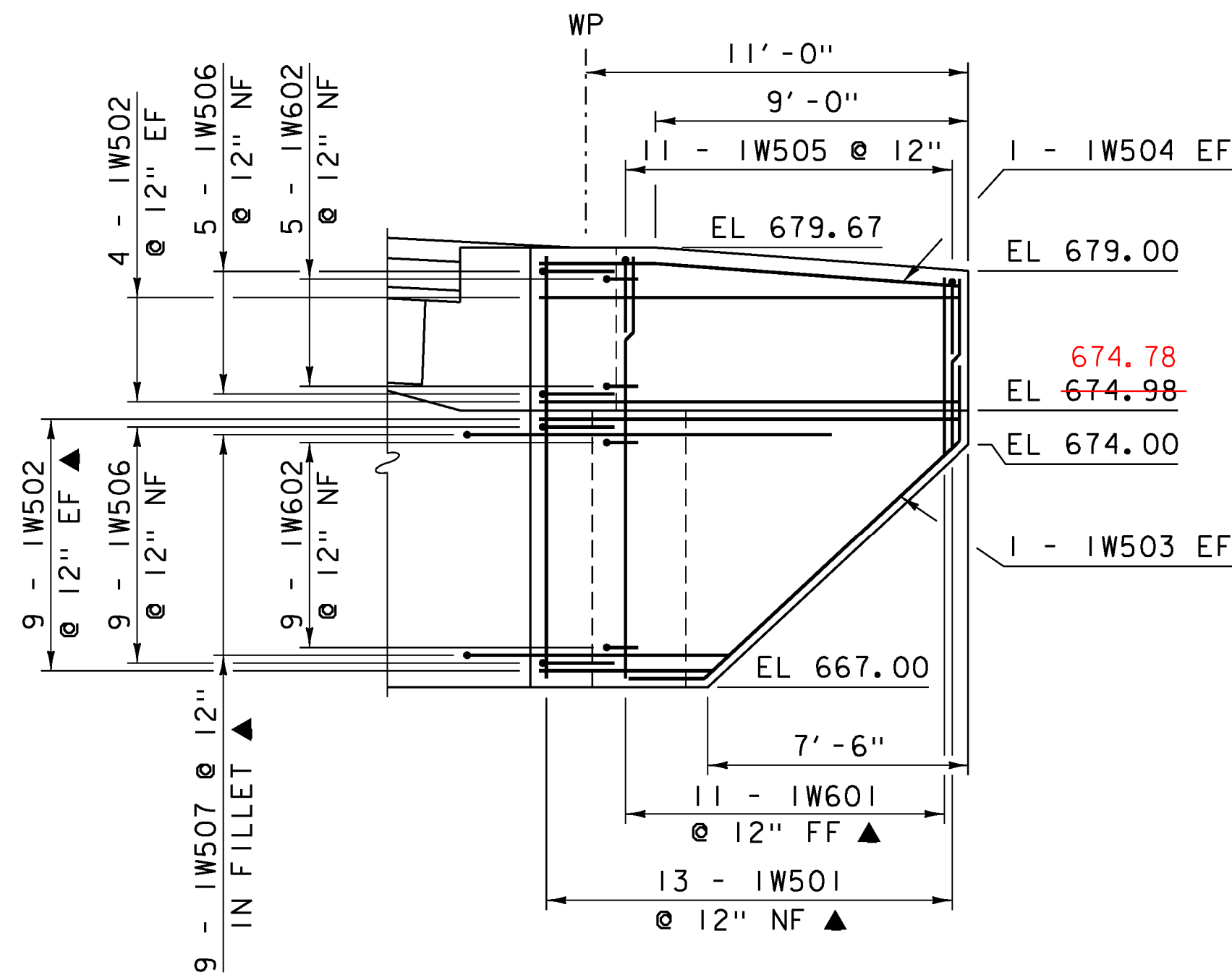
CHECKED BY: H. I. SALLS

SHEET 38 OF 70



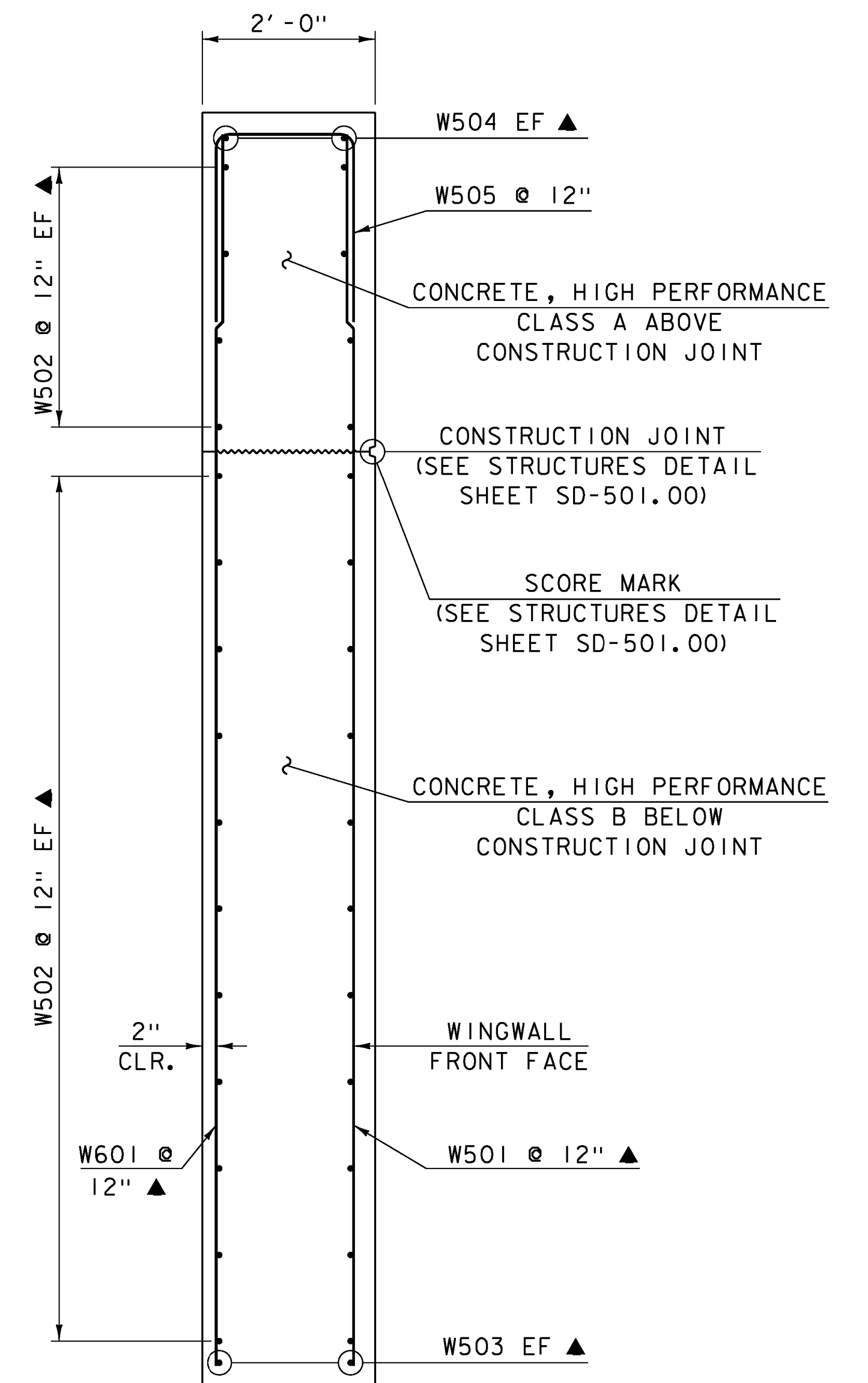
WINGALL NO. 2 ELEVATION

SCALE: 1/4" = 1'-0"



WINGALL NO. 1 ELEVATION

SCALE: 1/4" = 1'-0"

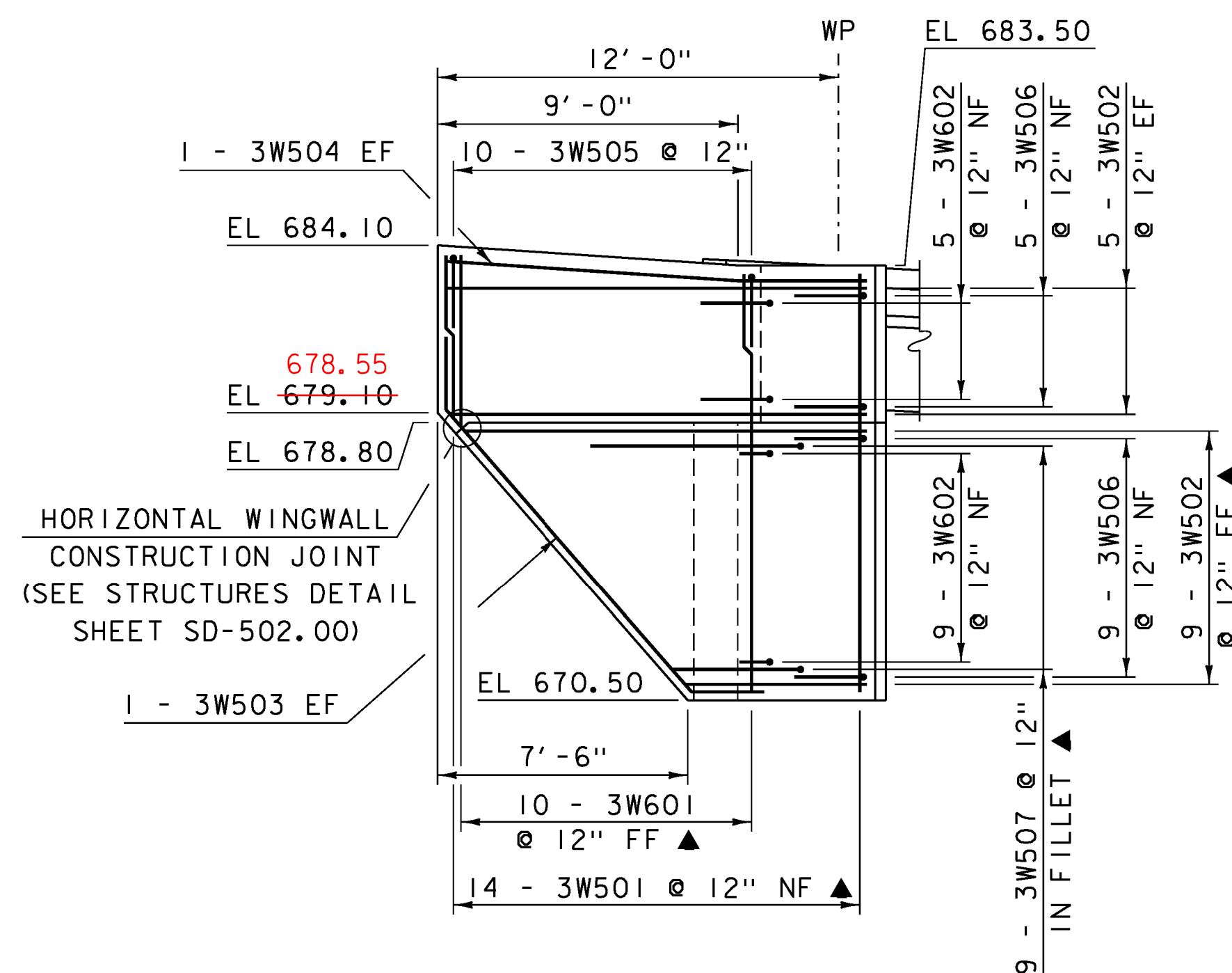


WINGWALL TYPICAL SECTION

SCALE: 3/4" = 1'-0"

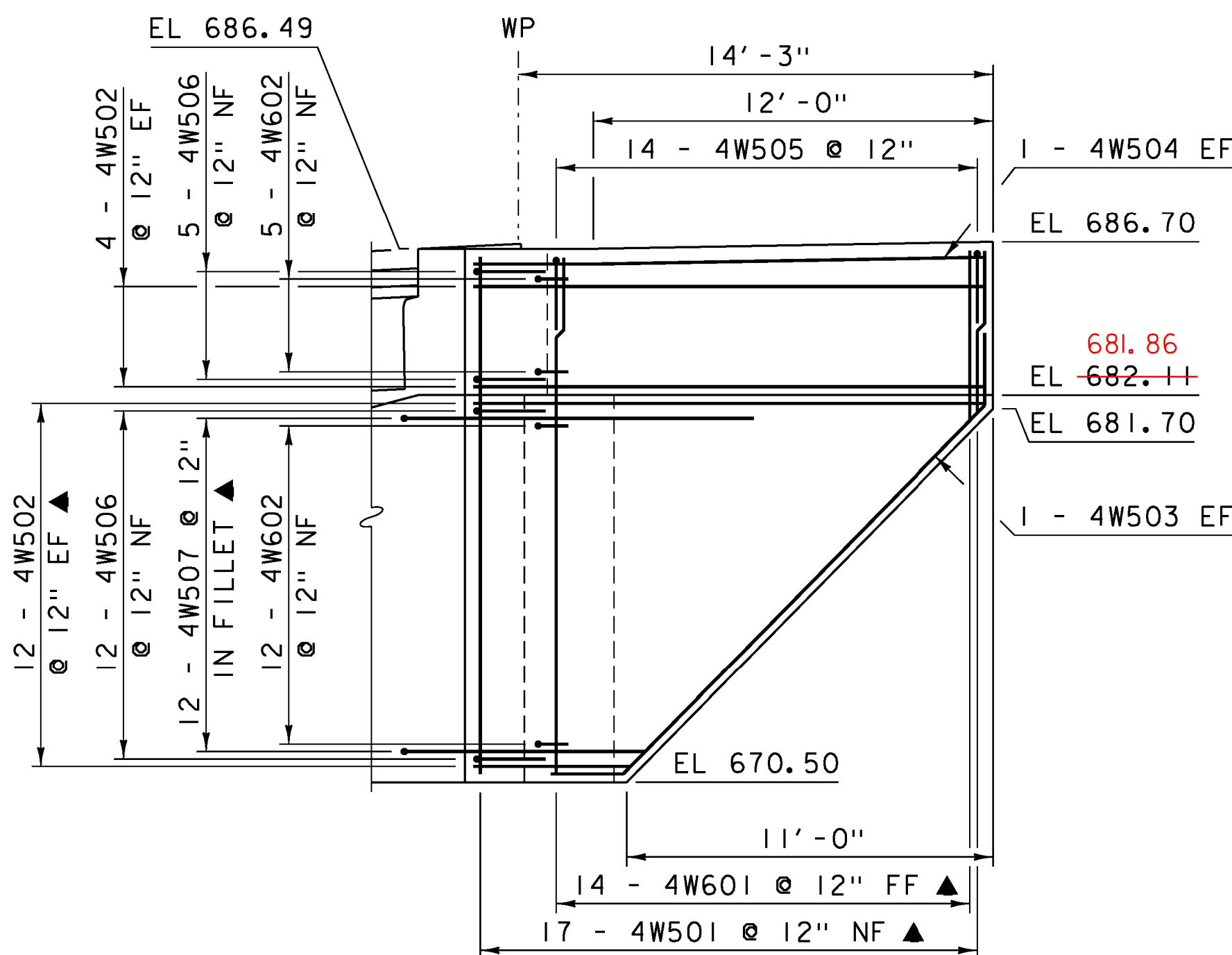
NOTE:

NF = NEAR FACE
 FF = FAR FACE
 EF = EACH FACE
 ▲ = CUT TO FIT IN FIELD
 3" CLR. UNLESS OTHERWISE NOTED
 2'-2" BAR LAP UNLESS OTHERWISE NOTED



WINGALL NO. 3 ELEVATION

SCALE: 1/4" = 1'-0"



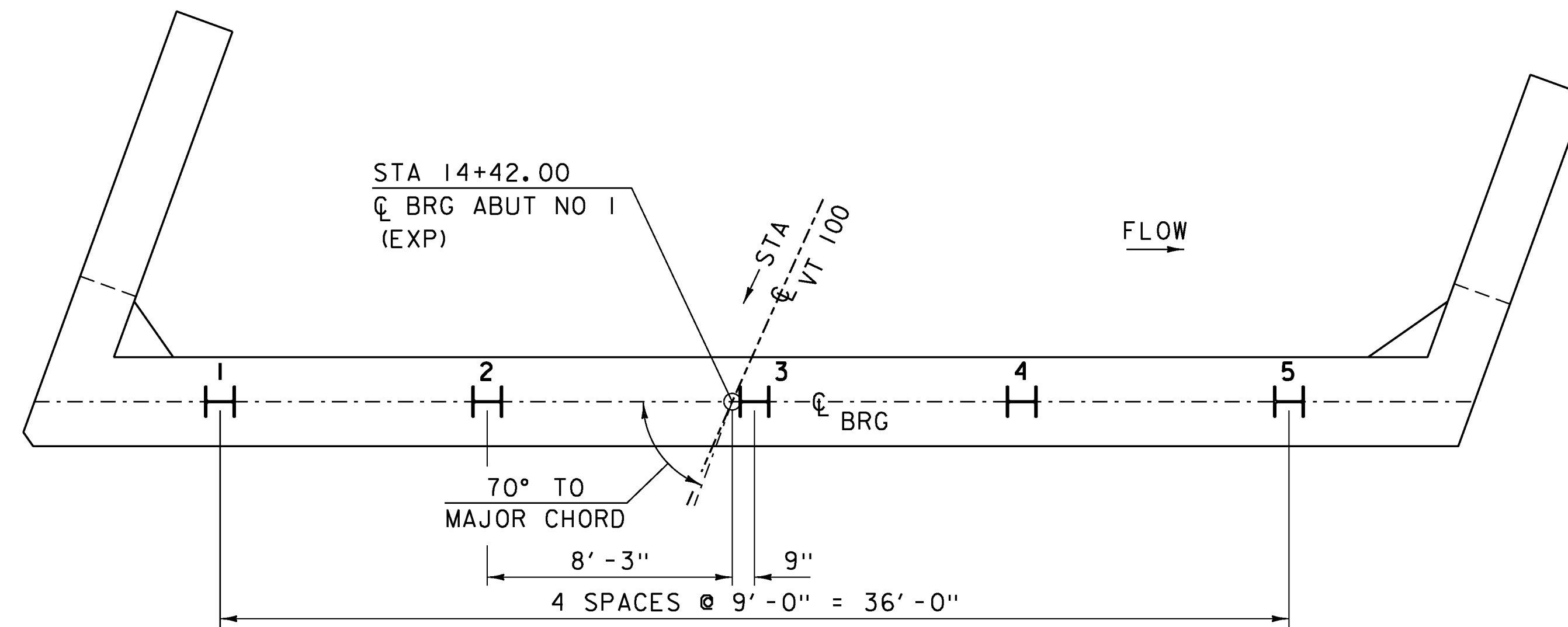
WINGALL NO. 4 ELEVATION

SCALE: 1/4" = 1'-0"

PROJECT NAME: STOWE
 PROJECT NUMBER: BRF 029-1(17)

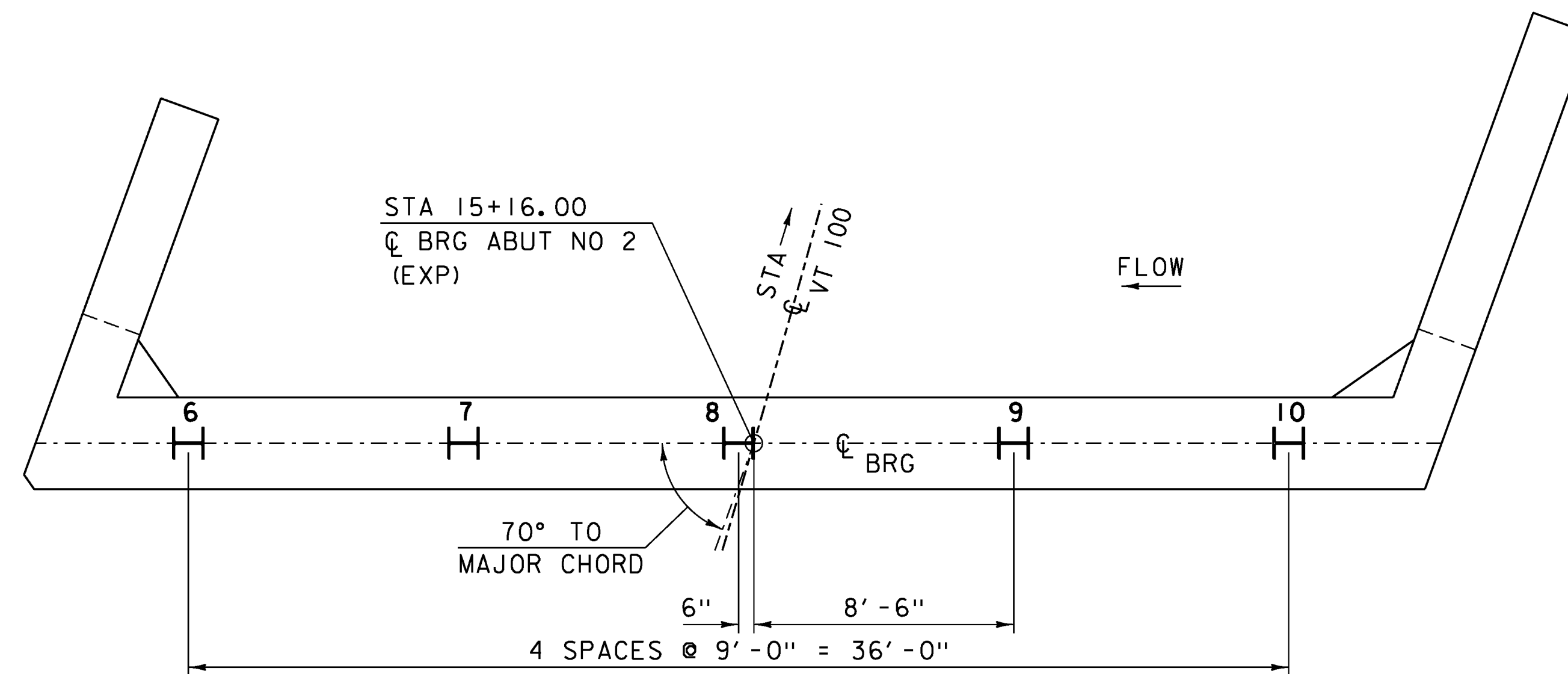
FILE NAME: s85e037sub.dgn
 PROJECT LEADER: C. CARLSON
 DESIGNED BY: H. I. SALLS
 WINGWALL DETAILS

PLOT DATE: 17-JUN-2013
 DRAWN BY: G. ROY
 CHECKED BY: H. I. SALLS
 SHEET 39 OF 70



ABUTMENT NO. 1 PILE LAYOUT

SCALE: $\frac{1}{4}" = 1' - 0"$



ABUTMENT NO. 2 PILE LAYOUT

SCALE: $\frac{1}{4}" = 1' - 0"$

NOTE:

SEE STRUCTURES DETAIL SD-601.00
FOR PILE SPLICE DETAIL.

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1 (17)

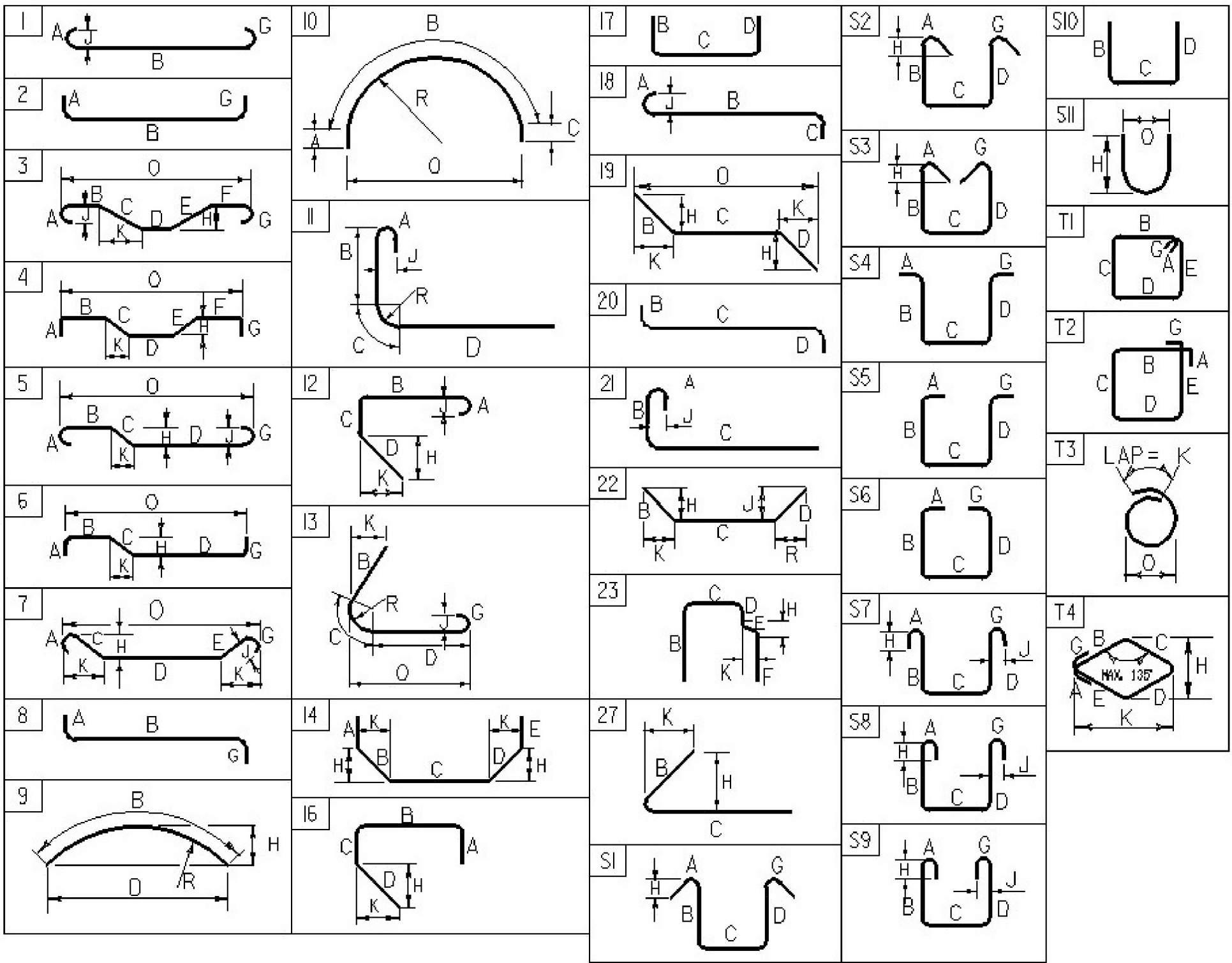
FILE NAME: s85e037sub.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. I. SALLS
PILE LAYOUT

PLOT DATE: 17-JUN-2013
DRAWN BY: G. ROY
CHECKED BY: H. I. SALLS
SHEET 40 OF 70

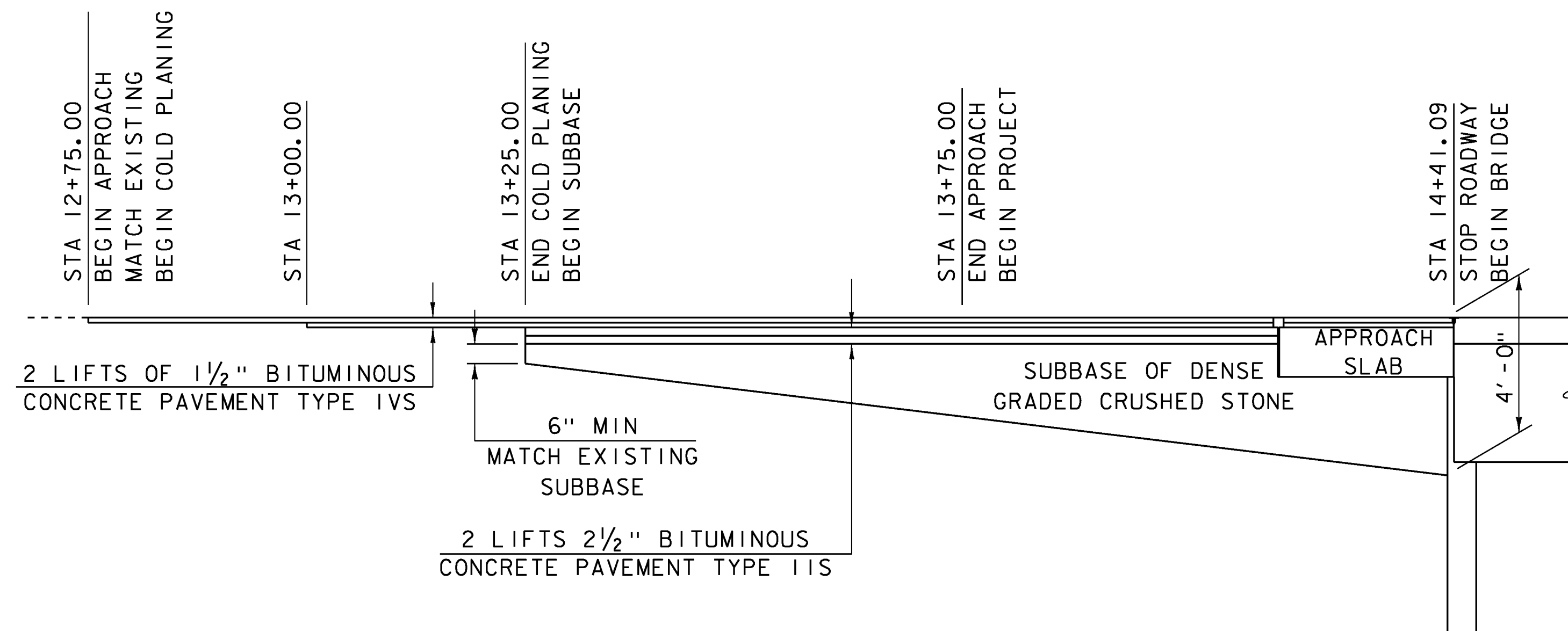
REINFORCING STEEL SCHEDULE

~ NOTES ~

1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-SI). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
8. ▲ DENOTES BARS TO BE CUT IN FIELD.
9. * DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
0. △ DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
1. "2" IN BAR MARK SUFFIX DENOTES LEVEL II REINFORCING STEEL.

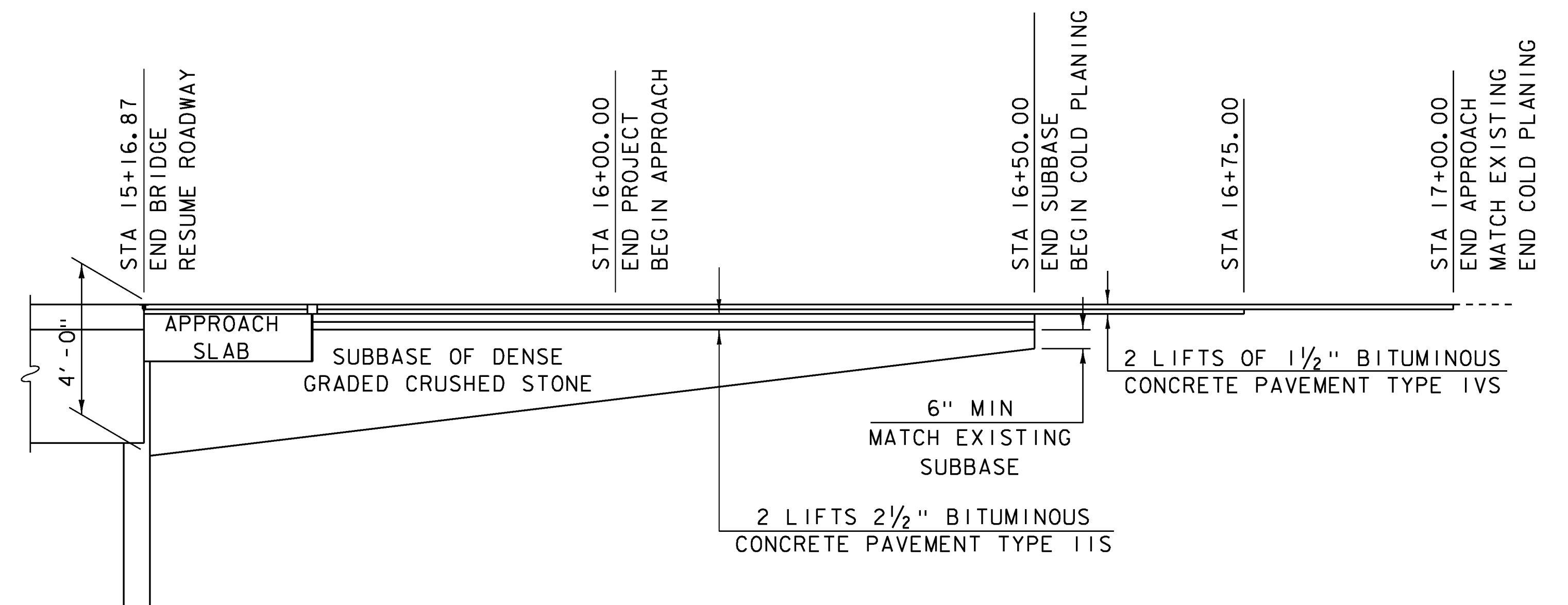


PROJECT NAME:	STOWE
PROJECT NUMBER:	BRF 029-1(17)
FILE NAME: s85e037reinf.dgn	PLOT DATE: 17-JUN-2013
PROJECT MANAGER: C. CARLSON	DRAWN BY: G. ROY
DESIGNED BY: H. I. SALLS	CHECKED BY: H. I. SALLS
REINFORCING STEEL SCHEDULE	SHEET 41 OF 70



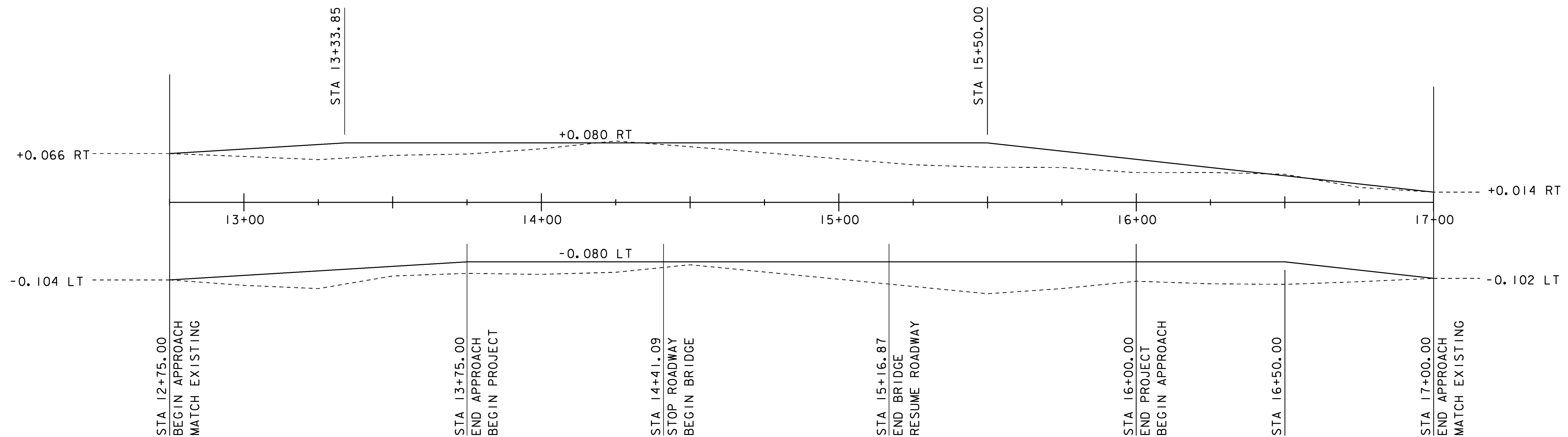
BEGIN PROJECT MATERIAL TRANSITION

NOT TO SCALE



END PROJECT MATERIAL TRANSITION

NOT TO SCALE

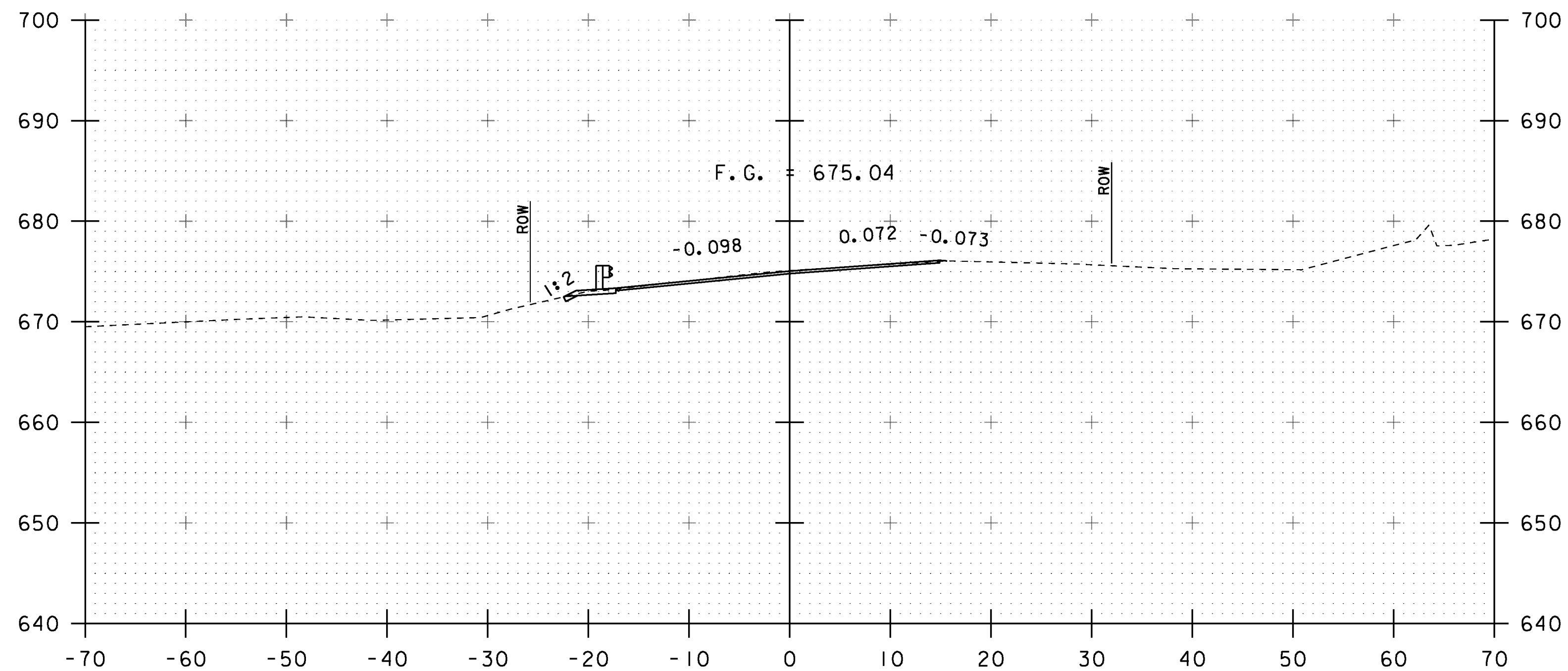


BANKING DIAGRAM

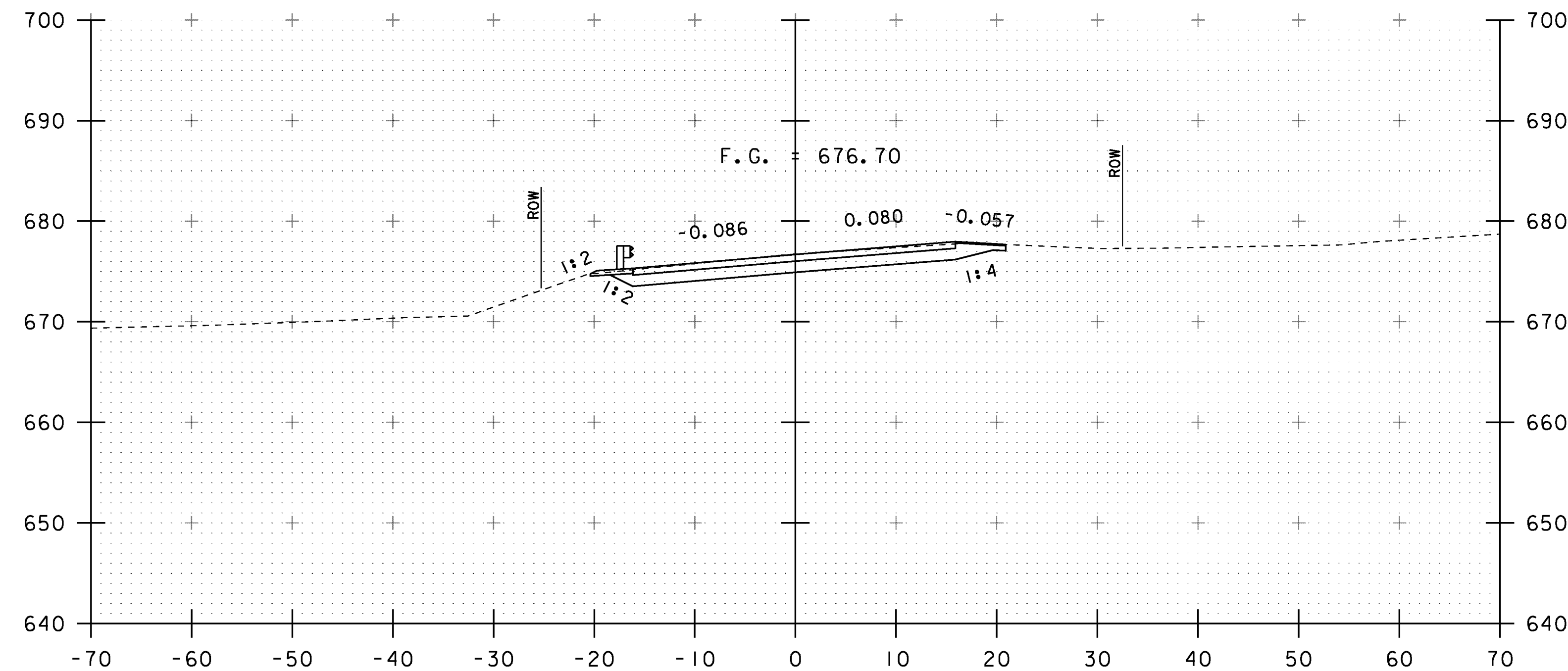
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PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1 (17)

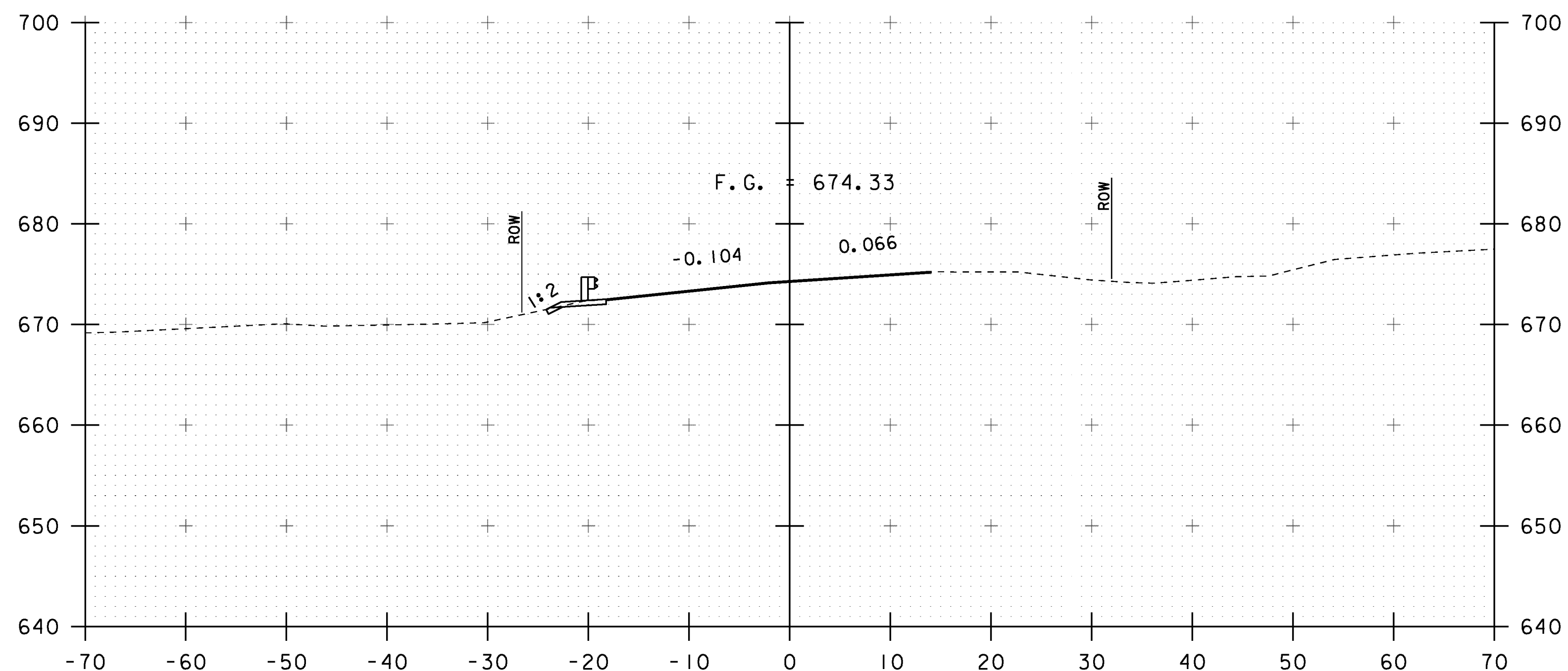
FILE NAME: s85e037pro.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
BANKING DIAGRAM & MATERIAL TRANSITIONS
PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 42 OF 70



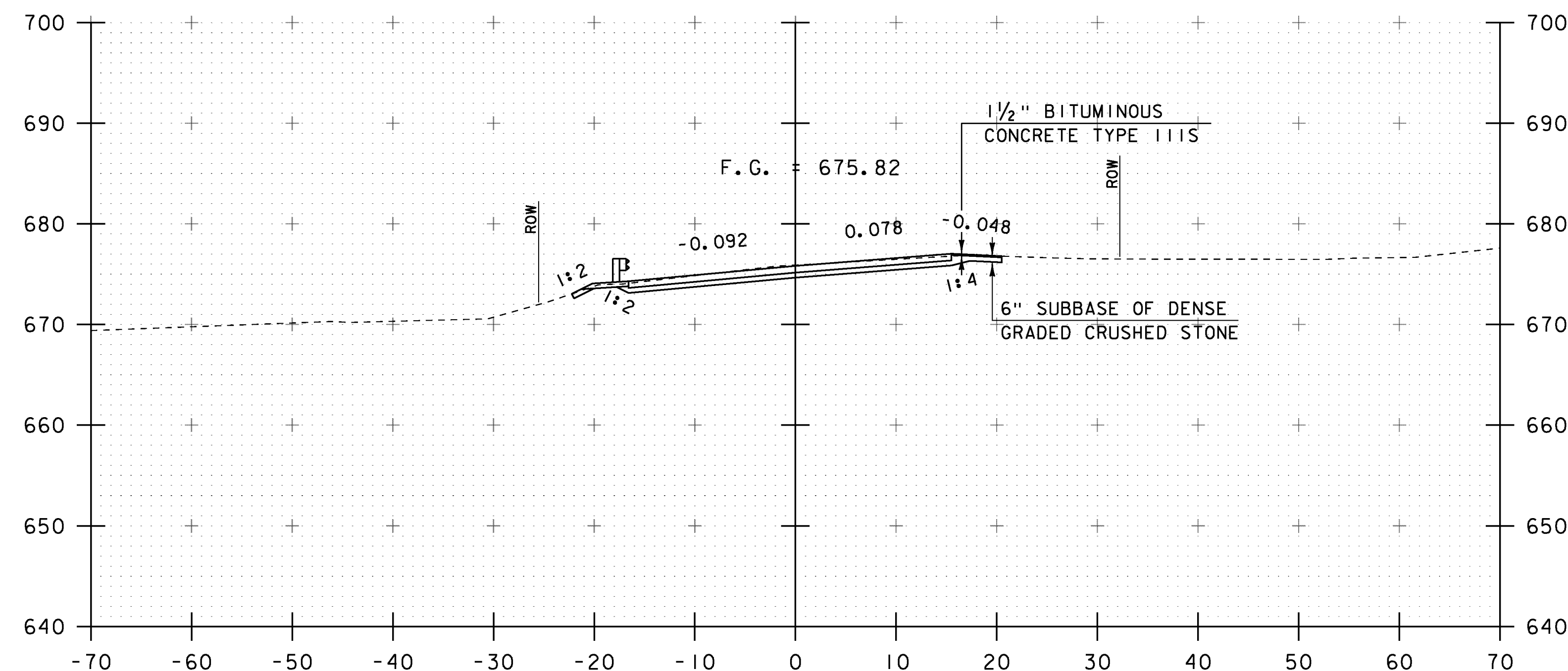
13+00



13+50



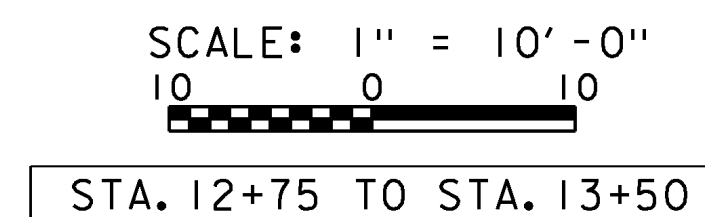
12+75



13+25

STA 12+75.00
BEGIN APPROACH
MATCH EXISTING

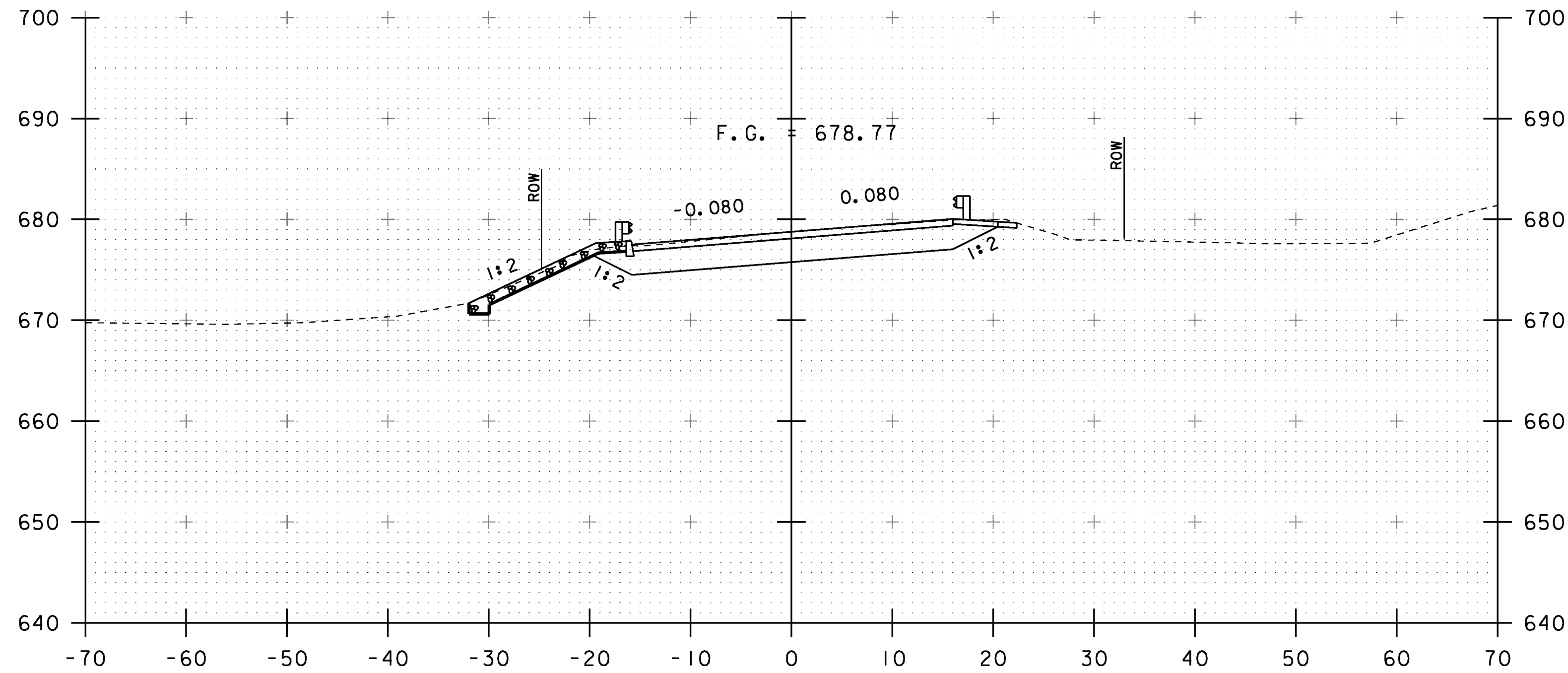
STA 13+10.0 RT - STA 13+58.0 RT
CONSTRUCT 5' PAVED APRON



PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1 (17)

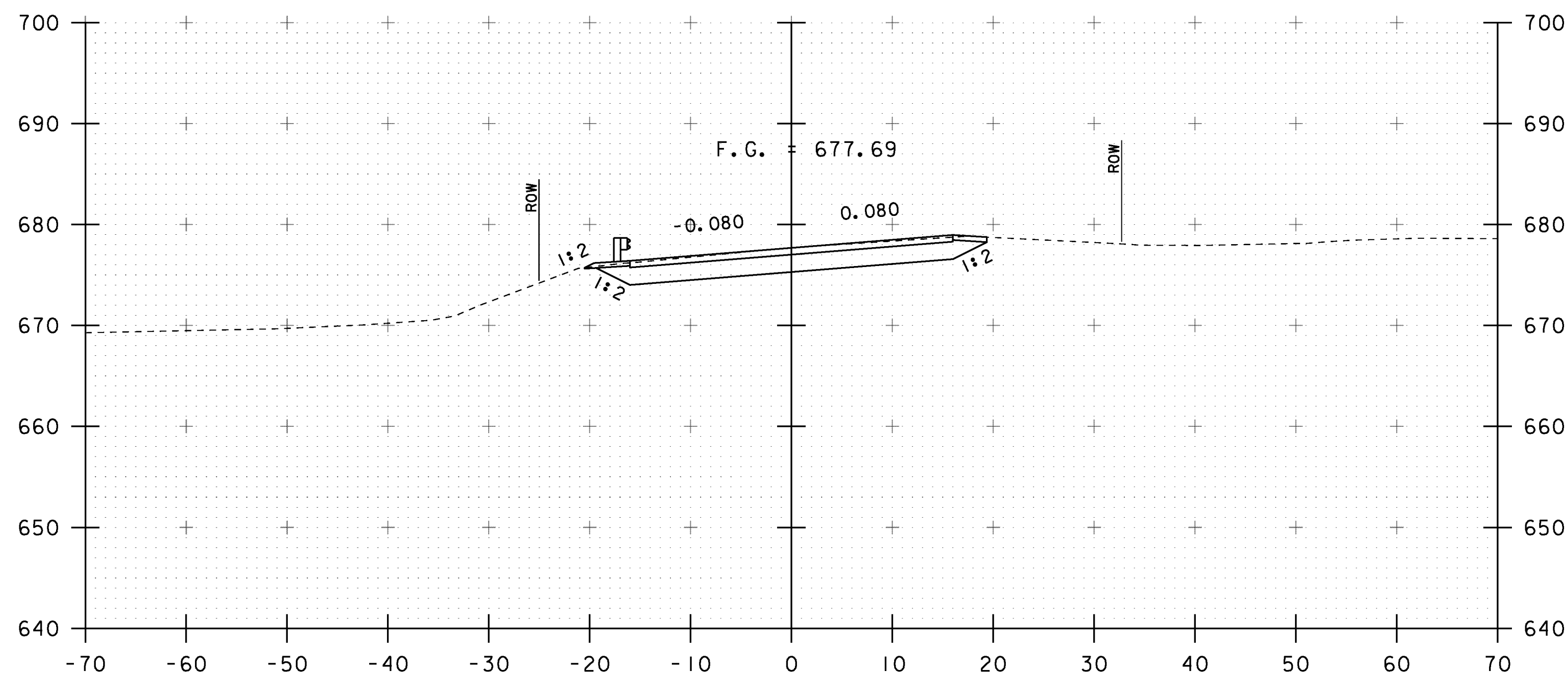
FILE NAME: s85e037xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
MAINLINE CROSS SECTIONS 1

PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 43 OF 70



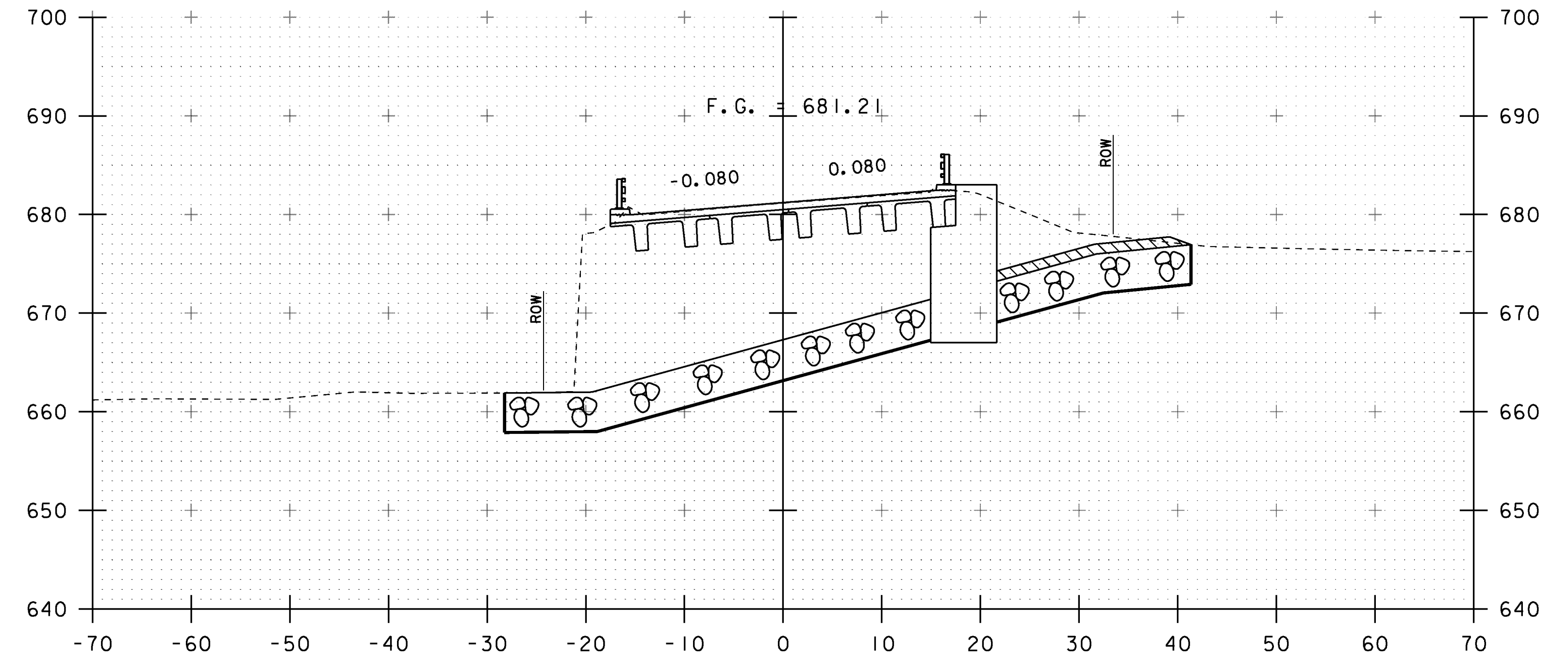
STA 14+00.00
CONSTRUCT STONE FILL
TYPE 1 PAD, 5' X 16'

14+00



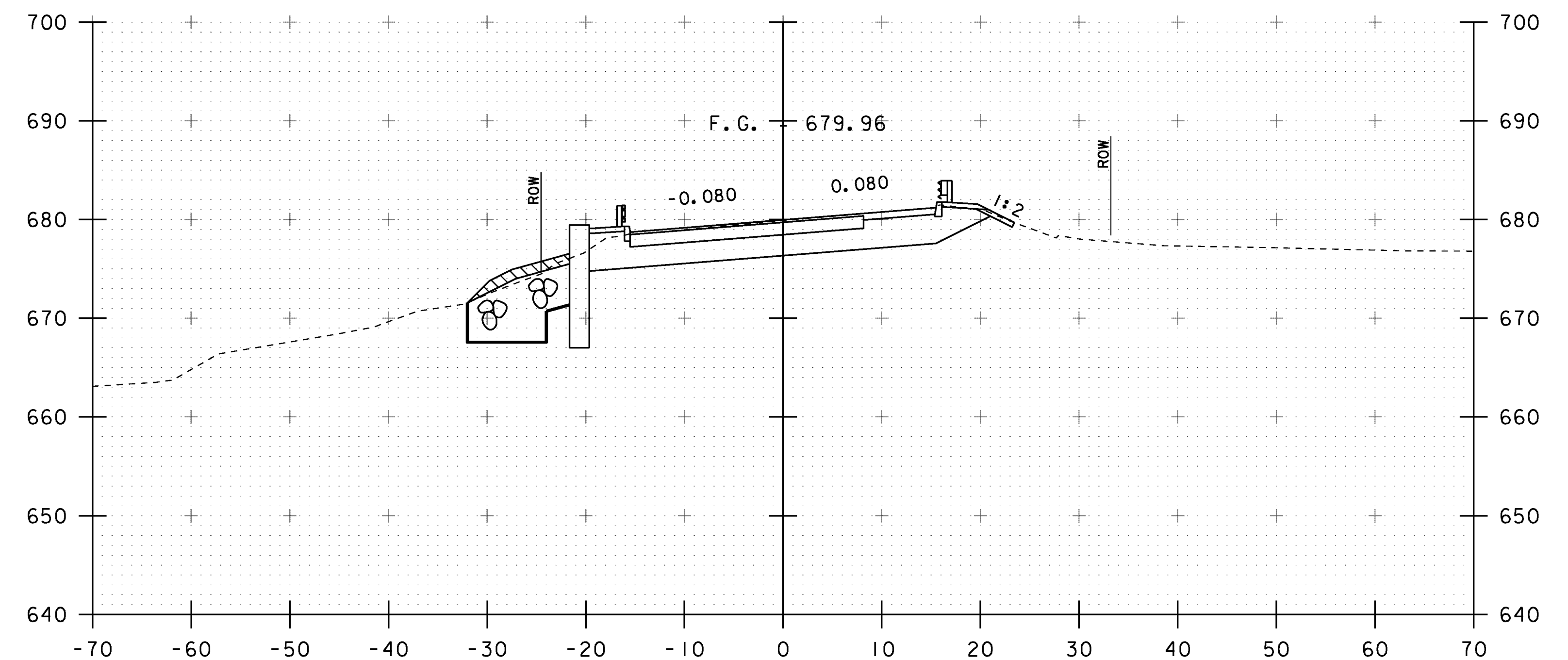
STA 13+75.00
END APPROACH
BEGIN PROJECT

13+75

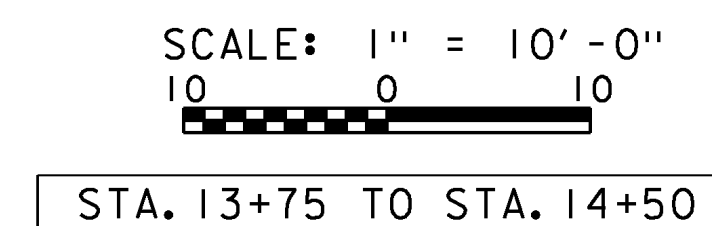


STA 14+41.09
STOP ROADWAY
BEGIN BRIDGE

14+50



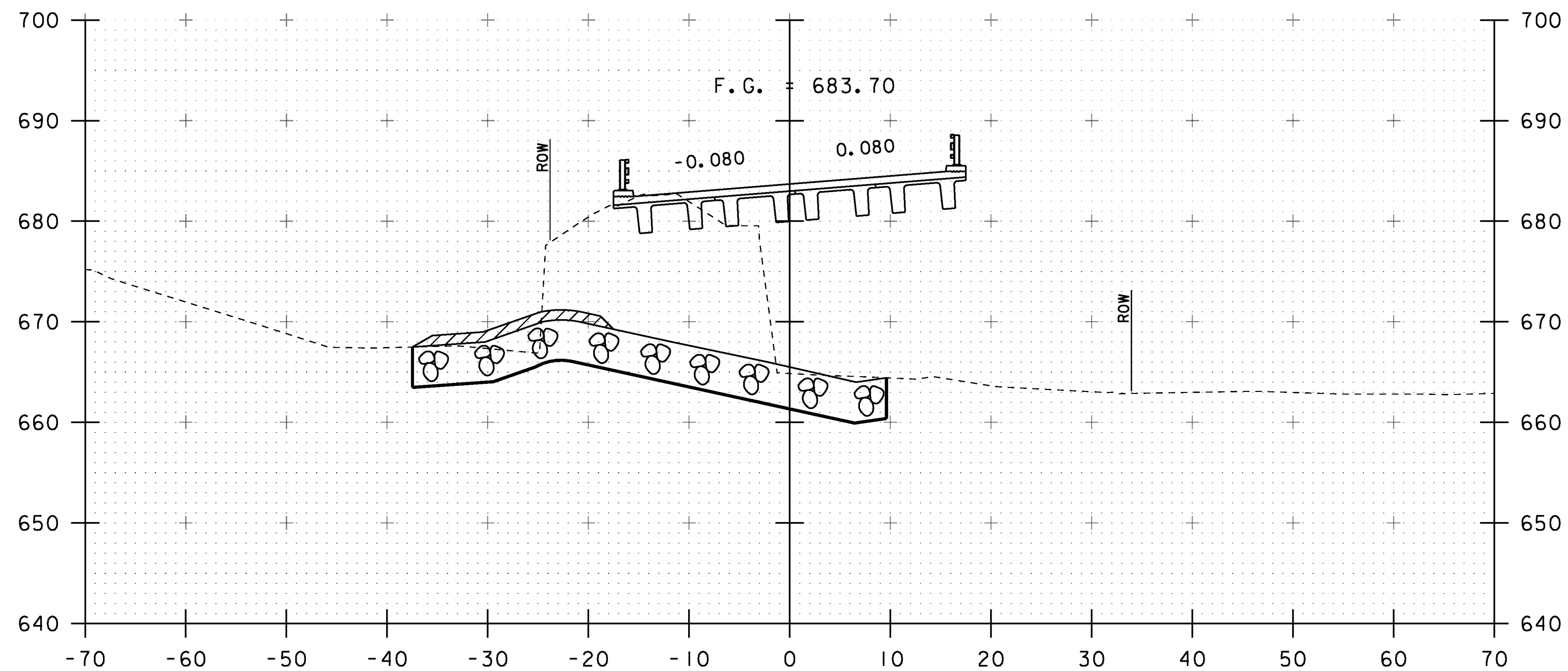
14+25



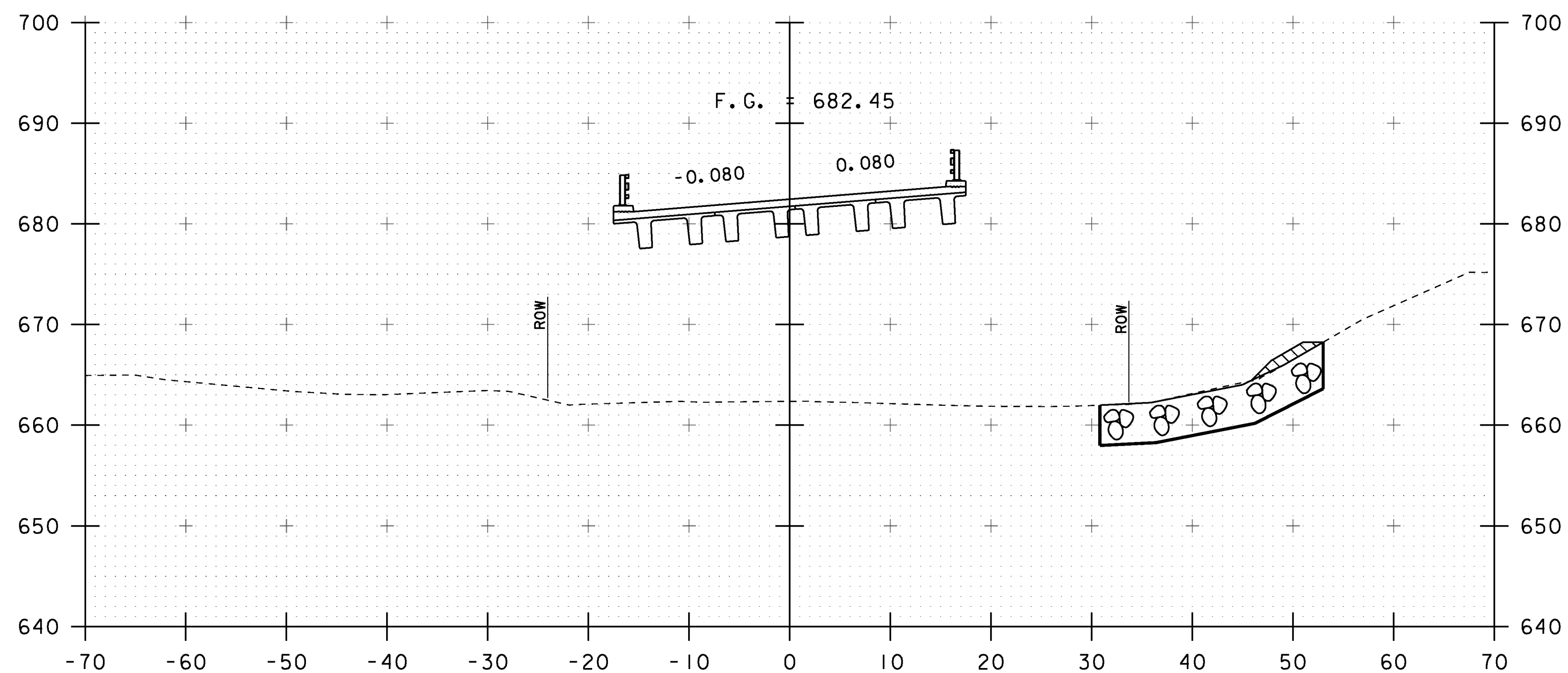
PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1 (17)

FILE NAME: s85e037xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
MAINLINE CROSS SECTIONS 2

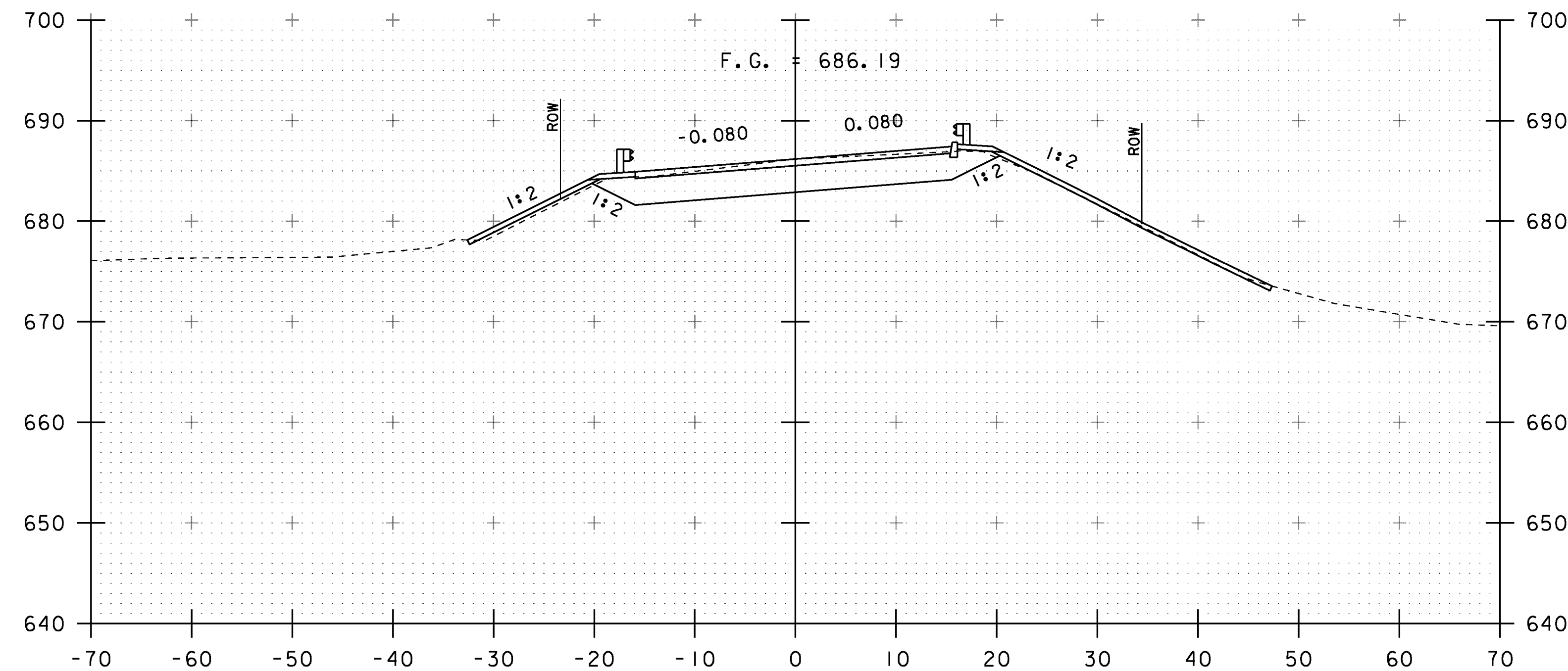
PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 44 OF 70



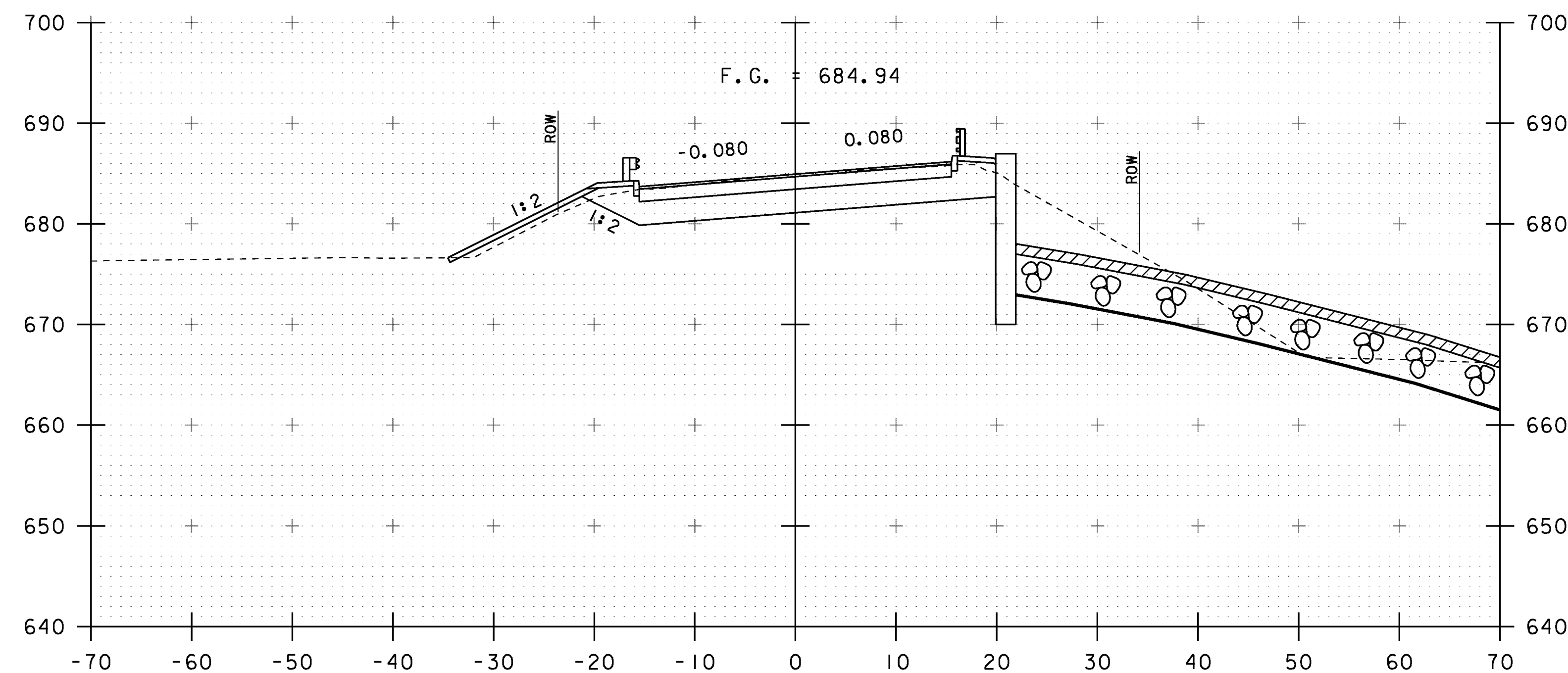
15+00



14+75



15+50



15+25

STA 15+16.87
END BRIDGE
RESUME ROADWAY

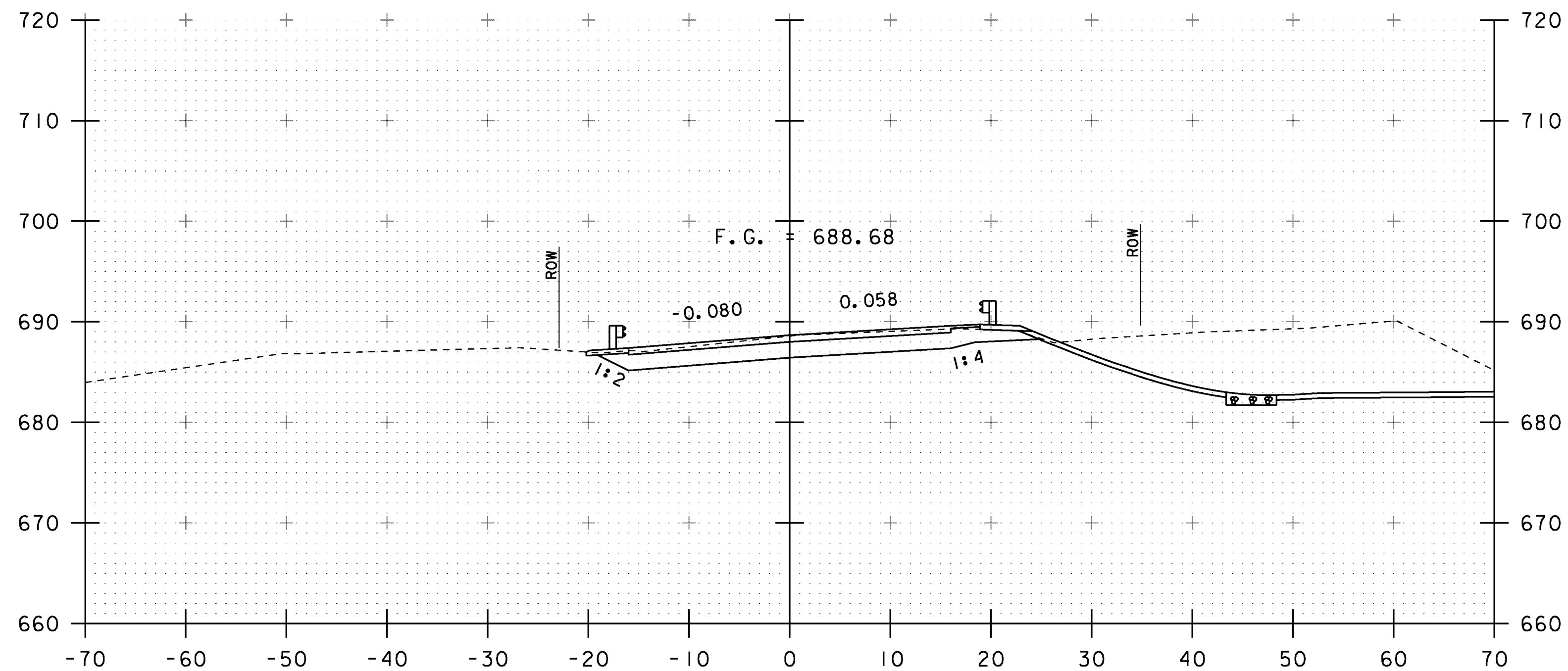
SCALE: 1" = 10'-0"
10 0 10

STA. 14+75 TO STA. 15+50

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1 (17)

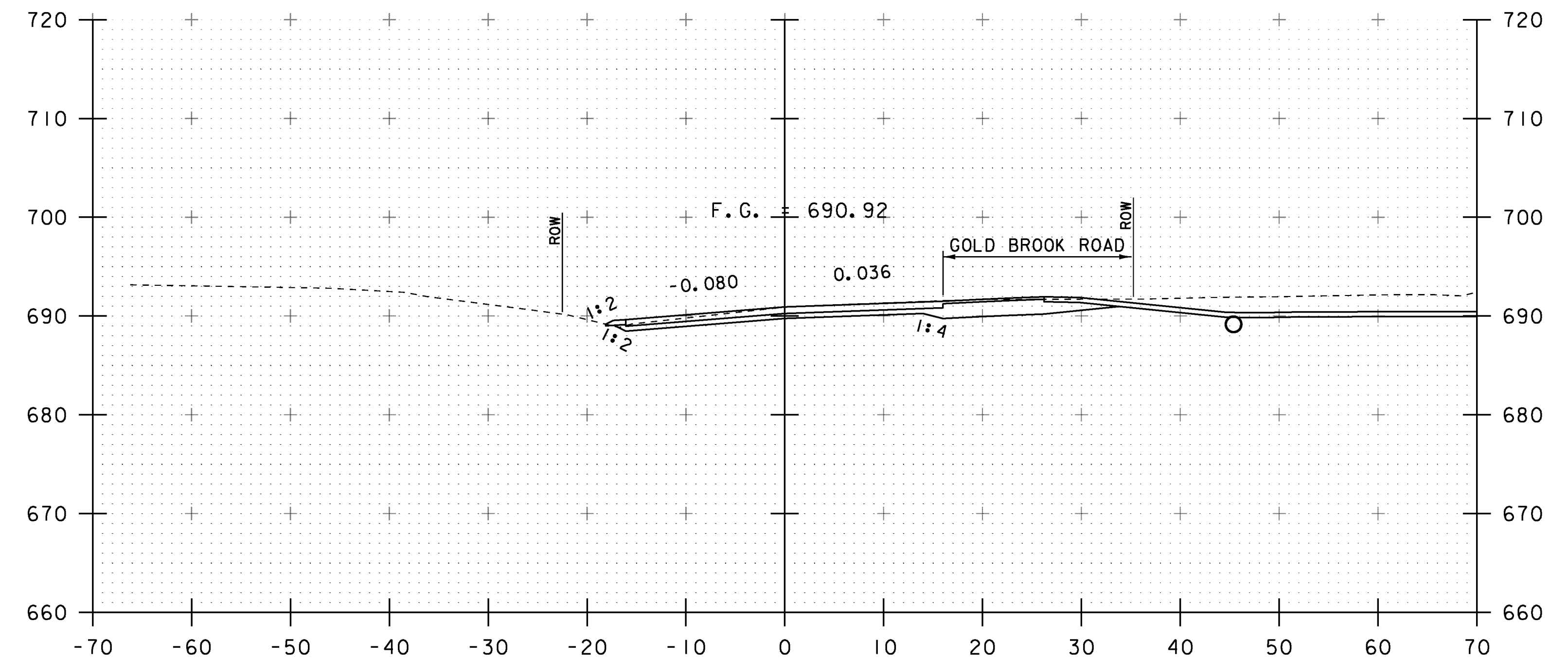
FILE NAME: s85e037xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
MAINLINE CROSS SECTIONS 3

PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 45 OF 70

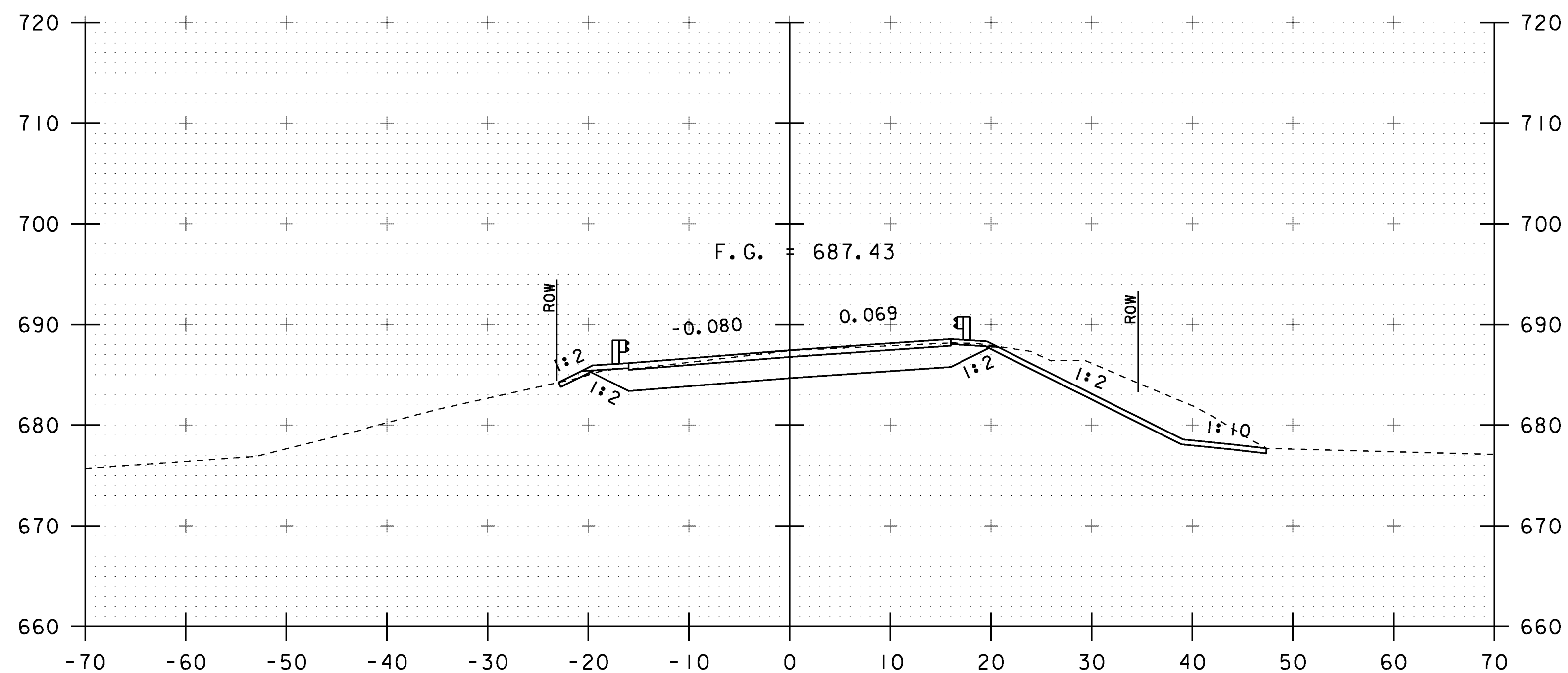


STA 16+00.00
END PROJECT
BEGIN APPROACH

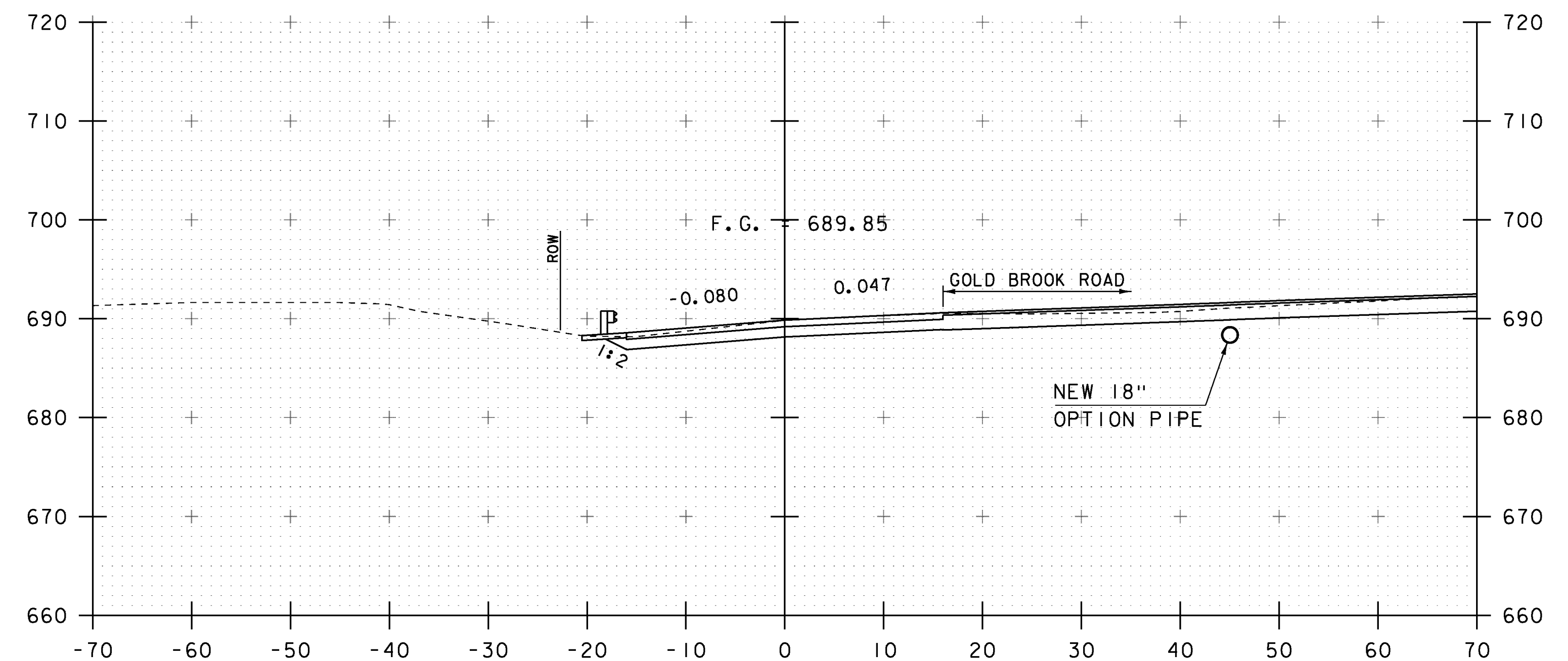
16+00



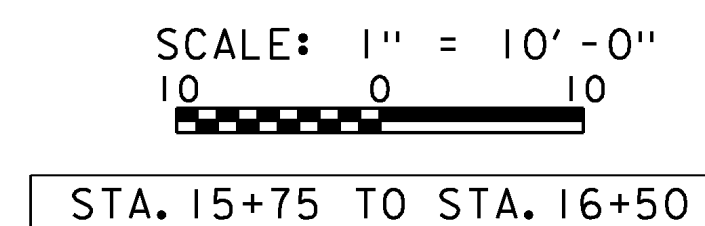
16+50



15+75



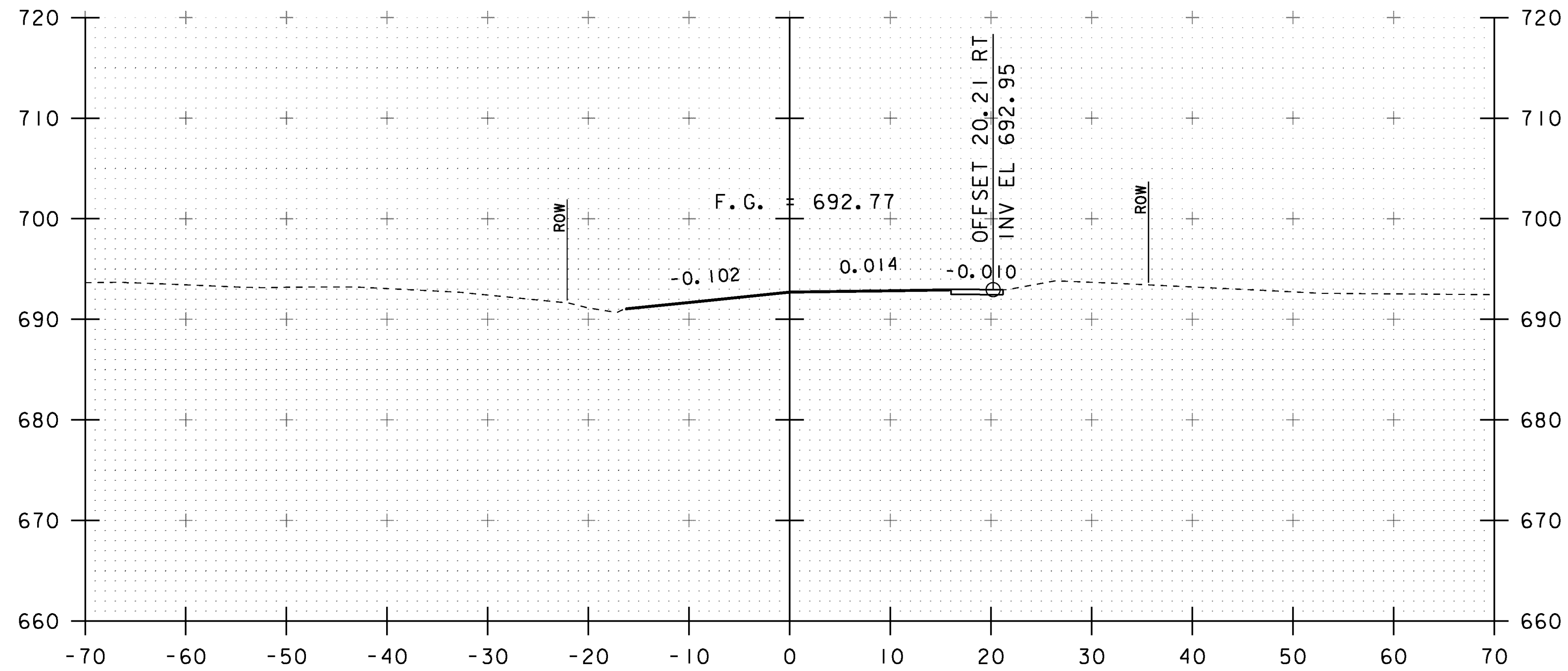
16+25



PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1 (17)

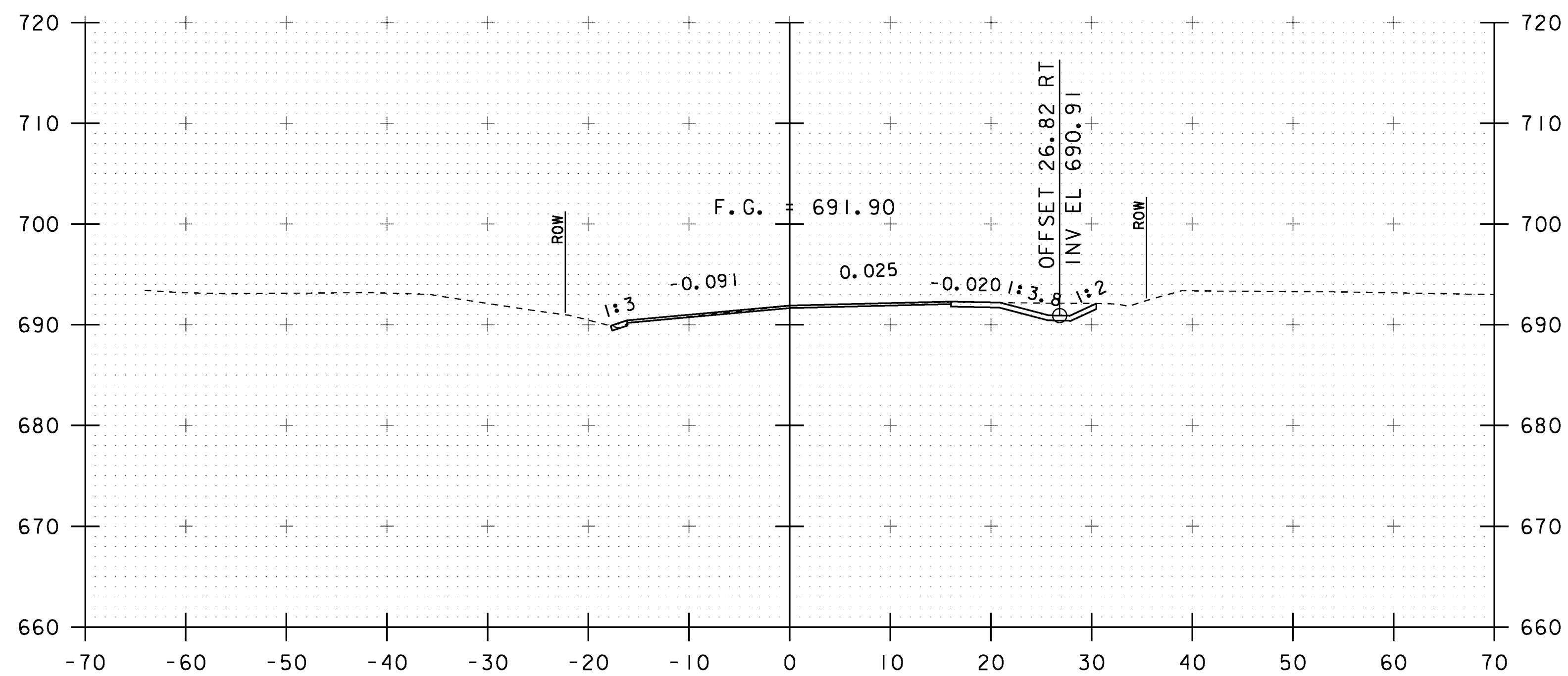
FILE NAME: s85e037xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
MAINLINE CROSS SECTIONS 4

PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 46 OF 70



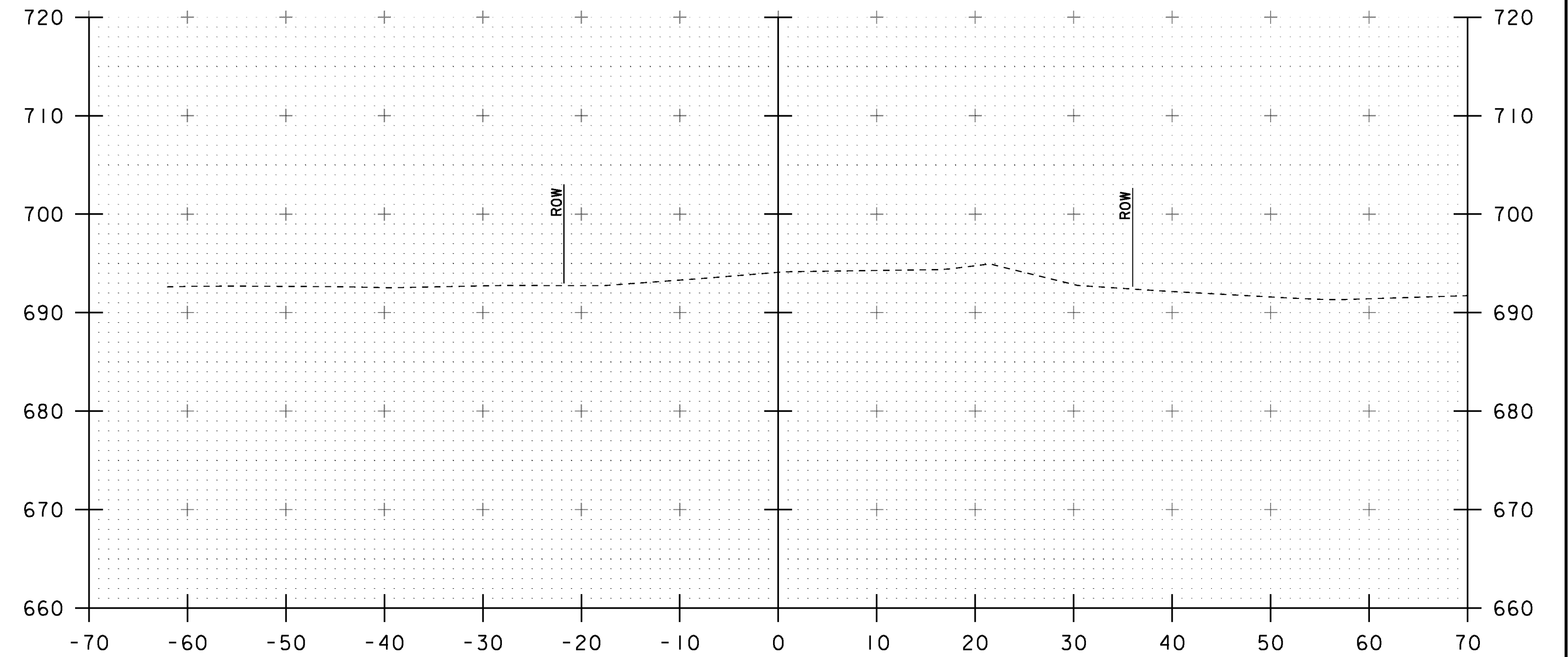
STA 17+00.00
END APPROACH
MATCH EXISTING

17+00

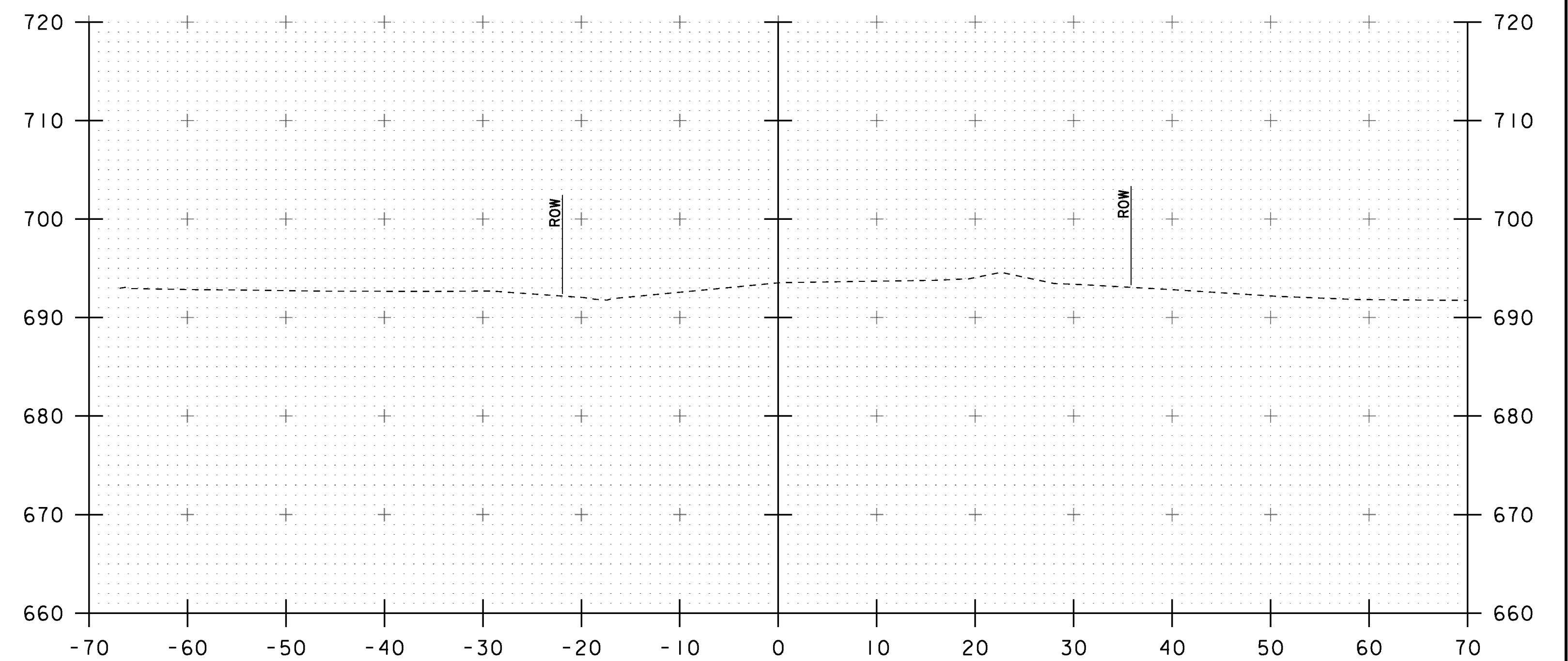


STA 16+54.6 RT - STA 17+00.0 RT
CONSTRUCT GRASS-LINED DITCH

16+75



17+50



17+25

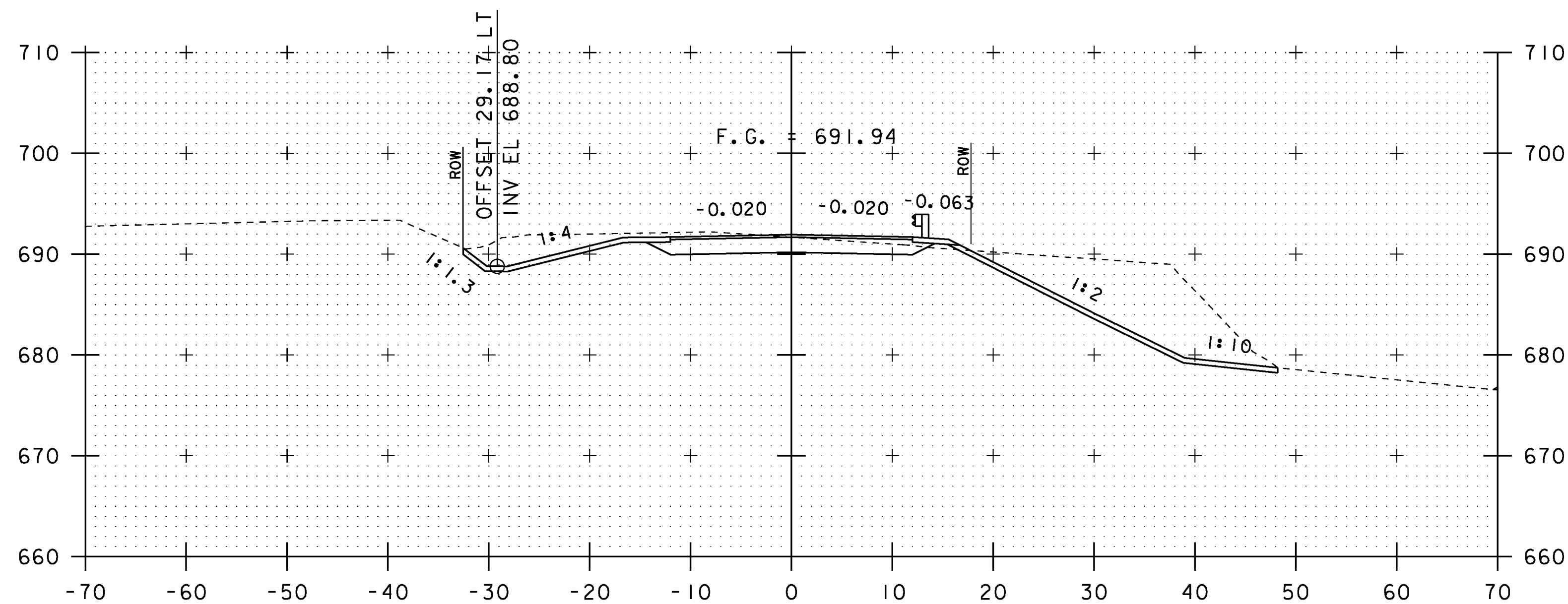
SCALE: 1" = 10' - 0"

STA. 16+75 TO STA. 17+50

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1 (17)

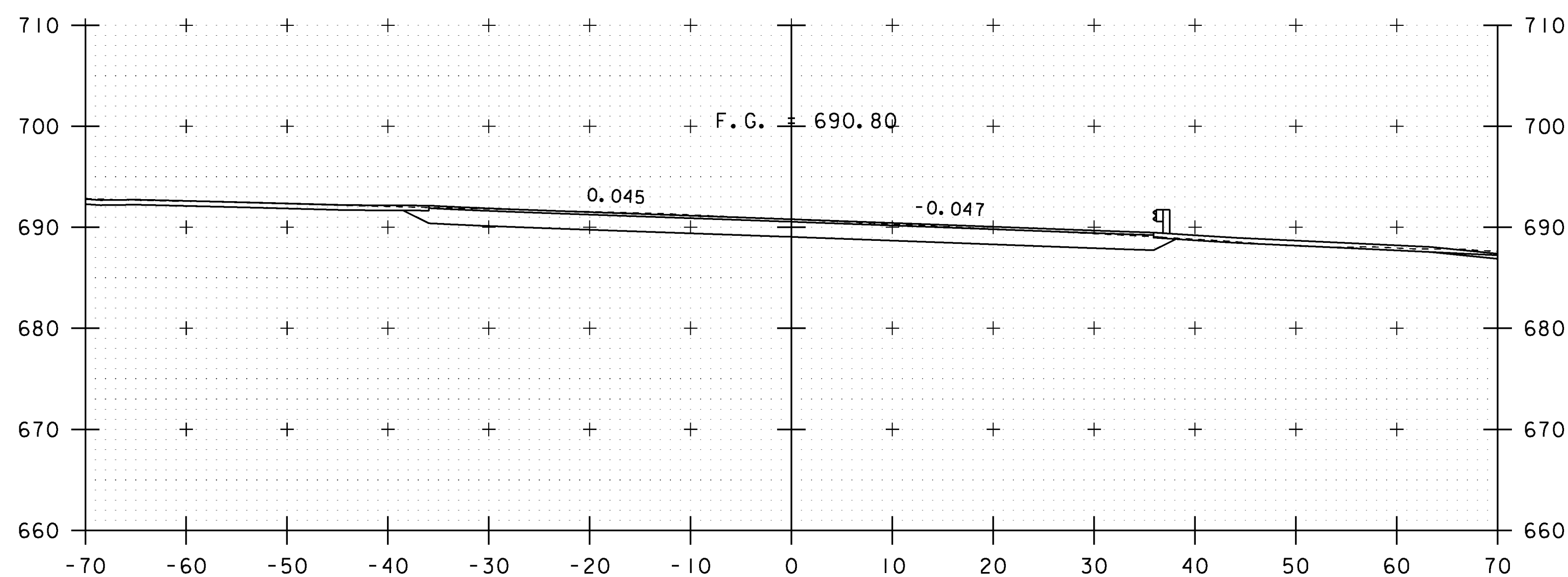
FILE NAME: s85e037xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
MAINLINE CROSS SECTIONS 5

PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 47 OF 70



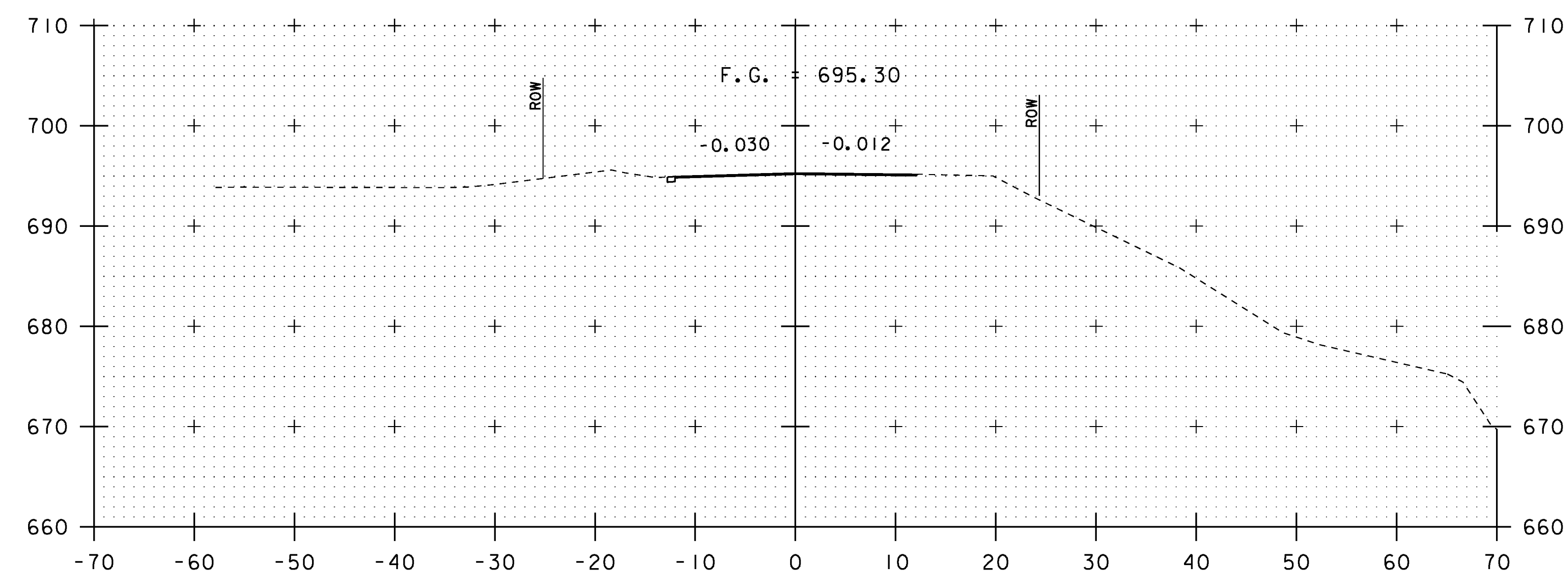
STA 0+45.0 LT - STA 1+50.0 LT
CONSTRUCT GRASS-LINED DITCH

0+50



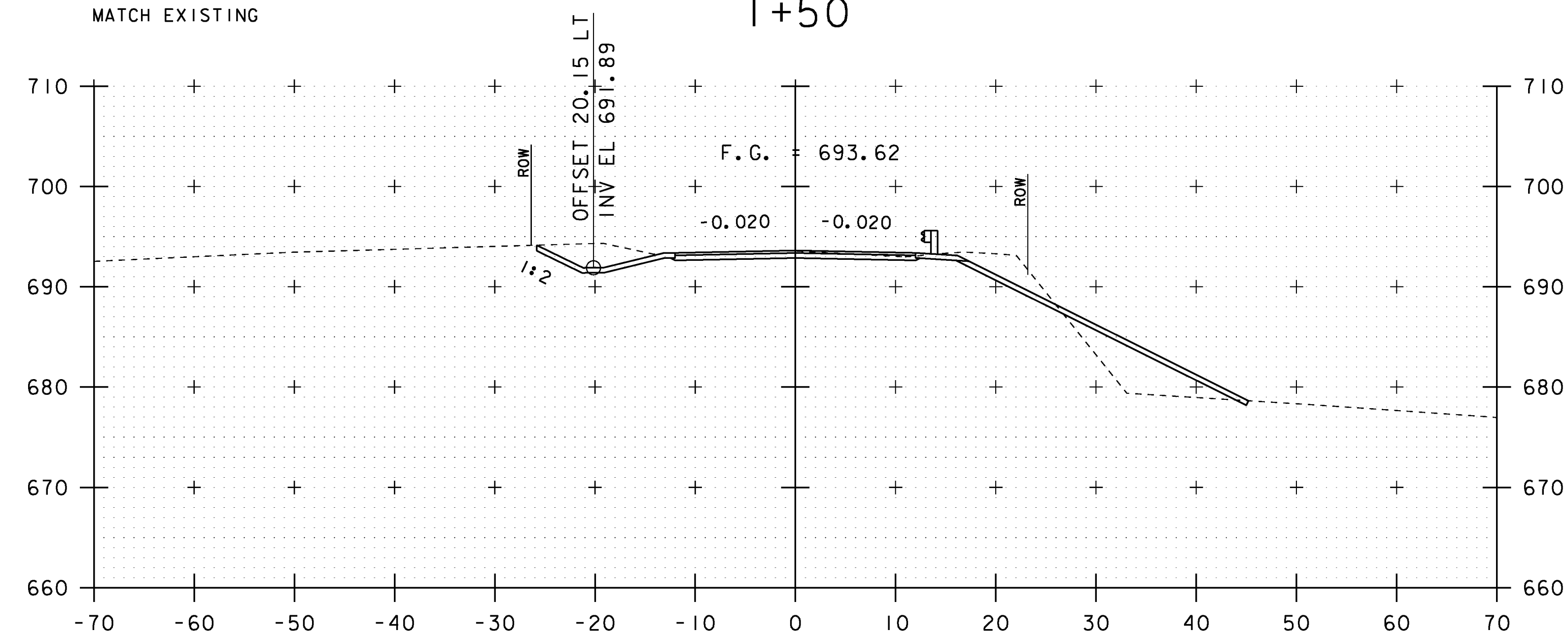
VT 100 STA 16+30.00 =
TH 52 STA 0+00.00
BEGIN SIDELINE ROADWAY

0+16



STA 1+50.00
END SIDELINE ROADWAY
MATCH EXISTING

1+50



1+00

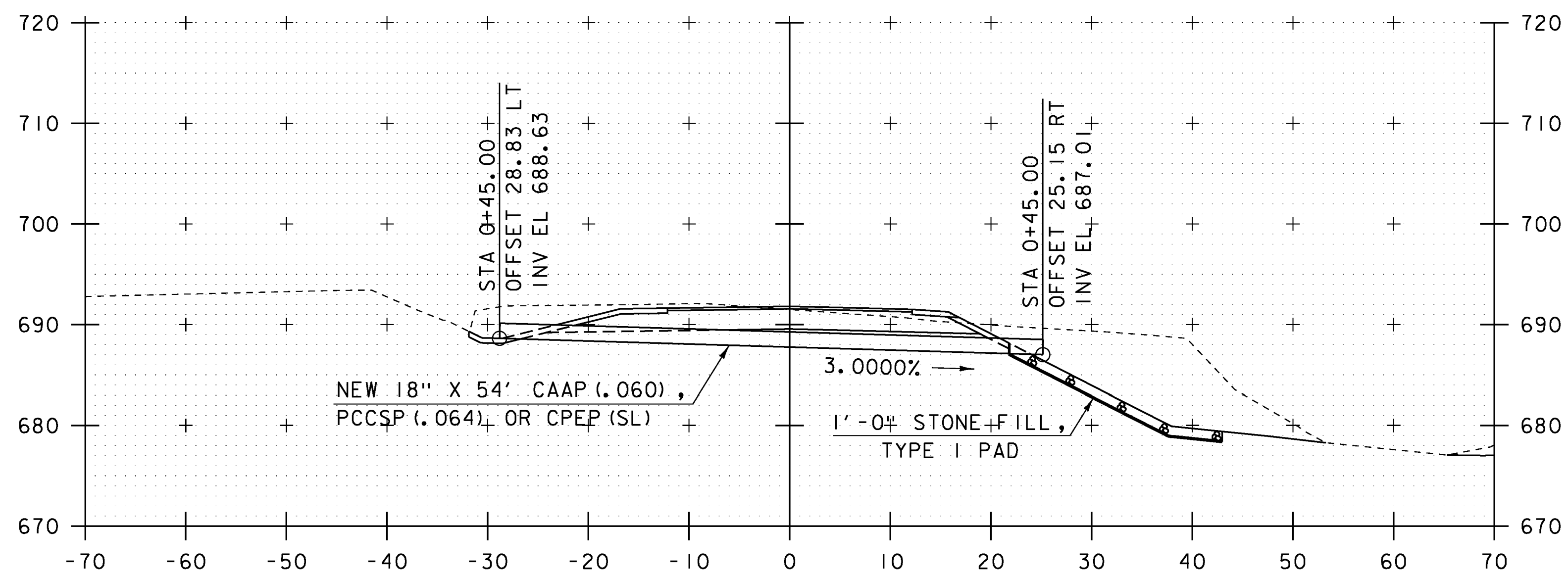
SCALE: 1" = 10' - 0"
10 0 10

STA. 0+16 TO STA. 1+50

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1 (17)

FILE NAME: s85e037xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
TH 52 CROSS SECTIONS

PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 48 OF 70



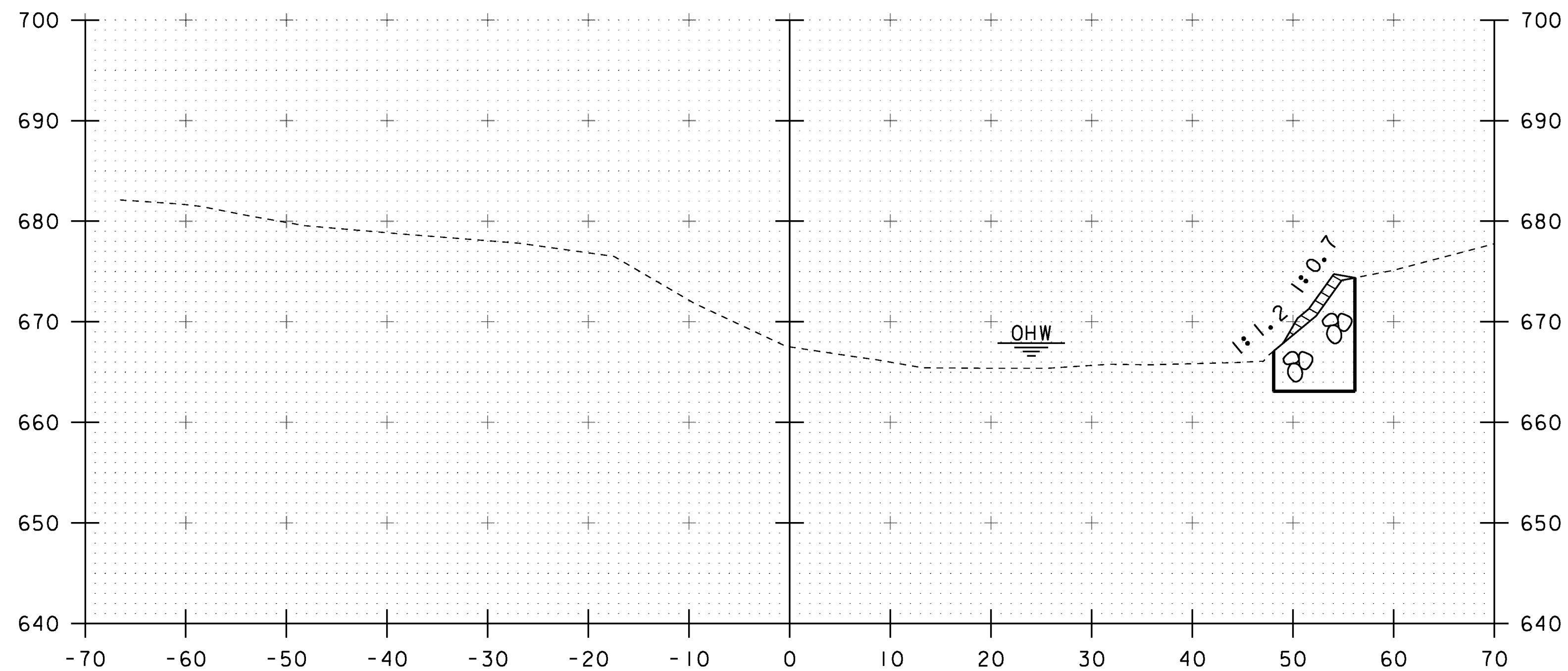
0+45.0

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PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1 (17)

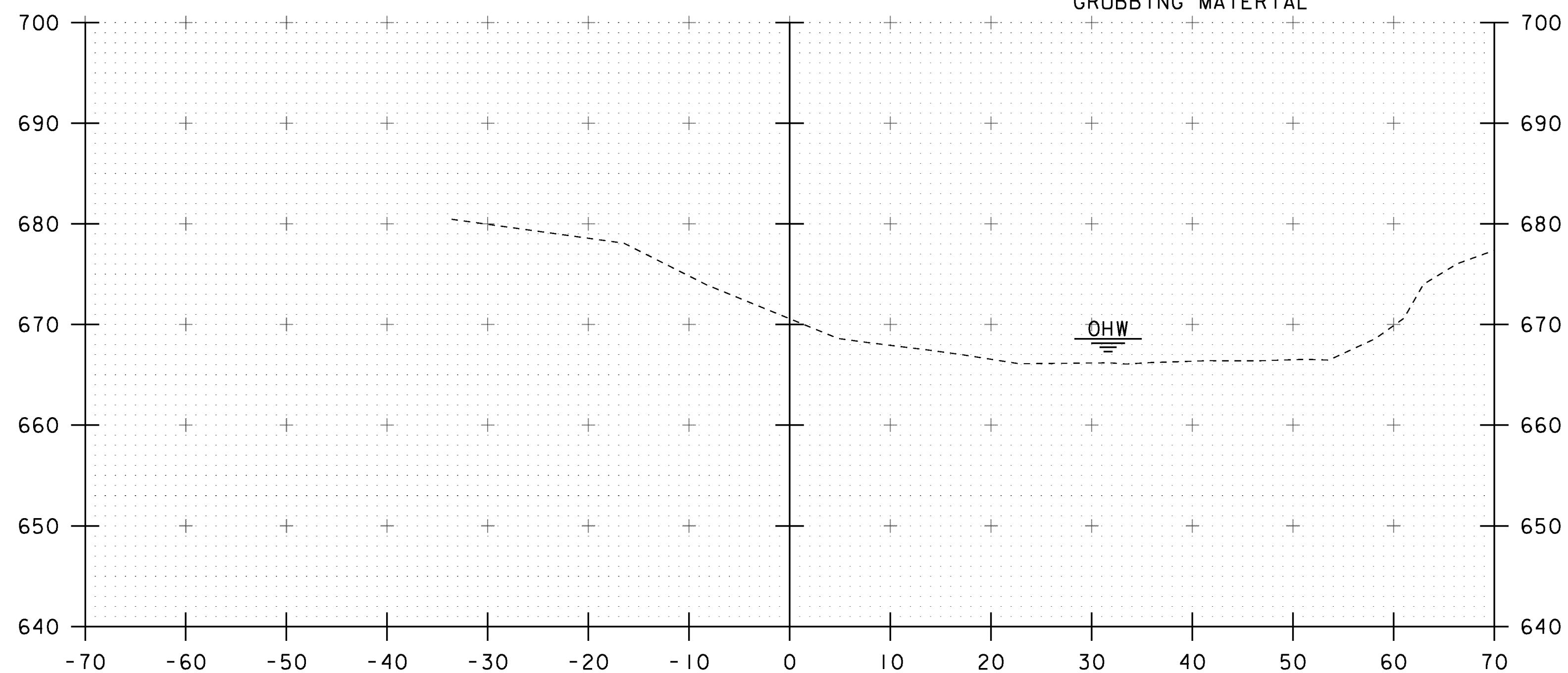
FILE NAME: s85e037xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
PIPE PROFILE

PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 49 OF 70

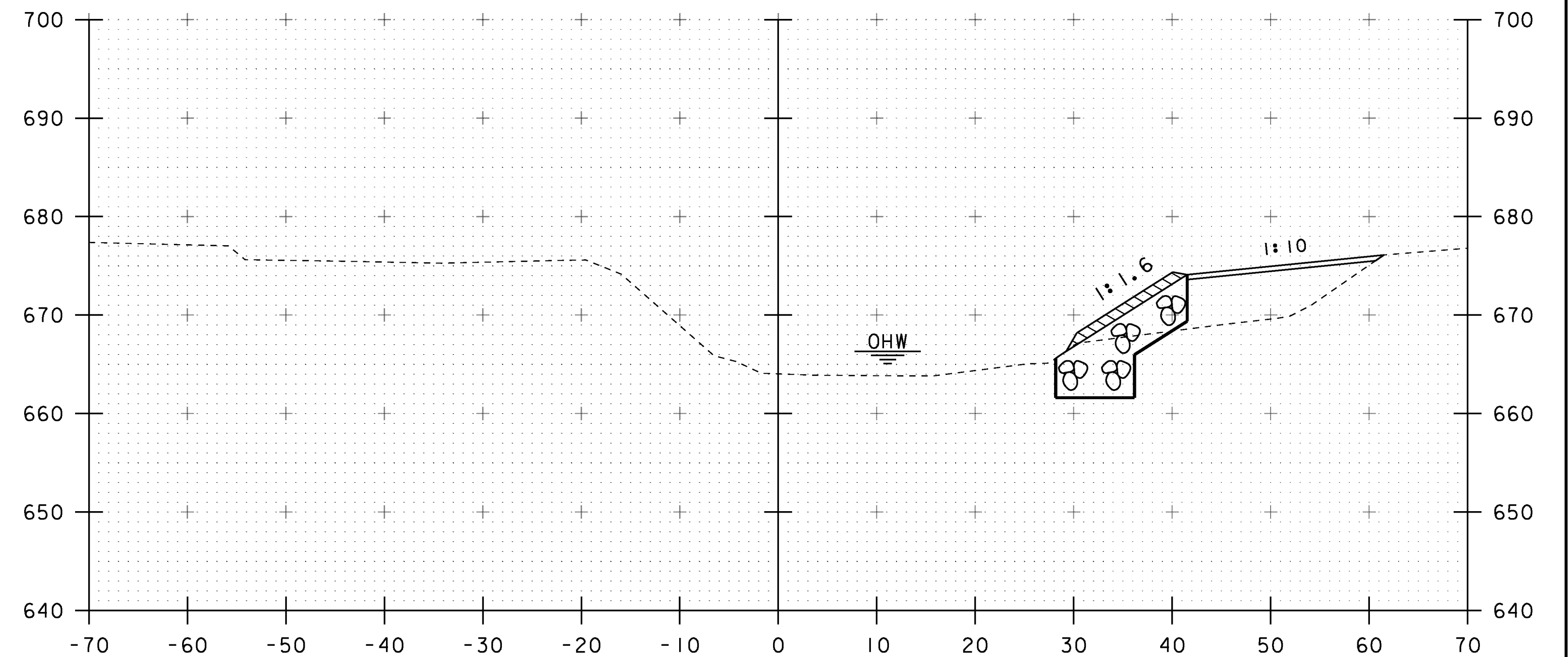


49+25

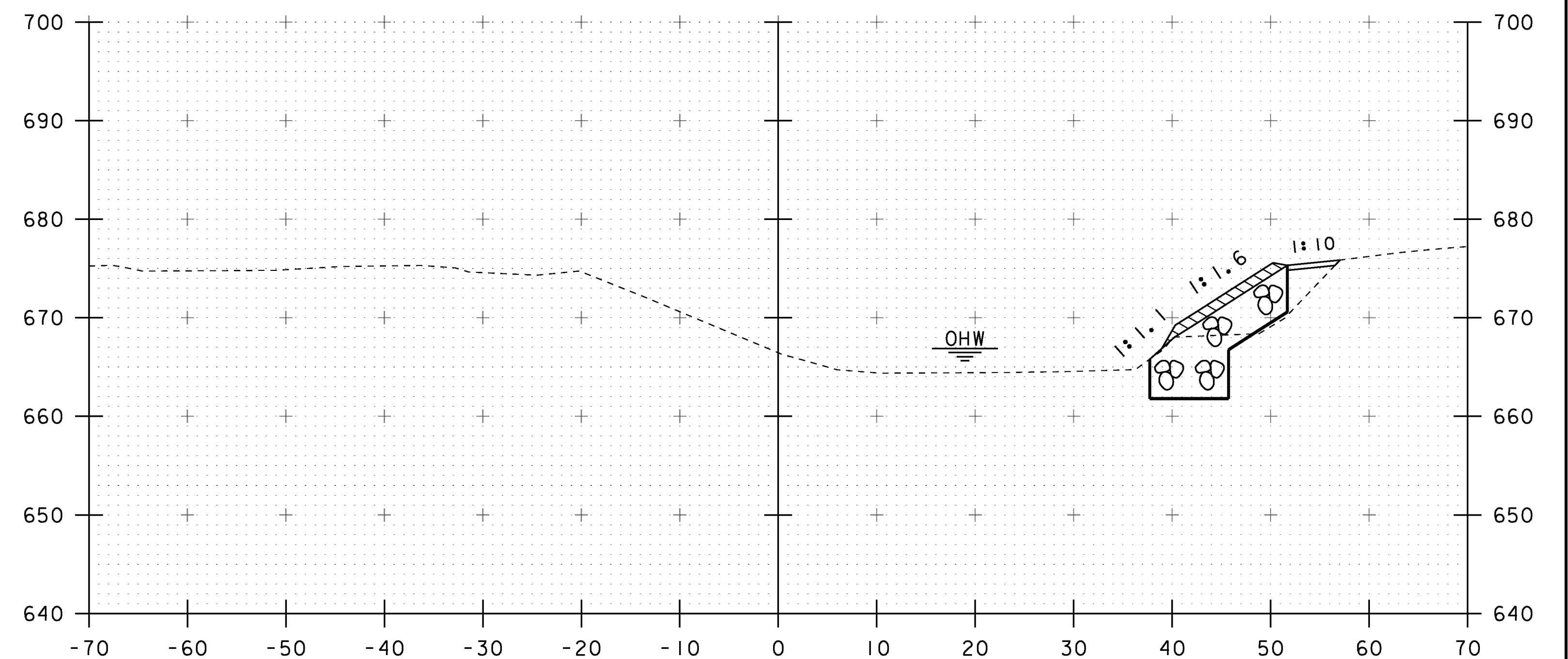
CHANNEL STA 49+18.9 RT
BEGIN UNCLASSIFIED CHANNEL EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE IV
GRUBBING MATERIAL



49+00



49+75



49+50

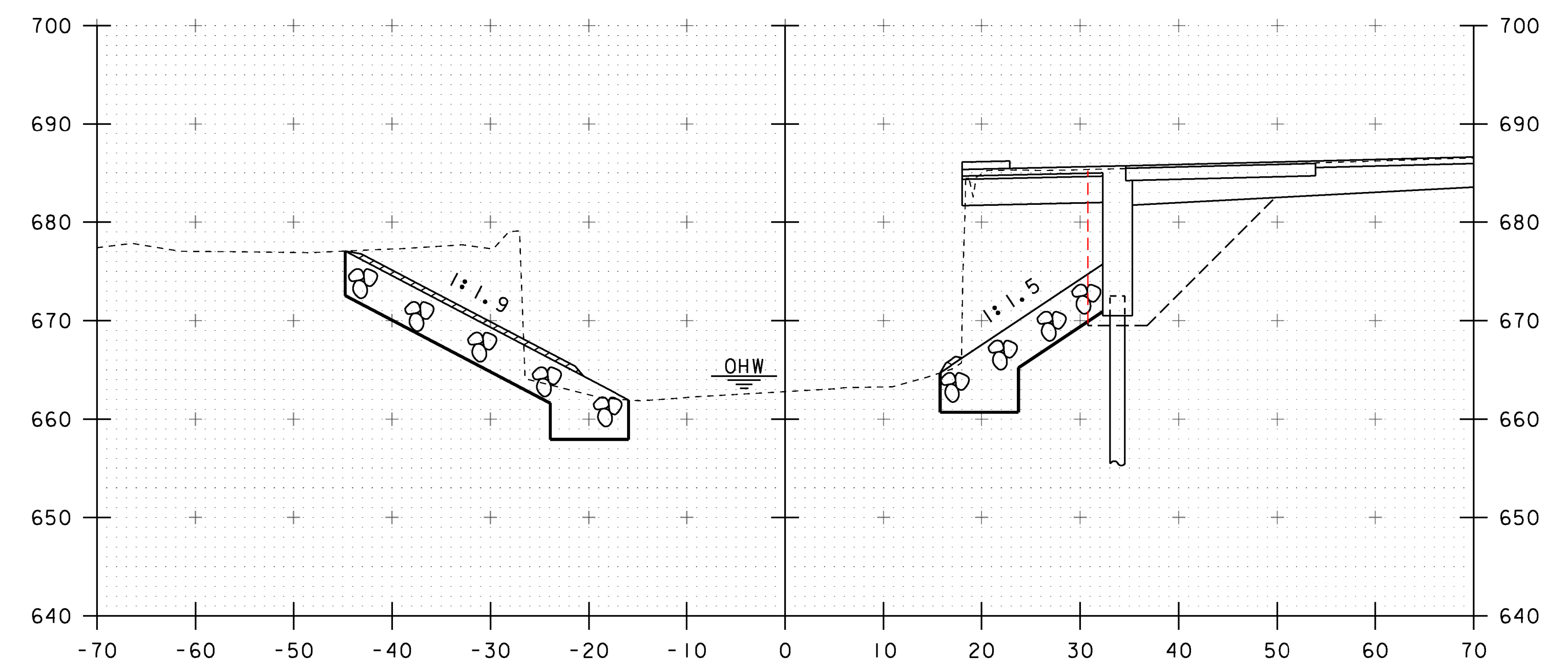
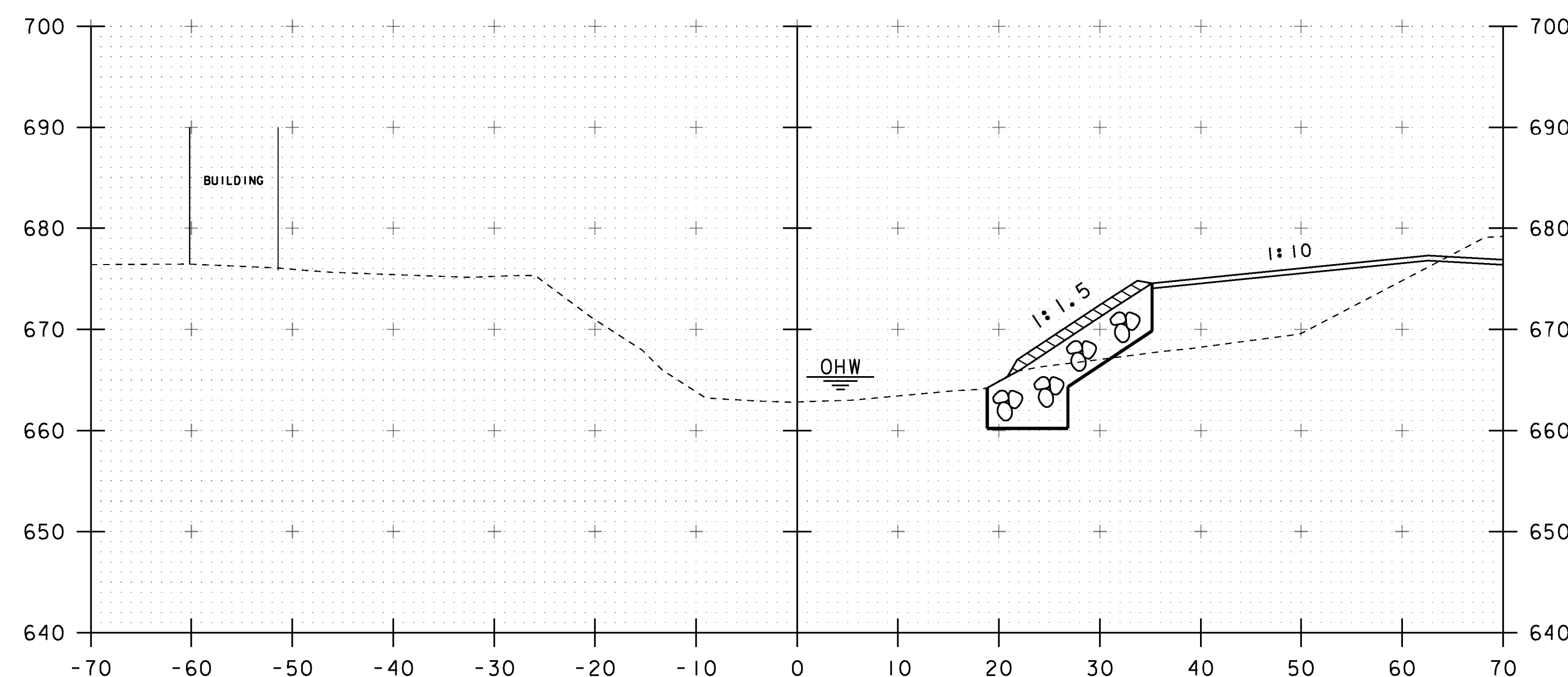
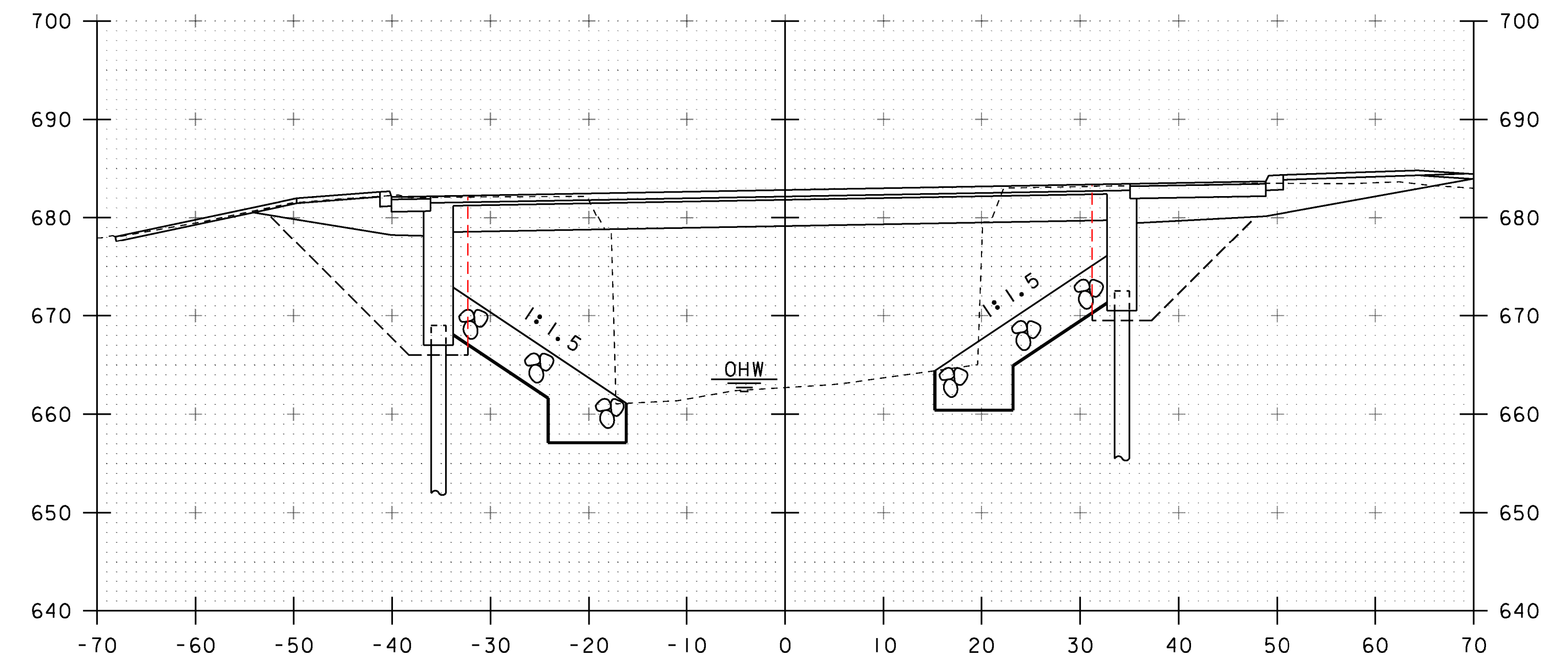
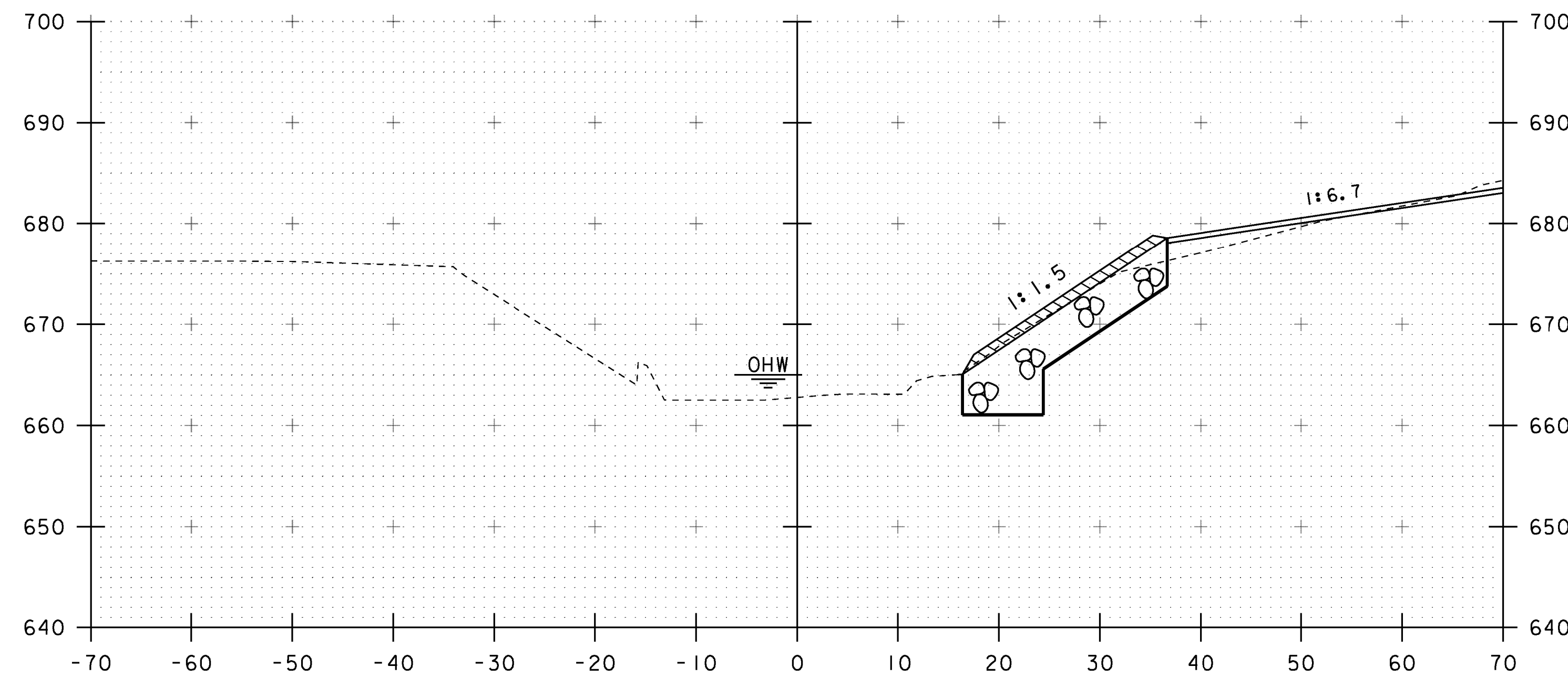
SCALE: 1" = 10' - 0"

STA. 49+00 TO STA. 49+75

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1 (I7)

FILE NAME: s85e037xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
CHANNEL CROSS SECTIONS I

PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLET
CHECKED BY: G. ROY
SHEET 50 OF 70



CHANNEL STA 50+63.5 LT
BEGIN STRUCTURE EXCAVATION
GRANULAR BACKFILL FOR STRUCTURES

CHANNEL STA 50+26.4 LT
BEGIN UNCLASSIFIED CHANNEL EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE IV
GRUBBING MATERIAL

CHANNEL STA 50+33.7 RT
BEGIN STRUCTURE EXCAVATION
GRANULAR BACKFILL FOR STRUCTURES

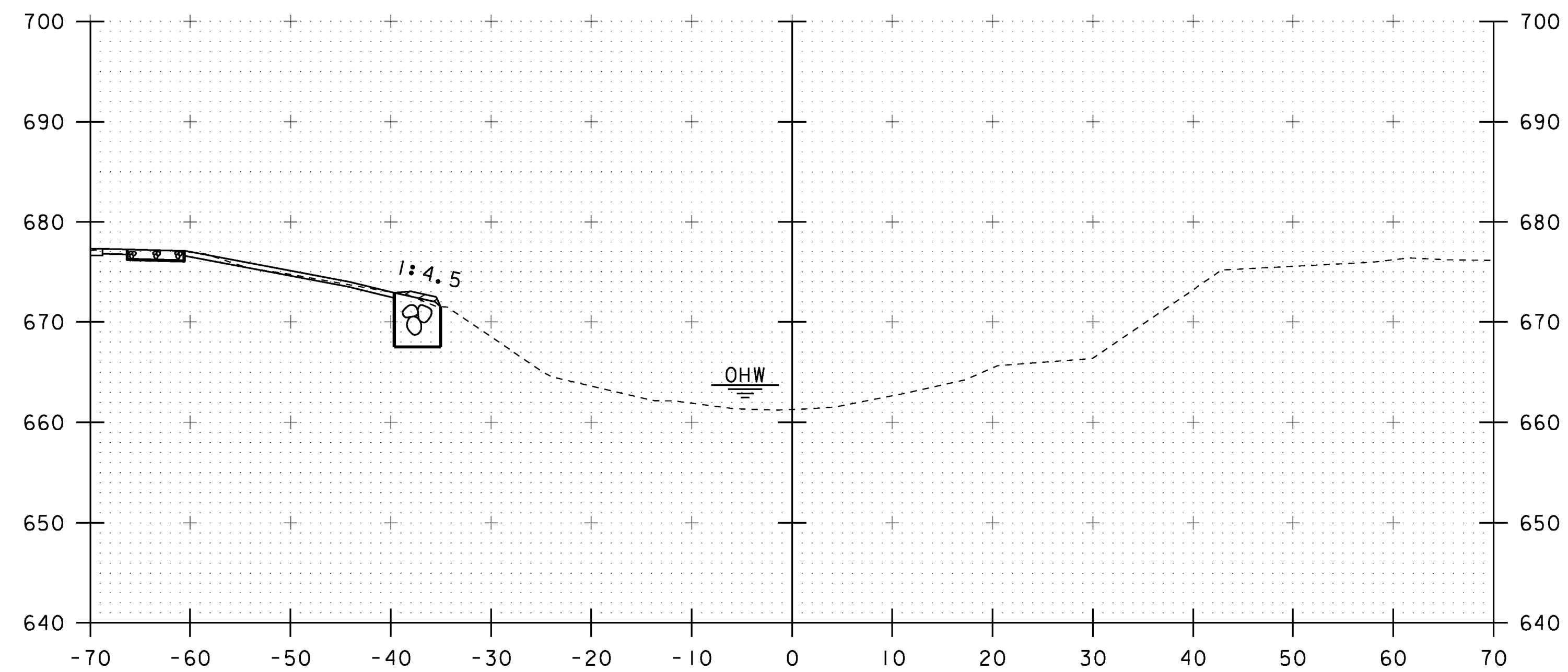
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STA. 50+00 TO STA. 50+75

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1(17)

FILE NAME: s85e037xsl.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
CHANNEL CROSS SECTIONS 2

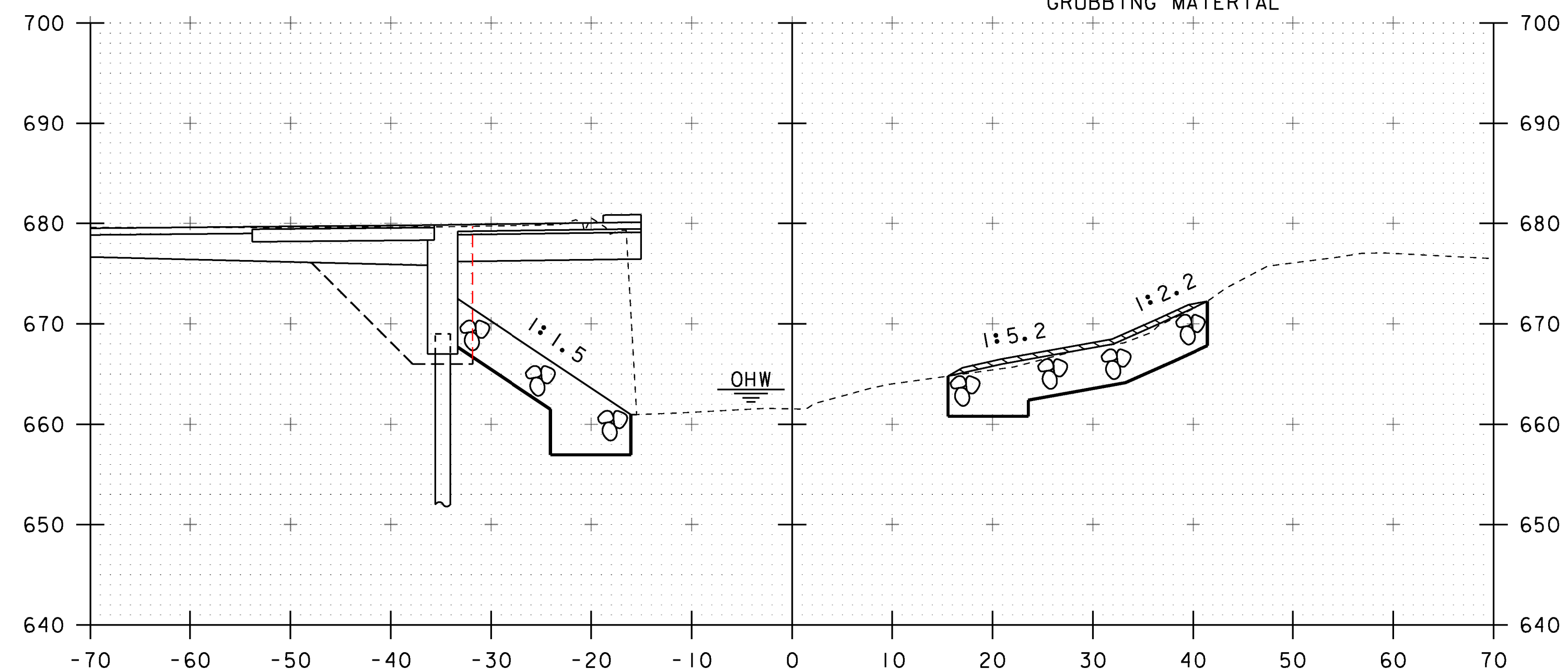
PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 51 OF 70



CHANNEL STA 51+20.6 LT
END STRUCTURE EXCAVATION
GRANULAR BACKFILL FOR STRUCTURES

51+25

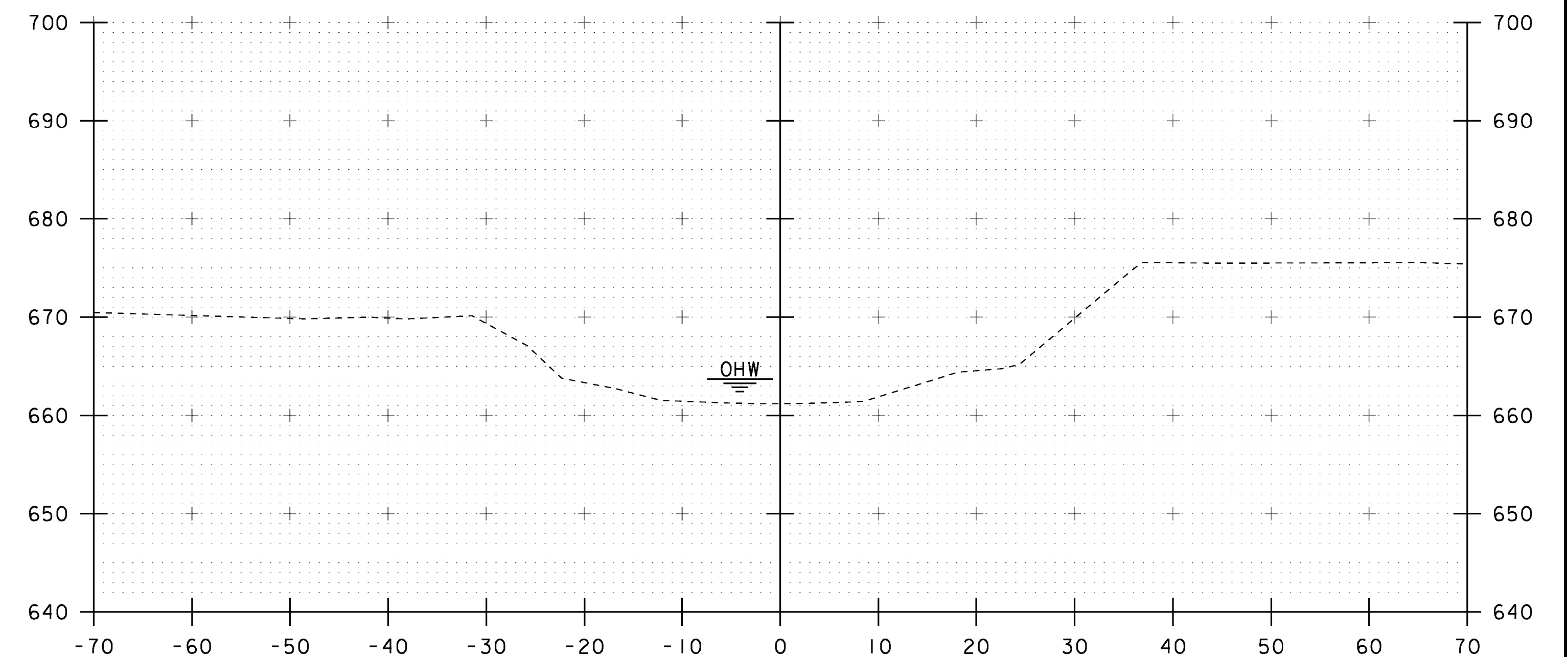
CHANNEL STA 51+07.9 RT
END UNCLASSIFIED CHANNEL EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE IV
GRUBBING MATERIAL



CHANNEL STA 50+89.5 RT
END STRUCTURE EXCAVATION
GRANULAR BACKFILL FOR STRUCTURES

51+00

CHANNEL STA 51+25.9 LT
END UNCLASSIFIED CHANNEL EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE IV
GRUBBING MATERIAL



CHANNEL STA 51+25.9 LT
END UNCLASSIFIED CHANNEL EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE IV
GRUBBING MATERIAL

51+50

CHANNEL STA 51+75.1 RT
END UNCLASSIFIED CHANNEL EXCAVATION
GEOTEXTILE UNDER STONE FILL
STONE FILL, TYPE IV
GRUBBING MATERIAL

SCALE: 1" = 10'-0"

STA. 51+00 TO STA. 51+50

PROJECT NAME: STOWE		PLOT DATE: 17-JUN-2013	
PROJECT NUMBER: BRF 029-1(17)		DRAWN BY: R. PELLETT	
FILE NAME: s85e037xsl.dgn		DESIGNED BY: H. SALLS	
CHANNEL CROSS SECTIONS 3		CHECKED BY: G. ROY	
		SHEET 52 OF 70	

EPSC PLAN NARRATIVE

1.1 PROJECT DESCRIPTION

THIS PROJECT ENTAILS THE CONSTRUCTION OF A NEW BRIDGE WITH RELATED APPROACH WORK TO REPLACE BRIDGE 208 ON VT ROUTE 100 OVER THE GOLD BROOK IN STOWE, LAMOILLE COUNTY, VERMONT. TRAFFIC WILL BE RELOCATED ON A 2-WAY TEMPORARY BRIDGE.

NOTE: AREA OF DISTURBANCE INCLUDES LIMITS OF EARTH DISTURBANCE WITHIN THE PROJECT AREA, AS WELL AS WASTE, BORROW AND STAGING AREAS, AND OTHER EARTH DISTURBING ACTIVITIES WITHIN OR DIRECTLY ADJACENT TO THE PROJECT LIMITS AS SHOWN ON THE ATTACHED EPSC PLAN.

TOTAL AREA OF DISTURBANCE AS SHOWN ON THE ATTACHED EPSC PLAN IS APPROXIMATELY 1.05 ACRES.

IT IS ANTICIPATED THAT THIS PROJECT WILL LAST ONE CONSTRUCTION SEASON.

1.2 SITE INVENTORY

1.2.1 TOPOGRAPHY

THE PROJECT SITE IS LOCATED WITHIN A RURAL VILLAGE SETTING WITH A HOUSE AND BUILDINGS IN IMMEDIATE PROXIMITY TO THE BRIDGE. THERE ARE OVERHEAD UTILITIES WHICH WILL BE RELOCATED PRIOR TO CONSTRUCTION.

1.2.2 DRAINAGE, WATERWAYS, BODIES OF WATER, AND PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

THE GOLD BROOK IS THE ONLY WATER SOURCE ON THE PROJECT SITE. THE BROOK IS CLASSIFIED AS PERENNIAL, INCISED, ALLUVIAL, AND SINUOUS, WITH A STREAM BED CONSISTING OF GRAVEL, COBBLES, AND BOULDERS. THE TRIBUTARY AREA IS 9.0 SQUARE MILES. THERE ARE SEVERAL DRAINAGE PIPES ON SITE.

1.2.3 VEGETATION

THE VEGETATION IN THE PROJECT AREA CONSISTS OF HARDWOOD TREES, BRUSH, AND GRASS. DISTURBED VEGETATION WILL BE RE-ESTABLISHED WITH STANDARD SEED AND MULCH PRACTICES.

1.2.4 SOILS

ALL SOIL DATA CAME FROM THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE FOR THE COUNTY OF LAMOILLE, VERMONT.

CROGHAN LOAMY FINE SAND	COLTON-DUXBURY COMPLEX
2-8% SLOPES	2-8% SLOPES
HYDRO SOIL GROUP B	HYDRO SOIL GROUP A
K-FACTOR 0.17	K-FACTOR 0.17/0.32

NOTE: K-VALUES GENERALLY INDICATE THE FOLLOWING:
0.0-0.23 = LOW EROSION POTENTIAL
0.24-0.36 = MODERATE EROSION POTENTIAL
0.37 AND HIGHER = HIGH EROSION POTENTIAL

1.2.5 SENSITIVE RESOURCE AREAS

CRITICAL HABITATS: GOLD BROOK IS DESIGNATED A COLD WATER FISHERIES.
ARCHEOLOGICAL AREAS: THE GOLD BROOK CREAMERY BUILDING IS LISTED ON THE STATE REGISTER OF HISTORICAL PLACES (No. 0808-104). CLEARED FOR ARCHEOLOGY 11/13/2008, UVM ARA REPORT.
HISTORICAL PLACES: ADJACENT TO, BUT NOT WITHIN THE PROJECT LIMITS. SEE ARCHEOLOGICAL AREAS ABOVE.
PRIME AGRICULTURAL LAND: ADJACENT TO, BUT NOT WITHIN THE PROJECT LIMITS.
THREATENED AND ENDANGERED SPECIES: NO
WATER RESOURCE: GOLD BROOK
WETLANDS: NO

1.3 RISK EVALUATION

THIS PROJECT FALLS UNDER THE JURISDICTION OF GENERAL PERMIT 3-9020 FOR STORMWATER RUNOFF FROM CONSTRUCTION SITES FOR LOW RISK SITES. ANY MODIFICATIONS TO THE PROJECT THAT INCREASE THE RISK TO ENVIRONMENTAL RESOURCES SHALL BE EVALUATED IN ACCORDANCE WITH THE PERMIT REQUIREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ADDITIONAL PERMITTING.

1.4 EROSION PREVENTION AND SEDIMENT CONTROL

THE EROSION CONTROL PLANS ARE MEANT AS A GUIDELINE FOR PREVENTING EROSION AND CONTROLLING SEDIMENT TRANSPORT. THE PRINCIPLES OUTLINED IN THIS NARRATIVE CONSIST OF APPLYING MEASURES THROUGHOUT CONSTRUCTION OF THE PROJECT IN ORDER TO MINIMIZE SEDIMENT TRANSPORT TO THE RECEIVING WATERS. THE MEASURES INCLUDE STABILIZATION AND STRUCTURAL PRACTICES, STORM WATER CONTROLS AND OTHER POLLUTION PREVENTION PRACTICES. REFER TO THE LOW RISK SITE HANDBOOK AND APPROPRIATE DETAIL SHEETS FOR SPECIFIC GUIDANCE AND CONSTRUCTION DETAILING.

ALL MEASURES SHALL BE REGULARLY MAINTAINED AND SHALL BE CHECKED FOR SEDIMENT BUILD-UP. SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED SITE WHERE IT WILL NOT BE SUBJECT TO EROSION.

1.4.1 MARK SITE BOUNDARIES
SITE BOUNDARIES AND AREAS CONSTRUCTION EQUIPMENT CAN ACCESS SHALL BE DELINEATED.

PROJECT DEMARCATION FENCING (PDF) SHALL BE USED TO PHYSICALLY MARK SITE BOUNDARIES. BECAUSE THIS PROJECT FALLS UNDER THE CGP 3-9020, BARRIER FENCE SHALL BE USED INSTEAD OF PROJECT DEMARCATION FENCE WITHIN 100 FEET OF A WATER RESOURCE (STREAM, BROOK, LAKE, POND, WETLAND, ETC.). THIS MEASURE LIMITS THE AREA THAT CAN BE DISTURBED AND EXPOSED TO EROSIVE EFFECTS.

PROJECT DEMARCATION FENCING AND BARRIER FENCE SHALL BE INSTALLED AS SHOWN ON THE PLANS.

1.4.2 LIMIT DISTURBANCE AREA
PREVENTING INITIAL SOIL EROSION BY MINIMIZING THE EXPOSED AREA IS MUCH MORE EFFECTIVE THAN TREATING ERODED SEDIMENT. EARTH DISTURBANCE CAN BE MINIMIZED THROUGH CONSTRUCTION PHASING BY ONLY OPENING UP EARTH AS NECESSARY. THIS CAN LIMIT THE AREA THAT WILL BE DISTURBED AND EXPOSED TO EROSION. EMPLOY TEMPORARY CONSTRUCTION STABILIZATION PRACTICES IN INCREMENTAL STAGES AS PHASES CHANGE. FOR PROJECTS WHICH FALL UNDER THE CONSTRUCTION GENERAL PERMIT, ONLY THE ACREAGE LISTED ON THE PERMIT AUTHORIZATION MAY BE EXPOSED AT ANY GIVEN TIME.

MAINTAINING VEGETATED BUFFERS ALONG STREAM BANKS, WETLANDS OR OTHER SENSITIVE AREAS IS A CRUCIAL EROSION AND SEDIMENT CONTROL MEASURE THAT SHOULD BE ESTABLISHED WHEREVER POSSIBLE.

1.4.3 SITE ENTRANCE/EXIT STABILIZATION
TRACKING OF SEDIMENT ONTO PUBLIC HIGHWAYS SHALL BE MINIMIZED TO REDUCE THE POTENTIAL FOR RUNOFF ENTERING RECEIVING WATERS. INSTALLATION SHALL COINCIDE WITH THE CONTRACTOR’S PROGRESS SCHEDULE.

STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED ANYWHERE EQUIPMENT WILL BE GOING FROM AREAS OF EXPOSED SOILS TO PAVED SURFACES.

1.4.4 INSTALL SEDIMENT BARRIERS
SEDIMENT BARRIERS SHALL BE UTILIZED TO INTERCEPT RUNOFF AND ALLOW SUSPENDED SEDIMENT TO SETTLE OUT. THEY SHALL BE INSTALLED PRIOR TO ANY UP SLOPE WORK.

SILT FENCE WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN. BECAUSE THIS PROJECT FALLS UNDER THE CGP 3-9020, WOVEN WIRE REINFORCED SILT FENCE SHALL BE USED INSTEAD OF SILT FENCE WITHIN 100 FEET UPSLOPE OF RECEIVING WATERS.

FILTER CURTAIN WILL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

1.4.5 DIVERT UPLAND RUNOFF
DIVERSIONARY MEASURES SHALL BE USED TO INTERCEPT RUNOFF FROM ABOVE THE CONSTRUCTION AND DIRECT IT AROUND THE DISTURBED AREA SO THAT CLEAN WATER DOES NOT BECOME MUDDIED WHILE TRAVELING OVER EXPOSED SOILS ON THE CONSTRUCTION SITE.

DIVERSIONARY MEASURES ARE NOT ANTICIPATED ON THIS PROJECT.

1.4.6 SLOW DOWN CHANNELIZED RUNOFF
CHECK STRUCTURES SHALL BE UTILIZED TO REDUCE THE VELOCITY, AND THUS THE EROSIVE POTENTIAL, OF CONCENTRATED FLOW IN CHANNELS.

PIPE INLET PROTECTION SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

CHECK DAMS SHALL BE INSTALLED AS PROPOSED ON THE EPSC PLAN.

1.4.7 CONSTRUCT PERMANENT CONTROLS
PERMANENT STORMWATER TREATMENT DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH PERMIT CONDITIONS.

STONE FILL TYPE I SHALL BE PLACED AS SHOWN ON THE PLANS.

UPON PROJECT COMPLETION, THE CHANNEL WILL BE ARMORED WITH STONE FILL TYPE IV, AS SPECIFIED ON THE PLANS.

1.4.8 STABILIZE EXPOSED SOILS DURING CONSTRUCTION
ALL AREAS OF DISTURBANCE MUST HAVE TEMPORARY STABILIZATION IN PLACE WITHIN 48 HOURS OF DISTURBANCE OR IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT 3-9020 AUTHORIZATION.

SURFACE ROUGHENING OF ALL EXPOSED SLOPES, COMBINED WITH TEMPORARY MULCHING, SHALL BE UTILIZED ON A REGULAR BASIS. BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED TO STABILIZE ALL SLOPES STEEPER THAN 1:3.

THE FORECAST OF RAINFALL EVENTS SHALL TRIGGER IMMEDIATE PROTECTION OF EXPOSED SOILS.

1.4.9 WINTER STABILIZATION
VARIOUS MEASURES SPECIFIC TO WINTER MAY BE NECESSARY SHOULD THE PROJECT EXTEND INTO WINTER (OCTOBER 15 THROUGH APRIL 15). REFER TO THE LOW RISK SITE HANDBOOK FOR GUIDANCE.

WINTER WORK IS NOT ANTICIPATED.

1.4.10 STABILIZE SOIL AT FINAL GRADE
EXPOSED SOIL MUST BE STABILIZED WITHIN 48 HOURS OF REACHING FINAL GRADE.

SEED, MULCH, FERTILIZER AND LIME SHALL BE USED TO ESTABLISH PERMANENT VEGETATION. FOR SLOPES STEEPER THAN 1:3, BIODEGRADABLE EROSION CONTROL MATTING OR AN EQUIVALENT SHALL BE USED INSTEAD OF MULCH.

1.4.11 DE-WATERING ACTIVITIES
DISCHARGE FROM DEWATERING ACTIVITIES THAT FLOWS OFF OF THE CONSTRUCTION SITE MUST NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF THE VERMONT WATER QUALITY STANDARDS.

DEWATERING ACTIVITIES ARE NOT ANTICIPATED ON THIS PROJECT.

1.4.12 INSPECT YOUR SITE
INSPECT THE PROJECT SITE BASED ON SPECIAL PROVISION REQUIREMENTS OR CONSTRUCTION GENERAL PERMIT AUTHORIZATION STIPULATIONS.

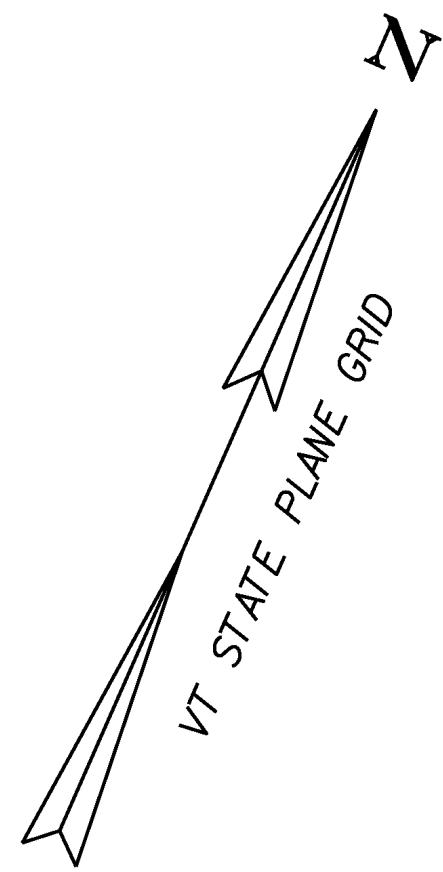
1.5 SEQUENCE AND STAGING

THIS SECTION WILL BE DEVELOPED BY THE CONTRACTOR USING THE GUIDANCE OUTLINED IN THE VTRANS EPSC PLAN CONTRACTOR CHECKLIST.

1.5.1 CONSTRUCTION SEQUENCE

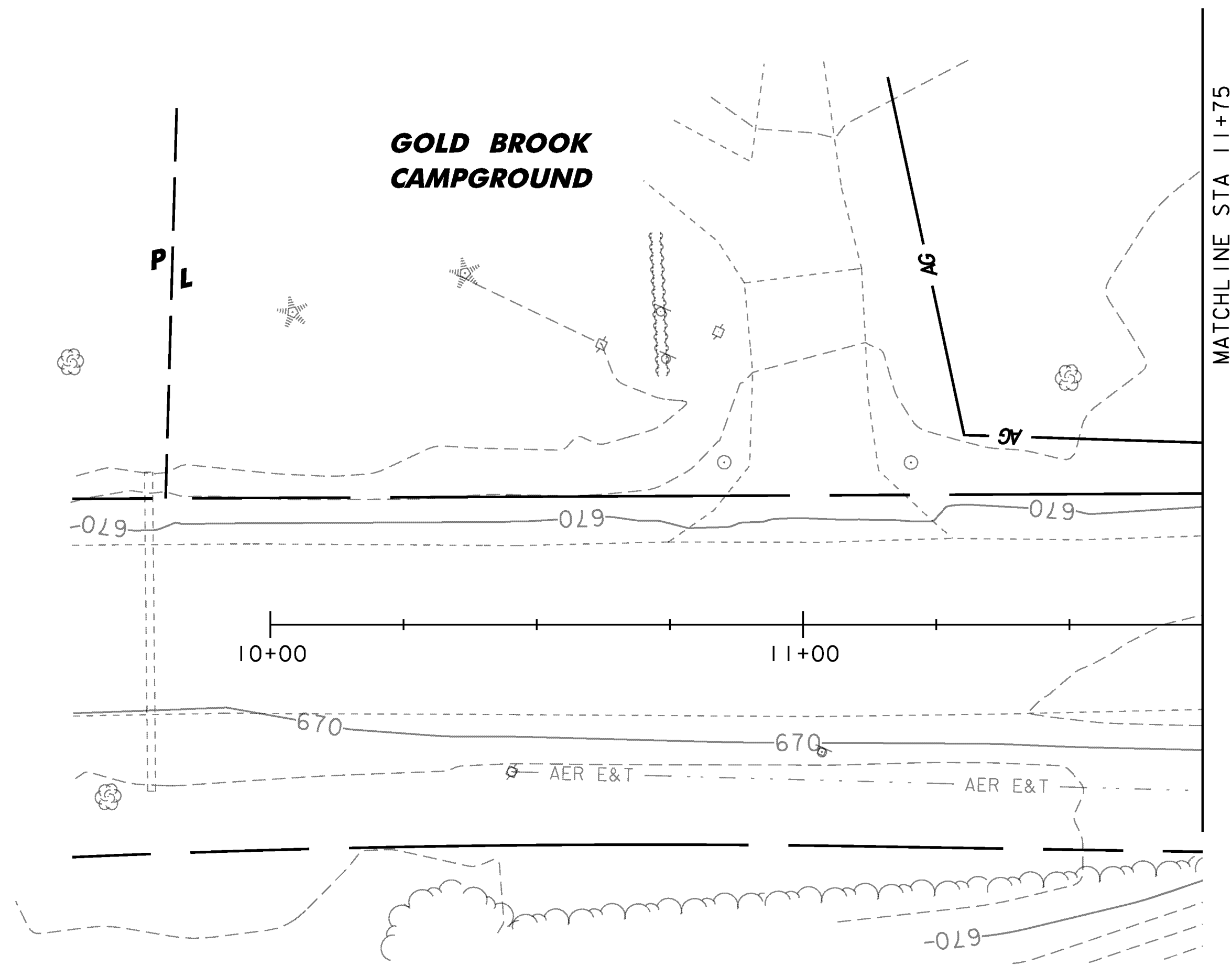
1.5.2 OFF-SITE ACTIVITIES
IN ADDITION TO THE CONTRACTOR CHECKLIST ANY ACTIVITIES OUTSIDE THE CONSTRUCTION LIMITS SHALL FOLLOW SUBSECTIONS 105.25- 105.29 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.

PROJECT NAME: STOWE	
PROJECT NUMBER: BRF 029-1 (17)	
FILE NAME: s85e037EPSC_narrative.dgn	PLOT DATE: 17-JUN-2013
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: G. ROY
EPSC NARRATIVE	SHEET 53 OF 70



**NF
NICHOLS,
KATHRYN K.**

**GOLD BROOK
CAMPGROUND**



**NF
NICHOLS,
JOHN P.**

LEGEND

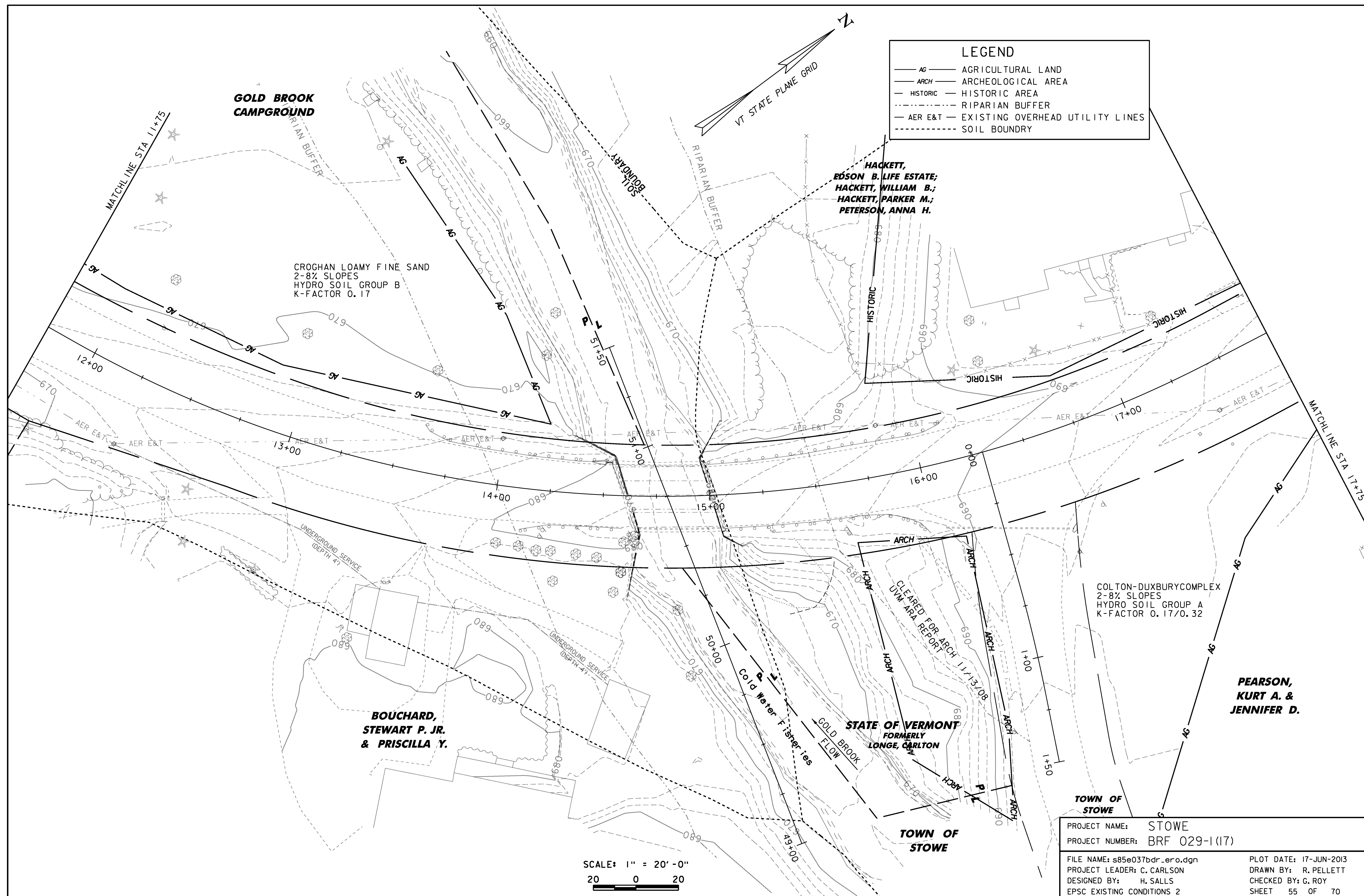
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- ARCH — ARCHEOLOGICAL AREA
- HISTORIC — HISTORIC AREA
- RIPARIAN BUFFER
- AER E&T — EXISTING OVERHEAD UTILITY LINES

SCALE: 1" = 20' - 0"
20 0 20

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1 (17)

FILE NAME: s85e037bdr_ero.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
EPSC EXISTING CONDITIONS 1

PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 54 OF 70



SOIL BOUNDARY

HACKETT, EDSON B. LIFE ESTATE; HACKETT, WILLIAM B.; HACKETT, PARKER M.; PETERSON, ANNA H.

NF PIKE, LESLIE C. & CLAIRE J. REVOCABLE TRUST

PEARSON, KURT A. & JENNIFER D.

NF PIKE, LESLIE C. & CLAIRE J. REVOCABLE TRUST

LEGEND

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- RIPARIAN BUFFER
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SCALE: 1" = 20'-0"

PROJECT NAME: STOWE

PROJECT NUMBER: BRF 029-1(17)

FILE NAME: s85e037bdr_ero.dgn

PLOT DATE: 17-JUN-2013

PROJECT LEADER: C. CARLSON

DRAWN BY: R. PELLETT

DESIGNED BY: H. SALLS

CHECKED BY: G. ROY

EPSC EXISTING CONDITIONS 3

SHEET 56 OF 70

SOIL BOUNDARY

HACKETT, EDSON B. LIFE ESTATE; HACKETT, WILLIAM B.; HACKETT, PARKER M.; PETERSON, ANNA H.

NF PIKE, LESLIE C. & CLAIRE J. REVOCABLE TRUST

PEARSON, KURT A. & JENNIFER D.

NF PIKE, LESLIE C. & CLAIRE J. REVOCABLE TRUST

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SCALE: 1" = 20'-0"

PROJECT NAME: STOWE

PROJECT NUMBER: BRF 029-1(17)

FILE NAME: s85e037bdr_ero.dgn

PLOT DATE: 17-JUN-2013

PROJECT LEADER: C. CARLSON

DRAWN BY: R. PELLETT

DESIGNED BY: H. SALLS

CHECKED BY: G. ROY

EPSC EXISTING CONDITIONS 3

SHEET 56 OF 70

SOIL BOUNDARY

HACKETT, EDSON B. LIFE ESTATE; HACKETT, WILLIAM B.; HACKETT, PARKER M.; PETERSON, ANNA H.

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- AER E&T — EXISTING OVERHEAD UTILITY LINES

SCALE: 1" = 20'-0"

PROJECT NAME: STOWE

PROJECT NUMBER: BRF 029-1(17)

FILE NAME: s85e037bdr_ero.dgn

PLOT DATE: 17-JUN-2013

PROJECT LEADER: C. CARLSON

DRAWN BY: R. PELLETT

DESIGNED BY: H. SALLS

CHECKED BY: G. ROY

EPSC EXISTING CONDITIONS 3

SHEET 56 OF 70

SOIL BOUNDARY

HACKETT, EDSON B. LIFE ESTATE; HACKETT, WILLIAM B.; HACKETT, PARKER M.; PETERSON, ANNA H.

NF PIKE, LESLIE C. & CLAIRE J. REVOCABLE TRUST

PEARSON, KURT A. & JENNIFER D.

NF PIKE, LESLIE C. & CLAIRE J. REVOCABLE TRUST

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- HISTORIC — HISTORIC AREA
- RIPARIAN BUFFER
- AER E&T — EXISTING OVERHEAD UTILITY LINES

SCALE: 1" = 20'-0"

PROJECT NAME: STOWE

PROJECT NUMBER: BRF 029-1(17)

FILE NAME: s85e037bdr_ero.dgn

PLOT DATE: 17-JUN-2013

PROJECT LEADER: C. CARLSON

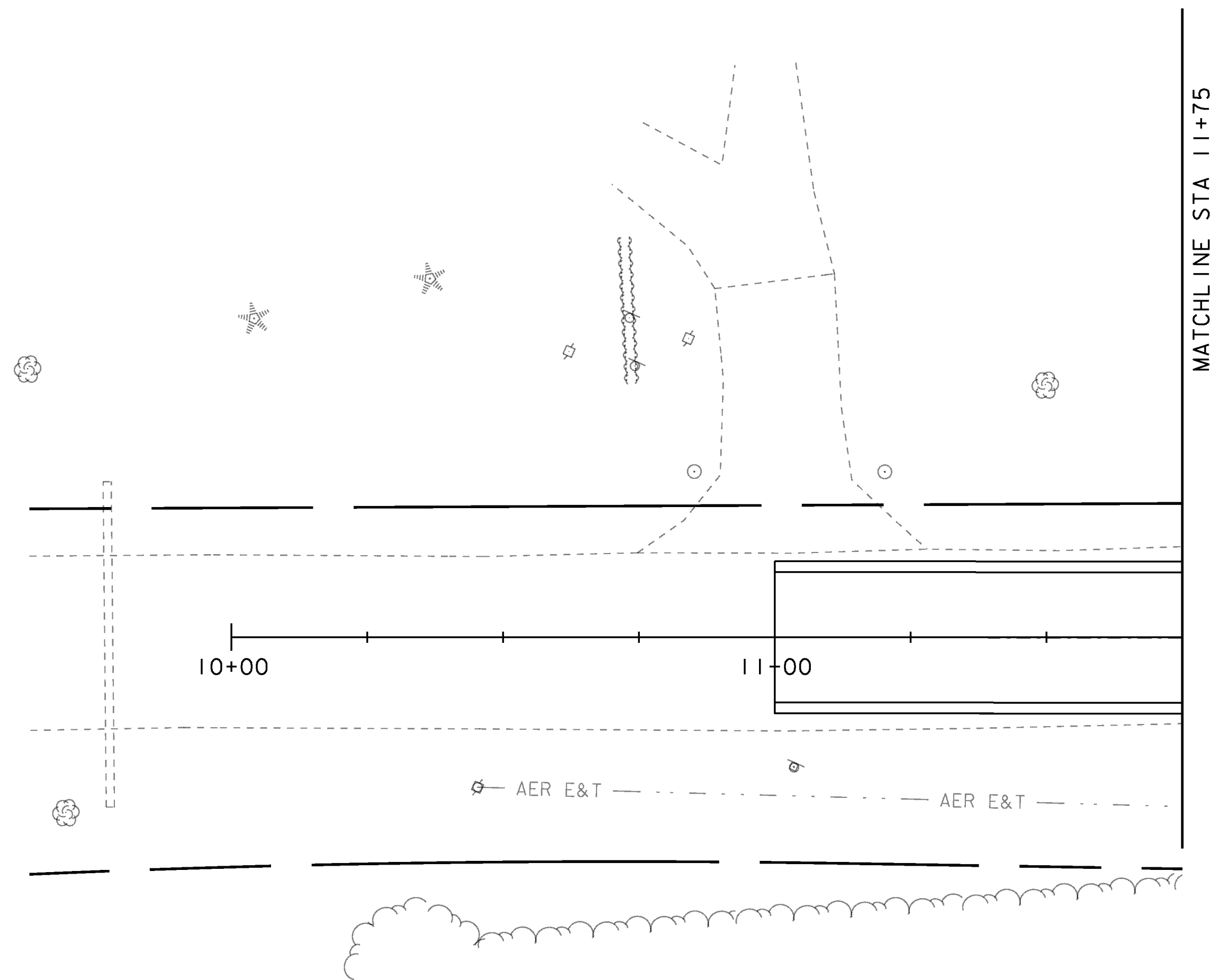
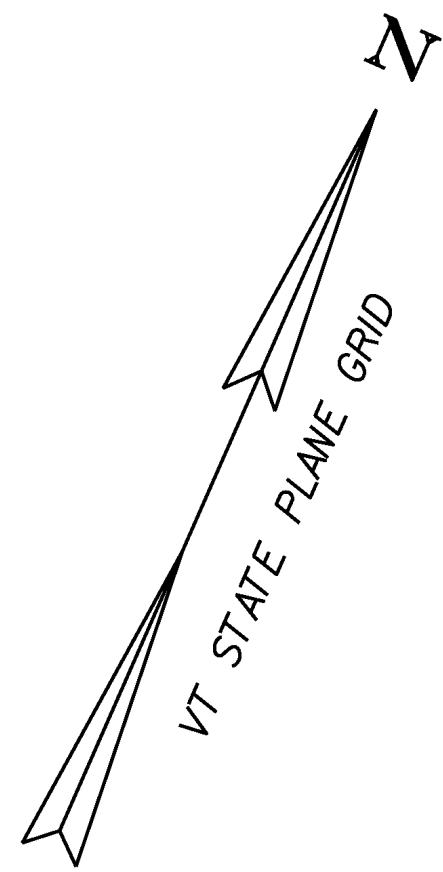
DRAWN BY: R. PELLETT

DESIGNED BY: H. SALLS

CHECKED BY: G. ROY

EPSC EXISTING CONDITIONS 3

SHEET 56 OF 70



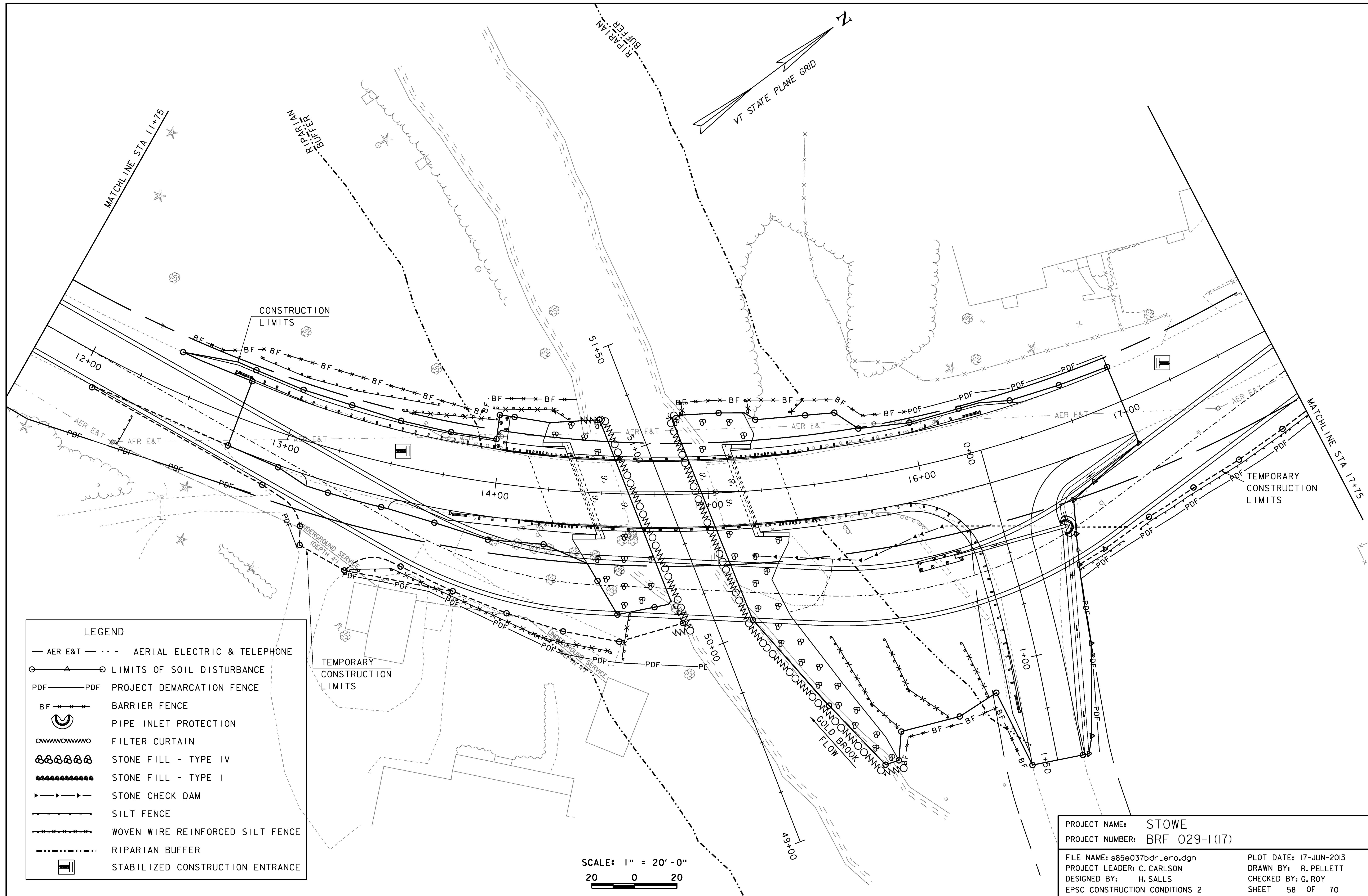
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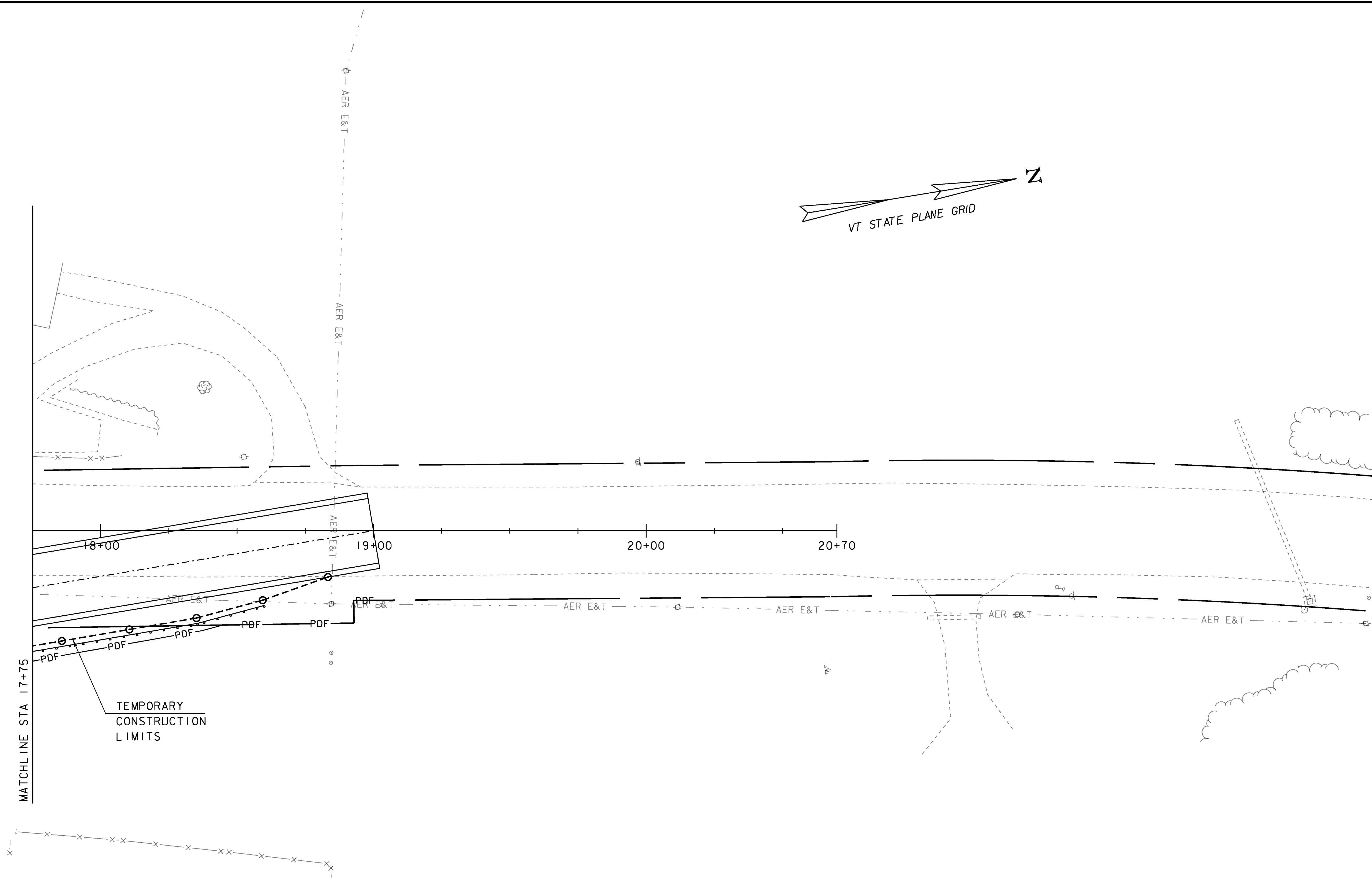
- AER E&T — . . . AERIAL ELECTRIC & TELEPHONE
- PDF — PDF — PROJECT DEMARCATION FENCE
- — — — ○ LIMITS OF SOIL DISTURBANCE

SCALE: 1" = 20'-0"

PROJECT NAME: STOWE
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FILE NAME: s85e037bdr_ero.dgn	PLOT DATE: 17-JUN-2013
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DESIGNED BY: H. SALLS	CHECKED BY: G. ROY
EPSC CONSTRUCTION CONDITIONS 1	SHEET 57 OF 70





LEGEND

— AER E&T —

— PDF —

○ — △ — ○

AERIAL ELECTRIC & TELEPHONE

SILT FENCE

PROJECT DEMARCATION FENCE

LIMITS OF SOIL DISTURBANCE

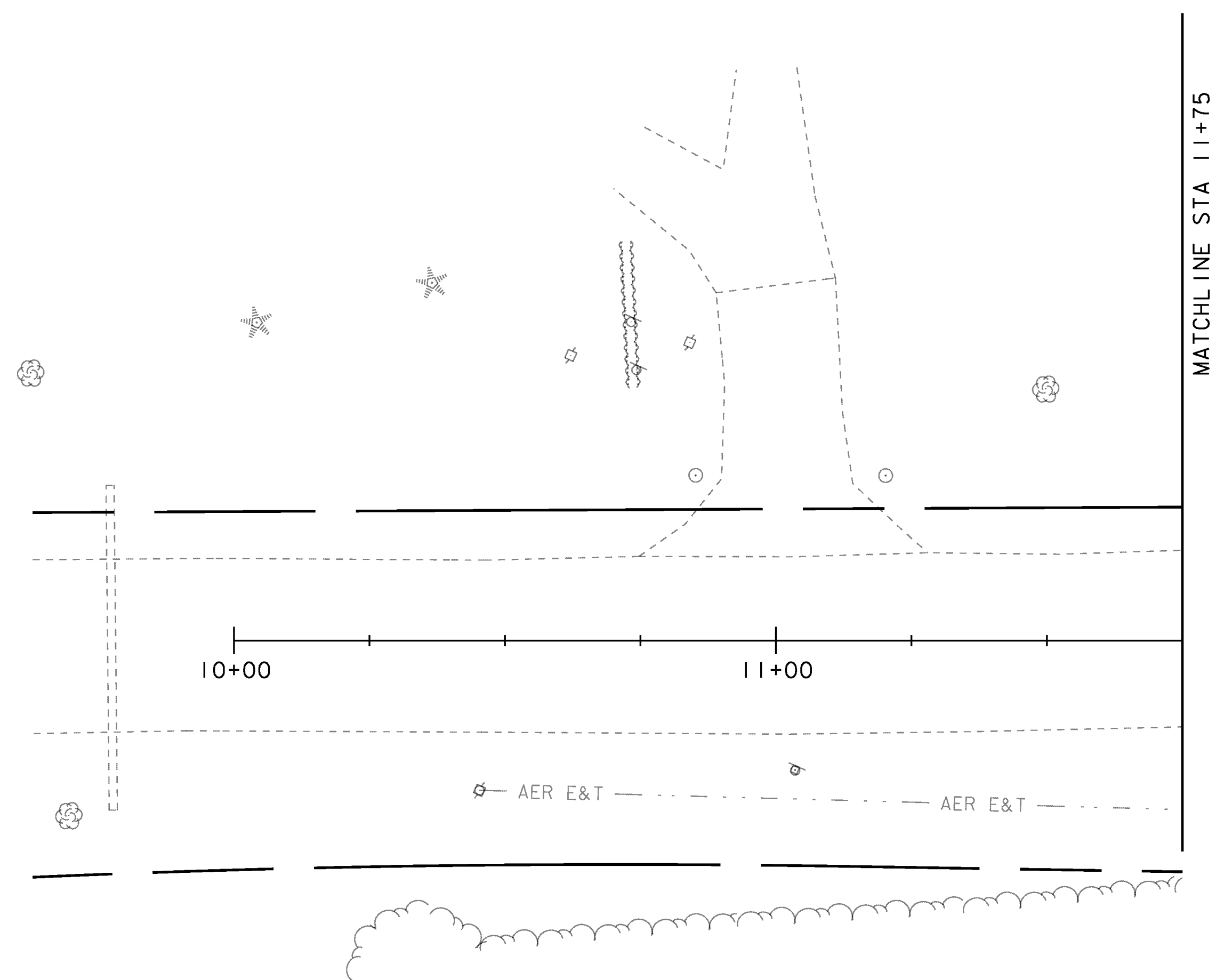
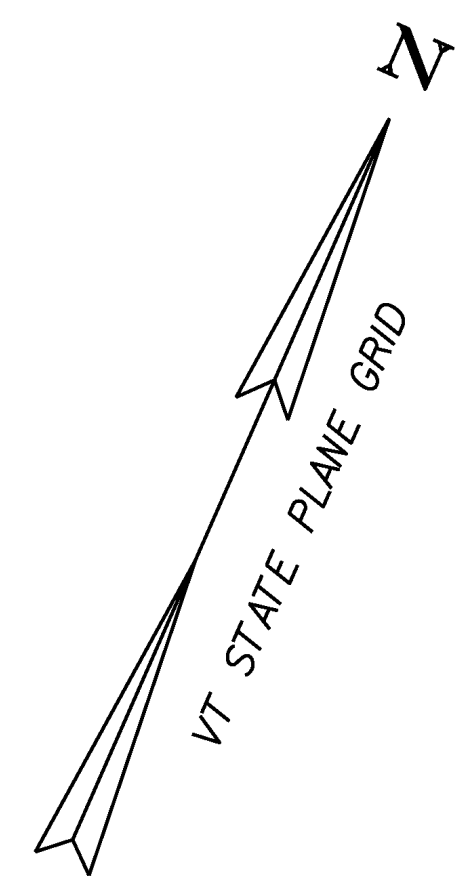
SCALE: 1" = 20'-0"

20

0

20

PROJECT NAME: STOWE	
PROJECT NUMBER: BRF 029-1 (17)	
FILE NAME: s85e037bdr_ero.dgn	PLOT DATE: 17-JUN-2013
PROJECT LEADER: C. CARLSON	DRAWN BY: R. PELLETT
DESIGNED BY: H. SALLS	CHECKED BY: G. ROY
EPSC CONSTRUCTION CONDITIONS 3	SHEET 59 OF 70

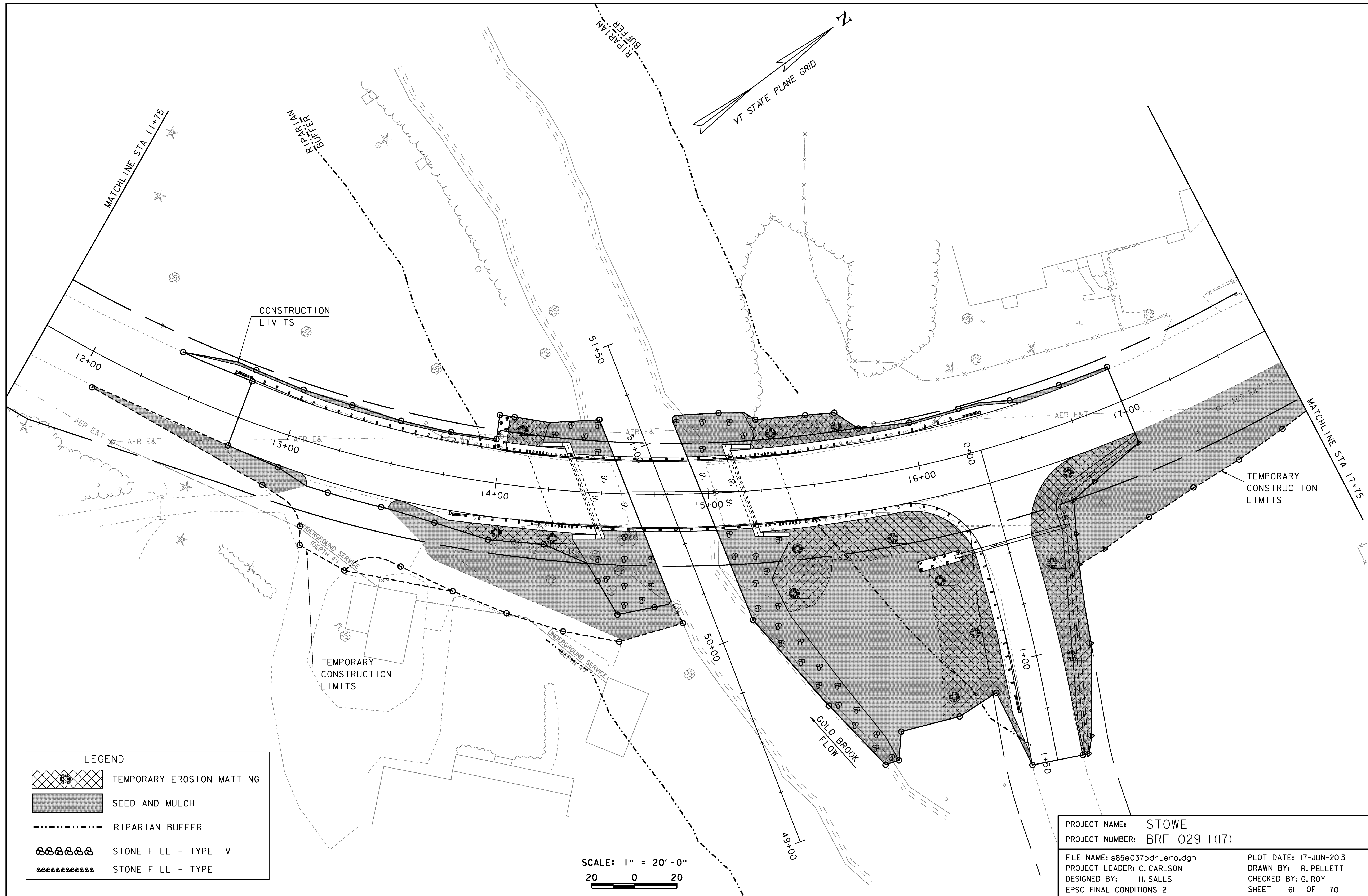


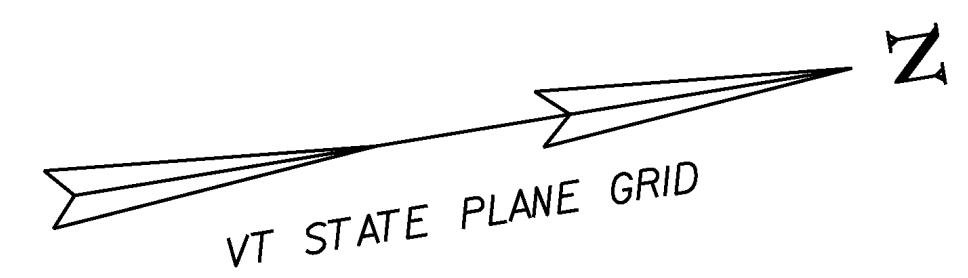
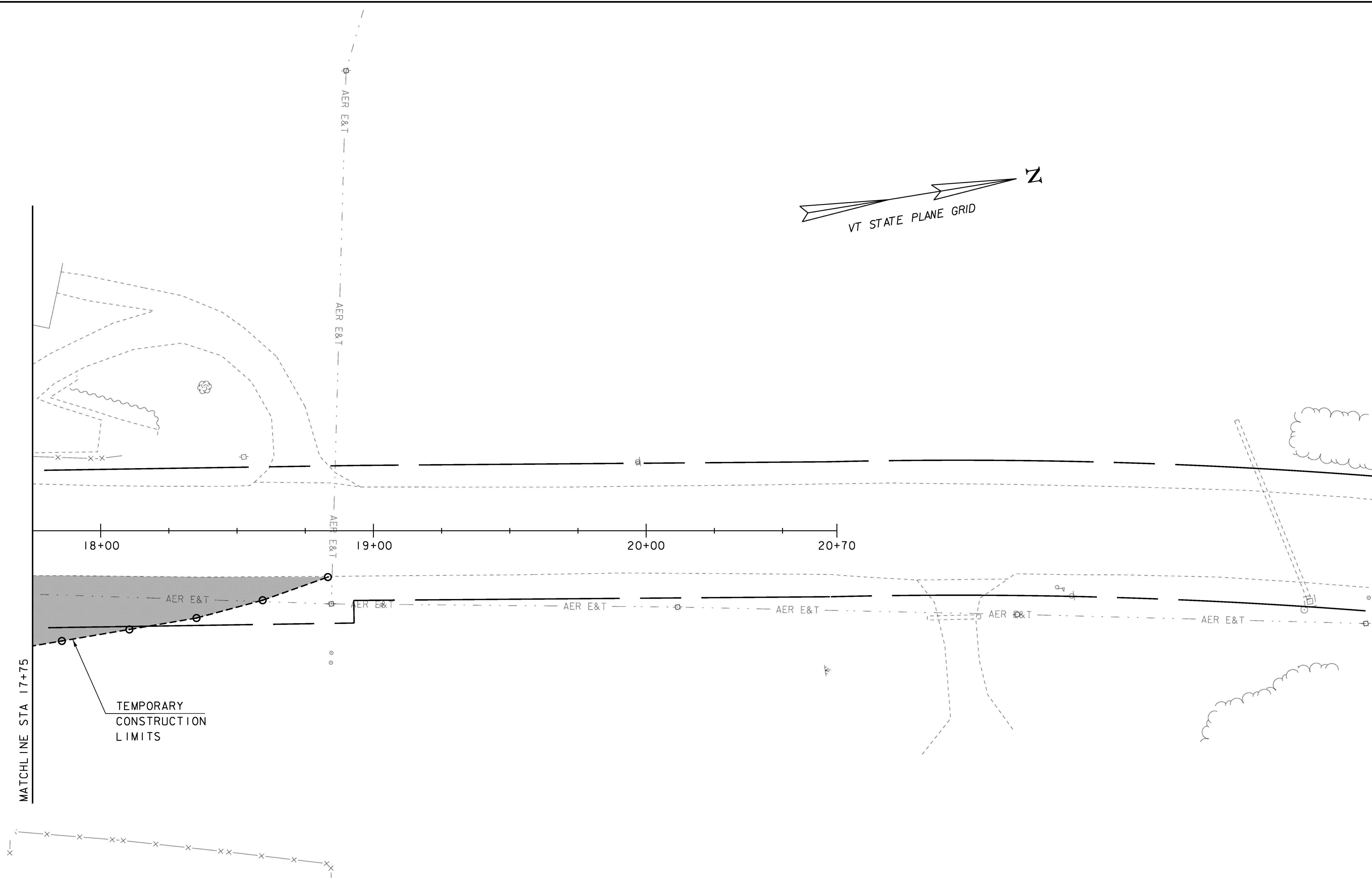
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PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1 (17)

FILE NAME: s85e037bdr_ero.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
EPSC FINAL CONDITIONS 1

PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 60 OF 70





MATCHLINE STA 17+75

TEMPORARY
CONSTRUCTION
LIMITS

AER E&T

AER E&T

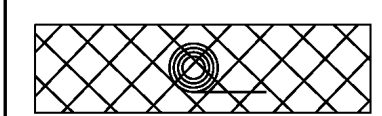
AER E&T

AER E&T

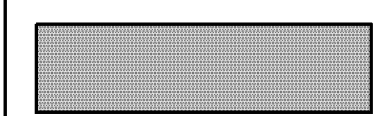
AER E&T

AER E&T

LEGEND



TEMPORARY EROSION MATTING



SEED AND MULCH

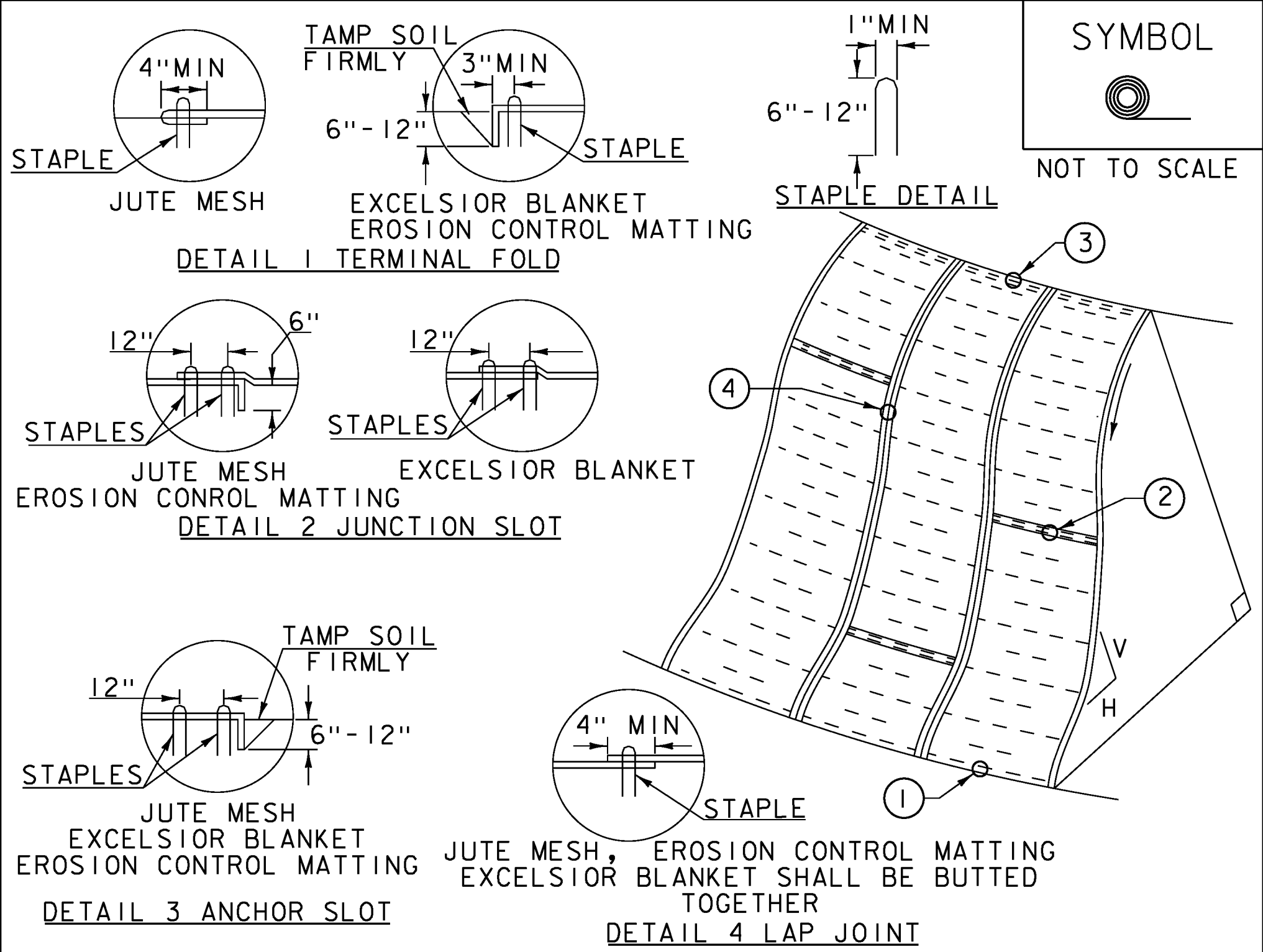
SCALE: 1" = 20'-0"



PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1 (17)

FILE NAME: s85e037bdr_ero.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
EPSC FINAL CONDITIONS 3

PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: G. ROY
SHEET 62 OF 70



CONSTRUCTION SPECIFICATIONS

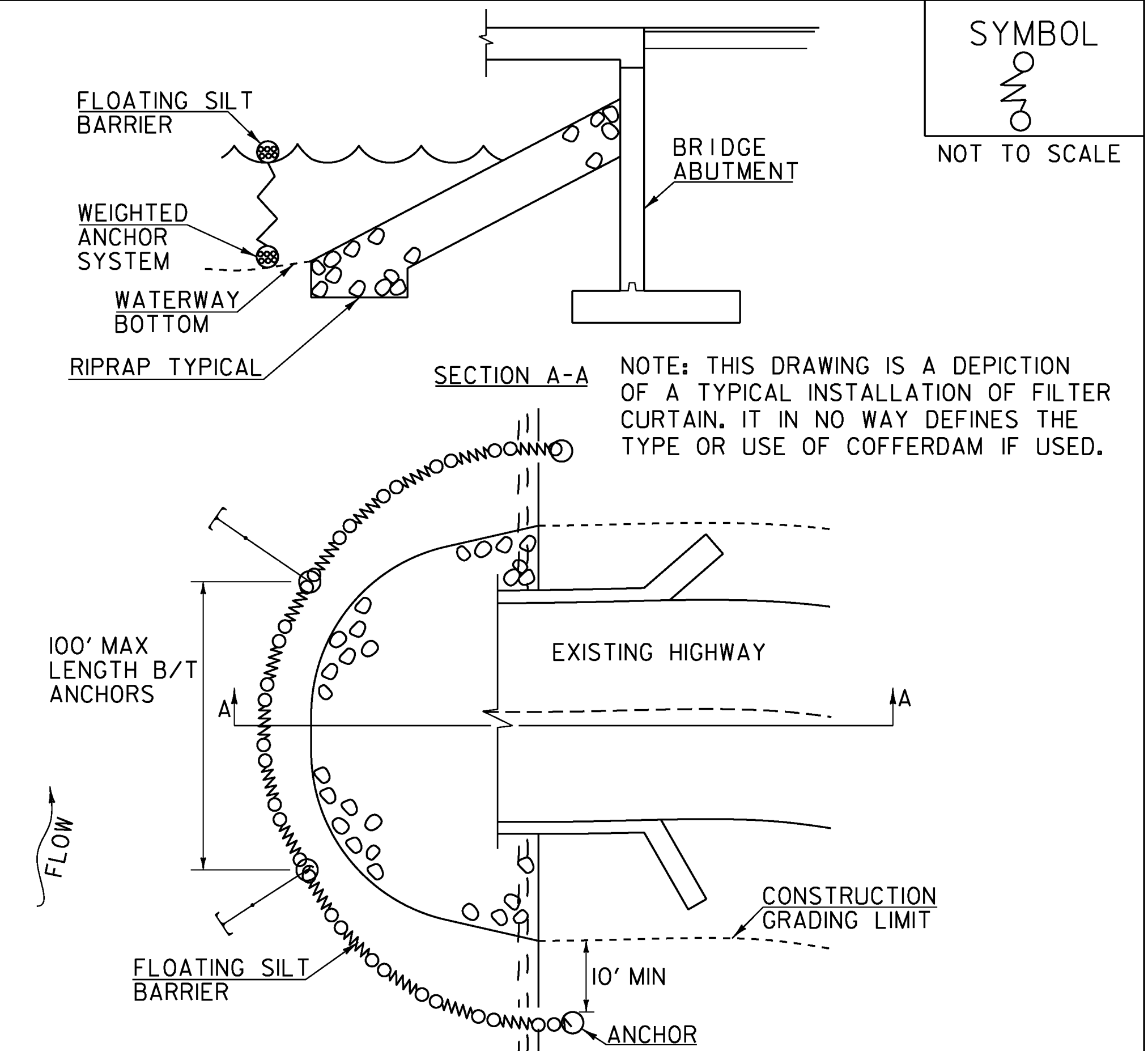
1. APPLY TO SLOPES GREATER THAN 3H:1V OR WHERE NECESSARY TO AID IN ESTABLISHING VEGETATION.
2. APPLY FERTILIZER, LIME SEED PRIOR TO PLACING MATTING.
3. STAPLES ARE TO BE PLACED ALTERNATELY, IN COLUMNS APPROXIMATELY 2' APART AND IN ROWS APPROXIMATELY 3' APART. APPROXIMATELY 175 STAPLES ARE REQUIRED PER 4'X225' ROLL OF MATERIAL AND 125 STAPLES ARE REQUIRED PER 4'X150' ROLL OF MATERIAL.
4. DISTURBED AREAS SHALL BE SMOOTHLY GRADED. EROSION CONTROL MATERIAL SHALL BE PLACED LOOSELY OVER GROUND SURFACE. DO NOT STRETCH.
5. ALL TERMINAL ENDS AND TRANSVERSE LAPS SHALL BE STAPLED AT APPROXIMATELY 12" INTERVALS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

ROLLED EROSION
CONTROL PRODUCT
(RECP) SIDE SLOPE

NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR
EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM
THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL
GUIDANCE.
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION
653 AND AS SHOWN IN THE PLANS FOR TEMPORARY EROSION
MATTING (PAY ITEM 653.20) OR PERMANENT EROSION MATTING
(PAY ITEM 653.21).

REVISIONS	
APRIL 16, 2007	JMF
JANUARY 13, 2009	WHF



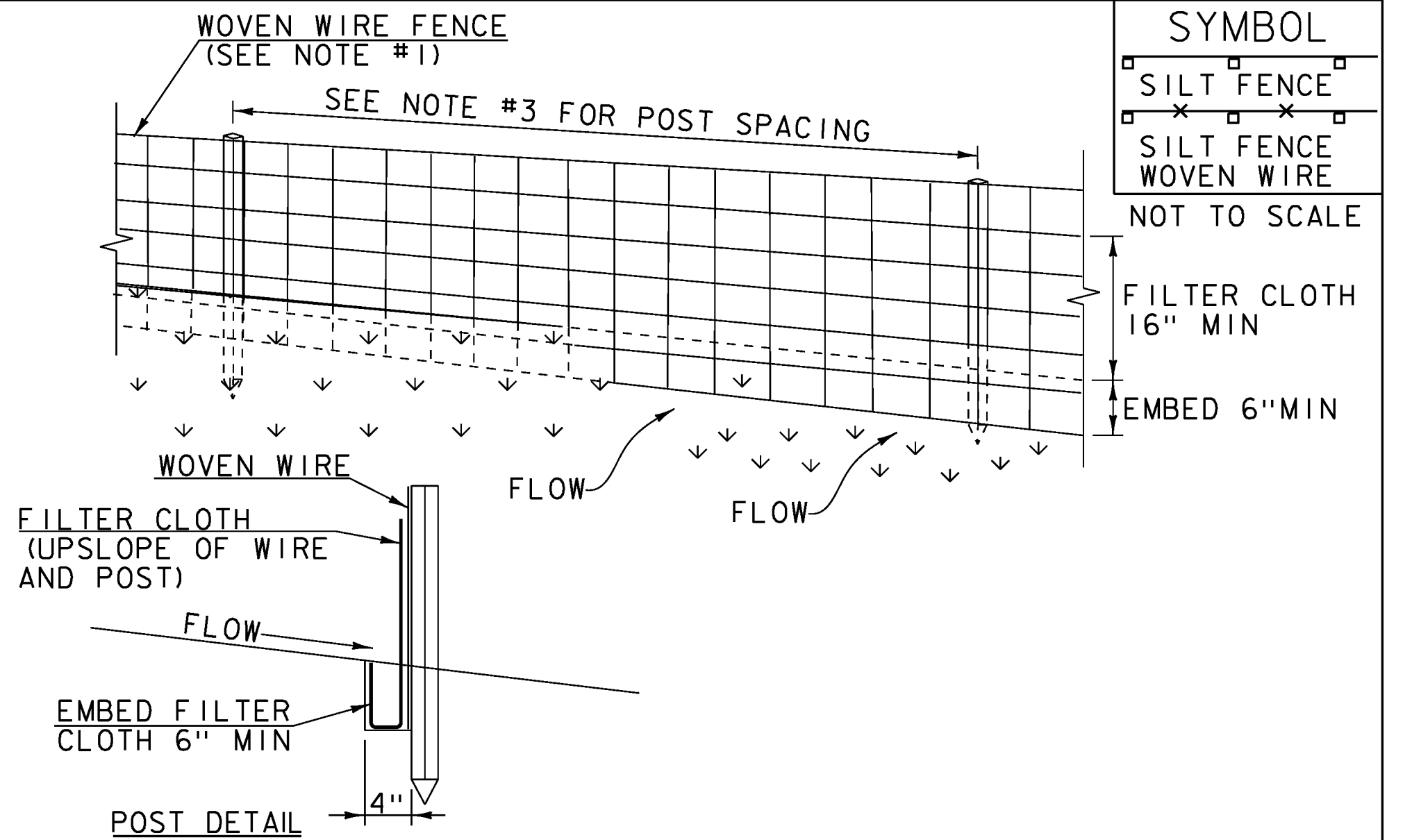
CONSTRUCTION SPECIFICATIONS

1. FILTER CURTAIN SHALL NOT BE PLACED ACROSS A FLOWING WATERWAY, OR IN A WATERWAY WITH STREAM VELOCITIES GREATER THAN 1.5 FEET/SECOND.
2. MAXIMUM 100' LENGTH BETWEEN ANCHORS.
3. LAST SECTION SHALL TERMINATE A MINIMUM OF 10' BEYOND LIMIT OF DISTURBANCE.
4. THE WEIGHTED ANCHOR SYSTEM SHALL BE A TYPE WHICH ALLOWS THE CURTAIN TO CONFORM TO THE BOTTOM OF THE WATERWAY.
5. THE CURTAIN SHALL BE REMOVED BY SLOWLY PULLING TOWARD THE SHORE MINIMIZING THE ESCAPE OF SEDIMENTS INTO WATERWAY.

FILTER CURTAIN

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH
SECTION 649 FOR GEOTEXTILE FOR FILTER CURTAIN (PAY
ITEM 649.61).

REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF
SEPTEMBER 4, 2009	WHF



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE REINFORCED FENCE IS REQUIRED WITHIN 100' UPSLOPE OF RECEIVING WATERS WHEN THE PROJECT FALLS UNDER A CONSTRUCTION STORMWATER PERMIT. WOVEN WIRE SHALL BE A MIN. 14 GAUGE WITH A 6" MAX. MESH OPENING.
2. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAF1100X, STABILINKA T140N OR APPROVED EQUIVALENT.
3. POST SPACING FOR WIRE-BACKED FENCE SHALL BE 10' MAXIMUM. FOR FILTER-CLOTH FENCE, WHEN ELONGATION IS >50%, POST SPACING SHALL NOT EXCEED 4' AND WHEN ELONGATION IS <50%, POST SPACING SHALL NOT EXCEED 6'.
4. WOVEN WIRE FENCE IS TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. FILTER CLOTH IS TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN SEDIMENT REACHES HALF OF FABRIC HEIGHT.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC
ORIGINALLY DEVELOPED BY USDA-NRCS
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SILT FENCE

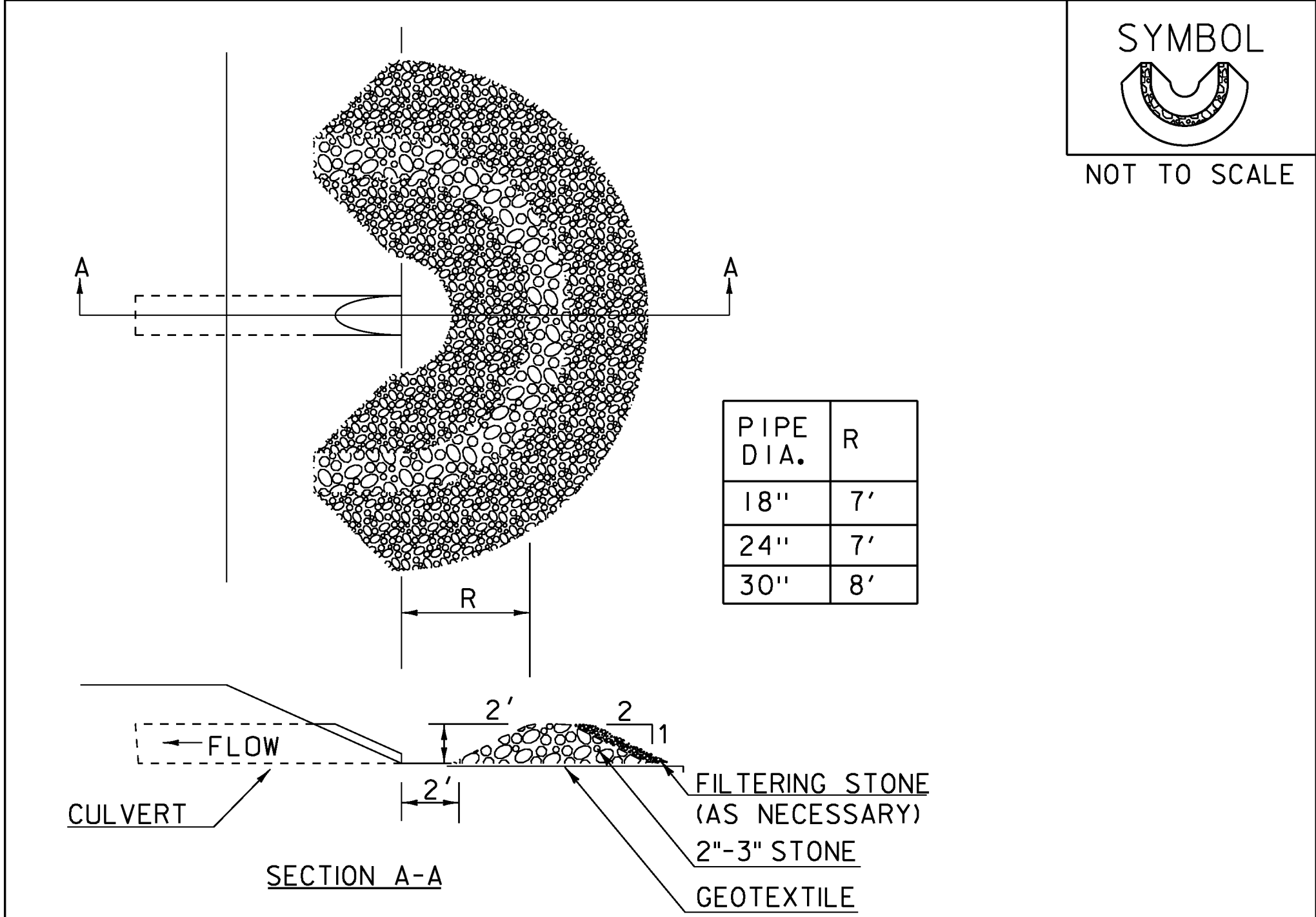
NOTES:
REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR
EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM
THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL
GUIDANCE.

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH
SECTION 649 AND AS SHOWN IN THE PLANS FOR GEOTEXTILE
FOR SILT FENCE (PAY ITEM 649.51) OR GEOTEXTILE FOR
SILT FENCE, WOVEN WIRE REINFORCED (PAY ITEM 649.515).

REVISIONS	
MARCH 21, 2008	WHF
DECEMBER 11, 2008	WHF
JANUARY 13, 2009	WHF

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1(I17)

FILE NAME: s85e037erodetails.dgn
PROJECT LEADER: C.CARLSON
DESIGNED BY: H. SALLS
EPSC DETAILS I
PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: EVANS-MONGEON
SHEET 63 OF 70



CONSTRUCTION SPECIFICATIONS

- 1. USE 2" TO 3" STONE. FILTERING STONE SHALL BE 3/4".
- 2. PLACE STONE OVER GEOTEXTILE.
- 3. ONCE THE AREAS UPSTREAM FROM THE CHECK DAM ARE STABILIZED WITH VEGETATION, THE SEDIMENT TRAPPED BEHIND THE DAM SHALL BE DISPOSED OF IN AN APPROVED WASTE AREA.
- 4. THE CHECK DAM(S) SHALL BE FLATTENED AND GRADED IN A MANNER WHICH PROTECTS THE AREA FROM EROSION AND CHANNEL BLOCKAGE . (GEOTEXTILE MUST BE REMOVED).
- 5. THE GEOTEXTILE MUST BE DISPOSED OF APPROPRIATELY.
- 6. THE AREA CONTRIBUTING TO THE CHECK DAM SHALL NOT EXCEED 4 ACRES.

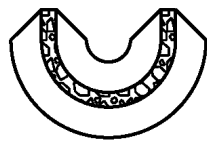
ADAPTED FROM DETAILS PROVIDED BY: ILLINOIS USDA-NRCS
ORIGINALLY DEVELOPED BY USDA-NRCS

PIPE INLET
PROTECTION

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH
SECTION 653 FOR INLET PROTECTION DEVICE, TYPE 1(PAY
ITEM 653.40).

REVISIONS	
MARCH 6, 2008	WHF
JANUARY 13, 2009	WHF

SYMBOL



NOT TO SCALE

VAOT RURAL AREA MIX

VAOT RURAL AREA MIX					
		LBS/AC			
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
37.5%	22.5	45	CREEPING RED FESCUE	85%	98%
37.5%	22.5	45	TALL FESCUE	90%	95%
5.0%	3	6	RED TOP	90%	95%
15.0%	9	18	BIRDSFOOT TREFOIL	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	85%	95%
100%	60	120			

VAOT URBAN AREA MIX

VAOT URBAN AREA MIX					
		LBS/AC			
% WEIGHT	BROADCAST	HYDROSEED	NAME	GERM %	PURITY %
42.5%	34	68	CREEPING RED FESCUE	85%	98%
10.0%	8	16	PERENNIAL RYE GRASS	90%	95%
42.5%	34	68	KENTUCKY BLUE GRASS	85%	85%
5.0%	4	8	ANNUAL RYE GRASS	85%	95%
100%	80	160			

SOIL AMENDMENT GUIDANCE

FERTILIZER		LIME	
BROADCAST	HYDROSEED	BROADCAST	HYDROSEED
10-20-10	FOLLOW	PELLETIZED	FOLLOW
500 LBS/AC	MANUFACTURER	2 TONS/AC	MANUFACTURER

CONSTRUCTION GUIDANCE

1. RURAL SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
2. URBAN SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED LAWN AREAS DISTURBED BY THE CONTRACTOR.
3. ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
4. FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER
5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
6. TOPSOIL: TO BE USED WITH SEED AS INDICATED ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.
7. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED
8. TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

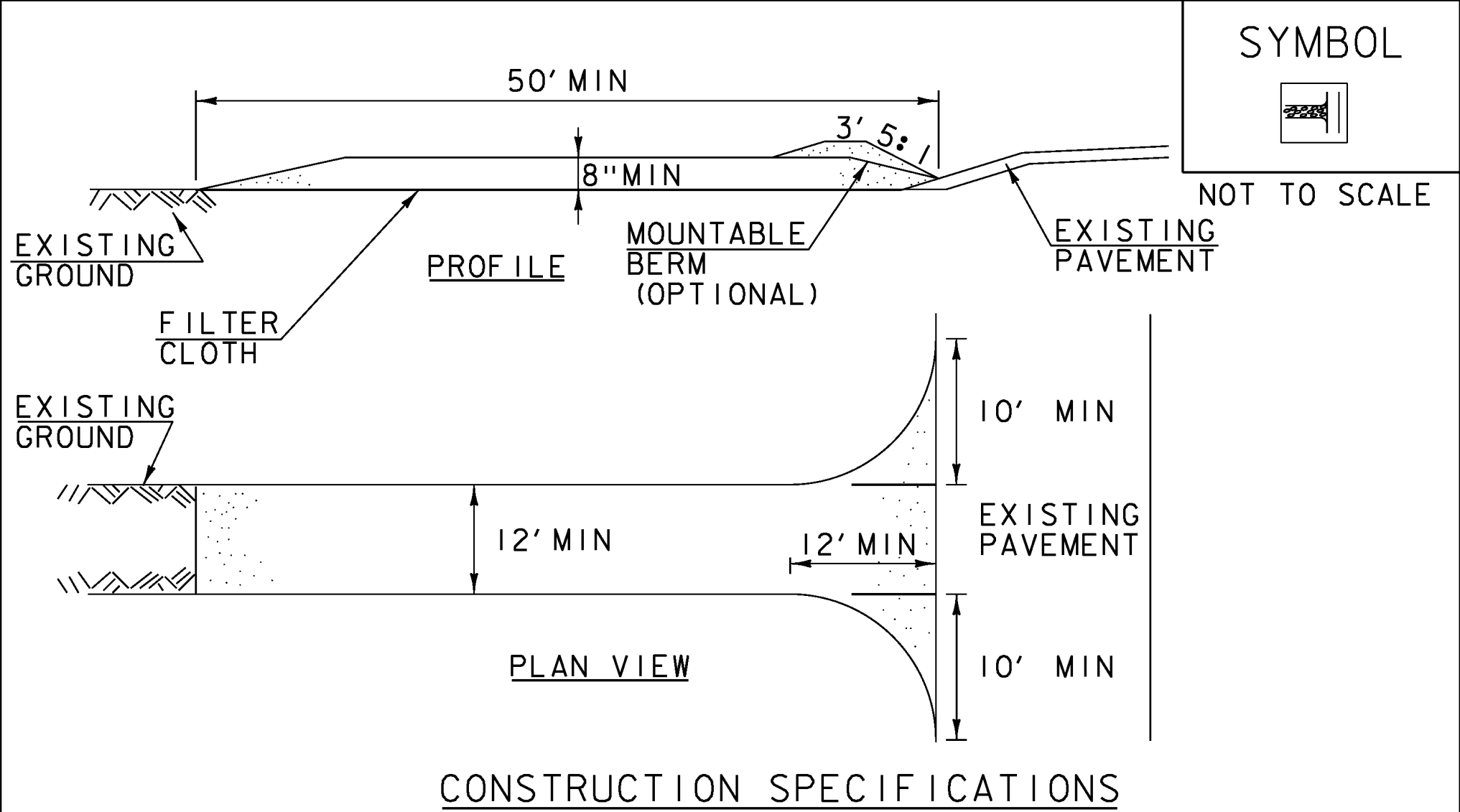
ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR
ROADWAYS AND TRANSPORTATION FACILITIES

TURF ESTABLISHMENT

REVISIONS	
JUNE 23, 2009	WHF
JANUARY 15, 2010	WHF
FEBRUARY 16, 2011	WHF

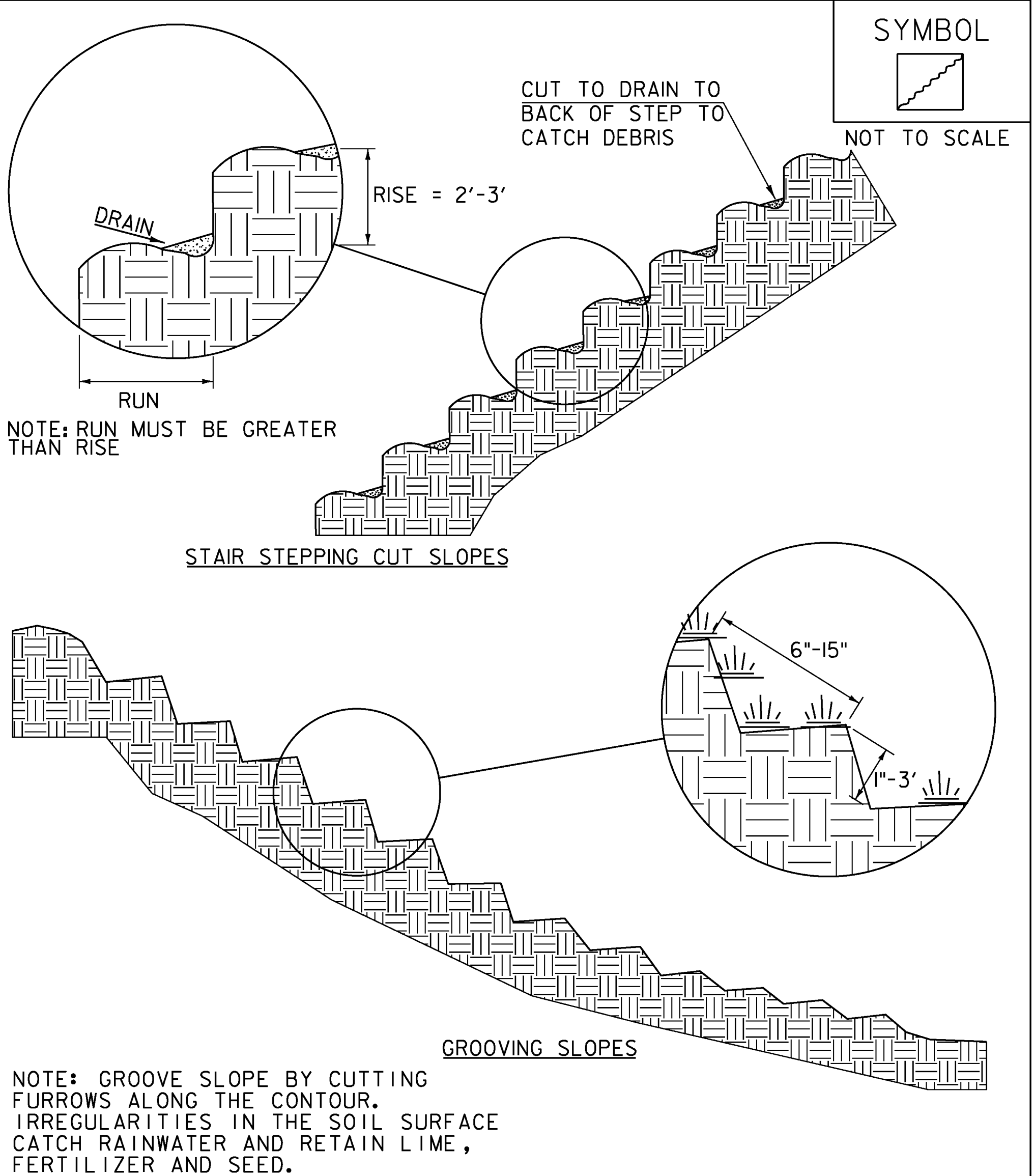
PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1(I17)

FILE NAME: s85e037erodetails.dgn
PROJECT LEADER: C. CARLSON
DESIGNED BY: H. SALLS
EPSC DETAILS 2
PLOT DATE: 17-JUN-2013
DRAWN BY: R. PELLETT
CHECKED BY: EVANS-MONGEON
SHEET 64 OF 70

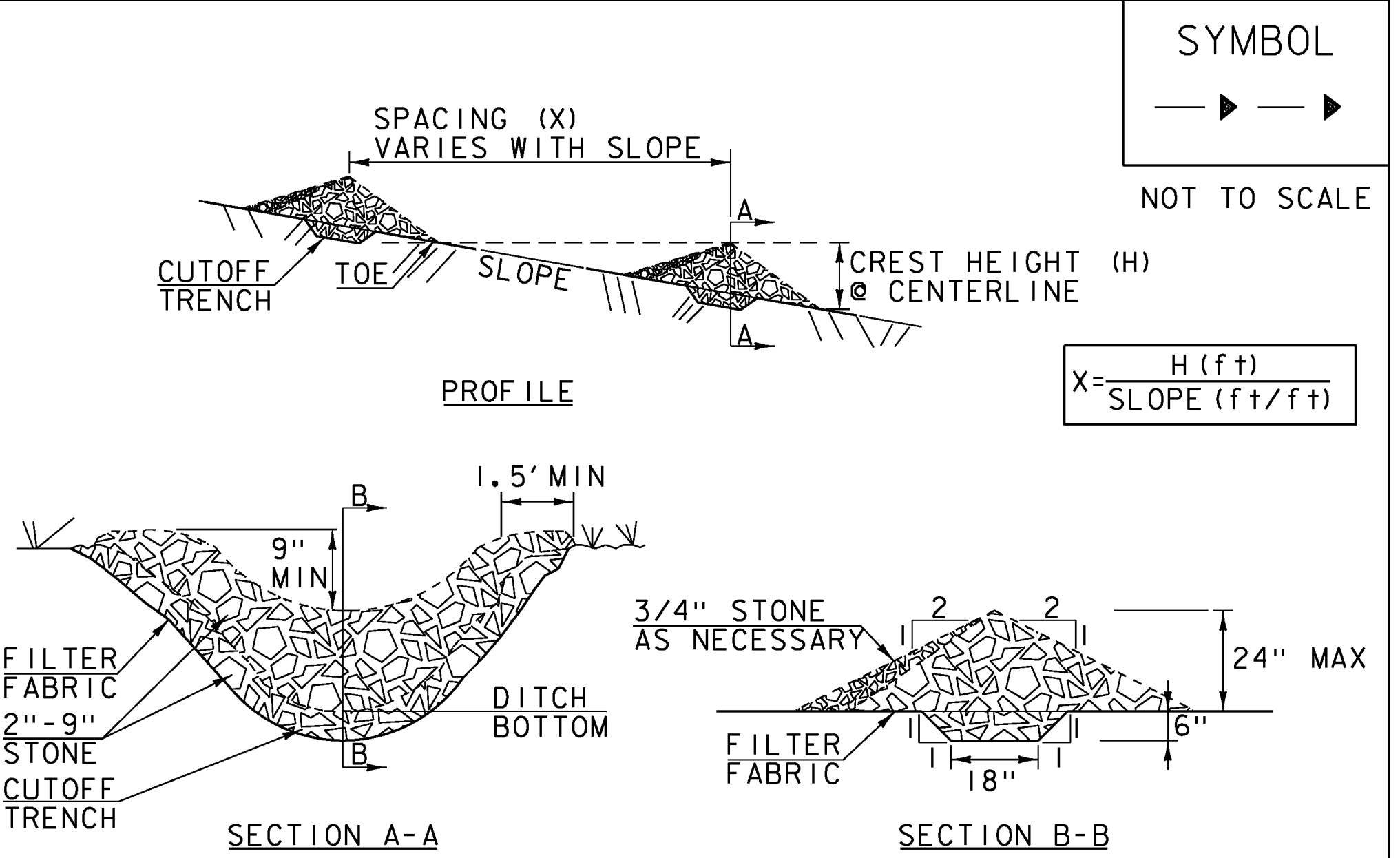


1. STONE SIZE- USE 1-4" STONE, RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH- NOT LESS THAN 50' (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MINIMUM LENGTH APPLIES).
3. THICKNESS- NOT LESS THAN 8".
4. WIDTH- 12' MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. 24' IF SINGLE ENTRANCE TO SITE.
5. GEOTEXTILE MUST BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE.
6. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	STABILIZED CONSTRUCTION ENTRANCE
NOTES: REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.	
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR VEHICLE TRACKING PAD (PAY ITEM 653.35) OR AS SPECIFIED IN THE CONTRACT.	
REVISIONS	
MARCH 24, 2008	WHF
JANUARY 13, 2009	WHF



ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	SURFACE ROUGHENING
NOTES: REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.	
THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT	
REVISIONS	
APRIL 1, 2008	WHF
JANUARY 13, 2009	WHF



1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION.
2. CHECK DAMS SHALL BE SPACED SO THAT THE ELEVATION OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION AS THE TOE OF THE UPSTREAM DAM.
3. 3/4" FILTERING STONE MAY BE ADDED TO THE FACE OF THE CHECK DAM AS NECESSARY.
4. EXTEND THE STONE A MINIMUM OF 1.5' BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
5. PROTECT CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
6. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.
7. MAXIMUM DRAINAGE AREA 2 ACRES.

ADAPTED FROM DETAILS PROVIDED BY: NEW YORK STATE DEC ORIGINALLY DEVELOPED BY USDA-NRCS VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION	CHECK DAM
NOTES: REFER TO "THE VERMONT STANDARDS & SPECIFICATIONS FOR EROSION PREVENTION & SEDIMENT CONTROL -2006- "FROM THE VT AGENCY OF NATURAL RESOURCES FOR ADDITIONAL GUIDANCE.	
THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 653 FOR TEMPORARY STONE CHECK DAM, TYPE I (PAY ITEM 653.25)	
REVISIONS	
MARCH 21, 2008	WHF
JANUARY 8, 2009	WHF

PROJECT NAME: STOWE	PLOT DATE: 17-JUN-2013
PROJECT NUMBER: BRF 029-1(17)	DRAWN BY: R. PELLETT
FILE NAME: s85e037erodetails.dgn	CHECKED BY: EVANS-MONGEON
PROJECT LEADER: C. CARLSON	SHEET 65 OF 70
DESIGNED BY: H. SALLS	
EPSC DETAILS 3	

RIGHT - OF - WAY DETAIL SHEET

[illegible]

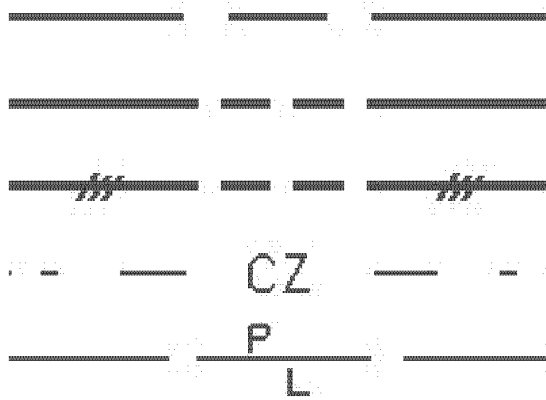
- PDF -PROJECT DEMARCATION FENCE
- EC -EROSION CONTROL
- (P) -PERMANENT
- (T) -TEMPORARY
- DR. -DRAINAGE RIGHT
- DIT. -DITCHING RIGHT
- CH. -CHANNEL RIGHT
- DRIVE -DRIVE RIGHT
- CUL. -CULVERT RIGHT
- C&T -CLEARING & TRIMMING RIGHT
- SR -SLOPE RIGHT
- UE -UTILITY EASEMENT

FILE NAME:	r85e037_detail.xls	PLOT DATE:	17-JUN-2013
PROJECT LEADER:	C. WILLIAMS	DRAWN BY:	M. TROTTIER
DESIGNED BY:	E. CHARBONNEAU	CHECKED BY:	E. PIERCE
R.O.W. DETAIL SHEET 1 OF 2		SHEET	66 OF 70

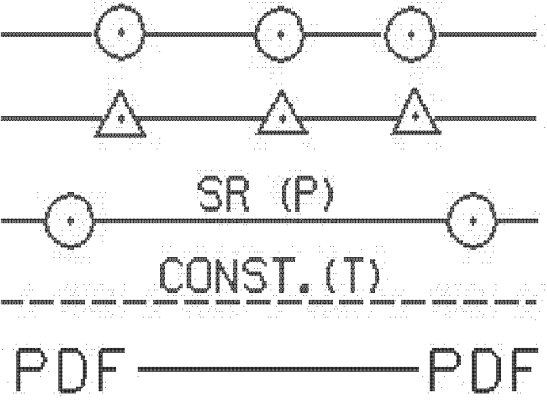
RIGHT - OF - WAY DETAIL SHEET

[illegible][illegible]

PLAN LEGEND



EXISTING RIGHT-OF-WAY
TAKING WITH ACCESS
TAKING WITHOUT ACCESS
CLEAR ZONE
PROPERTY LINE

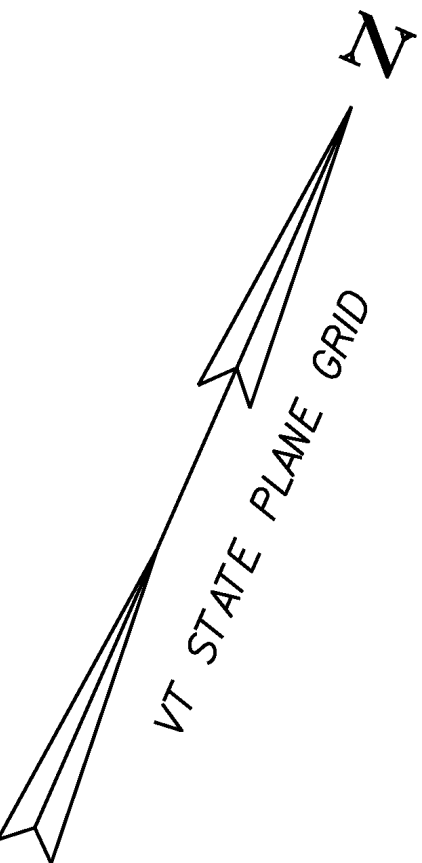


TOE OF SLOPE
TOP OF CUT
SLOPE RIGHT
CONSTRUCTION RIGHT
PROJECT DEMARCATION FENCE

EC	-EROSION CONTROL
(P)	-PERMANENT
(T)	-TEMPORARY
DR.	-DRAINAGE RIGHT
DIT.	-DITCHING RIGHT
CH.	-CHANNEL RIGHT
DRIVE	-DRIVE RIGHT
CUL.	-CULVERT RIGHT
C&T	-CLEARING & TRIMMING RIGHT
SR	-SLOPE RIGHT
UE	-UTILITY EASEMENT

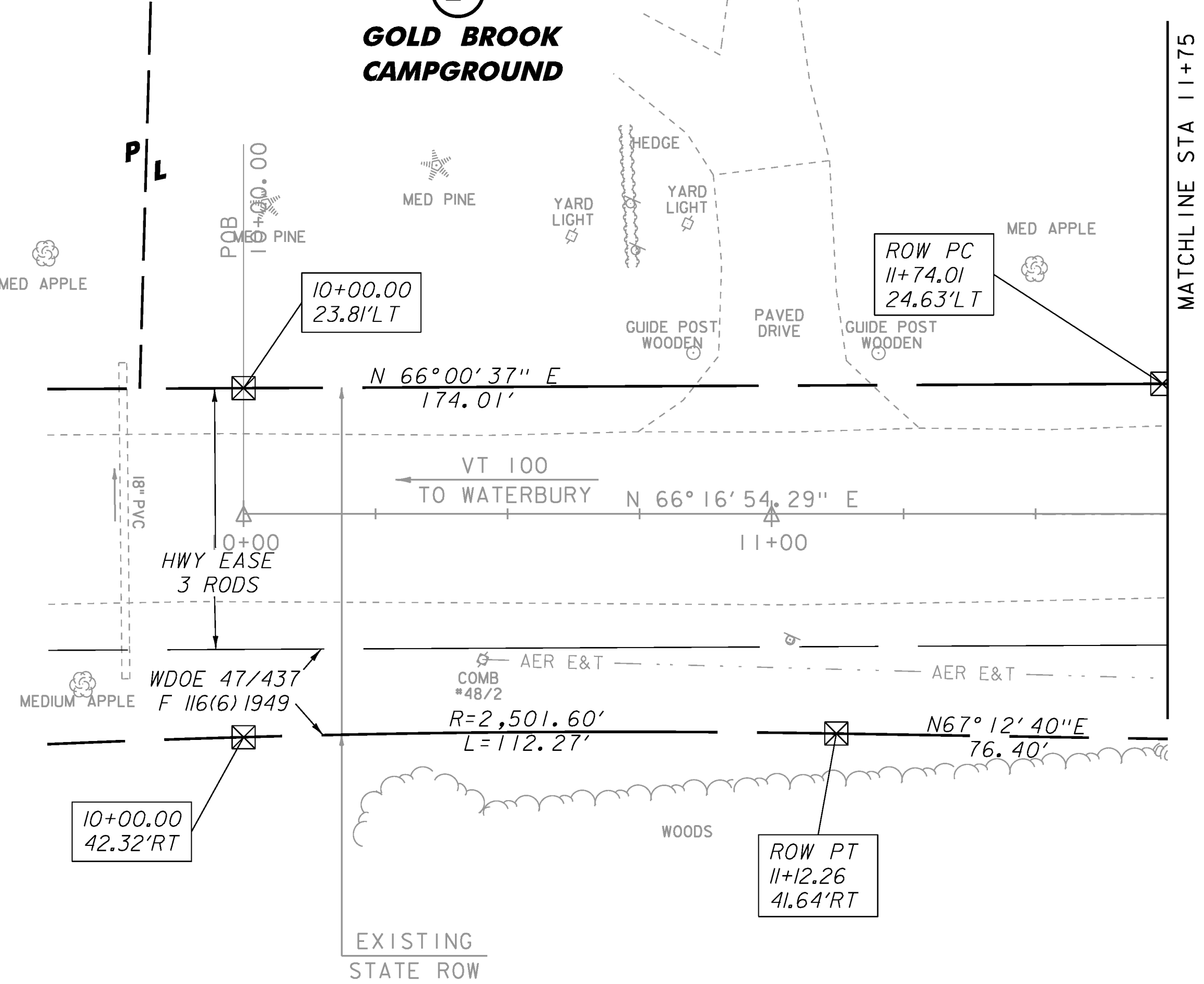
APPROVED: HARRY PETROVS DATE: 02-21-12
CHIEF, PLANS & TITLES

PROJECT NAME:	STOWE		
PROJECT NUMBER:	BRF 029-1 (17)		
FILE NAME:	r85e037_detail.xls	PLOT DATE:	17-JUN-2013
PROJECT LEADER:	C. WILLIAMS	DRAWN BY:	M. TROTTIER
DESIGNED BY:	E. CHARBONNEAU	CHECKED BY:	E. PIERCE
R.O.W. DETAIL SHEET 2 OF 2		SHEET 67	OF 70



**NF
NICHOLS,
KATHRYN K.**

**2
GOLD BROOK
CAMPGROUND**



**NF
NICHOLS,
JOHN P.**

⊠ CALCULATED R.O.W. POINT

LEGEND

LINES SHOWN ON THIS PLAN AS EXISTING
PROPERTY LINES P/L ARE BELIEVED TO
BE ACCURATE BUT SHOULD NOT BE RELIED
UPON FOR PURPOSES UNRELATED TO THE
STATE OF VERMONT'S ACQUISITION OF LAND

AND RIGHTS FOR THIS PROJECT'S OF SOIL
**FOR R.O.W.
USE ONLY**

SCALE 1" = 20' - 0
20 0 20

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1 (17)

FILE NAME: r85e037.lay1.dgn
PROJECT LEADER: C. WILLIAMS
DESIGNED BY: E. CHARBONNEAU
ROW LAYOUT SHEET 1 OF 3

PLOT DATE: 17-JUN-2013
DRAWN BY: E. PIERCE
CHECKED BY: E. PIERCE
SHEET 68 OF 70

REMOVAL AND DISPOSAL OF GUARDRAIL

STA 13+60 LT - STA 14+50 LT
STA 14+10 RT - STA 14+60 RT
STA 15+00 LT - STA 16+20 LT
STA 15+10 RT - STA 15+98 RT

CONSTRUCT 5' PAVED APRON

STA 13+10.0 RT - STA 13+58.0 RT

CONSTRUCT GRASS-LINED DITCH

STA 16+54.6 RT - STA 17+00.0 RT
STA 17+04.5 LT - STA 1+50.0 LT

**GOLD BROOK
CAMPGROUND**

BRIDGE RAILING, GALVANIZED
3 RAIL BOX BEAM

STA 14+33.0 LT - STA 15+12.8 LT
STA 14+47.3 RT - STA 15+22.0 RT

CAST-IN-PLACE CONCRETE CURB, TYPE B

STA 13+99.8 LT - STA 14+33.3 LT
STA 14+15.4 RT - STA 14+47.0 RT
STA 15+13.0 LT - STA 15+46.6 LT
STA 15+21.9 RT - STA 15+53.5 RT

HD STEEL BEAM GUARDRAIL, GALVANIZED

STA 13+06.6 LT - STA 14+03.1 LT
STA 15+42.8 LT - STA 15+94.2 LT
VT 100 STA 15+50.3 RT - TH 52 STA 0+84.7 RT

MANUFACTURED TERMINAL SECTION, TANGENT

STA 12+65.9 LT - STA 13+06.6 LT
STA 13+80.8 RT - STA 14+19.0 RT
STA 15+94.2 LT - STA 16+34.8 LT
STA 0+84.7 RT - STA 1+24.6 RT

GUARDRAIL APPROACH SECTION,
GALVANIZED 3 RAIL BOX BEAM

STA 14+03.1 LT - STA 14+33.0 LT
STA 14+19.0 RT - STA 14+47.3 RT
STA 15+12.8 LT - STA 15+42.8 LT
STA 15+22.0 RT - STA 15+50.3 RT

VT 100 CURVE DATA
 $\Delta = 56^{\circ}59'32''$ LT
D = $10^{\circ}15'00''$
R = 558.98'
T = 303.45'
L = 556.02'
E = 77.06'
BANKING = 0.080

VT 100 STA 16+30.00 =
TH 52 STA 0+00.00
 $\Delta = 90^{\circ}$ RT

**HACKETT,
EDSON B. LIFE ESTATE;
HACKETT, WILLIAM B.;
HACKETT, PARKER M.;
PETERSON, ANNA H.**

**BEGIN MAINT. AGREE.
TH52 0+16.00 CL**

**END MAINT. AGREE.
TH52 0+35.09 CL
LENGTH 19.09'**

**STATE OF VERMONT
FORMERLY
LONGE, CARLTON**

**PEARSON,
KURT A. &
JENNIFER D.**

TH 52 CURVE DATA
 $\Delta = 4^{\circ}20'25.42''$ RT
D = $8^{\circ}00'00''$
R = 716.20'
T = 27.14'
L = 54.25'
E = 0.51'

PROJECT NAME: STOWE
PROJECT NUMBER: BRF 029-1 (17)

FILE NAME: r85e037.lay2.dgn
PROJECT LEADER: C. WILLIAMS
DESIGNED BY: E. CHARBONNEAU
ROW LAYOUT SHEET 2 OF 3

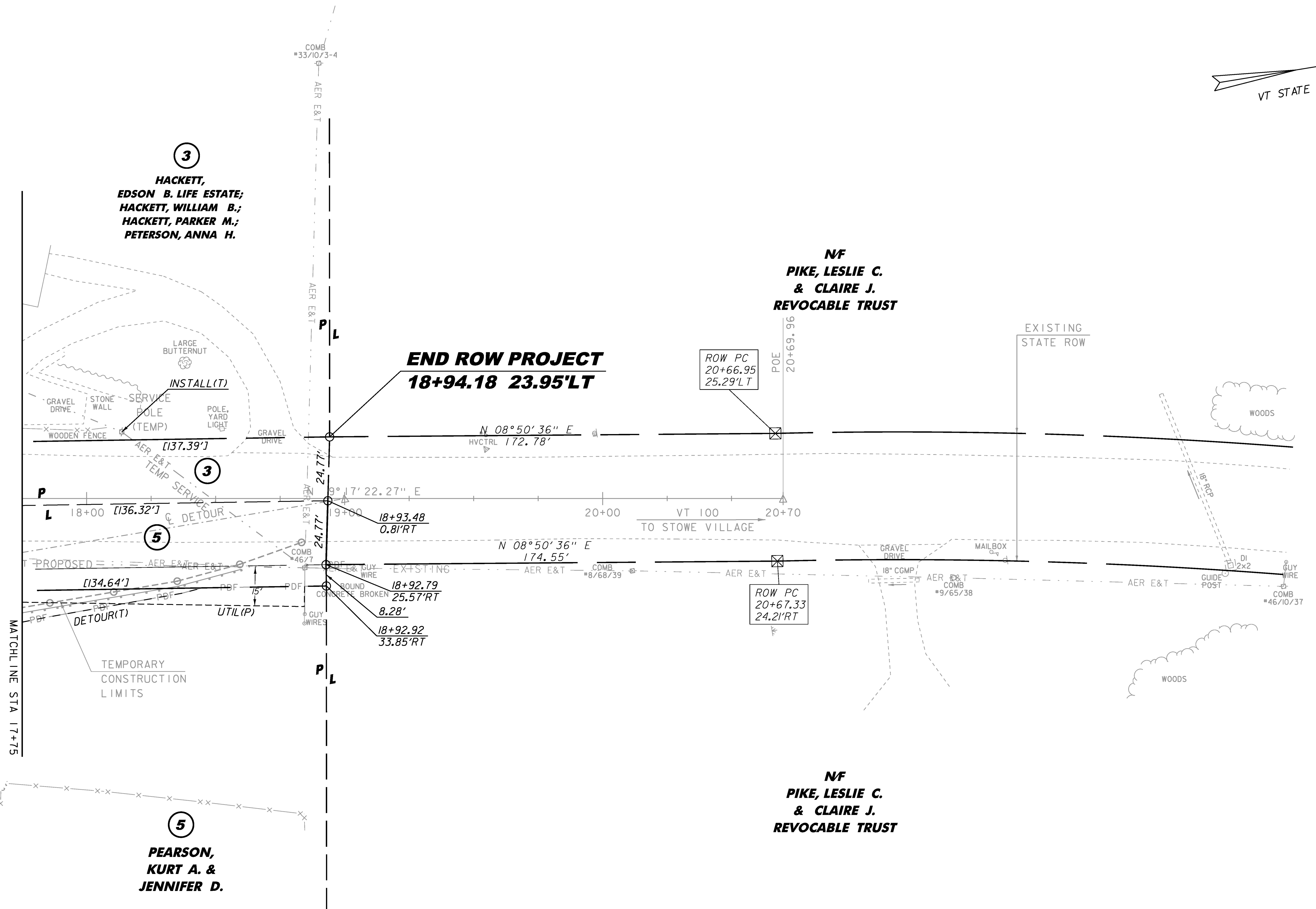
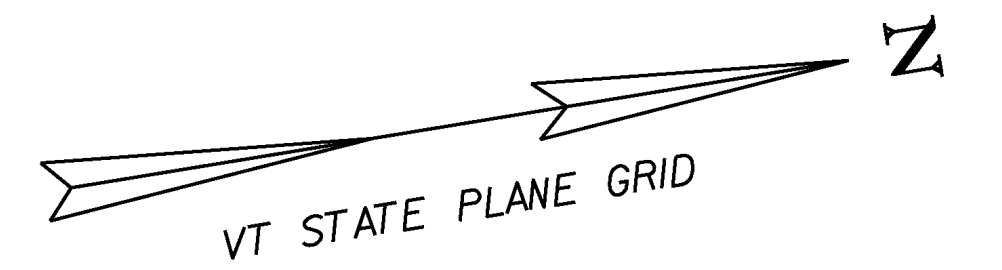
PLOT DATE: 17-JUN-2013
DRAWN BY: E. PIERCE
CHECKED BY: E. PIERCE
SHEET 69 OF 70

FOR R.O.W.
USE ONLY

Lines shown on this plan as existing property lines P/L are believed to be accurate but should not be relied upon for purposes unrelated to the State of Vermont's acquisition of land and rights for this project.

☒ CALCULATED R.O.W. POINT

SCALE 1" = 20' - 0
20 0 20



LINES SHOWN ON THIS PLAN AS EXISTING
PROPERTY LINES P/L ARE BELIEVED TO
BE ACCURATE BUT SHOULD NOT BE RELIED
UPON FOR PURPOSES UNRELATED TO THE
STATE OF VERMONT'S ACQUISITION OF LAND
AND RIGHTS FOR THIS PROJECT.

**FOR R.O.W.
USE ONLY**

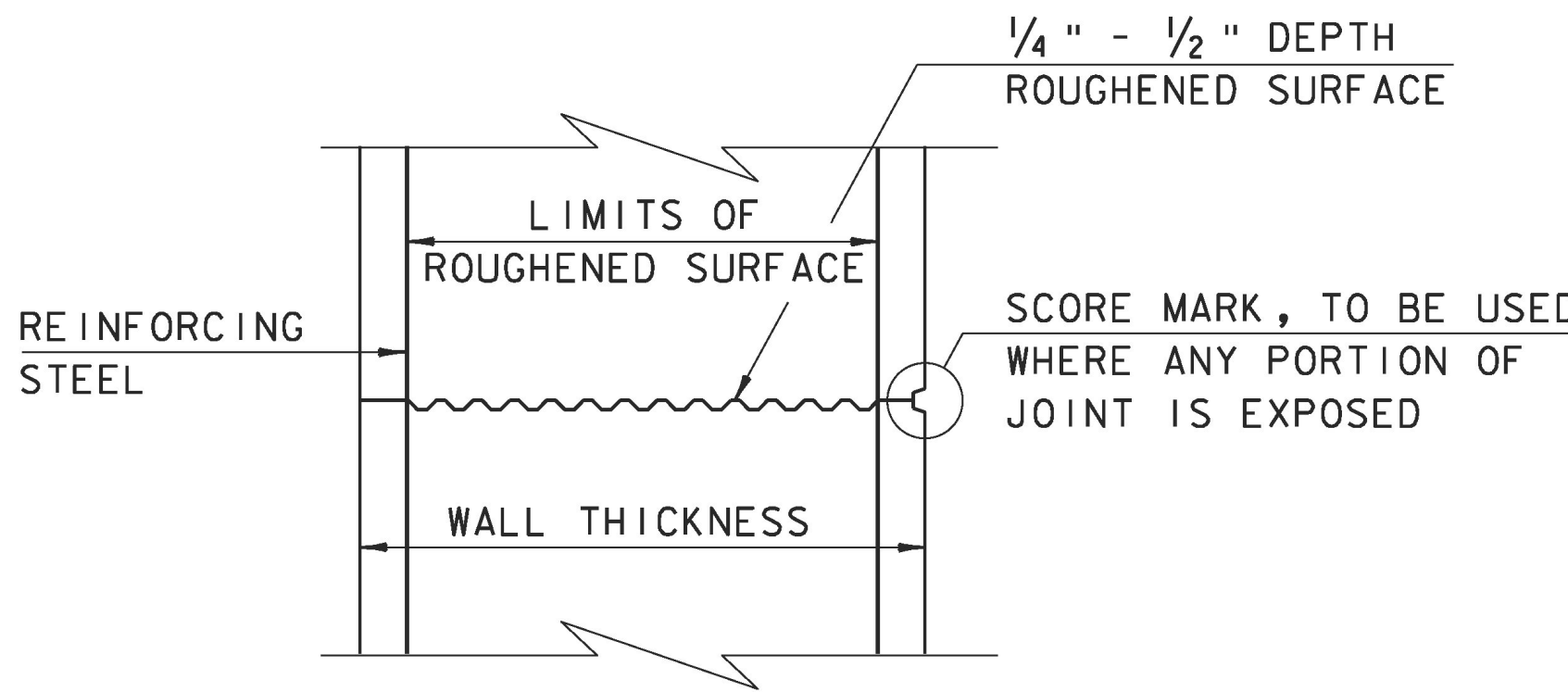
☒ CALCULATED R.O.W. POINT

SCALE 1" = 20' - 0
20 0 20

PROJECT NAME: STOWE	
PROJECT NUMBER: BRF 029-1 (17)	
FILE NAME: r85e037.lay3.dgn	PLOT DATE: 17-JUN-2013
PROJECT LEADER: C. WILLIAMS	DRAWN BY: E. PIERCE
DESIGNED BY: E. CHARBONNEAU	CHECKED BY: E. PIERCE
ROW LAYOUT SHEET 3 OF 3	SHEET 70 OF 70

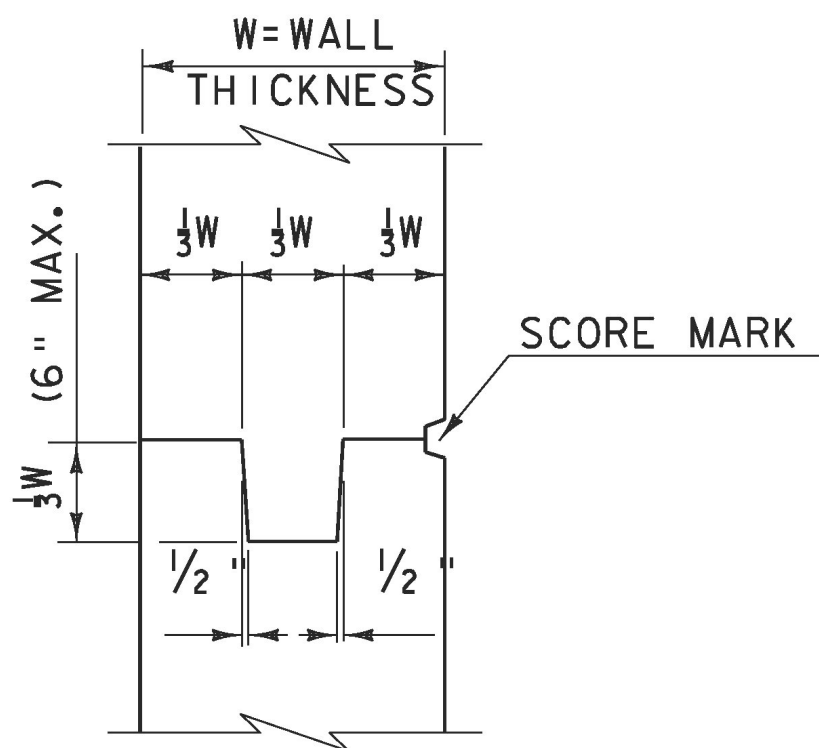
CONCRETE GENERAL NOTES

1. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1" x 1"

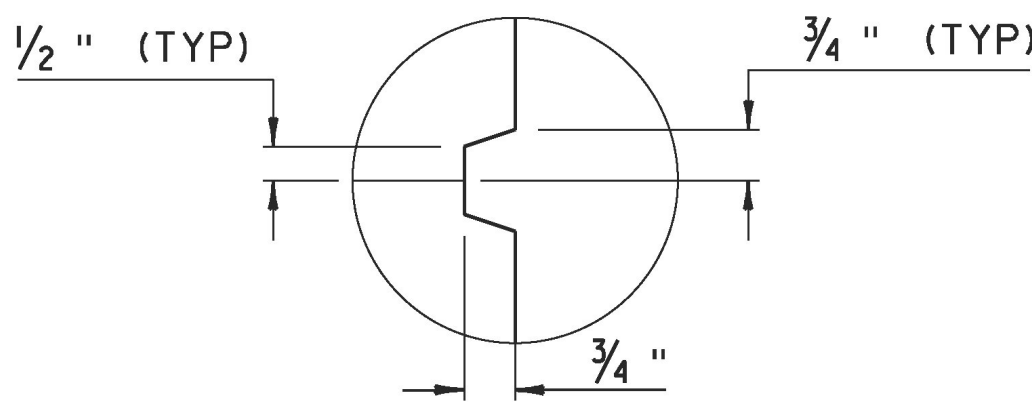


TYPICAL HORIZONTAL CONSTRUCTION JOINT
(NOT TO SCALE)

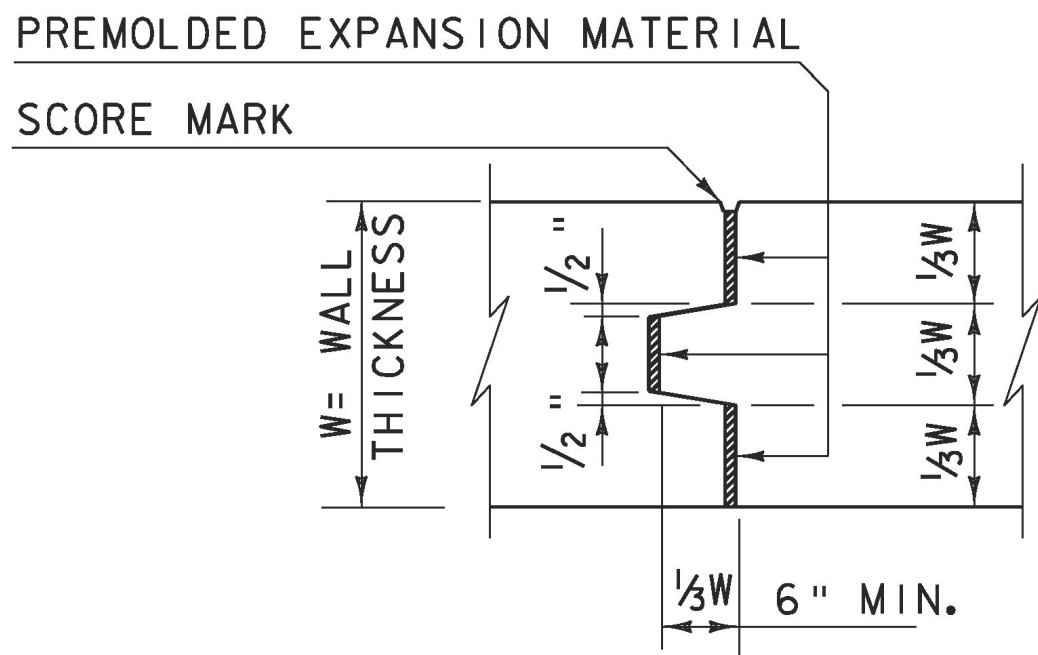
1. THE SURFACE OF THE CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND FREE OF LAITANCE.
2. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, ALL CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED.



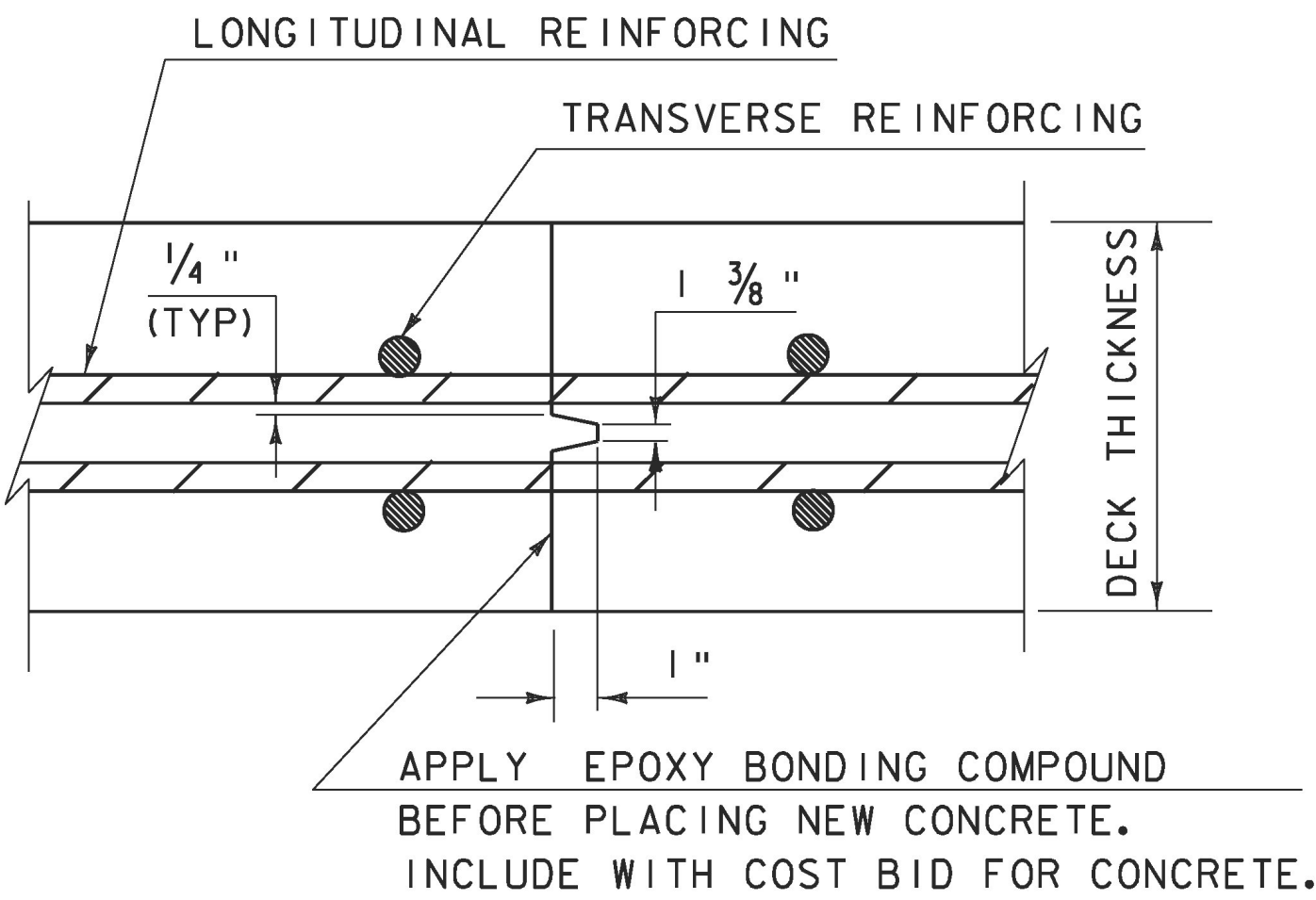
TYPICAL CONCRETE CONSTRUCTION JOINT
(NOT TO SCALE)



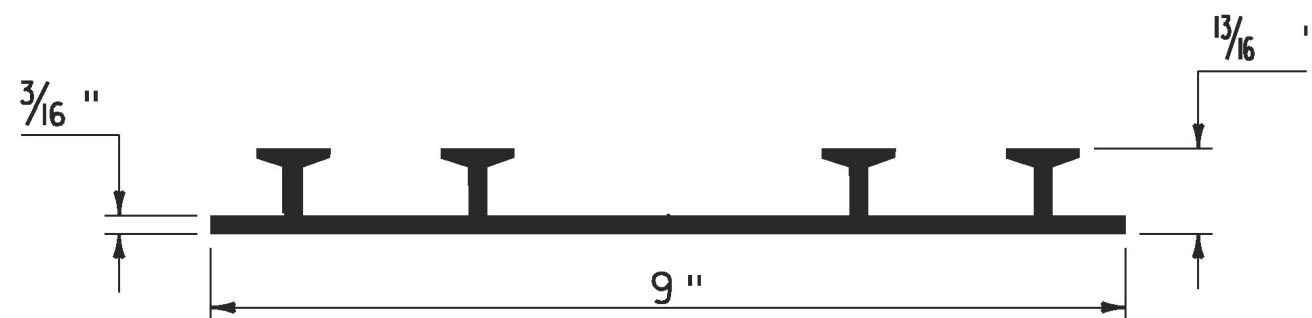
SCORE MARK DETAIL
(NOT TO SCALE)



TYPICAL CONCRETE EXPANSION JOINT
(NOT TO SCALE)



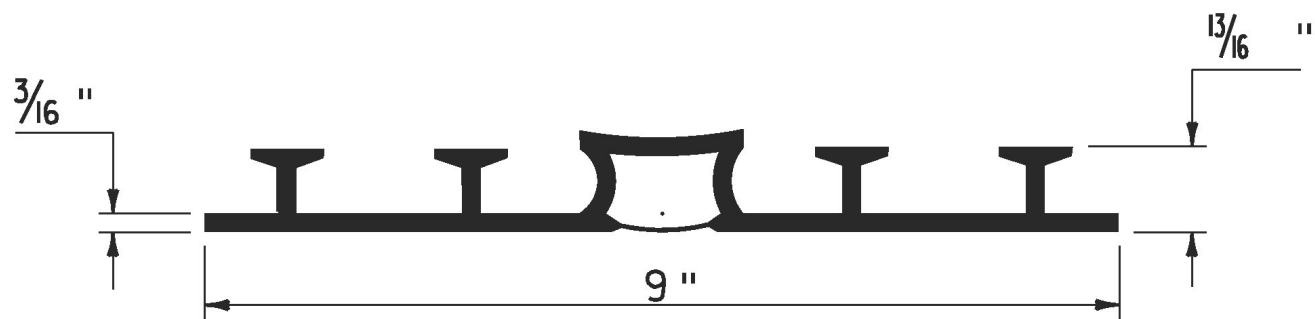
TRANSVERSE BRIDGE SLAB
CONSTRUCTION JOINT DETAILS
(NOT TO SCALE)



P.V.C. WATERSTOP FOR
CONSTRUCTION JOINTS
(NOT TO SCALE)

PAYMENT FOR THE P.V.C. WATERSTOP SHALL BE INCIDENTAL TO THE UNIT BID PRICE FOR THE ADJACENT CONCRETE.

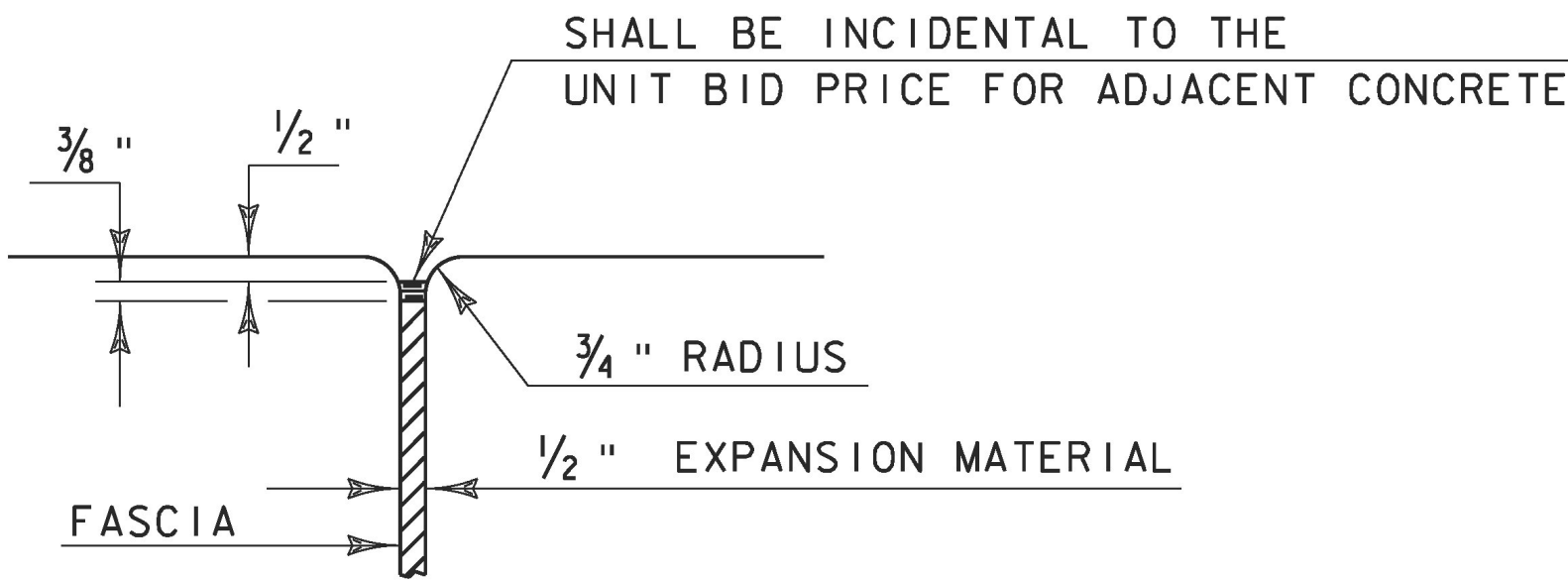
OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



P.V.C. WATERSTOP FOR
EXPANSION JOINTS
(NOT TO SCALE)

PAYMENT FOR THE P.V.C. WATERSTOP SHALL BE INCIDENTAL TO THE UNIT BID PRICE FOR THE ADJACENT CONCRETE.

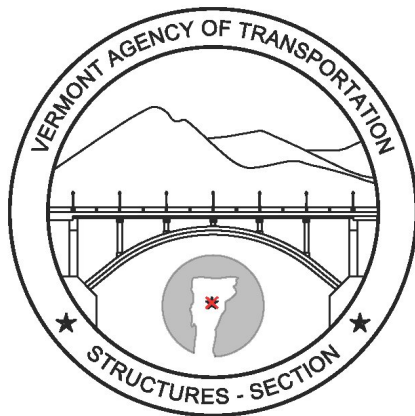
OTHER CONFIGURATIONS OF WATERSTOP MAY BE USED UPON APPROVAL OF THE ENGINEER.



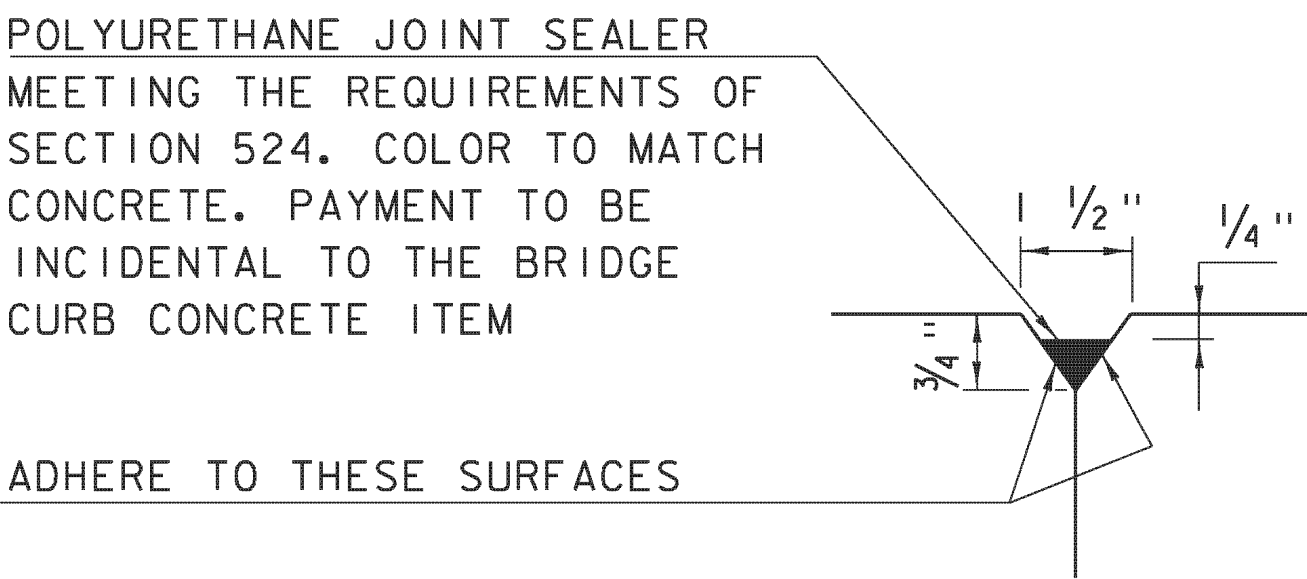
JOINT BETWEEN FASCIA
AND WINGWALL
(NOT TO SCALE)

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION

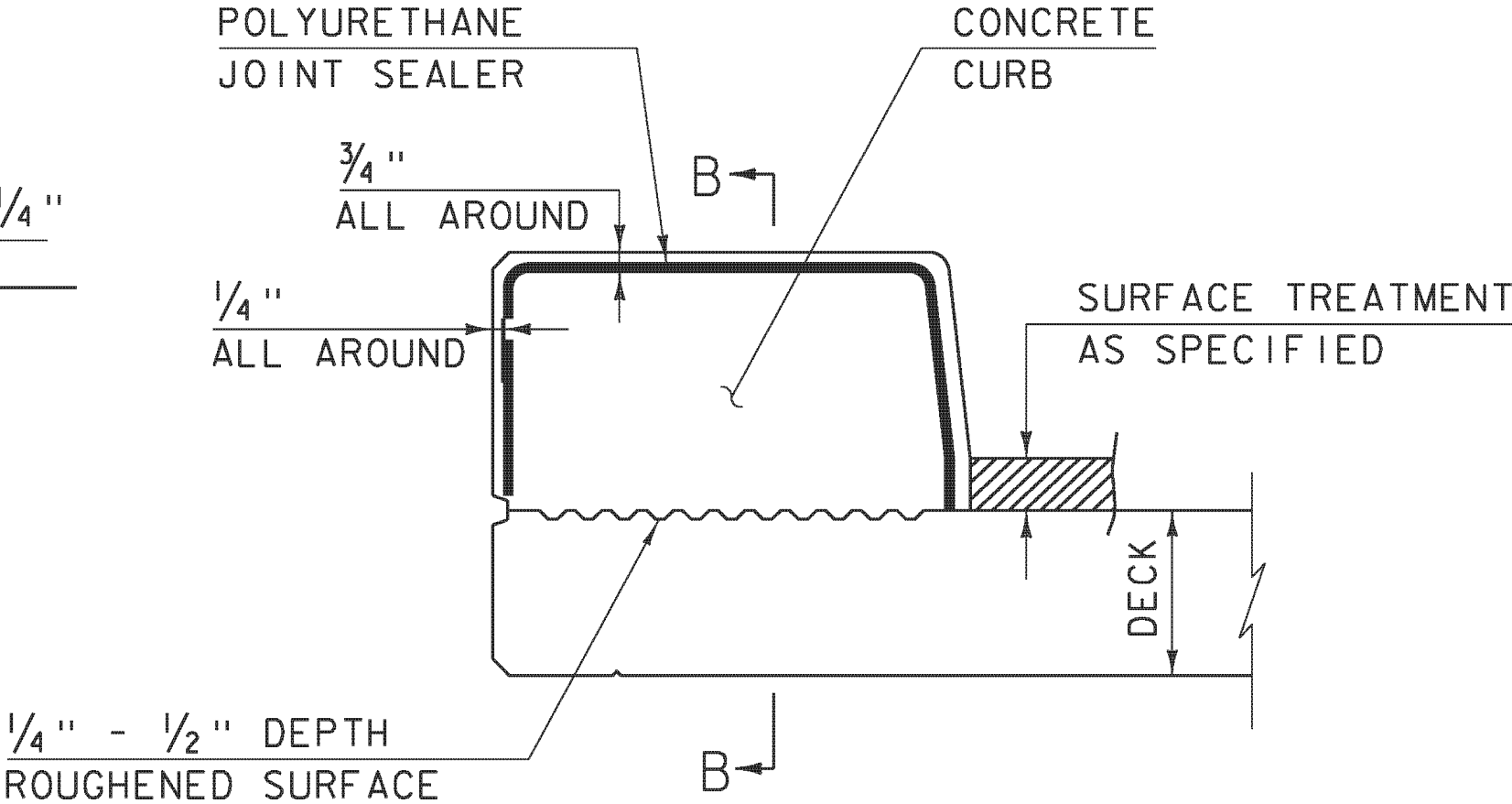
CONCRETE
DETAILS AND NOTES



STRUCTURES
DETAIL
SD-5 01.00

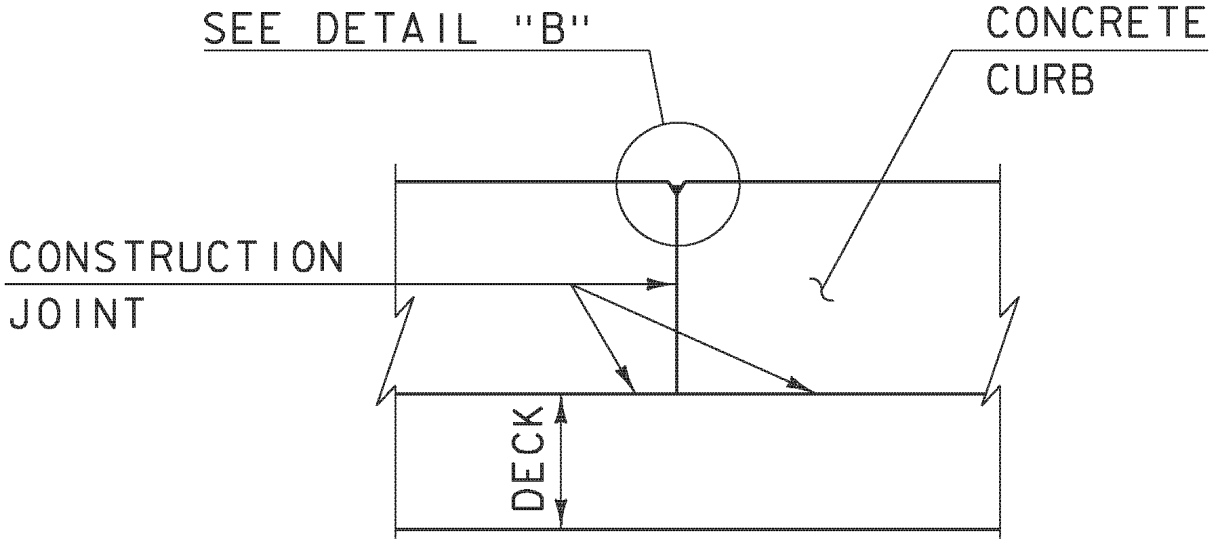


DETAIL "B"
(NOT TO SCALE)

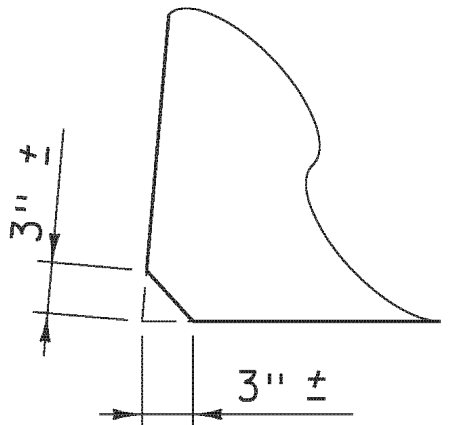


CONCRETE CURB JOINT SECTION
(NOT TO SCALE)

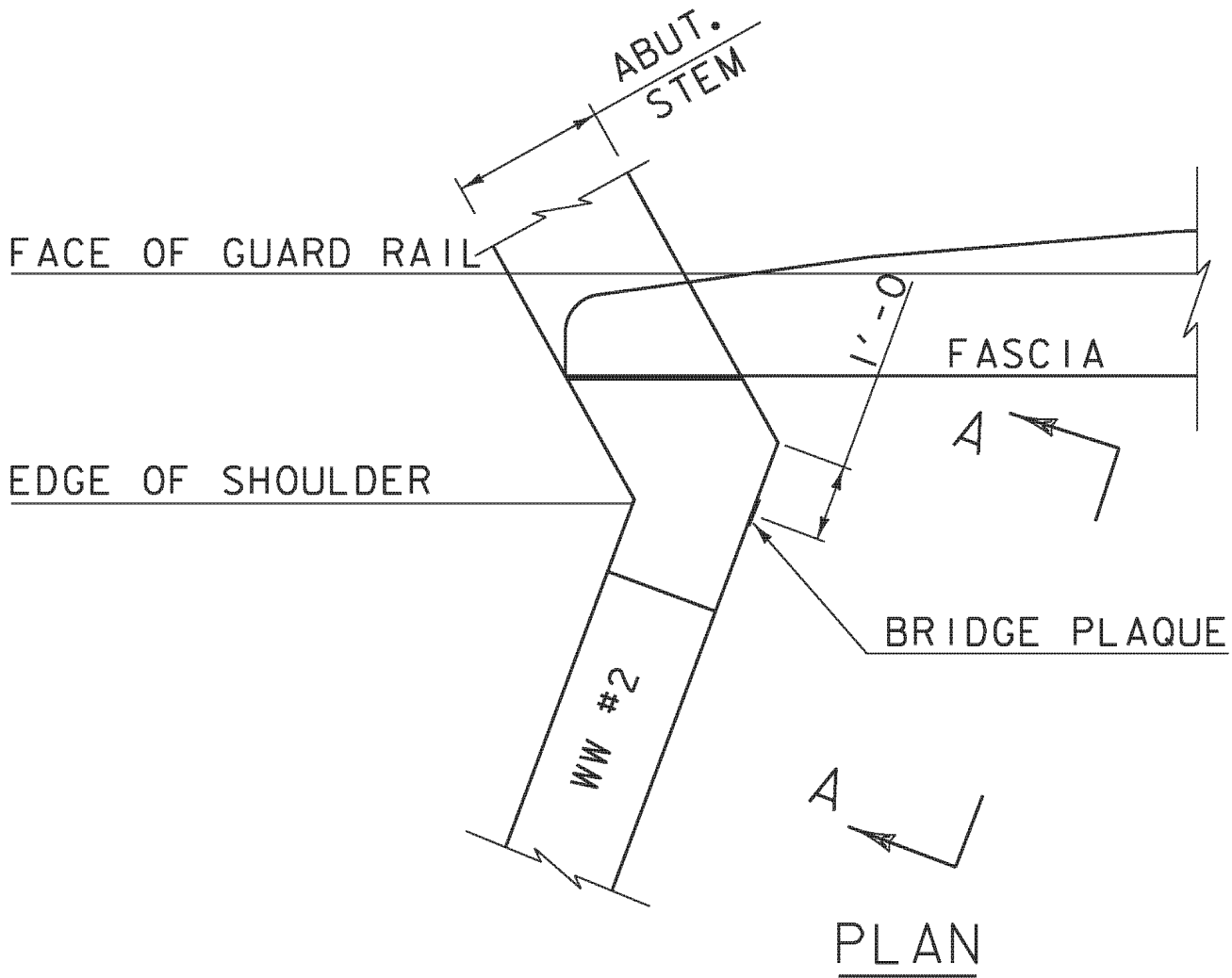
1. SEE TYPICAL HORIZONTAL CONSTRUCTION JOINT
DETAIL FOR ADDITIONAL INFORMATION



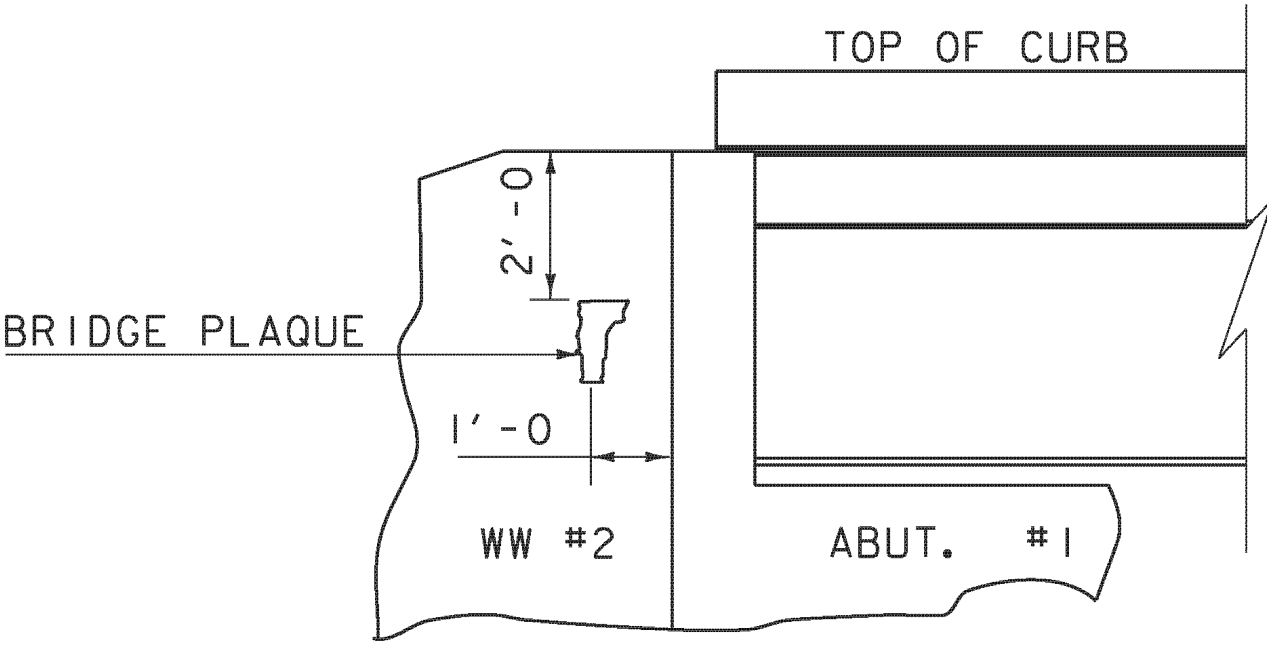
SECTION B - B
(NOT TO SCALE)



ACUTE ANGLE
CLIP DETAIL
(NOT TO SCALE)



PLAN



VIEW "A - A"

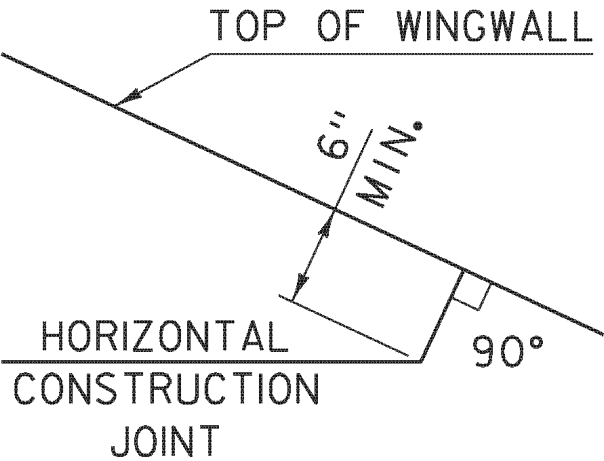
BRIDGE PLAQUE
(NOT TO SCALE)

THE BRIDGE PLAQUE WILL BE SUPPLIED BY THE AGENCY OF
TRANSPORTATION AND SHALL BE INSTALLED BY THE CONTRACTOR AT
ABUTMENT #1 ON THE RIGHT SIDE AS SHOWN OR AS DIRECTED BY
THE ENGINEER.

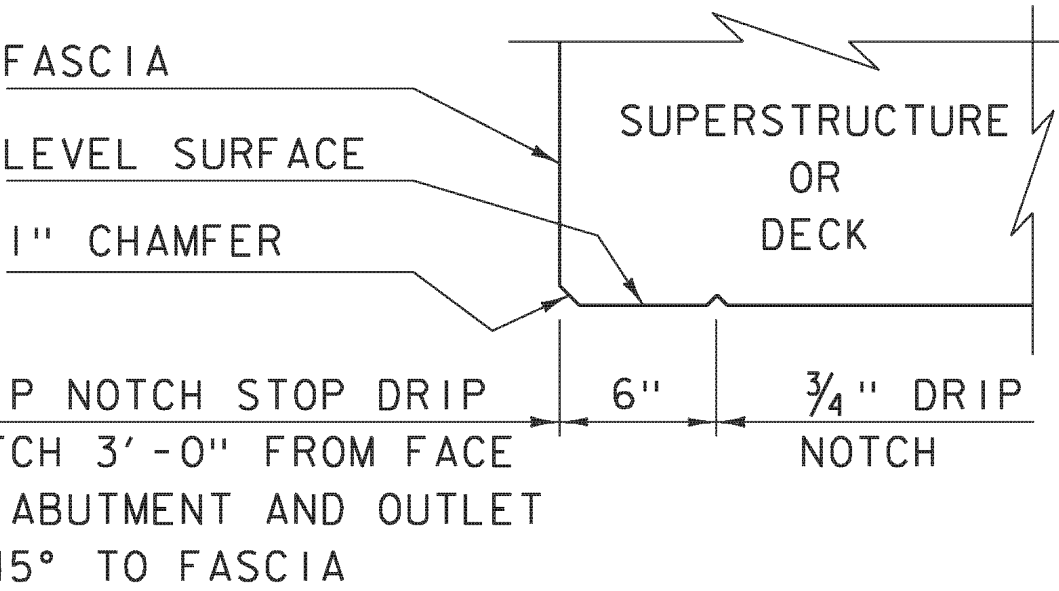
PAYMENT FOR INSTALLATION OF THE BRIDGE PLAQUE SHALL BE
INCIDENTAL TO THE ADJACENT CONCRETE.

CONCRETE CURB JOINT NOTES

1. CONCRETE CURBS MAY BE PLACED IN ONE CONTINUOUS OPERATION IF
AN APPROVED SHRINKAGE REDUCING ADMIXTURE LISTED IN THE
SPECIAL PROVISIONS IS USED WITH THE CONCRETE MIX DESIGN.
PAYMENT FOR THE SHRINKAGE REDUCING ADMIXTURE WILL BE
INCIDENTAL TO THE BRIDGE CURB CONCRETE ITEM.
2. IF THE CONTRACTOR CHOOSES NOT TO USE AN APPROVED SHRINKAGE
REDUCING ADMIXTURE, THE CURBS SHALL BE CONSTRUCTED WITH
CONSTRUCTION JOINTS SPACED AT A MAXIMUM OF 15'-0" CENTER TO
CENTER AND 2'-0" MINIMUM FROM THE CENTER OF NEAREST BRIDGE
RAILING POST.
3. ON MULTI-SPAN CONTINUOUS SUPERSTRUCTURES, REGARDLESS OF
WHETHER APPROVED SHRINKAGE REDUCING ADMIXTURE IS USED, CURB
JOINTS SHALL BE LOCATED OVER THE CENTERLINE OF PIERS AND
7'-0" EACH SIDE OF THE CENTERLINE OF EACH PIER.
4. WHEN CURB JOINTS ARE USED THE CURBS SHALL BE PLACED IN
ALTERNATE SECTIONS WITH A MINIMUM OF 48 HOUR DELAY BETWEEN
ADJACENT PLACEMENTS.
5. LONGITUDINAL REINFORCING SHALL BE CONTINUOUS THROUGH CURB
CONSTRUCTION JOINTS. CURB STIRRUP BARS SHALL BE TURNED AS
NECESSARY TO MAINTAIN COVER IN THE FLARED CURB ENDS.
6. THE JOINT SPACING AND DETAILS SHOWN SHALL APPLY TO
SIDEWALKS WHEN SHOWN IN THE PLANS.



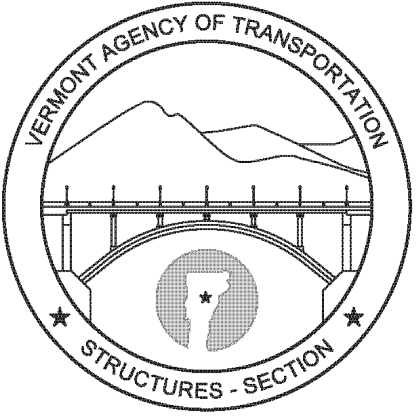
HORIZONTAL WINGWALL
CONSTRUCTION JOINT
(NOT TO SCALE)



DRIP NOTCH DETAIL
(NOT TO SCALE)

REVISIONS	
MAY 7, 2010	APPROVED FOR USE BY VAOT STRUCTURES SECTION
JUNE 4, 2010	MODIFIED AND ADDED TWO DETAILS
OCTOBER 10, 2012	MODIFIED HORZ. JOINT WINGWALL ADD 6" MIN. DIMENSION

CONCRETE
DETAILS AND NOTES



STRUCTURES
DETAIL
SD-502.00

STRUCTURES
DETAIL
SD-5 16.10

IN ACCORDANCE WITH SHEET 35 OF 70, PLOT DATE 17-JUN-2013.

GENERAL NOTES

1. ALL BEARINGS SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS, SECTIONS 531 AND 731, UNLESS NOTED OTHERWISE.
2. MATERIALS:

ELASTOMER.....50 ± 5 DURO NATURAL, GRADE 4
(100 ± 15 psi)

CARBON STEEL SHIMS.....ASTM A1011, GR. 40
(QUOTED 14 GAUGE ASTM A1011 GRADE 40 IN LIEU OF 1/16" AASHTO M270 GRADE 36 DUE TO AVAILABILITY)
3. TOLERANCES: LAMINATED PADS:

VERTICAL.....-0, +1/4"

HORIZONTAL.....-0, +1/4"

THICKNESS OF LAYERS.....±1/8"

PARALLELISM TOP.....0.005 rad

PARALLELISM SIDES.....1/4"

EDGE COVER.....-0, +1/8"
4. MARKINGS:

EACH BEARING SHALL BE PERMANENTLY MARKED IN A LOCATION THAT IS VISIBLE WHEN THE DEVICE IS INSTALLED IN THE COMPLETED STRUCTURE. MARKING SHALL BE SEP STANDARD:

CONTRACT/ORDER #

LOT#

BEARING ID # (MK. #)

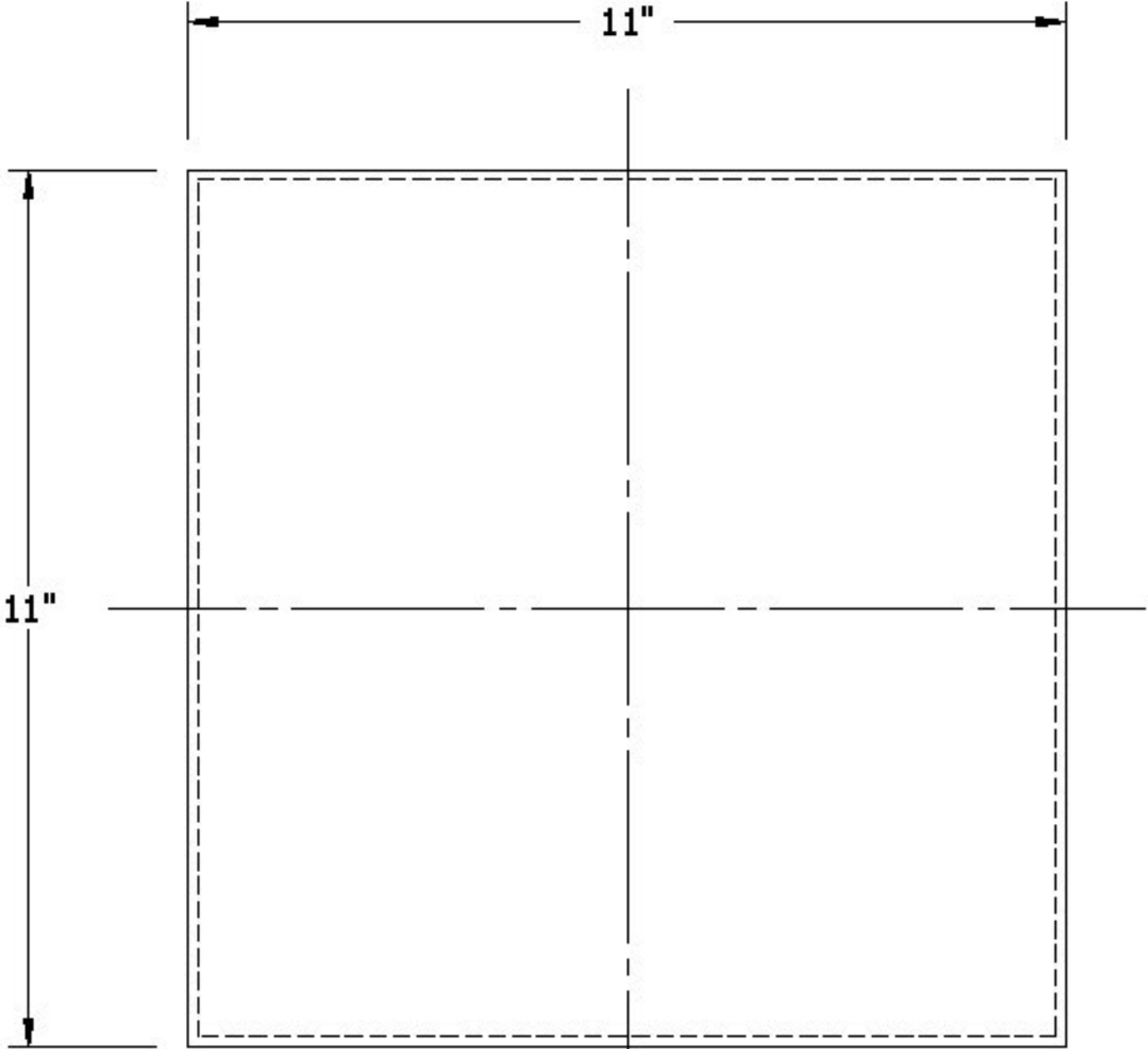
LOCATION/BRIDGE #

ELASTOMER TYPE AND GRADE

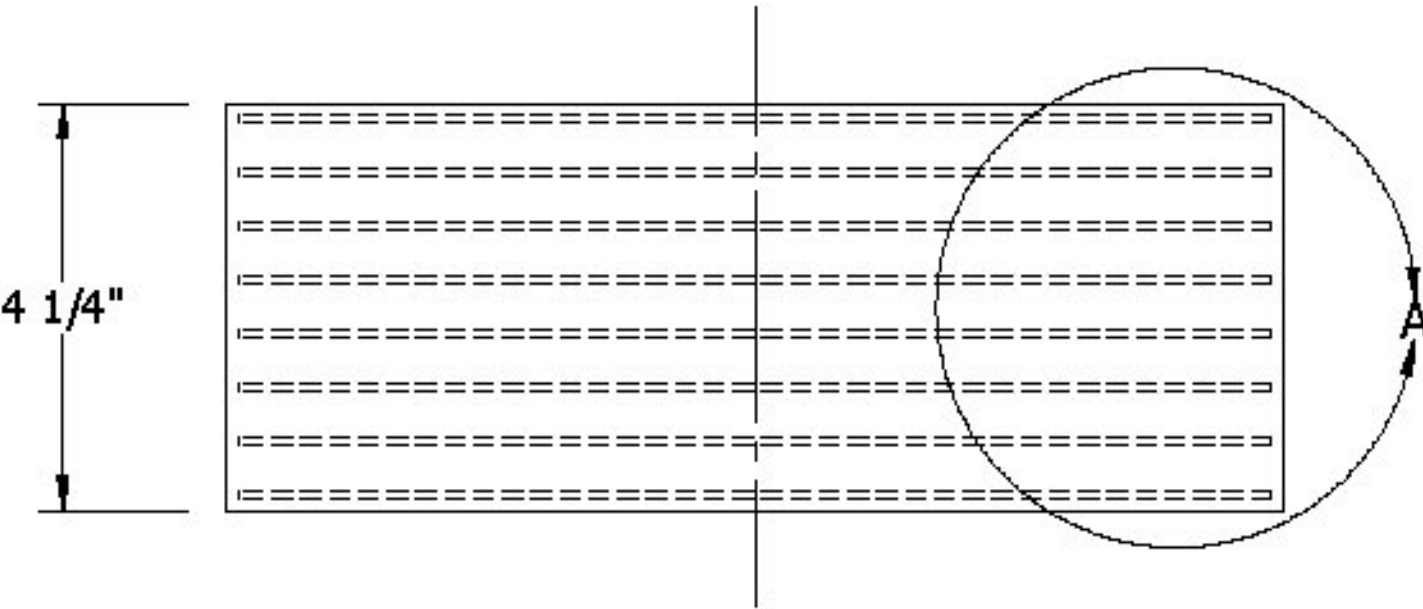
ORIENTATION (WHERE APPLICABLE)
5. TESTING: PROVIDE TYPE A CERTIFICATION FOR FABRIC PADS PER SUBSECTION 700.02(c)(1) OF THE VERMONT AOT SPECIFICATIONS.
6. REPRESENTATIVE

CUSTOMER SERVICE: STEVE BOWMAN.....903-677-4318

TECHNICAL: MIKE SPELLMAN.....903-677-4342

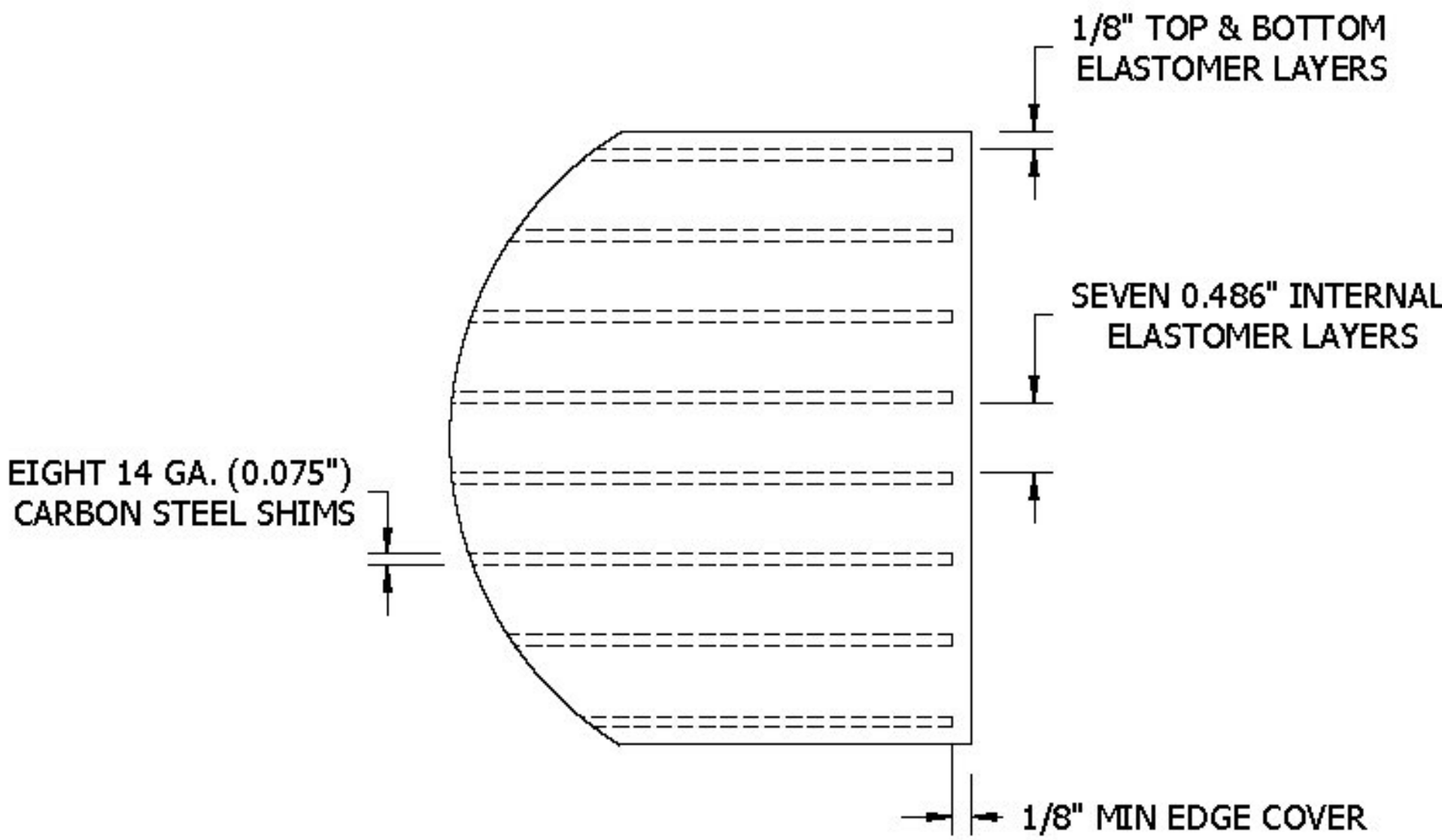


PLAN VIEW



ELEVATION VIEW

MK.01
BEARING PADS
@ ABUTMENT
(16) REQ'D



DETAIL A

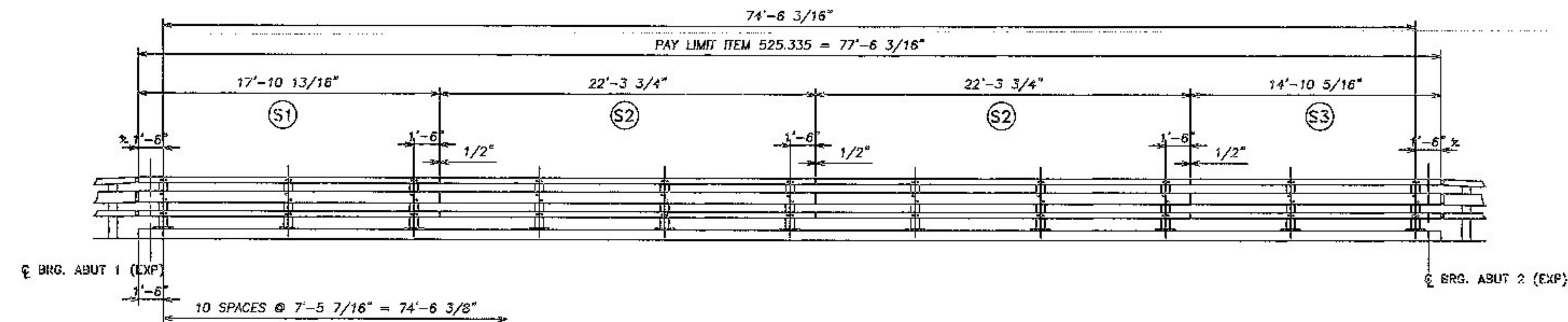
REVISIONS		
REV.	DESCRIPTION	DATE
A	SUBMITTAL	9/17/2013

Vermont Agency of Transportation
RECEIVED
57432 SHOP DRAWING SUBMITTAL.PDF

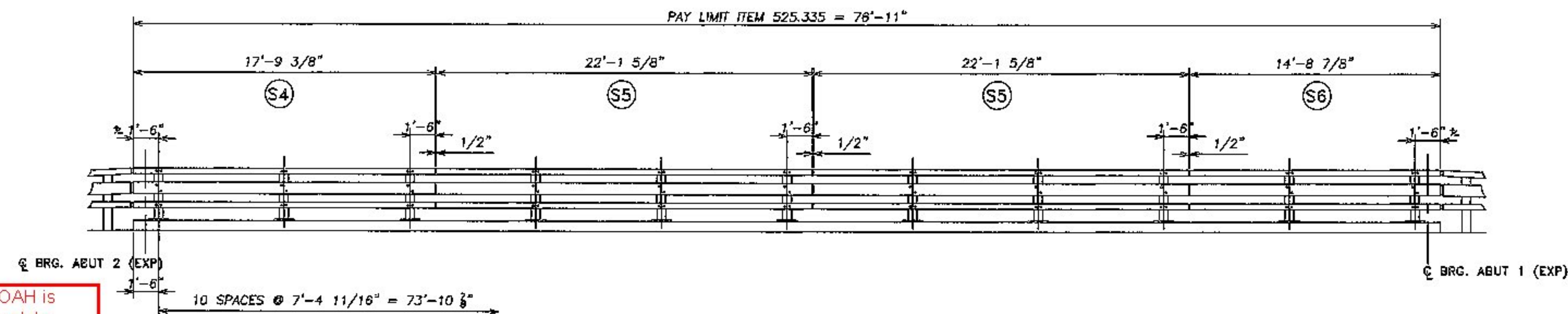
CK'D BY HIS _____ OK'D BY CLB _____
September 18, 2013

RESUBMIT No _____
BY C. Carlson _____ DATE 10/01/2013

Seismic Energy Products, Inc. STRUCTURAL BEARINGS FOR BRIDGES & BUILDINGS ATHENS, TX PHONE: 903-675-8571			
BEARING ASSY FOR: STATE OF VERMONT AGENCY OF TRANSPORTATION			
BRIDGE IMPROVEMENT PROJECT			
CONTRACTOR: AUSTIN CONSTRUCTION INC.			
PROJECT NO BRF 029-1 (17)	DRAWN C WILLIAMS	DATE 9/12/13	PO # S QTE
TOWN STOWE	CHECKED	DATE	SO NO. & ST. 57432 VT
COUNTY LAMOILLE	REVIEWED M SPELLMAN	DATE 9/17/13	SHEET 1 OF 1
ROUTE NO VT 100			
BRIDGE NO 208			



WEST SIDE RAILING ELEVATION
LOOKING AT TRAFFIC FACE OF RAILING
FACING WEST FROM CENTERLINE OF ROAD



EAST SIDE RAILING ELEVATION
LOOKING AT TRAFFIC FACE OF RAILING
FACING EAST FROM CENTERLINE OF ROAD

?? (6 for rails one for delineator)

**BILL OF MATERIAL
BOTH SIDES OF BRIDGE**

2'-11 3/8" unless OAH is including the base plate thickness

Qty	mk	Description	Spec.
22		BRIDGE RAIL POST W6x25 (6 hole) 3'-0.375" OAH w/ 1 x 10 x 14 B.P. (GALV)	A572 gr 60
6		SPLICE TUBE FOR 8x4 RAIL (GALV) TS 7x3x3/8 1'-8" LG w/ 2 WELDED NUTS	A500 gr B
12		SPLICE TUBE FOR 4x4 RAIL (GALV) TS 3x3x5/16 1'-8" LG w/ 2 WELDED NUTS	A500 gr B
1	S1	UPPER RAIL 8x4x5/16 (GALV) 17'-10 13/16" LG SHOP CURVED 543' RADIUS	A500 gr B
2	S2	UPPER RAIL 8x4x5/16 (GALV) 22'-3 3/4" LG SHOP CURVED 543' RADIUS	A500 gr B
1	S3	UPPER RAIL 8x4x5/16 (GALV) 14'-10 5/16" LG SHOP CURVED 543' RADIUS	A500 gr B
1	S4	UPPER RAIL 8x4x5/16 (GALV) 17'-9 3/8" LG SHOP CURVED 575' RADIUS	A500 gr B
2	S5	UPPER RAIL 8x4x5/16 (GALV) 22'-1 5/8" LG SHOP CURVED 575' RADIUS	A500 gr B
1	S6	UPPER RAIL 8x4x5/16 (GALV) 14'-8 7/8" LG SHOP CURVED 575' RADIUS	A500 gr B
2	S1	LOWER RAIL 4x4x1/4 (GALV) 17'-10 13/16" LG SHOP CURVED 543' RADIUS	A500 gr B
4	S2	LOWER RAIL 4x4x1/4 (GALV) 22'-3 3/4" LG SHOP CURVED 543' RADIUS	A500 gr B
2	S3	LOWER RAIL 4x4x1/4 (GALV) 14'-10 5/16" LG SHOP CURVED 543' RADIUS	A500 gr B
2	S4	LOWER RAIL 4x4x1/4 (GALV) 17'-9 3/8" LG SHOP CURVED 575' RADIUS	A500 gr B
4	S5	LOWER RAIL 4x4x1/4 (GALV) 22'-1 5/8" LG SHOP CURVED 575' RADIUS	A500 gr B
2	S6	LOWER RAIL 4x4x1/4 (GALV) 14'-8 7/8" LG SHOP CURVED 575' RADIUS	A500 gr B
22		BR NEOPRENE PAD 0.125 x 10.00 x 14.00 NETC 80 DURO	neoprene
132		3/4" SLOTTED HEAD BOLT (GALV) 0.750" DIA. X 6.000" LG NO SHLDR	A325
132		(3/4") HEAVY HEX NUT (GALV) 0.750" dia	A593 gr DH
132		(3/4") PLAIN ROUND WASHER TYPE A (GALV) 0.750" DIA USS LARGE (HI CARBON)	F844
72		(5/8") HEX HEAD BOLT (GALV) 0.625" DIA x 1.750" LG	A325
72		(5/8") PLAIN ROUND WASHER (GALV) 0.625" USS LARGE	F844
22		ANCHOR PLATE (GALV) PL .375 x 3.375 x 13.000 w/ 5" dia CTR HOLE	A36
88		(1") THD ANCHOR STUD (GALV) 1.000" DIA x 12" LONG full thread	A449
176		(1") HEAVY HEX NUT (GALV) 1.000" DIA (hi-str)	A563 DH
88		(1") JAM NUT (GALV) 1.000" DIA (hi-str)	A563 DH
88		(1") PLAIN ROUND WASHER (GALV) 1.000" DIA SAE (SMALL) HI-STR	F436

ITEM 525.335 BRIDGE RAILING GALVANIZED 3 RAIL BOX BEAM = 154.5 LF

Vermont Agency of Transportation
RECEIVED

CK'D BY M. Umberger OK'D BY H. Salls

July 15, 2014

RESUBMIT No Approved AsNoted
BY C. Carlson DATE 07/21/2014

HIGHWAY SAFETY CORP
GLASTONBURY, CT
860-633-9445

ITEM 525.335 BRIDGE RAILING GALVANIZED 3 RAIL BOX BEAM
TOWN OF STOWE, VERMONT
US RT VT 100 (MINOR ARTERIAL) BRIDGE #208
LAMOILLE COUNTY BRG 029-1 (17)

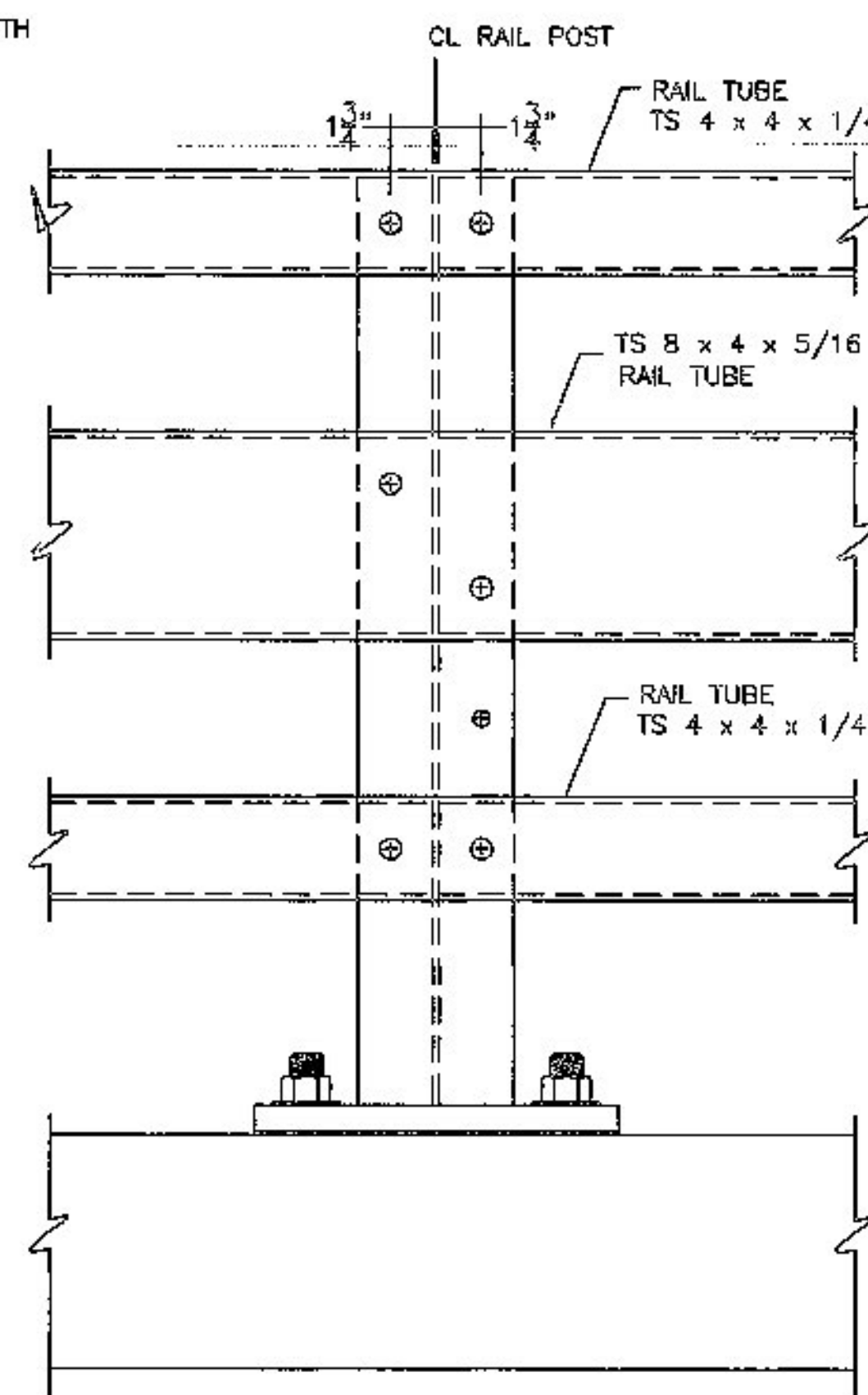
CERTIFIED
FABRICATOR

1999

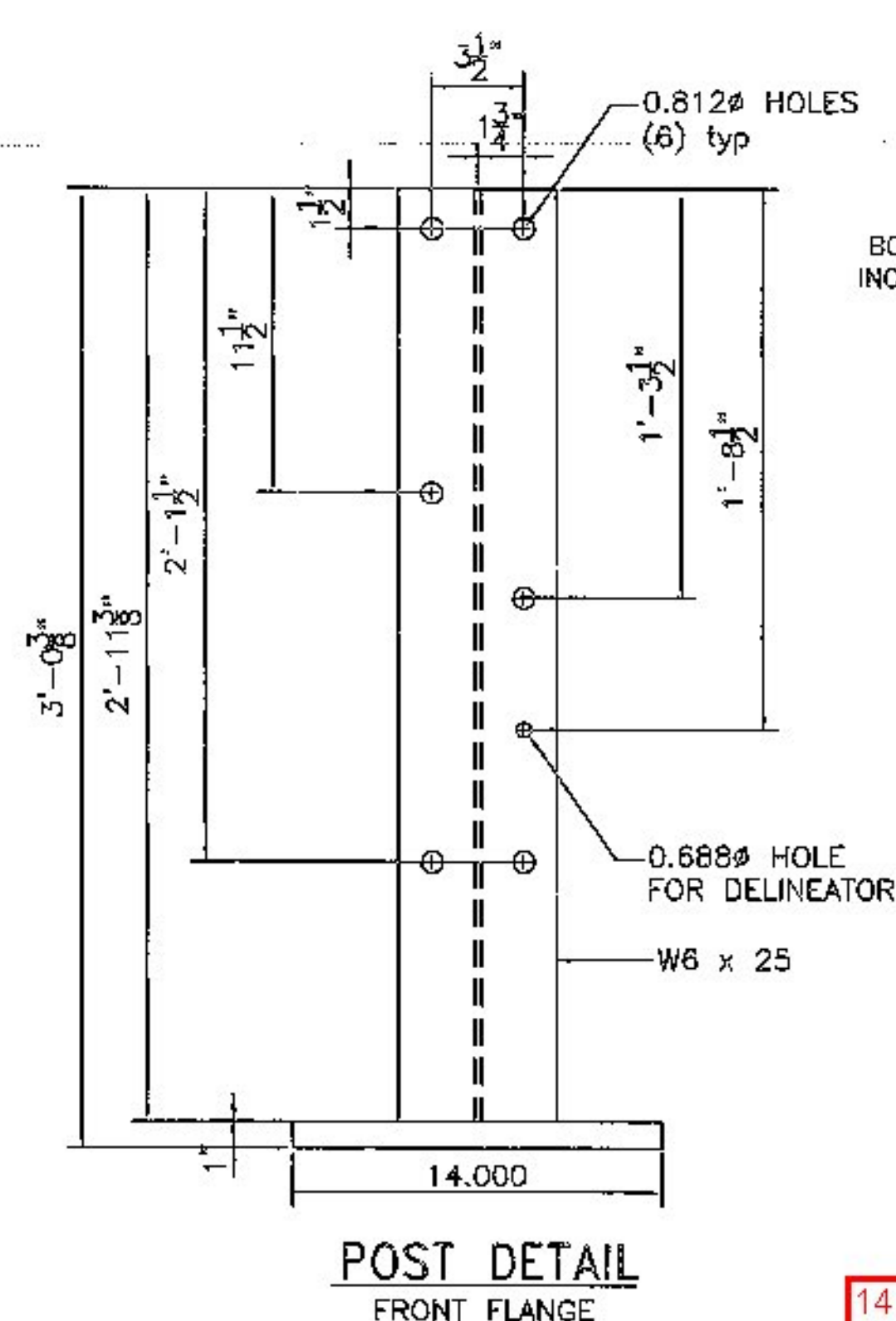
DESIGNER: RWL
DATE: 06-30-14
SCALE: NONE
SHEET NO.: 1 of 3

No.	Initial submitted	Remarks	Date
1			

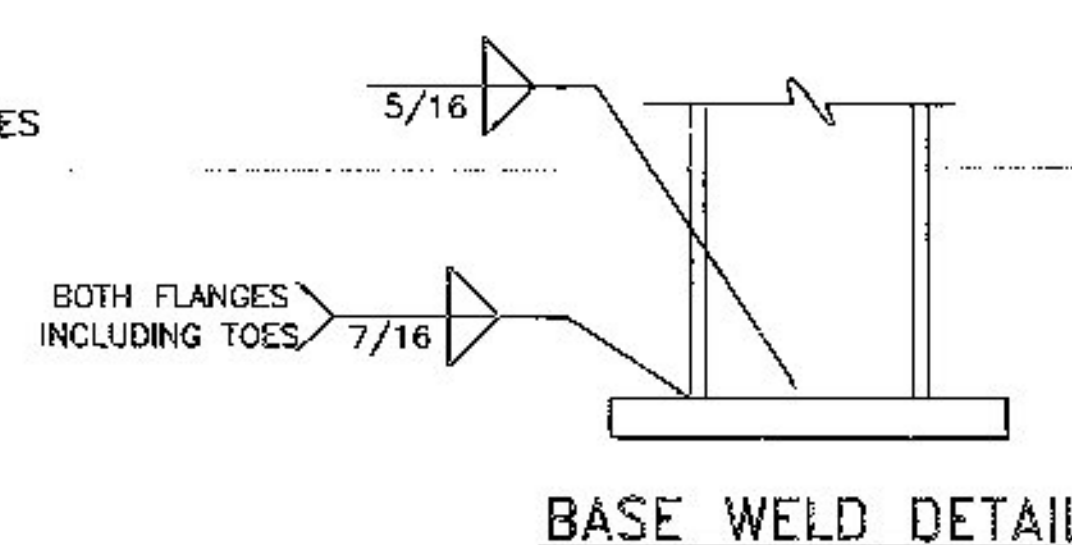
REVISIONS - APPLIES TO SET



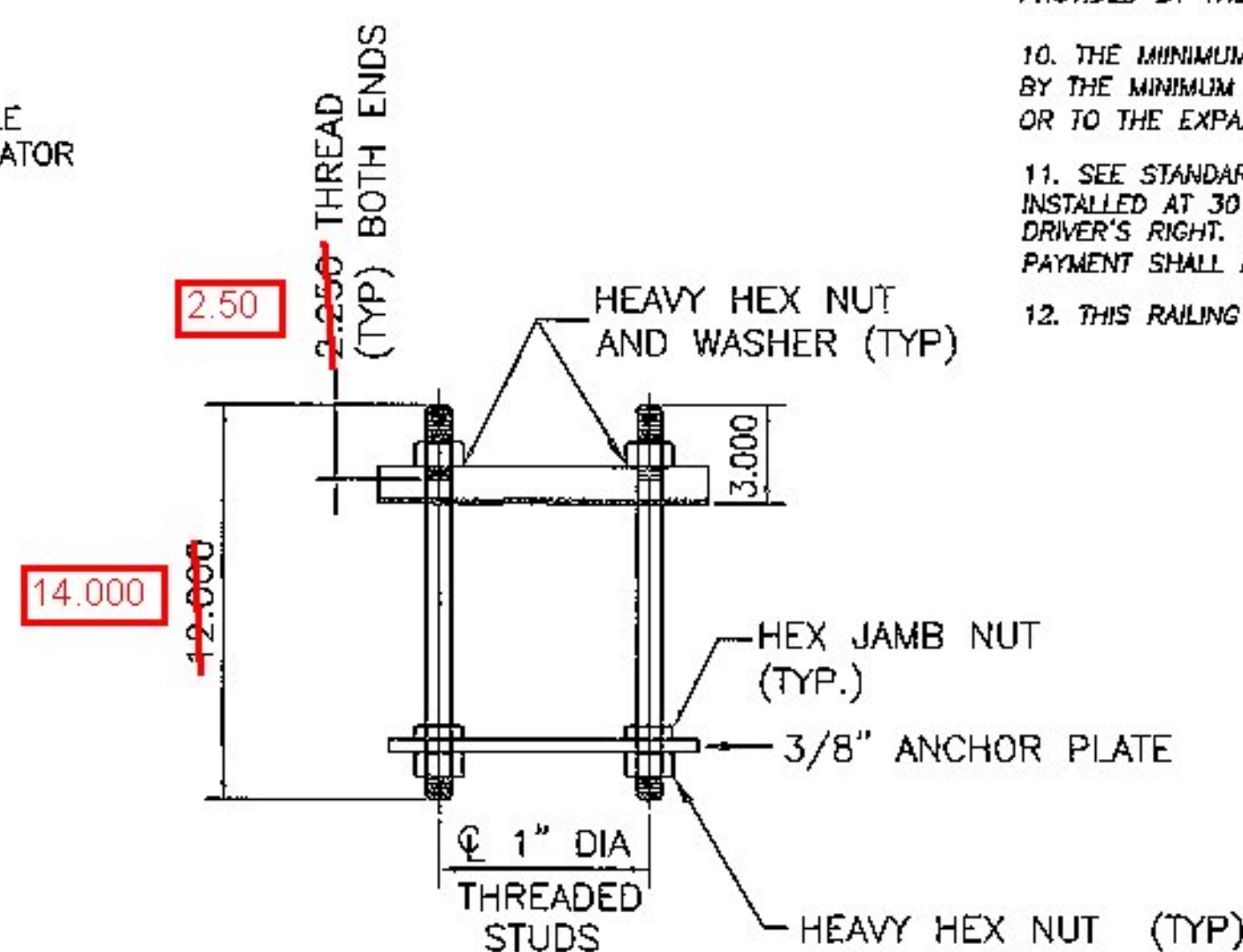
RAILING ELEVATION @ POST



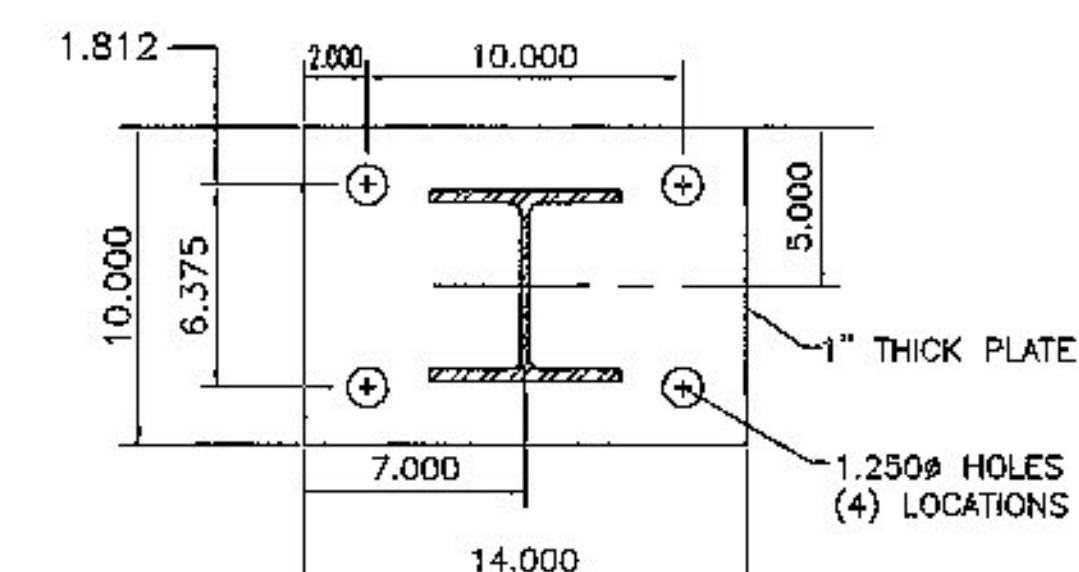
POST DETAIL
FRONT FLANGE



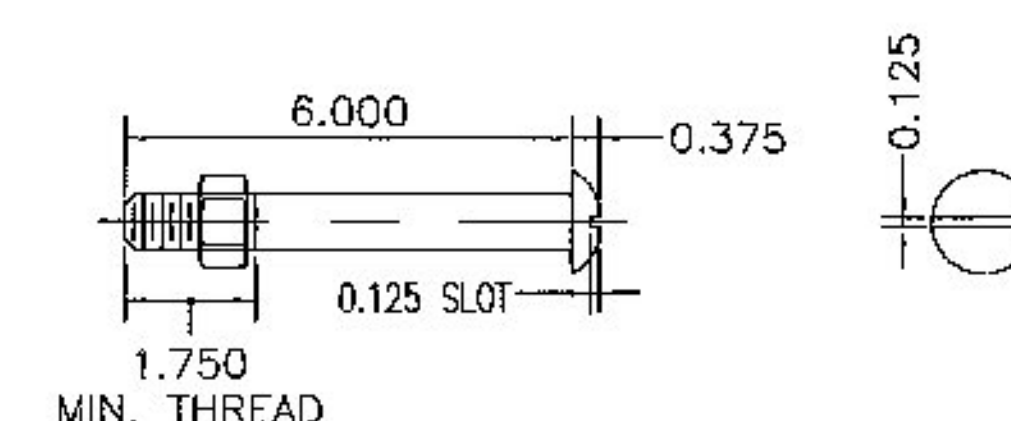
BASE WELD DETAIL



RAIL POST ANCHORAGE

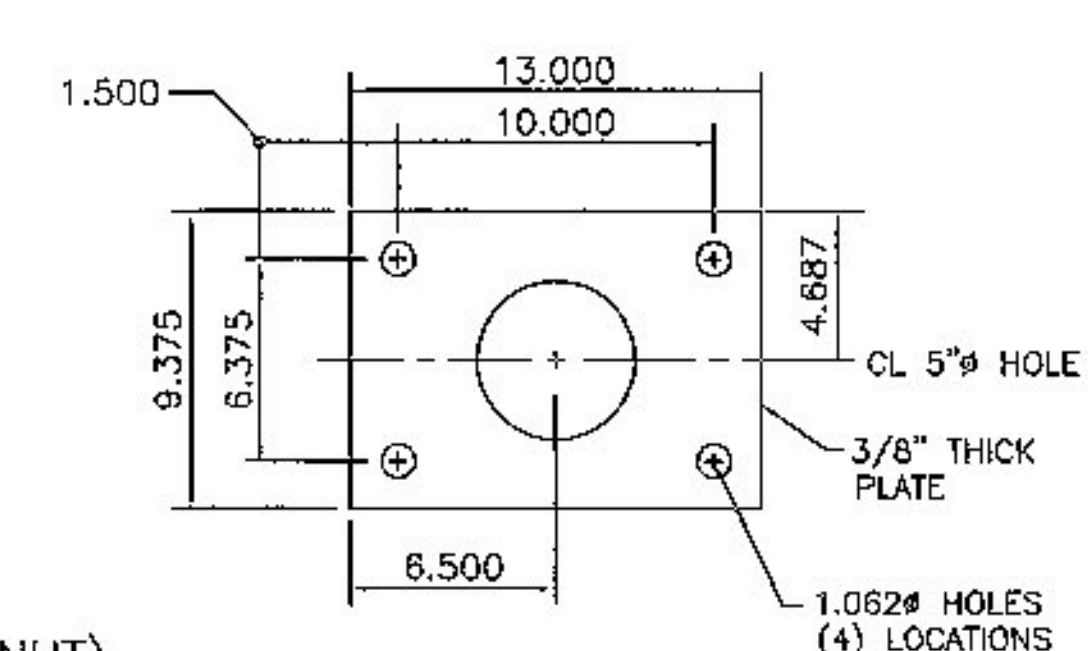


SECTION THRU POST
AT BASE PLATE
1.000 x 10.000 x 14.000

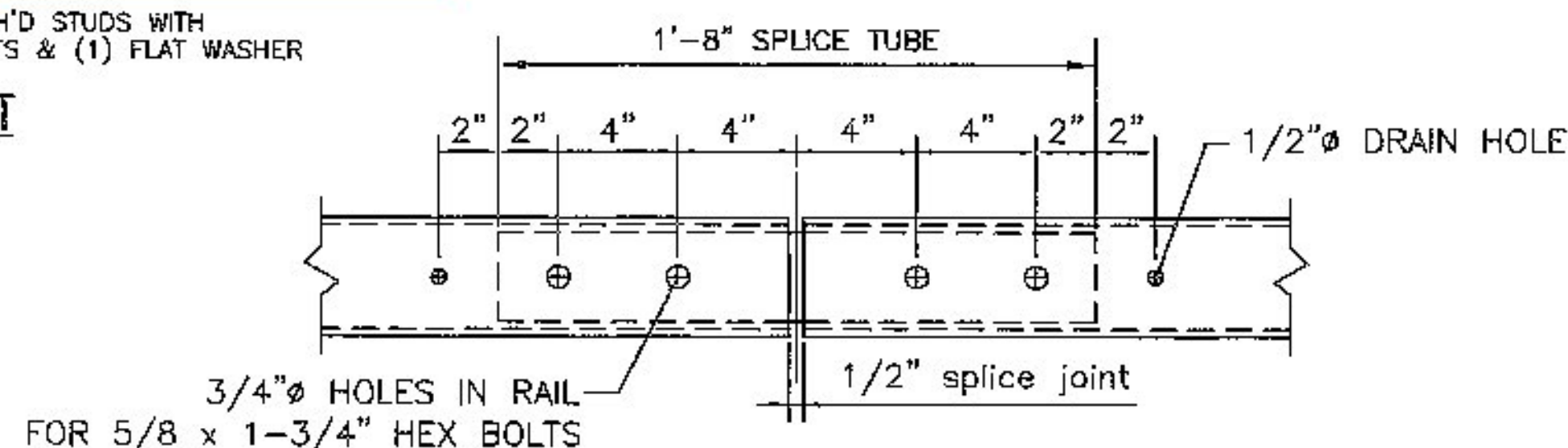


3/4" DIA. A449
ROUND HEAD BOLT

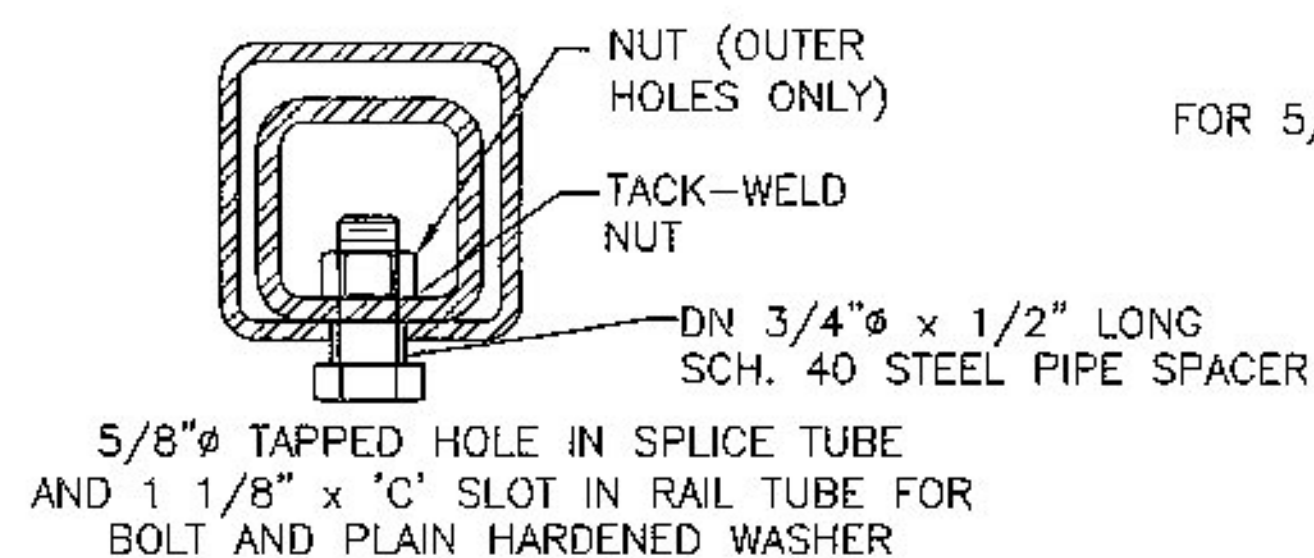
(WITH WASHER AND PREVAILING TORQUE TYPE LOCK NUT)
(SEE NOTE #8)
ONLY FULL DIAMETER BODY BOLTS WILL BE ALLOWED.



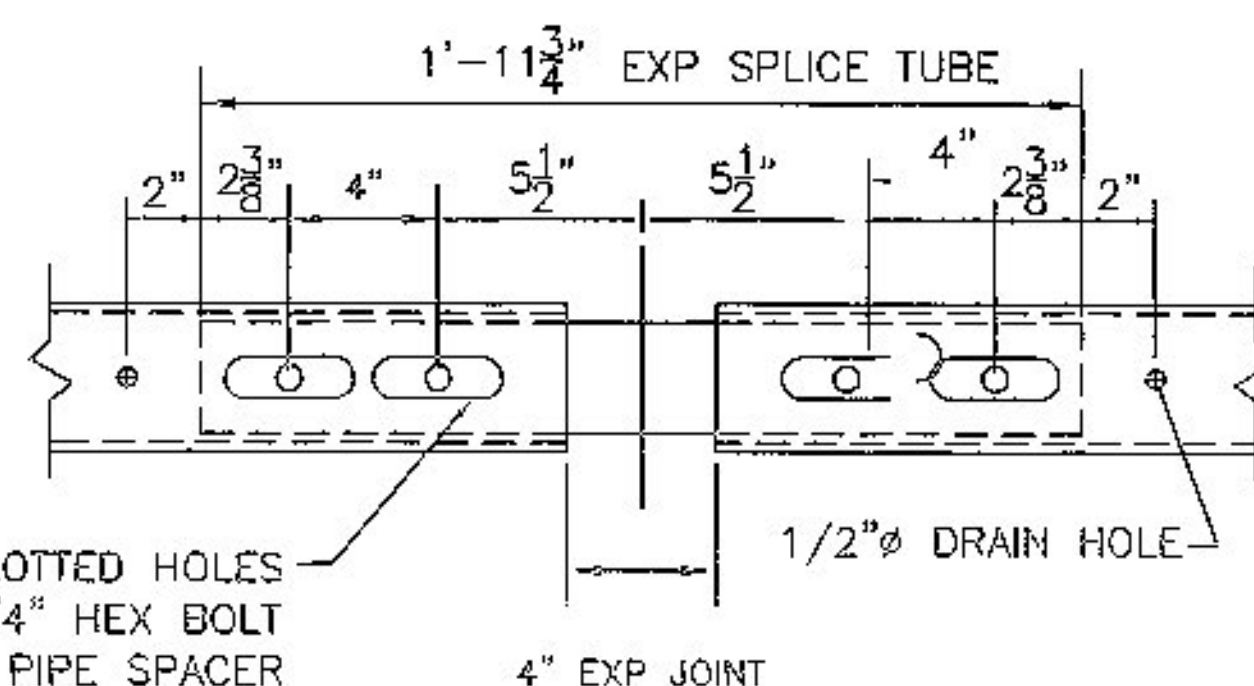
ANCHOR PLATE
0.375 x 9.375 x 13.000



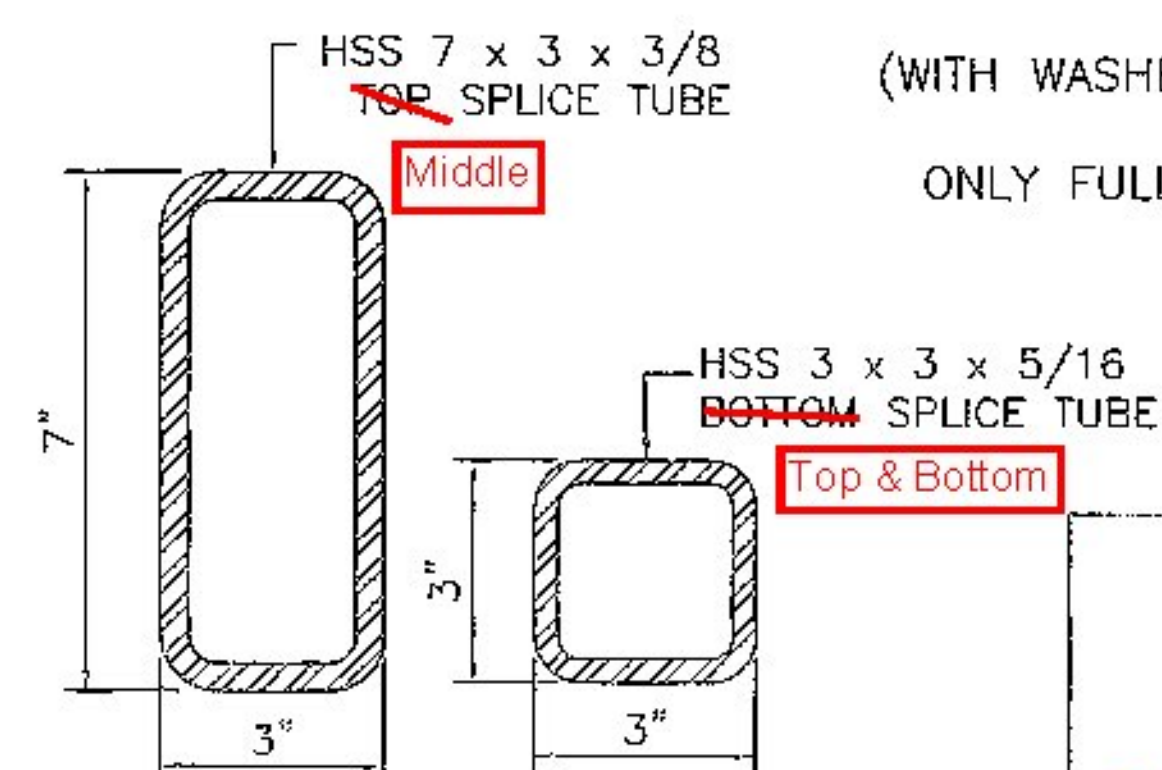
FIXED SPLICE JOINT DETAIL
BOTTOM VIEW



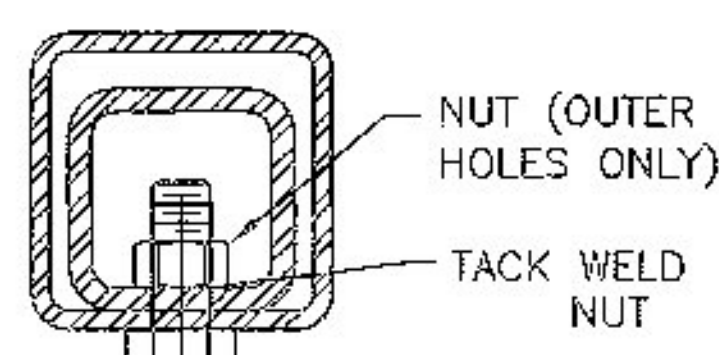
EXPANSION JOINT SECTION



EXPANSION SPLICE DETAIL
BOTTOM VIEW



RAIL TUBE SPLICE SECTION



5/8"Ø TAPPED HOLE IN SPLICE TUBE &
3/4"Ø HOLE IN RAIL TUBE FOR BOLT &
PLAIN HARDENED WASHER

FIXED SPLICE JOINT SECTION

NOTES

1. ALL WORK & MATERIALS SHALL CONFORM TO SECTION 5.25.
2. PRIOR TO GALVANIZING THE ASSEMBLY POST, GRIND ALL EDGES TO A MINIMUM RADIUS OF $\frac{1}{16}$ ".
3. ALL POSTS SHALL BE SET NORMAL TO GRADE.
4. SECTION OF RAIL TUBE SHALL BE ATTACHED TO A MINIMUM OF TWO BRIDGE RAIL POSTS AND PREFERABLY TO AT LEAST FOUR POSTS.
5. RAIL TUBE EXPANSION JOINTS SHALL BE PROVIDED IN ANY RAIL BAY SPANNING THE END OF AN INTEGRAL ABUTMENT BRIDGE AND AT ALL SUPERSTRUCTURE EXPANSION JOINTS. EXPANSION JOINT WIDTH SHALL BE 4" AT 45 DEG. F AND WILL BE ADJUSTED IN THE FIELD BY THE ENGINEER FOR OTHER TEMPERATURES.
6. HOLES IN RAILS FOR RAIL TUBE ATTACHMENT MAY BE FIELD DRILLED. HOLES SHALL BE COATED WITH AN APPROVED ZINC-RICH PAINT PRIOR TO INSTALLATION.
7. RAIL POST ANCHORING NUTS SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL $1\frac{1}{8}$ TURN.
8. RAIL TUBES SHALL BE ATTACHED USING $3\frac{1}{4}$ " FULL DIAMETER BODY ASTM A 449 (TYPE 1) ROUND HEAD BOLTS WITH WASHER AND PREVAILING TORQUE TYPE LOCK NUT INSERTED THROUGH THE FACE OF THE TUBE. HOLES IN POSTS SHALL BE $\frac{1}{16}$ " LARGER THAN THE BOLT SIZE.
9. ANY BENDING OF RAIL SHALL BE DONE AT FABRICATION PLANT ACCORDING TO A PROCEDURE PROVIDED BY THE FABRICATOR.
10. THE MINIMUM DISTANCE FOR THE POST TO AN EXPANSION JOINT SHALL BE DETERMINED BY THE MINIMUM EDGE DISTANCE OF 5" FROM ANY ANCHOR STUD TO THE END OF THE SLAB, OR TO THE EXPANSION JOINT RECESS POUR, IF ONE IS USED.
11. SEE STANDARD DRAWING G-1 FOR DETAILS OF DELINEATORS. A DELINEATOR SHALL BE INSTALLED AT 30 FOOT SPACING OR THE NEAREST POST. WHITE IS TO BE INSTALLED ON THE DRIVER'S RIGHT. FOR ONE WAY BRIDGES, YELLOW IS TO BE INSTALLED ON THE DRIVER'S LEFT. PAYMENT SHALL BE INCIDENTAL TO OTHER ITEMS.
12. THIS RAILING MEETS THE REQUIREMENTS FOR A TL-4 SERVICE LEVEL.

CK'D BY M. Umberger **OK'D BY** H. Salls

July 15, 2014

RESUBMIT	No	Approved As	Noted
BY	C. Carlson	DATE	07/21/2014


HIGHWAY SAFETY CORP.
 GLASTONBURY, CT
 860-633-9445

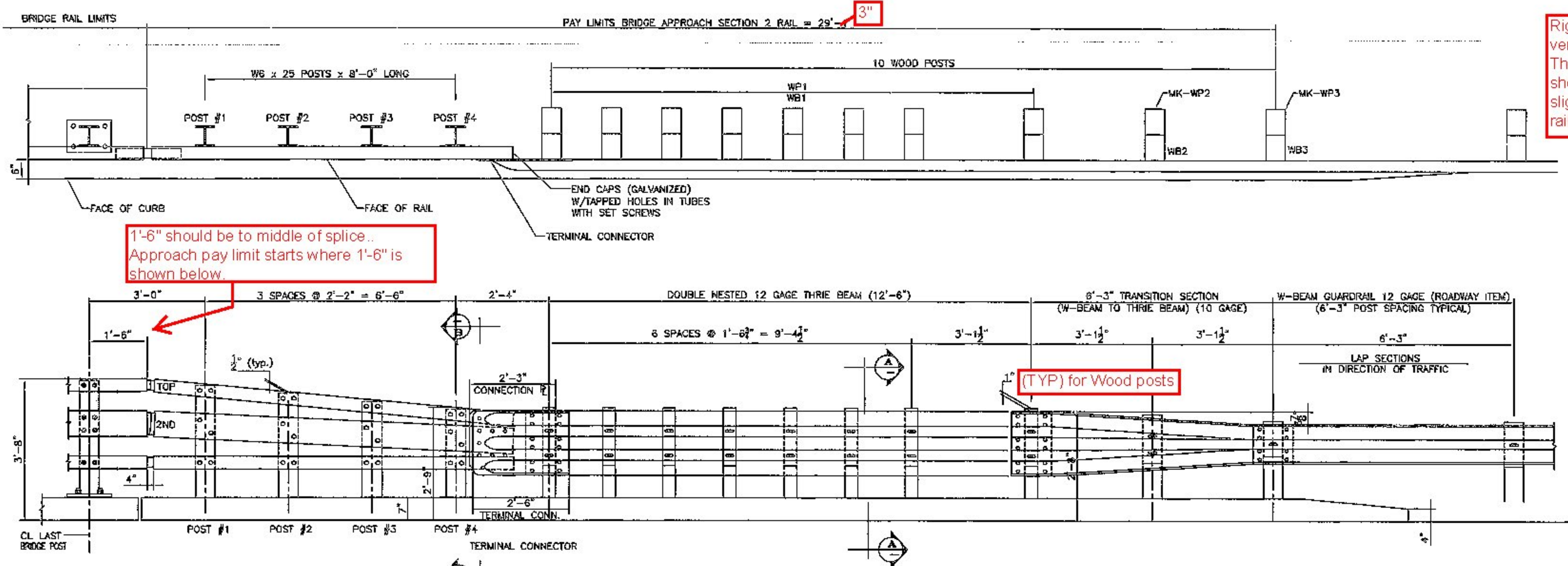
ITEM 525.335 BRIDGE RAILING, GALVANIZED 3 PAIR BOX BEAM
TOWN OF STOWE, VERMONT
US RT VT 100 (MINOR ARTERIAL) BRIDGE #208
LAMONIE COUNTY BR# 025-1 (17)

**CERTIFIED
FABRICATOR**

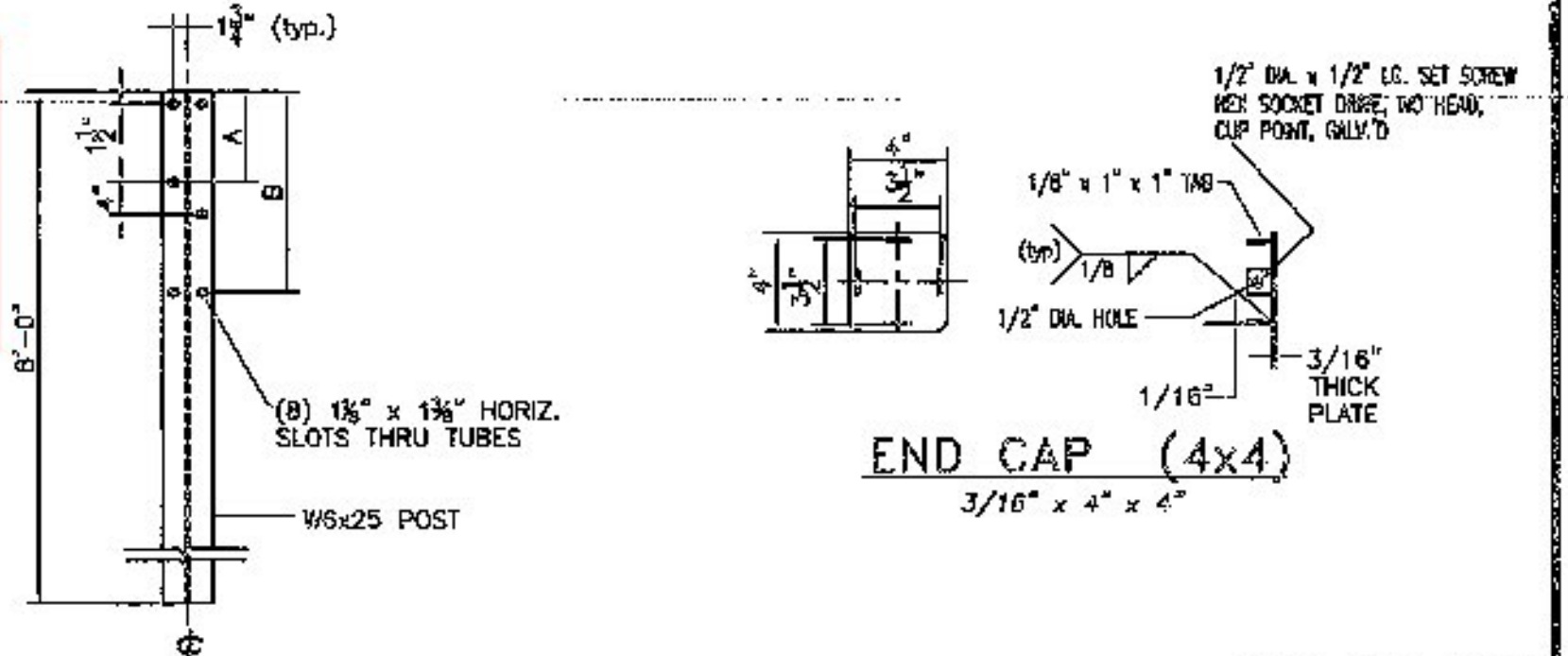
DATE SENT: _____

1999
SHEET NO.

2 of 3	
NONE	<u>50%</u>



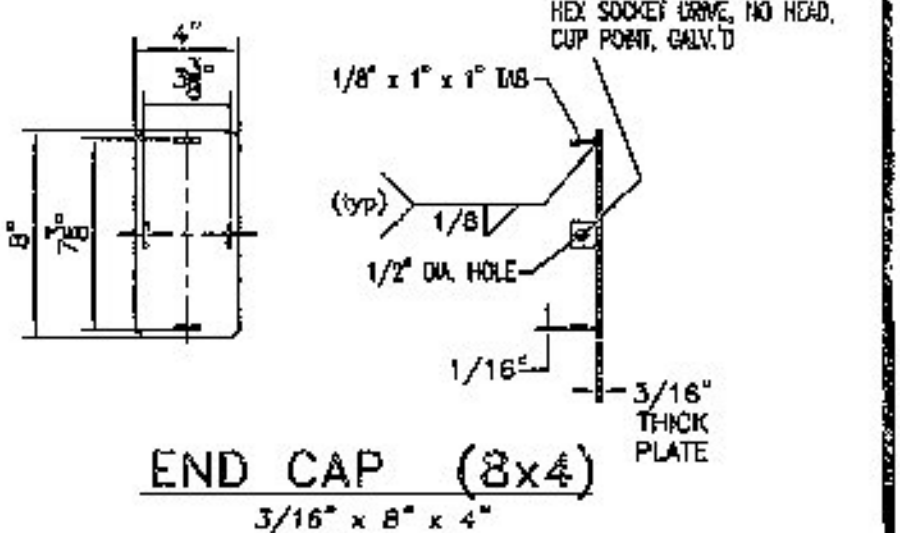
Right hole should be vertically offset slightly. The top of the posts should also be sloped slightly same as top of rail.



STEEL POST

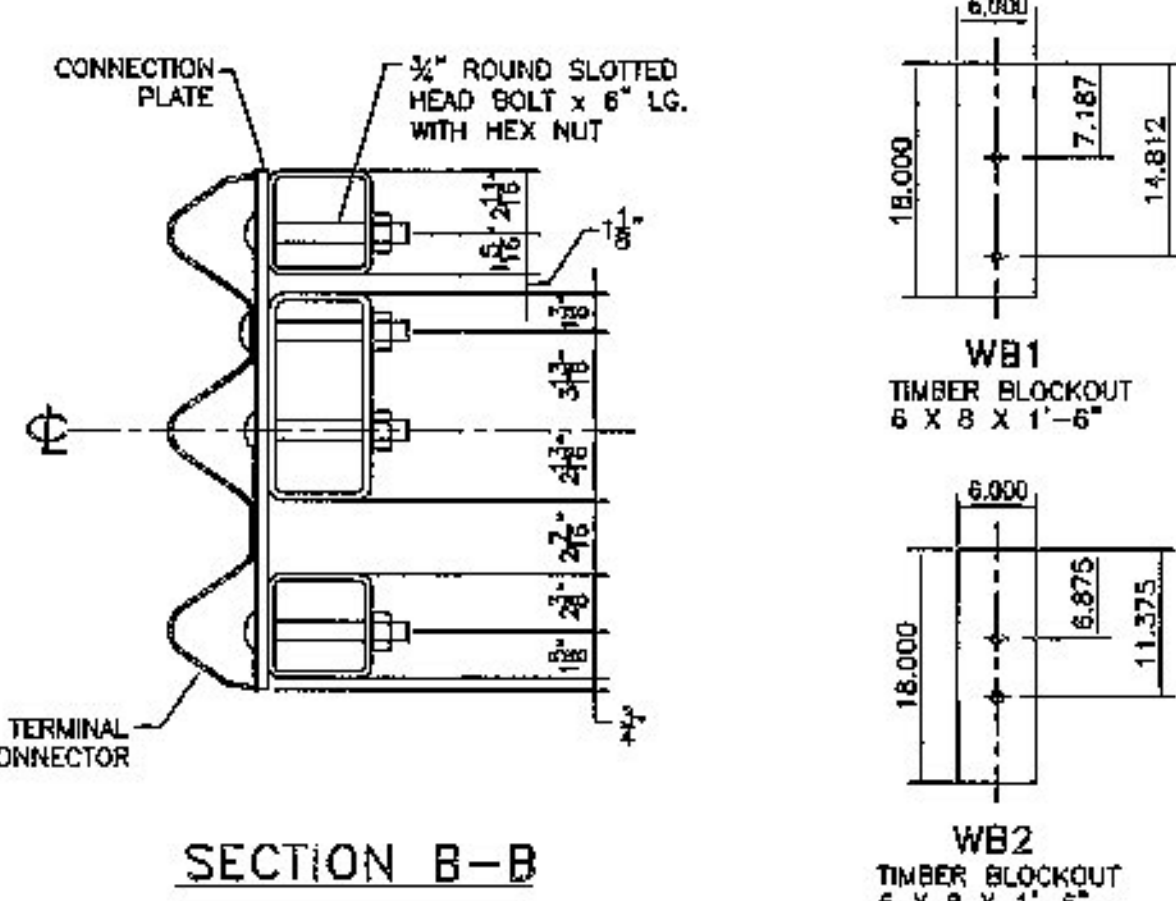
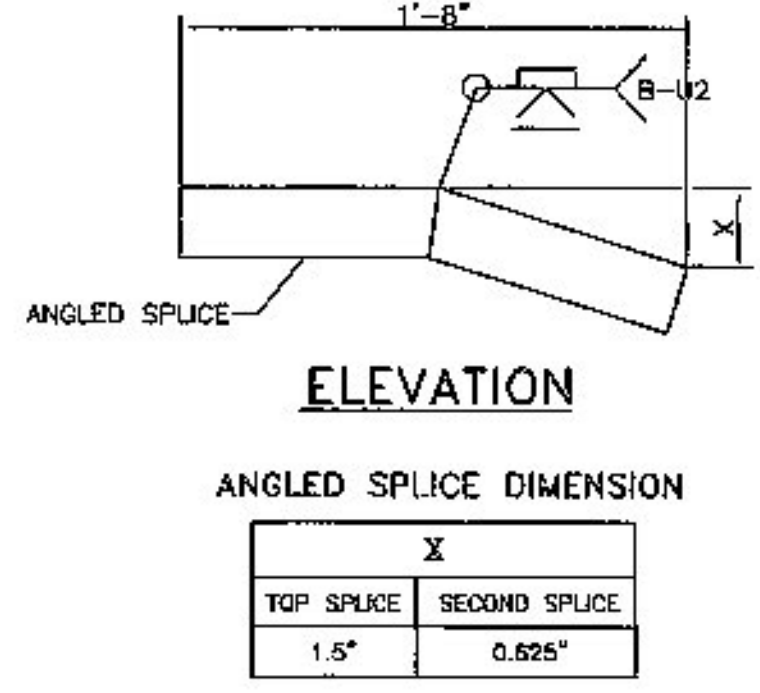
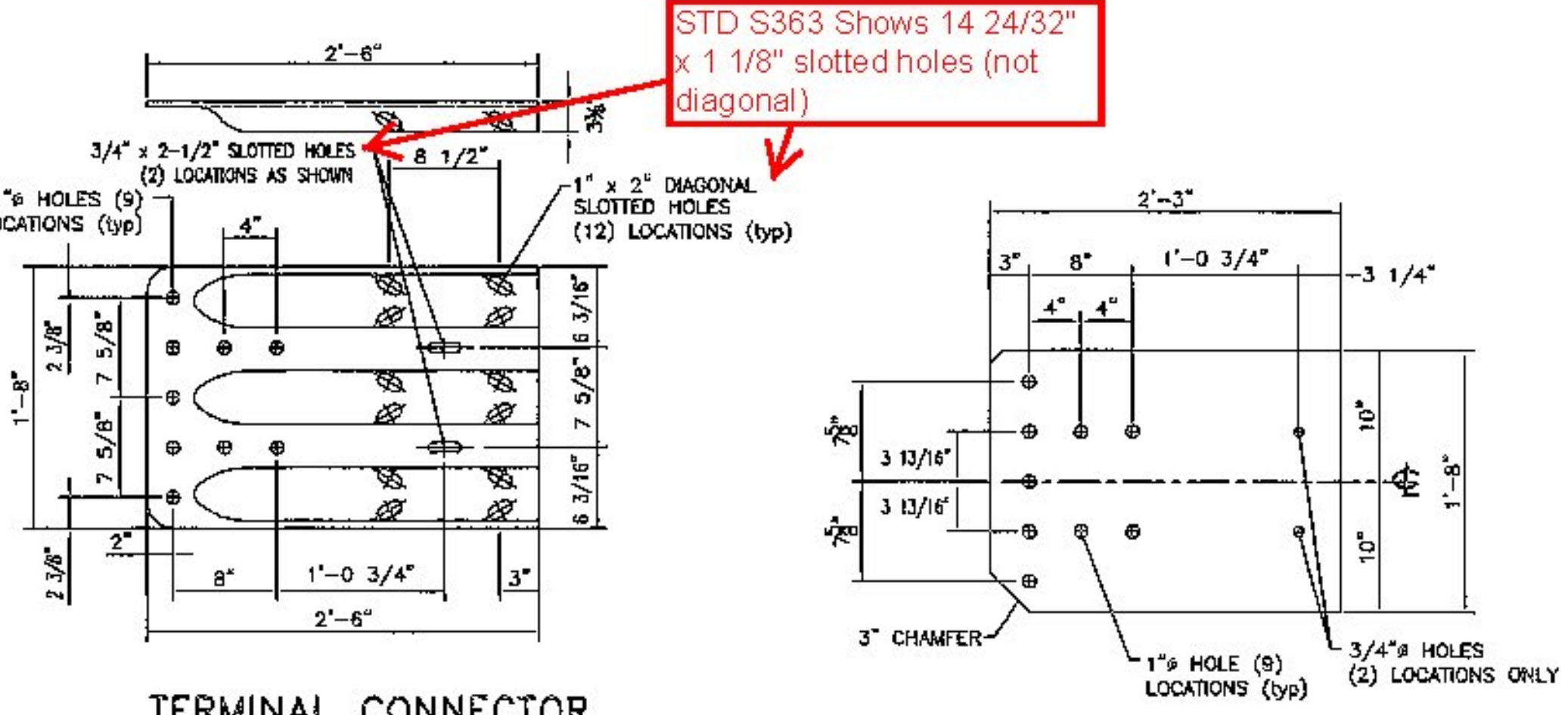
STEEL POST CHART

No.	A	B
#1	10.938"	2'-0.438"
#2	9.625"	1'-10.250"
#3	8.313"	1'-8.000"
#4	6.938"	1'-5.688"



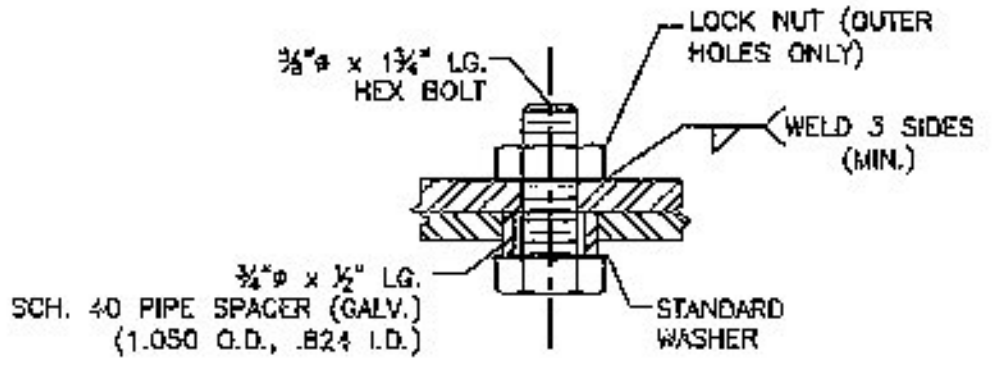
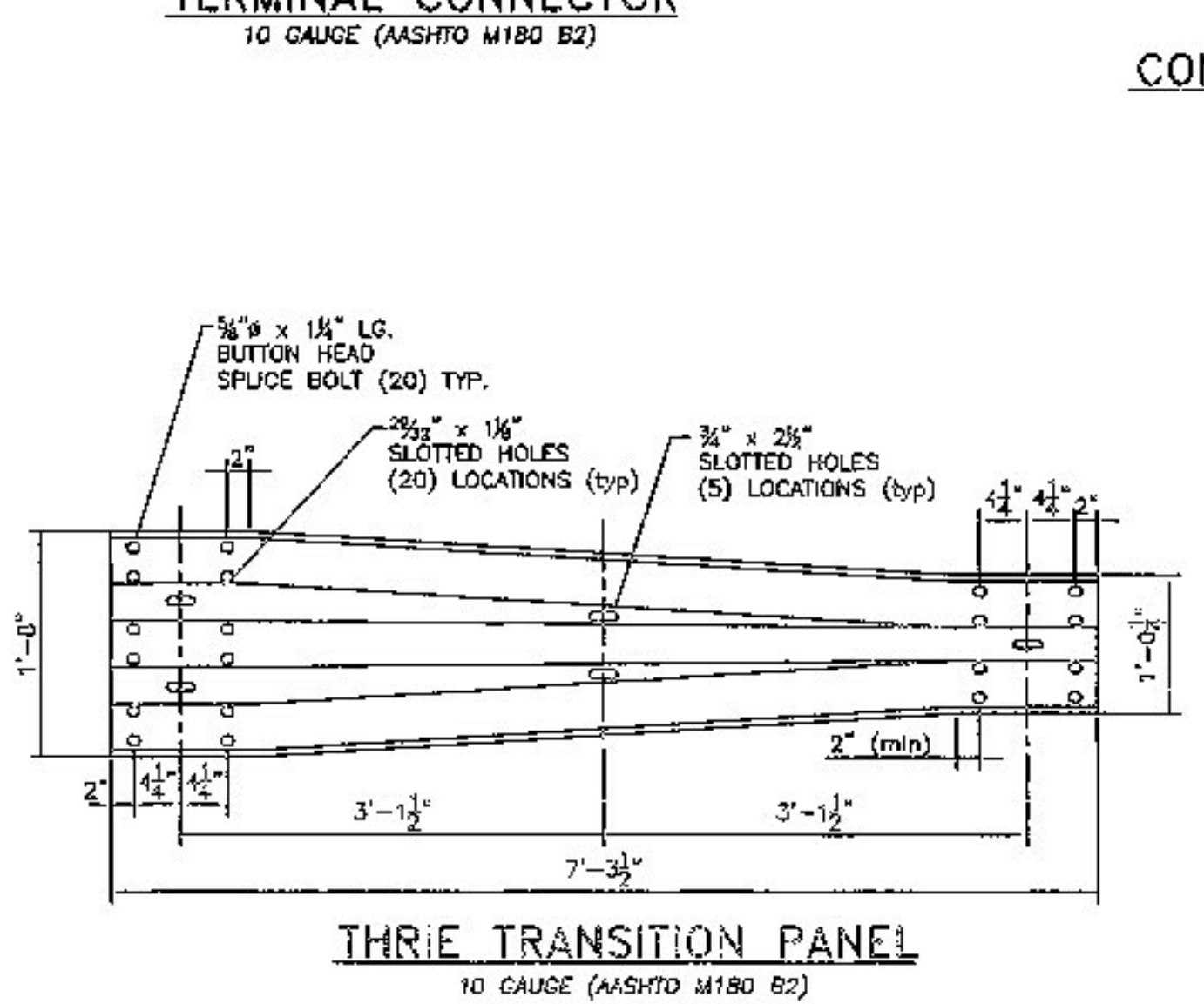
APPROACH RAIL ELEVATION

4 TOTAL APPROACHES

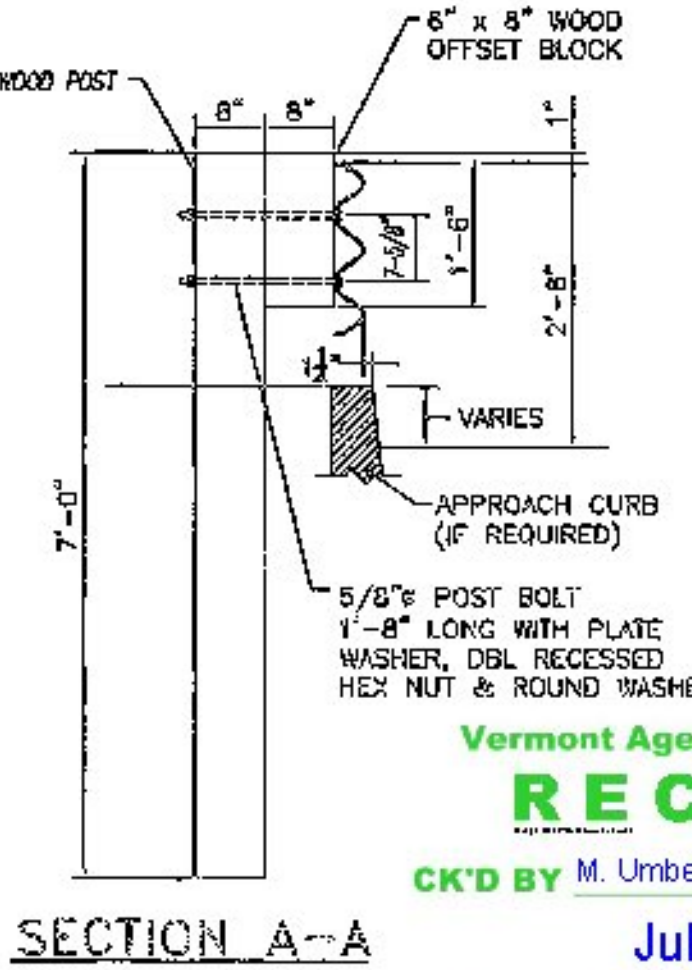


BILL OF MATERIAL FOR ALL 3 RAIL APPROACHES

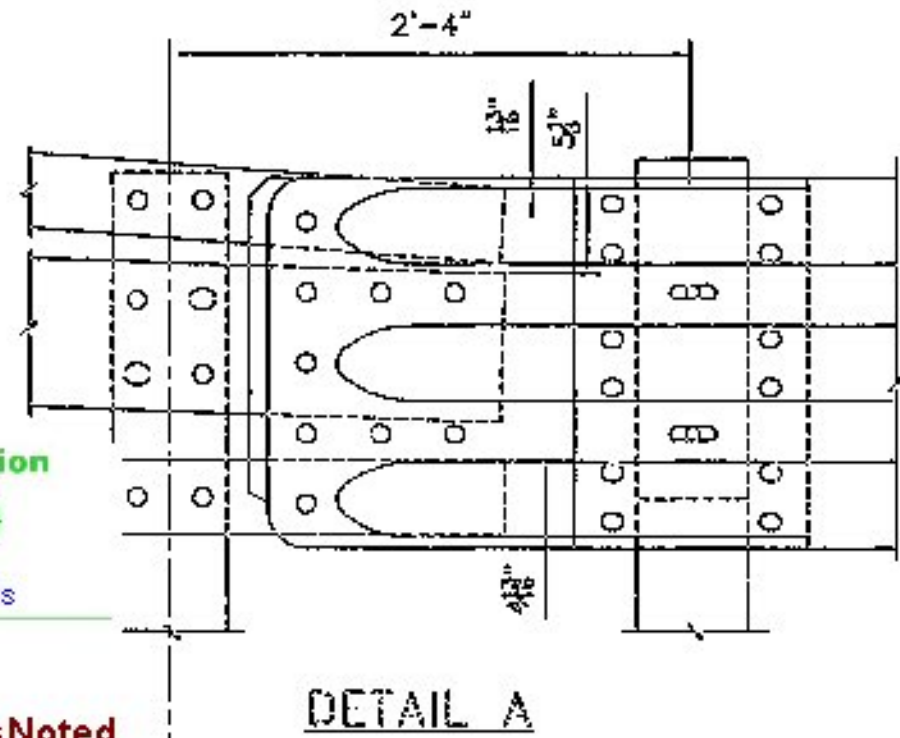
Qty	m.k.	Description	Spec.
4	01	WB25 APPROACH POST - #1 x 8'-0" OAL (GALV)	A709 gr 50
4	02	WB25 APPROACH POST - #2 x 8'-0" OAL (GALV)	A709 gr 50
4	03	WB25 APPROACH POST - #3 x 8'-0" OAL (GALV)	A709 gr 50
4	04	WB25 APPROACH POST - #4 x 8'-0" OAL (GALV)	A709 gr 50
4		UPPER RAIL APPROACH TUBE HSS 8 x 4 x 5/16 x 8'-4.000" w/ 3.500 SLOTS FOR 4" EXP GAP (GALV)	A500 gr B
4		LOWER RAIL APPROACH TUBE HSS 4 x 4 x 5/16 x 9'-4.000" w/ 3.500 SLOTS FOR 4" EXP GAP (GALV)	A500 gr B
4		CONNECTION PLATE PL 0.375" x 20.000" x 27.000" (GALV)	A709 gr 36
4		END CAP FOR 6x4 TUBE 0.187 THICK PLATE 4.000 x 4.000 w/ WELDED TABS (GALV)	A709 gr 36
4		END CAP FOR 4x4 TUBE 0.187 THICK PLATE 4.000 x 4.000 w/ WELDED TABS (GALV)	A709 gr 36
4		ANGLED SPICE TUBE (EXPANSION) FOR 6x4 UPPER RAIL HSS 7 x 3 x 3/8 x 1'-11.750" OAL (GALV)	A500 gr B
4		ANGLED SPICE TUBE (EXPANSION) FOR 4x4 LOWER RAIL HSS 3 x 3 x 5/16 x 1'-11.750" OAL (GALV)	A500 gr B
4		SPICE TUBE (EXPANSION) FOR 4x4 LOWER RAIL HSS 3 x 3 x 5/16 x 1'-11.750" OAL (GALV)	A500 gr B
32		WOOD POST (WP1) 6 x 6 x 7'-0"	TIMBER
32		WOOD BLOCKOUT (WB1) 6 x 8 x 1'-6"	TIMBER
4		WOOD POST (WP2) 6 x 8 x 7'-0"	TIMBER
4		WOOD BLOCKOUT (WB2) 6 x 8 x 1'-6"	TIMBER
4		WOOD POST (WP3) 6 x 8 x 7'-0"	TIMBER
4		WOOD BLOCKOUT (WB3) 6 x 8 x 1'-2"	TIMBER
4		THREE FLAT UP BRIDGE SHOE (MODIFIED) 10 GA. GALV	AASHTO M180 B2
4		THREE TRANSITION PANEL 6'-3" / 3'-1 1/2" 10 GA. GALV	AASHTO M180 B2
8		THREE PANEL 12'-6" / 1'-8 3/4" 12 GA. GALV	AASHTO M180 A2
124		ROUND HEAD POST BOLT slat or wrench head - no shoulder 3/4" DIA x 8" LG. (GALV) w/ LOCK NUT & FLAT WASHER	A440
12		ROUND HEAD POST BOLT slat or wrench head - no shoulder 3/4" DIA x 2" LG. (GALV) w/ HEX NUT	A440
8		ROUND HEAD POST BOLT - oval shoulder 5/8" DIA x 1'-8" LG. (GALV) w/ DBL RECESS NUT, FLAT WASHER	A307
68		ROUND HEAD POST BOLT - oval shoulder 5/8" DIA x 1'-8" LG. (GALV) w/ DBL RECESS NUT, FLAT WASHER	A307
32		HEXHEAD BOLT 5/8" x 1'-3/4" (GALV) w/ FLAT WASHER	A325
128		PANEL SPICE BOLT 5/8" x 1'-1/4" (GALV) w/ DOUBLE RECESSED NUT	A307
76		RECTANGULAR PLATE WASHER 0.187 x 1.750 x 3.000 (GALV)	A709 gr 36
32		SPACER PIPE - GALVANIZED 3/4" SCH. 40 x 1/2" LONG (GLV)	A53 gr 6



- NOTES:**
1. ALL APPROACH RAIL SPICES SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC FLOW.
 2. TUBES AND STEEL POST MATERIALS, DIMENSION SIZES AND NOTES SHALL BE THE SAME AS THOSE OF THE BRIDGE RAIL, UNLESS NOTED OTHERWISE.
 3. APPROACH RAIL BOLTS SHALL BE ASTM A307 GRADE A AND NUTS SHALL BE ASTM A307 GRADE A OR BETTER (GALVANIZED). WASHERS SHALL BE ASTM F844.
 4. WELD SPICE BARS TO FIT BEND. USE COMPLETE PENETRATION WELD (B-U2).



WOOD BLOCK DETAILS



ITEM 621.725 3 RAIL BOX BEAM = 4 TOTAL

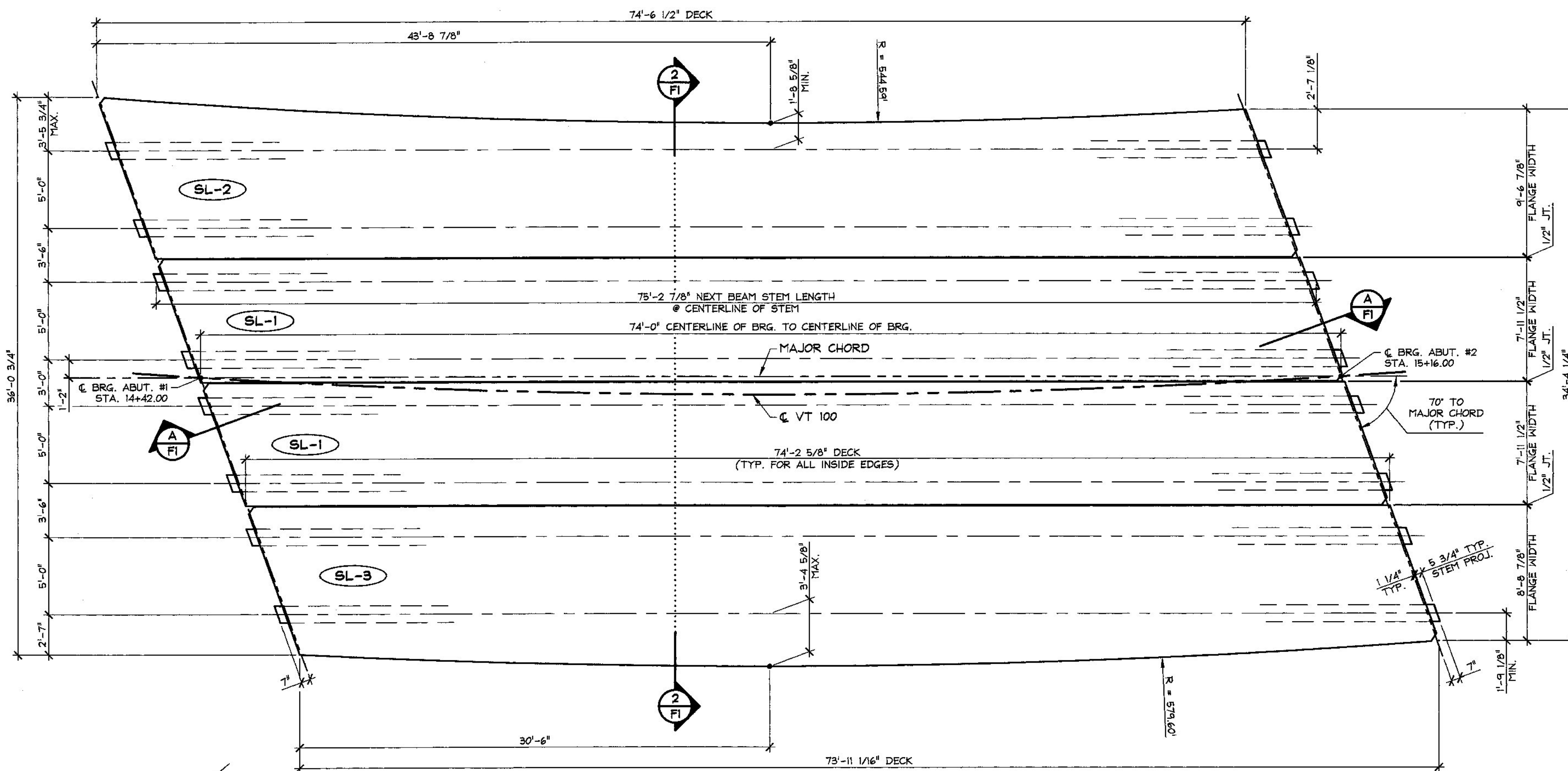
HIGHWAY SAFETY CORP
GLASTONBURY, CT
860-633-9445

ITEM 621.725 3 RAIL APPR. TUBES
TOWN OF STOWE, VERMONT
US RT VT 100 (MINOR ARTERIAL) BRG#206
LAMOILLE COUNTY BRG 029-1 (17)

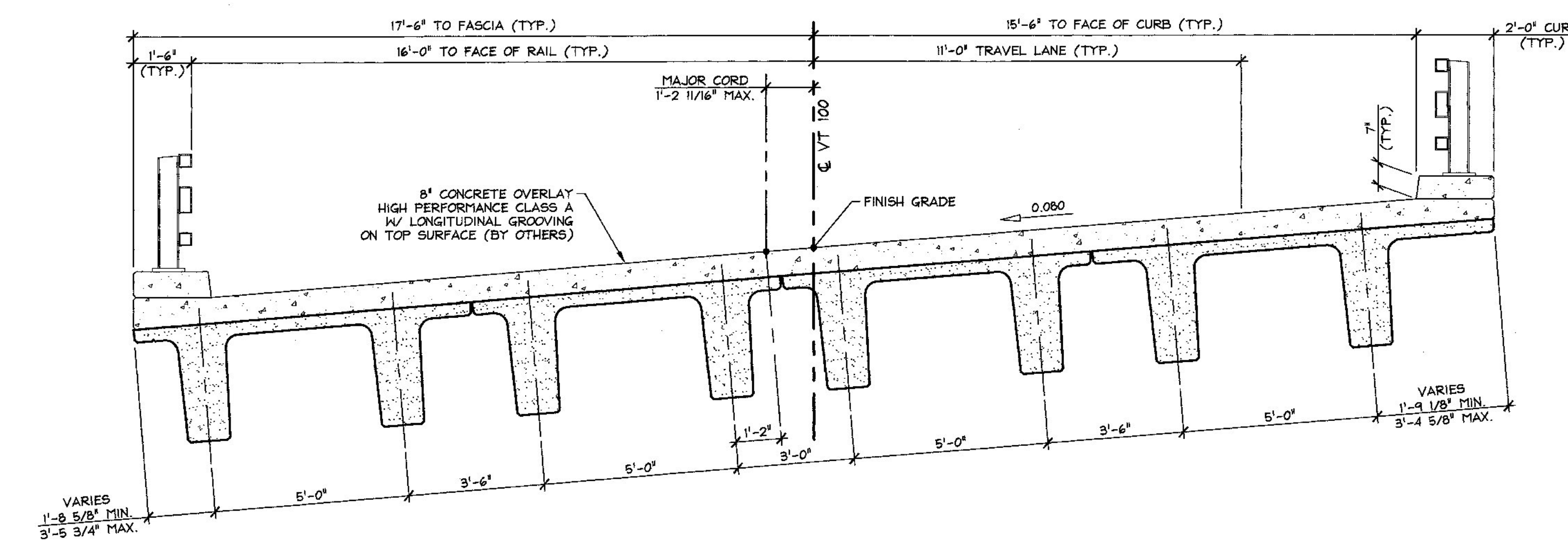
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1999
3 of 3

APPROVED BY: LAFAYETTE
DATE: 6-30-14
SCALE: NONE
SIZE: D

Vermont Agency of Transportation
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CK'D BY M. Umberger OK'D BY H. Salls
July 15, 2014
RESUBMIT No Approved As Noted
BY C. Carlson DATE 07/21/2014

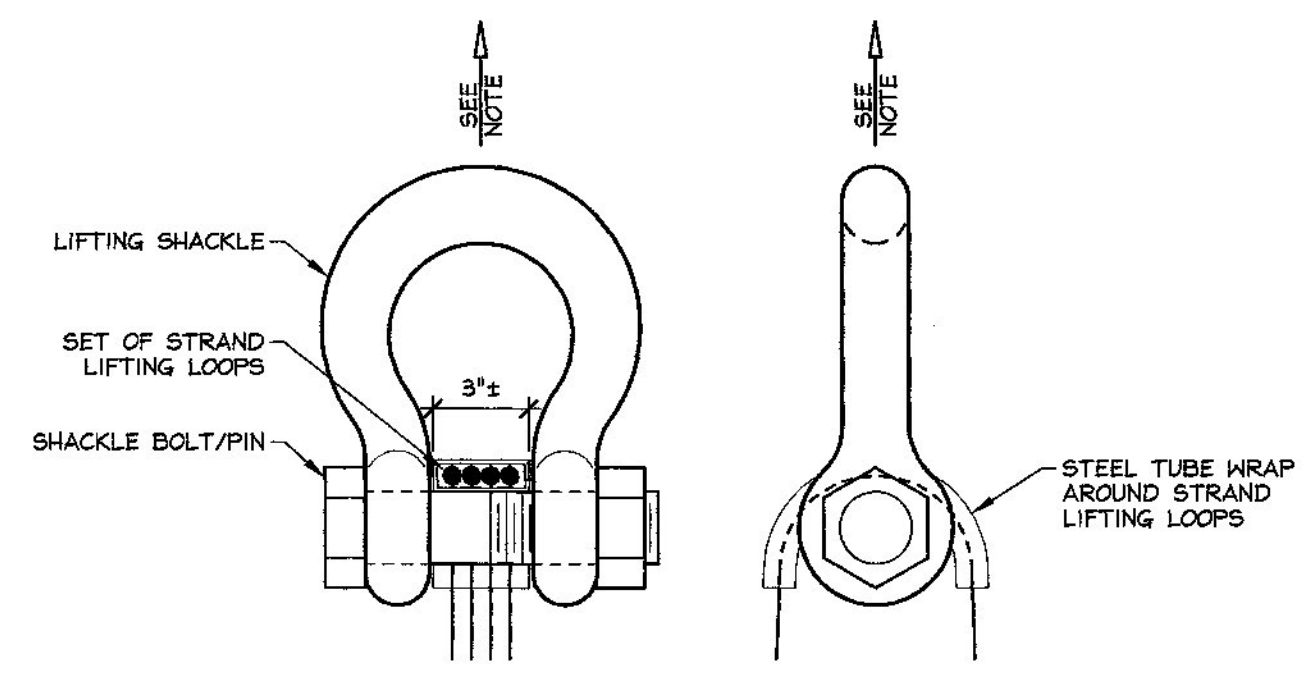


1 PRESTRESSED NEXT BEAM LAYOUT
3/16" = 1'-0"
DESIGN LIVE LOAD: HL-93

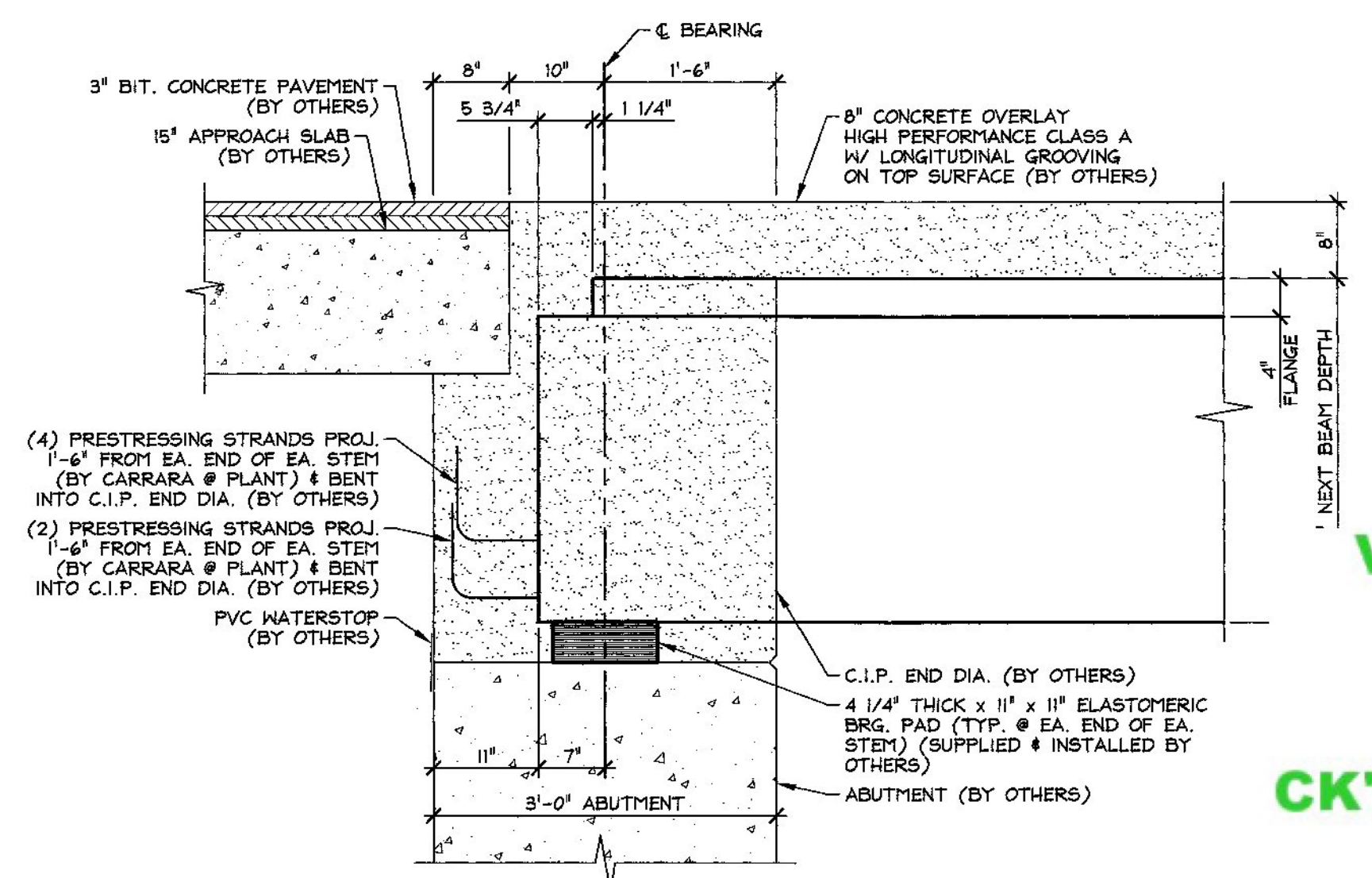


2 TRANSVERSE SECTION
3/8" = 1'-0"

If using Stainless Steel for the WWF in the top flange there needs to be a note regarding Corrosion Protection Level III and material must follow the solid stainless reinforcing steel specification found in the general special provisions.



LIFTING SHACKLE DETAILS
N.T.S.



A BEARING SECTION
3/4" = 1'-0"

GENERAL NOTES

1. MIN. CONCRETE STRENGTH AT 28 DAYS SHALL BE 8,000 PSI.
2. MIN. CONCRETE STRENGTH AT STRESS TRANSFER SHALL BE 6,000 PSI.
3. REINFORCING STEEL SHALL BE GR-60, ASTM A-615 (AASHTO M31) AND SHALL BE CORROSION PROTECTION LEVEL II.
4. PRESTRESSING STRANDS SHALL CONFORM TO ASTM A-416 (AASHTO M209) AND SHALL CONSIST OF 0.60" x 270 KSI 7-WIRE LOW RELAXATION STRANDS.
5. PRESTRESSING STRANDS SHALL EACH BE PULLED TO HAVE A NET TENSION OF 44.0 K AFTER ACCOUNTING FOR CHUCK SLIPPAGE. TENSION SHALL BE VERIFIED BY MEASURING STRAND ELONGATION. (SEE EXAMPLE ELONGATION CALCULATION AND TENSIONING PROCEDURE, THIS SHEET.)
6. ENDS OF PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH END OF BEAM STEMS (UNLESS NOTED OTHERWISE) AND EPOXY PAINTED.
7. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4".
8. THE TOP OF BEAMS SHALL RECEIVE A TRANSVERSE RAKE FINISH ROUGHENED TO 1/4" AMPLITUDE.
9. BEAMS SHALL BE HANDLED AND ERECTED USING THE LIFTING LOOPS ONLY. THE MINIMUM SLING ANGLE FROM THE HORIZONTAL SHALL BE 60°. THE PINS OF THE SHACKLES SHALL BE PLACED THROUGH THE LIFTING LOOPS. SEE DETAIL, THIS SHEET. BEAMS SHALL BE STORED AND TRANSPORTED WITH TIMBER SUPPORTS WITHIN 2'-0" OF THE BEAM ENDS, UNLESS APPROVED BY J.P. CARRARA & SONS, INC.
10. MATERIAL SPECIFICATION AND MIX DESIGN SHALL CONFORM TO VERMONT SPEC. F510.02 AND F510.05 RESPECTIVELY. DESIGN MIX: J.P.C. BRIDGE MIX #426M.
11. QUALITY CONTROL PROCEDURES ARE IN ACCORDANCE WITH PCI REQUIREMENTS. J.P. CARRARA & SONS, INC. IS A PCI CERTIFIED PLANT.
12. CURING METHOD: AS SOON AS THE TOP OF BEAM IS FINISHED, A COVER OF POLY AND A LAYER OF HOMOSOTE (OR BLUE BOARD) WILL BE PLACED OVER THE BEAM. THE DESIRED CURING TEMPERATURE RANGE SHALL NOT DROP BELOW 70°. THE TEMPERATURE SHALL BE RECORDED BY AUTOMATIC SENSOR INSTRUMENTS ON GRAPH CHARTS, SPACED NOT MORE THAN 10' APART AND WILL CONTINUE UNTIL RELEASE STRENGTH IS ACHIEVED, (NATURAL CURE WITH NO EXTERNAL HEAT APPLIED). EACH CHART SHALL BE MARKED.
13. OWNER SHALL PROVIDE APPROPRIATE WATERPROOFING TO GROUTED SHEAR KEYS. J.P. CARRARA & SONS, INC. SHALL NOT BE HELD LIABLE FOR PROBLEMS ASSOCIATED WITH MOISTURE INFILTRATING GROUTED SHEAR KEYS.

EXAMPLE PRESTRESSING STRAND ELONGATION CALC. AND TENSIONING
(NOT TO BE USED FOR CONSTRUCTION)

SIZE & GRADE: 0.60" x 270 KSI
AREA: 0.217 IN²
TENSION: 44,000 LB. EACH STRANDS
GRIP-TO-GRIP: 252'-0" = 252.00'
E_s = 28,600,000 PSI (ASSUMED FOR THESE CALCULATIONS; VALUE TO BE OBTAINED FOR STRAND SPOOL ACTUALLY USED)
EXAMPLE:
$$\Delta = \frac{P_e}{AE} = \frac{(44,000 - 3,000) \times 252.00 \times 12}{0.217 \times 28,600,000} = 19.98'$$

THEREFORE: (TOLERANCES ± 5%)
Δ UPPER LIMIT = 1.05 x 19.98' = 20.98' = 21'
Δ LOWER LIMIT = 0.95 x 19.98' = 18.98' = 19'
EXTRA FORCE REQUIRED TO COMPENSATE FOR 1/2" CHUCK SLIPPAGE:
$$\Delta P = \frac{0.5 \times 41,000}{19.98} = 1,026 \text{ LBS.}$$

TOTAL TENSIONING FORCE = 44,000 + 1,026 = 45,026 LBS.

STRAND TENSIONING PROCEDURE:

1. PULL EACH STRAND INITIALLY TO 3,000* LBS. AND MARK STRAND.
 2. THEN PULL EACH STRAND TO A TOTAL TENSION OF 45,026* LBS. AND MEASURE ELONGATION AFTER SEATING. IT MUST BE BETWEEN 18" & 21".
- * NOTE: FORCES READ ON STRESSING JACK GAUGES MUST BE MADE TO CORRESPOND TO ABOVE VALUES BASED ON CALIBRATION DATA FOR SPECIFIC JACK USED.

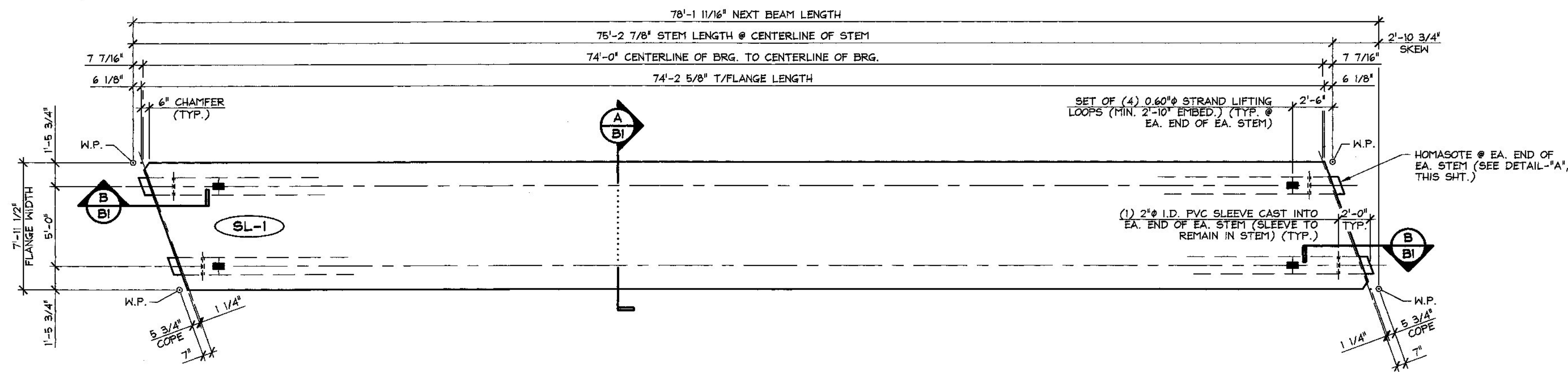
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Next F Beam Shop Drawings Approved.pdf

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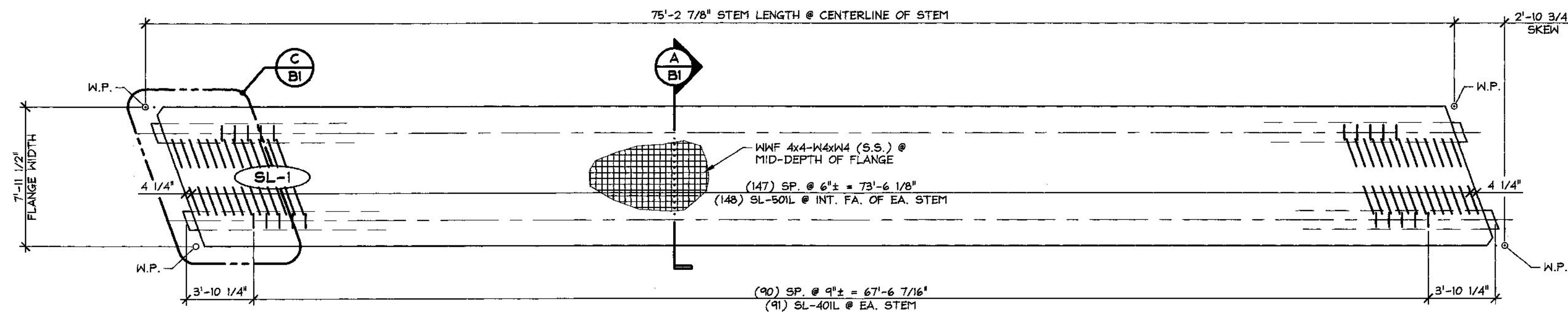
September 9, 2013

RESUBMIT Approved AsNoted
BY C. Carlson DATE 10/02/2013

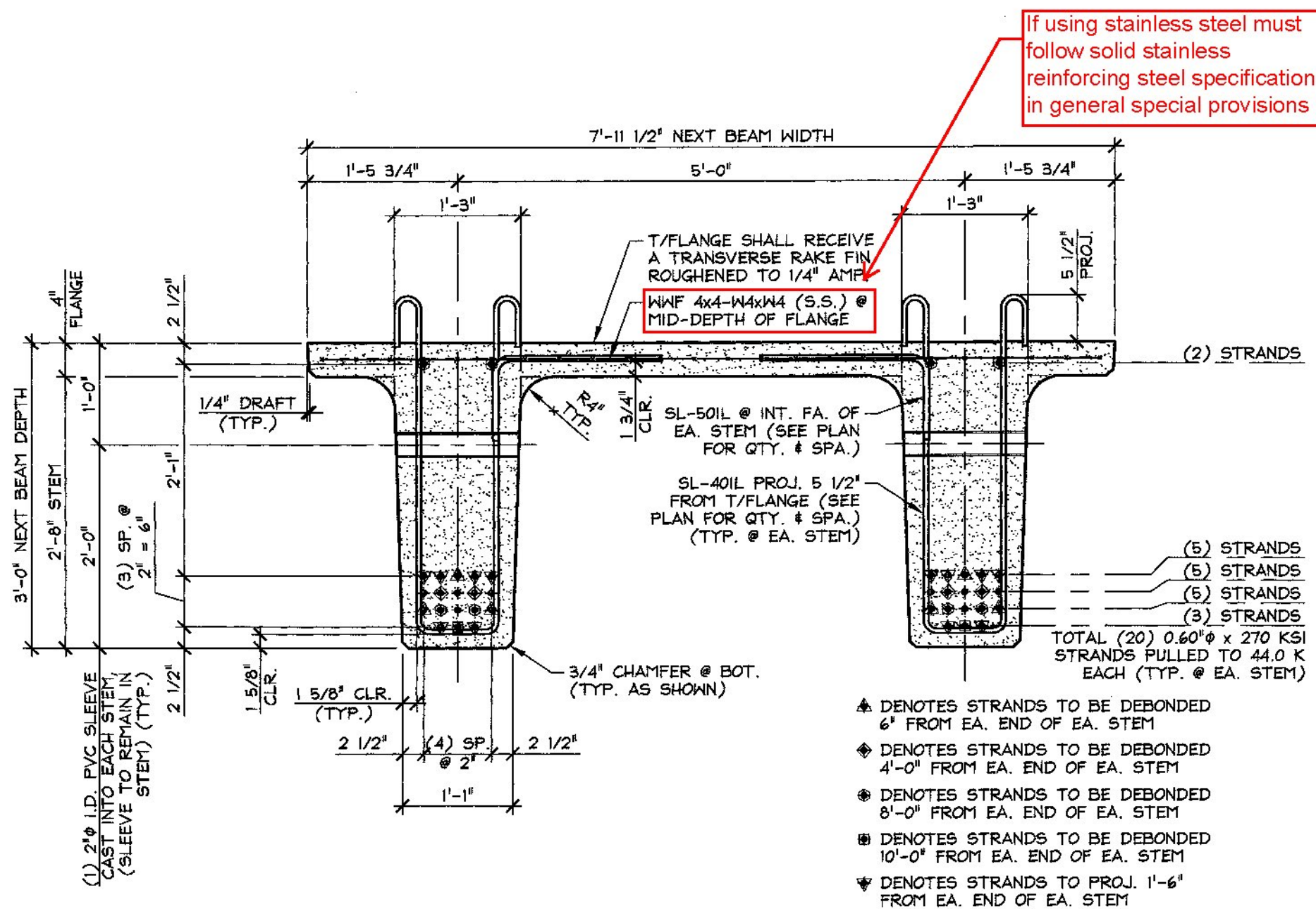
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	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF LAMOILLE		DATE: SEPT. 6, 2013 SCALE: NOTED	
	TOWN OF STOWE ROUTE NO. VT 100, MINOR ARTERIAL BRIDGE NO.: 208 PROJECT NO.: BRP 029-1(17)		CHKD: - DFTM: B.L.L. JOB NO: 23398-013	
	SUPERSTRUCTURE PLAN & SECTIONS		DWG. NO: F1	



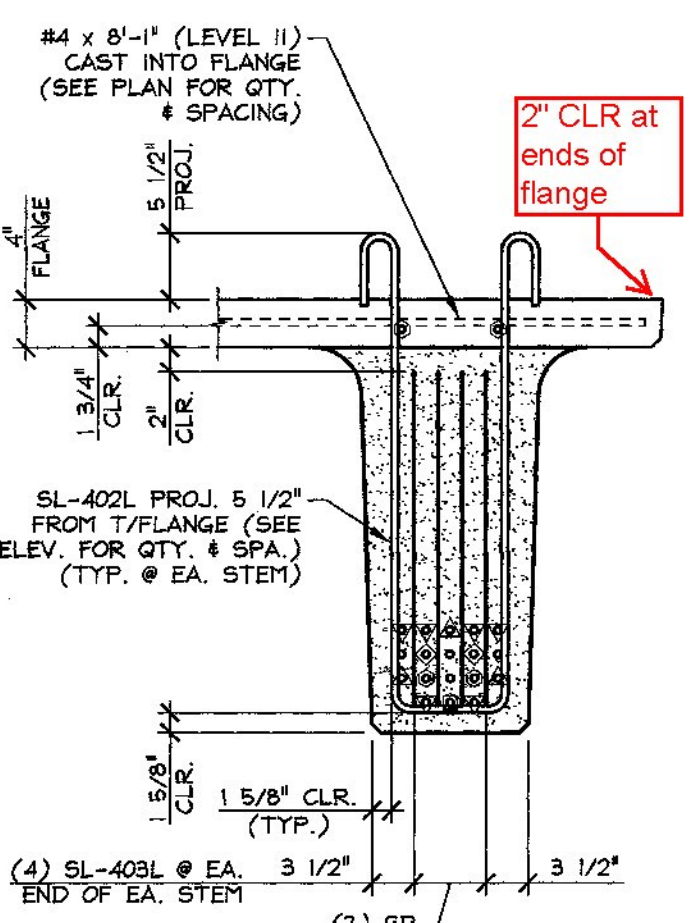
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3/16\"/>



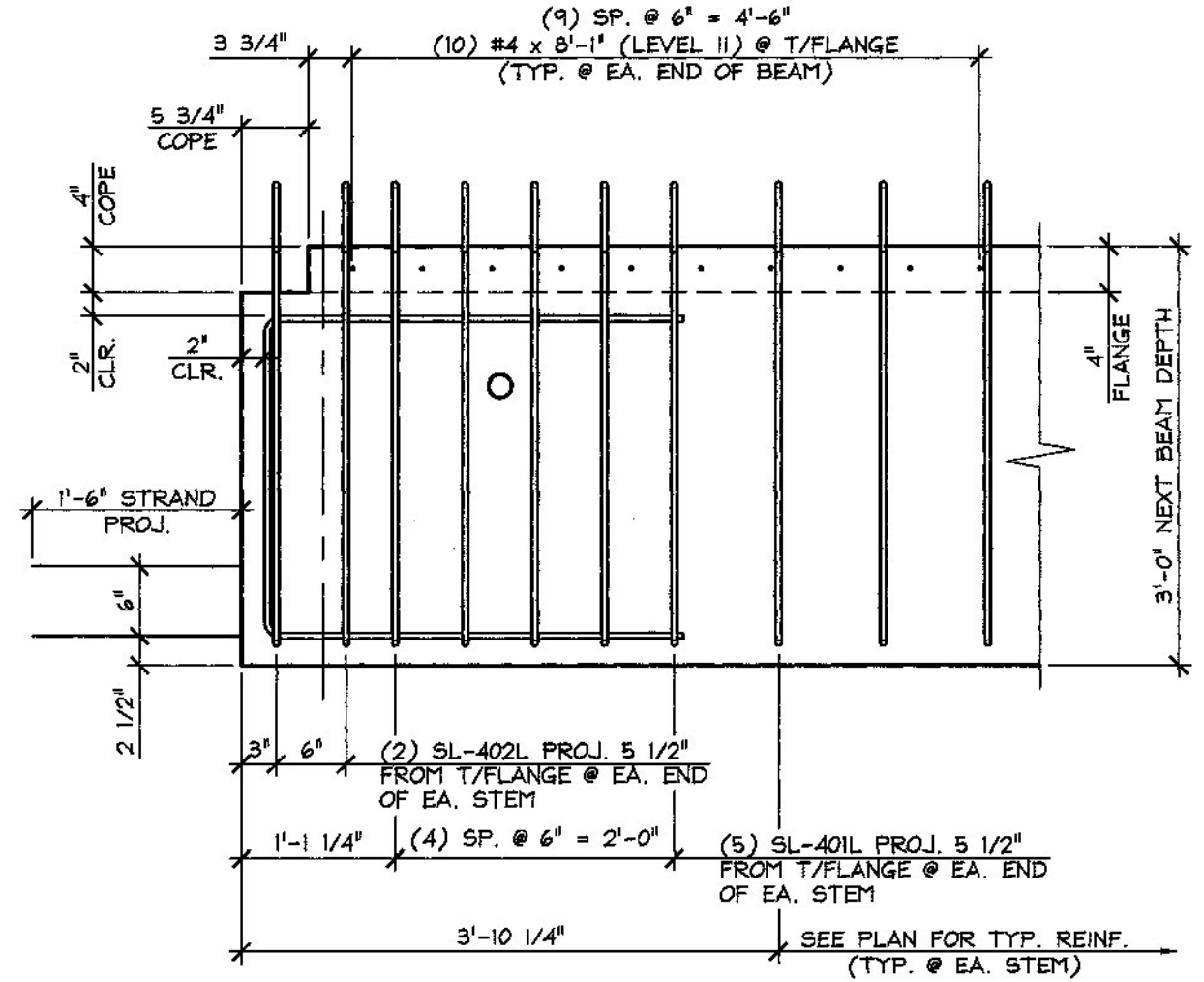
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3/16\"/>



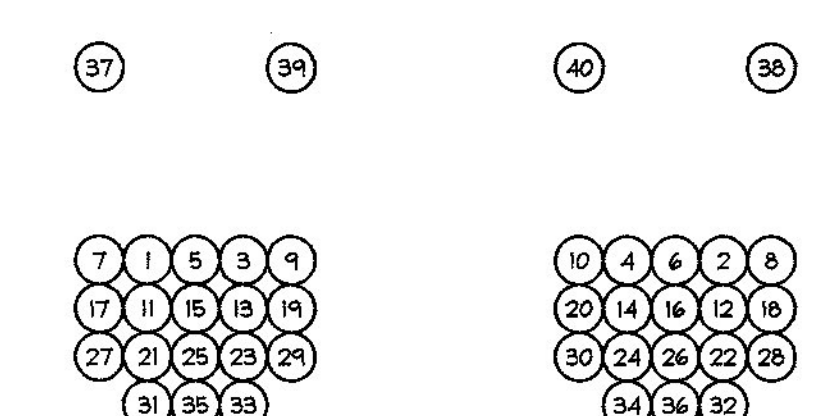
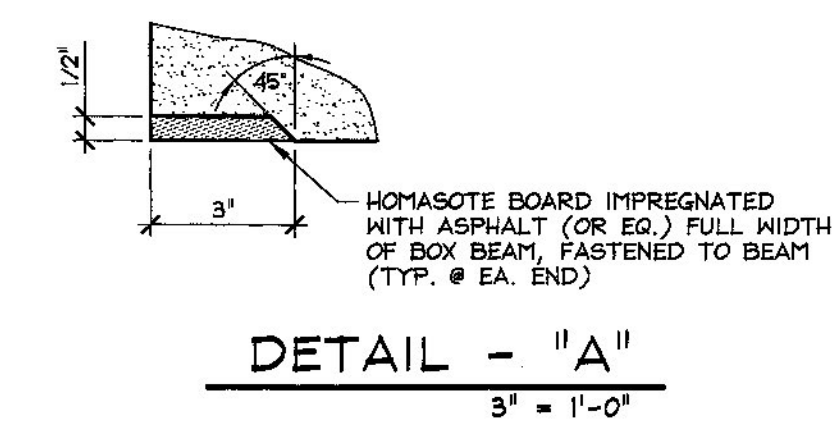
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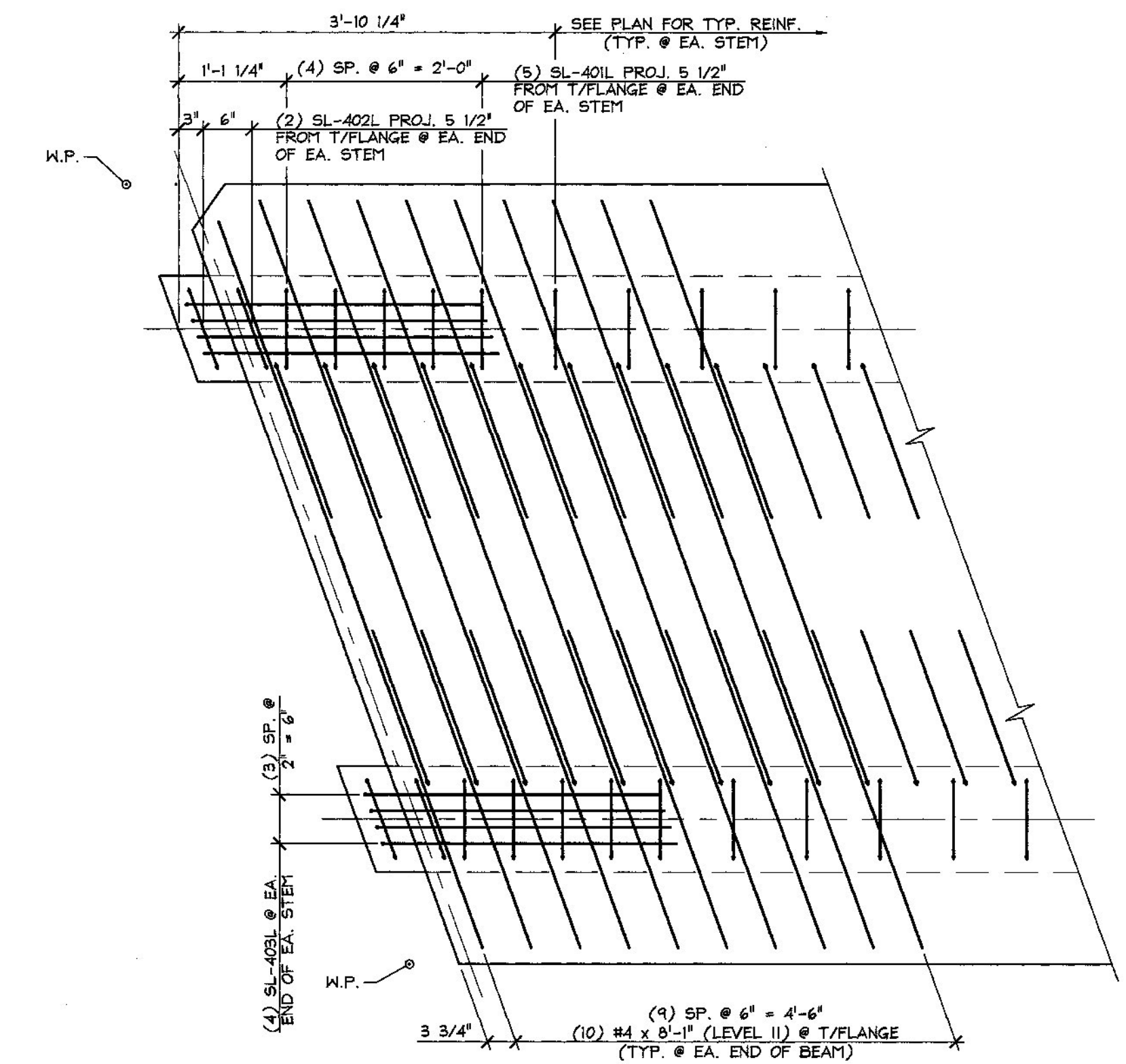
B END BLOCK STEM REINFORCING DETAILS
3/4\"/>



STEM ELEVATION



DETENSIONING SCHEDULE
N.T.S.



C END BLOCK REINFORCING PLAN
3/4\"/>

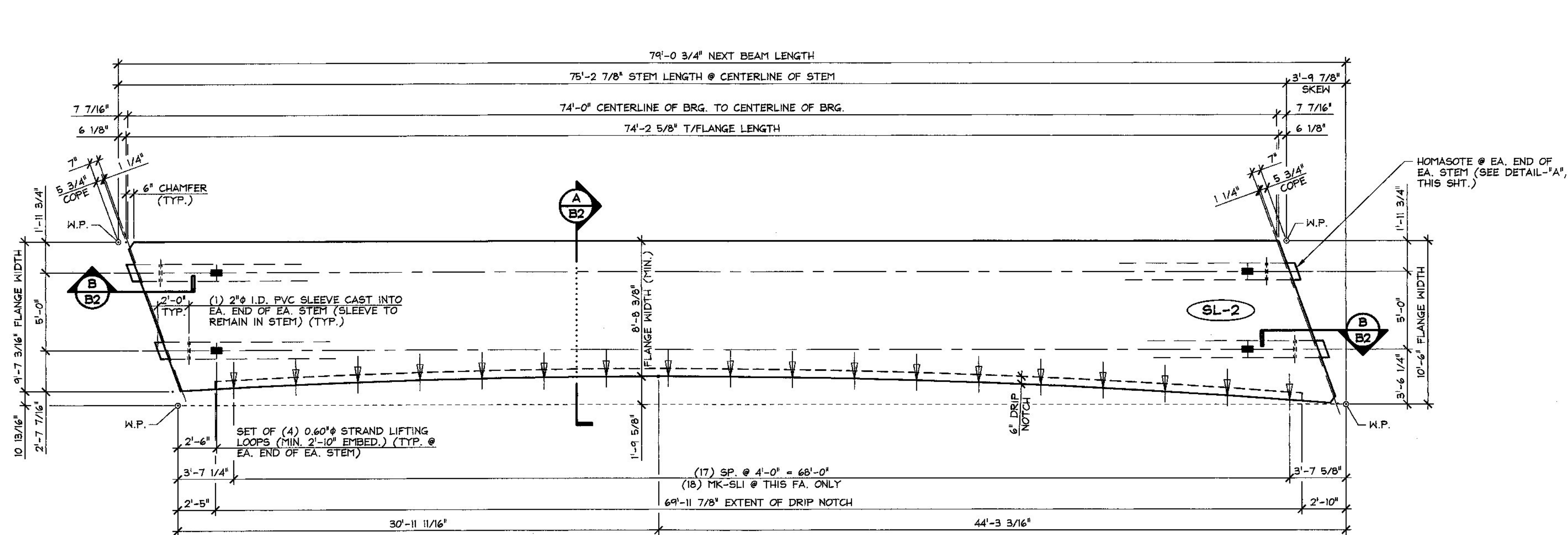
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September 9, 2013

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BY C. Carlson DATE 10/02/2013

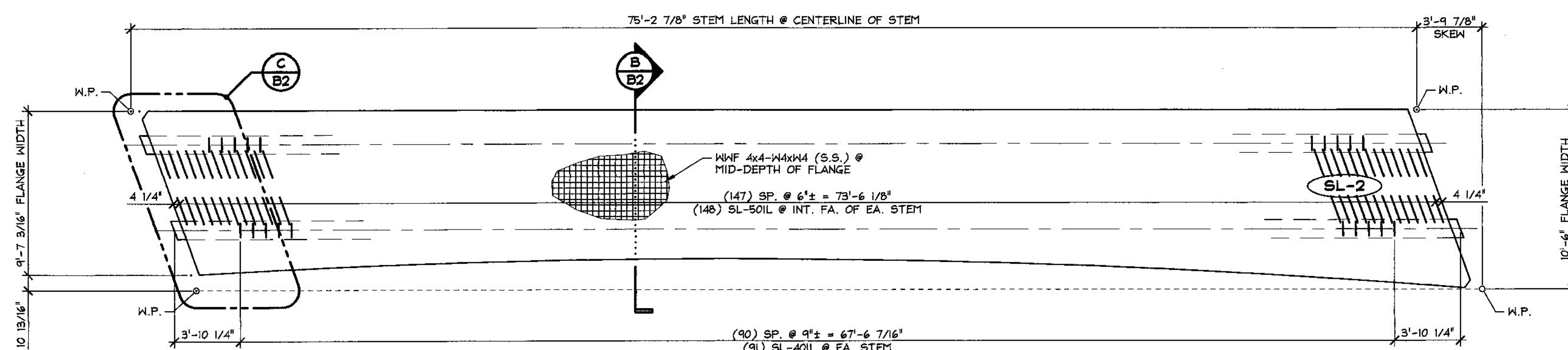
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ITEM	MARK	DESCRIPTION				QTY.	
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2	SL-402L	#4 BENT BAR (LEVEL II)				8	
3	SL-403L	#4 BENT BAR (LEVEL II)				16	
4		#4 x 8'-1"				20	
5							
6	SL-501L	#5 BENT BAR (LEVEL II)				2%	
7							
8							
9							
10							
11							
12		WKF 4x4-W4xM4 (STAINLESS STEEL) (7'-8" x 76'-10")				1	
13							
14		SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS				4	
15							

APPROVAL STAMP:	J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 CASE ST., MIDDLEBURY, VERMONT 05753 Phone:(802)388-6361 Fax:(802)388-9010		AUSTIN CONSTRUCTION CONTRACTOR CONCORD, VERMONT	
	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF LAMOILLE		DATE: SEPT. 6, 2013 SCALE: NOTED	
	TOWN OF STOWE ROUTE NO. VT 100, MINOR ARTERIAL BRIDGE NO.: 208 PROJECT NO.: BRP 029-1(17)		CHKD: - DFTM: B.L. JOB NO: 23398-013	
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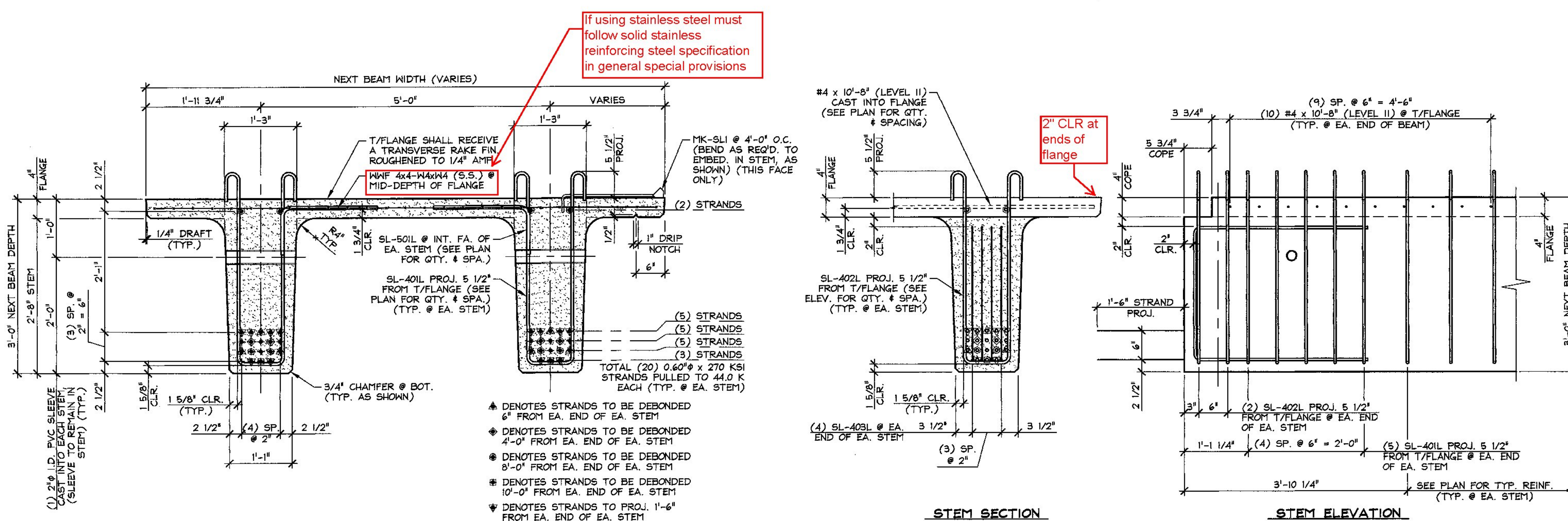


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B2
3/16\"/>

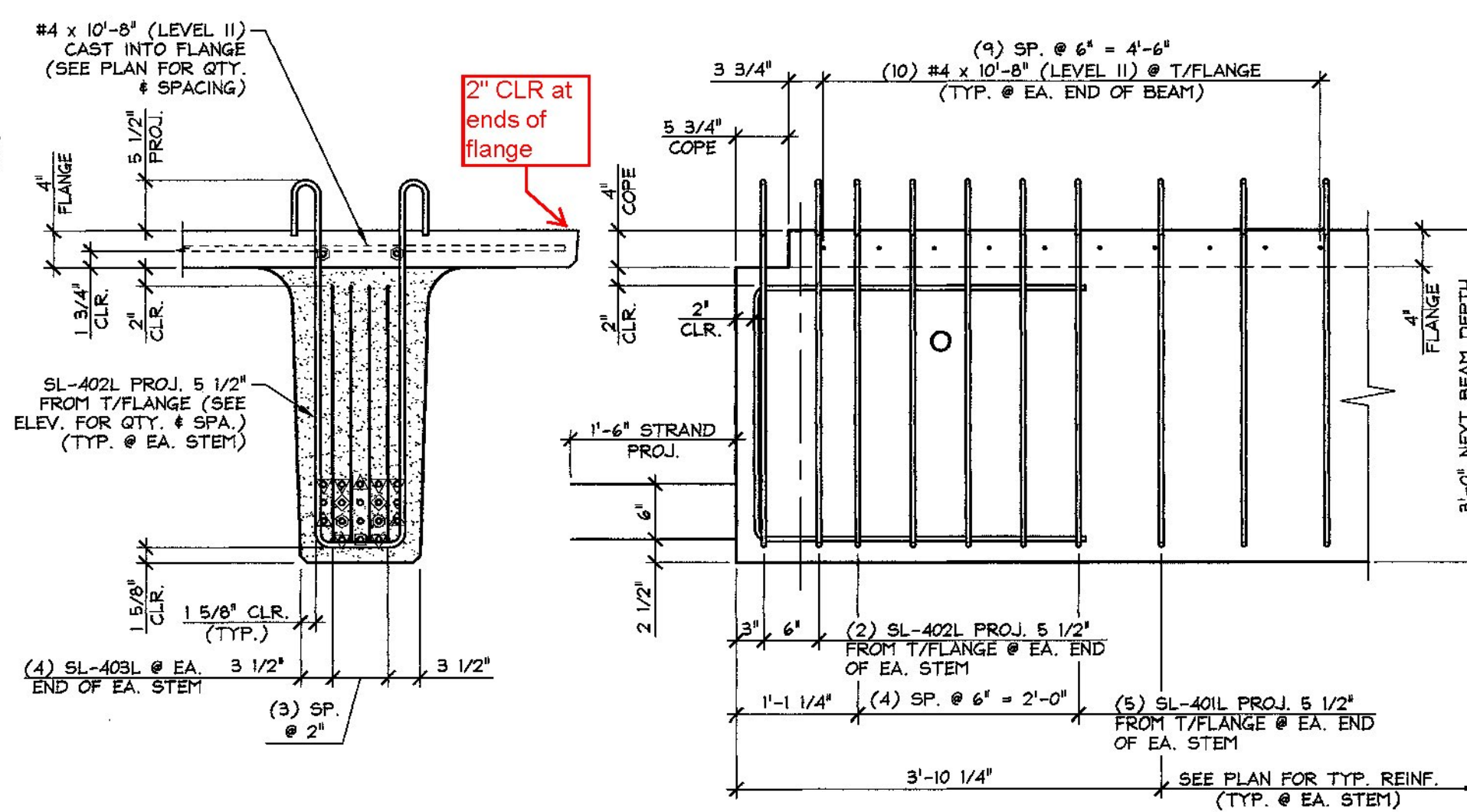
SHOP NOTE:
SEE SHEET "B4" FOR TOP
FLANGE CURVE DIMENSIONS



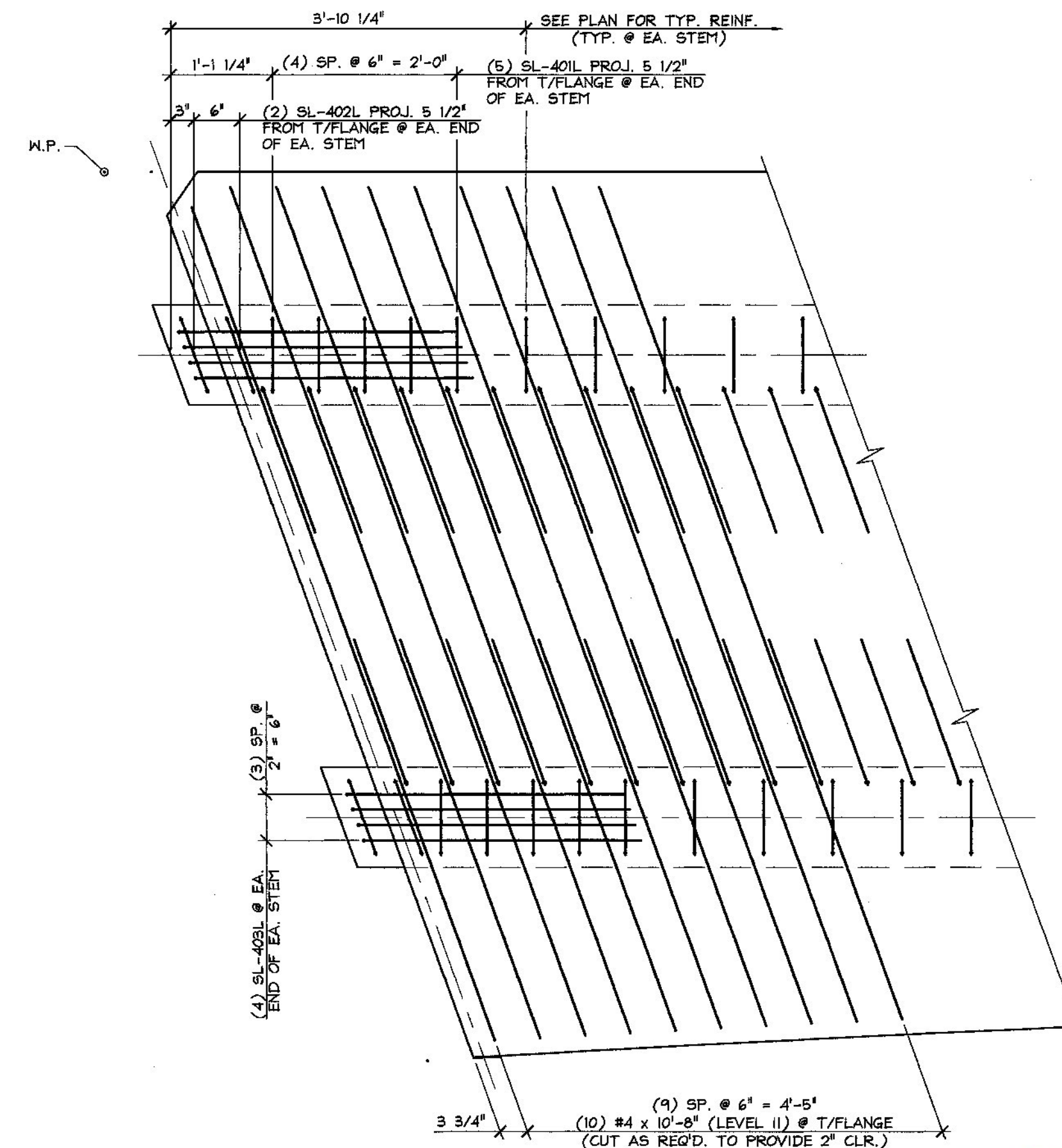
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3/16\"/>



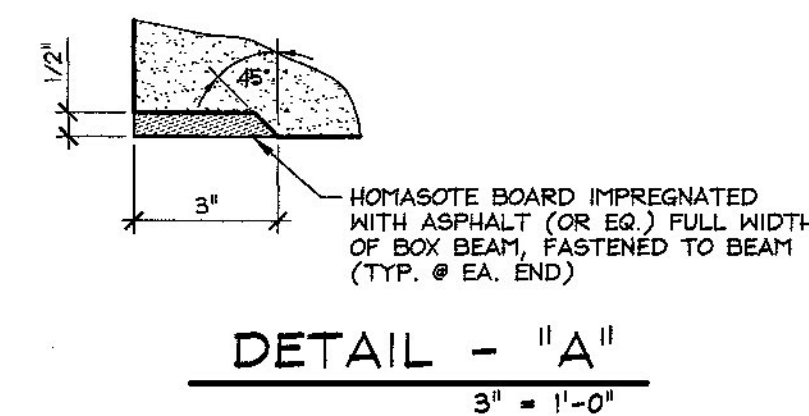
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B2
3/4\"/>



B END BLOCK STEM REINFORCING DETAILS
B2
3/4\"/>



C END BLOCK REINFORCING PLAN
B2
3/4\"/>

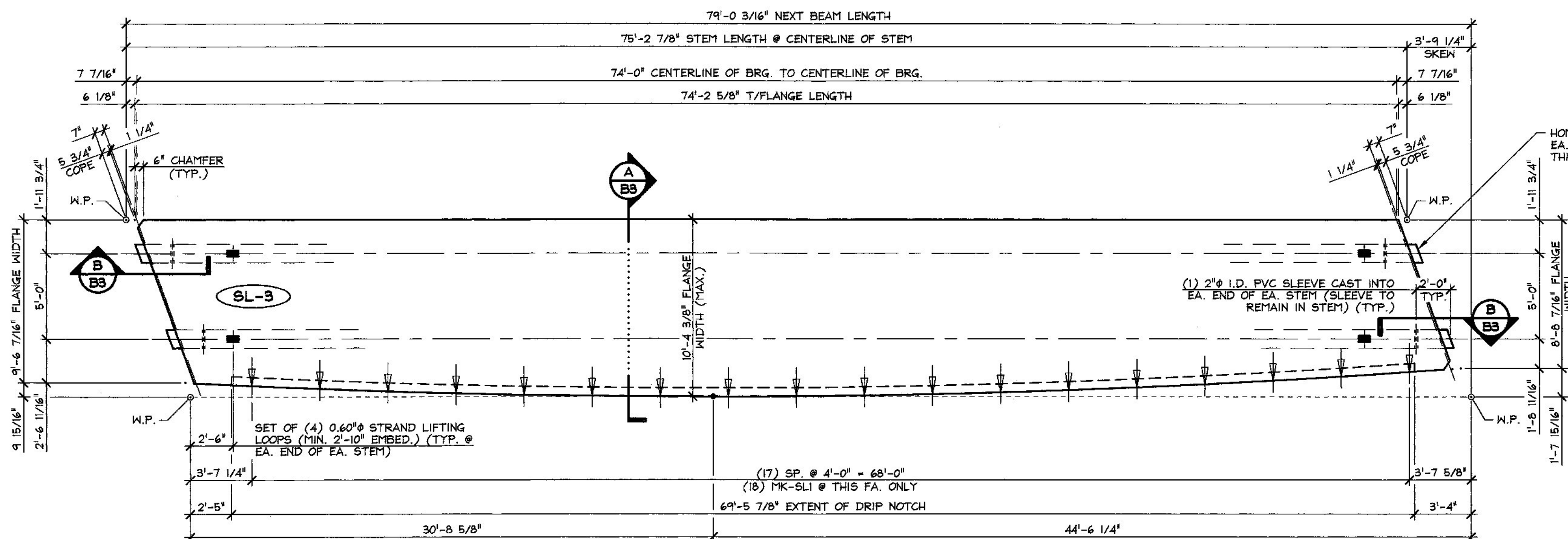


DETENSIONING SCHEDULE
N.T.S.

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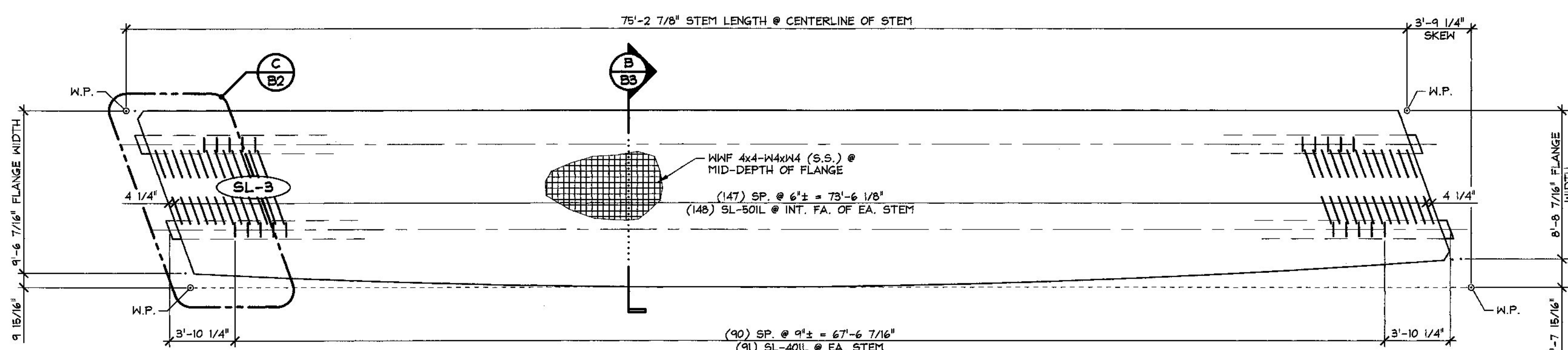
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2	SL-402L	#4 BENT BAR (LEVEL II)					8
3	SL-403L	#4 BENT BAR (LEVEL II)					16
4		#4 x 10'-8" (LEVEL II)					20
5							
	SL-501L	#5 BENT BAR (LEVEL II)					246
7							
8							
9							
10	MK-SLI	MODIFIED DAYTON SUPERIOR C-24 45' TYPE 4-APR HANGER (GALV.)					18
11							
12		WNF 4x4-W4x4 (STAINLESS STEEL) (10'-2" x 77'-8")					1
13							
14		SET OF (4) 0.60"ø x 270 KSI STRAND LIFTING LOOPS					4
15							

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	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF LAMOILLE		DATE: SEPT. 6, 2013 SCALE: NOTED	
	TOWN OF STOWE ROUTE NO. VT 100, MINOR ARTERIAL BRIDGE NO.: 208 PROJECT NO.: BRP 029-1(17)		CHKD: - DFTM: B.L. JOB NO: 23398-013	
	PRESTRESSED NEXT BEAM DETAILS		DWG. NO: B2	

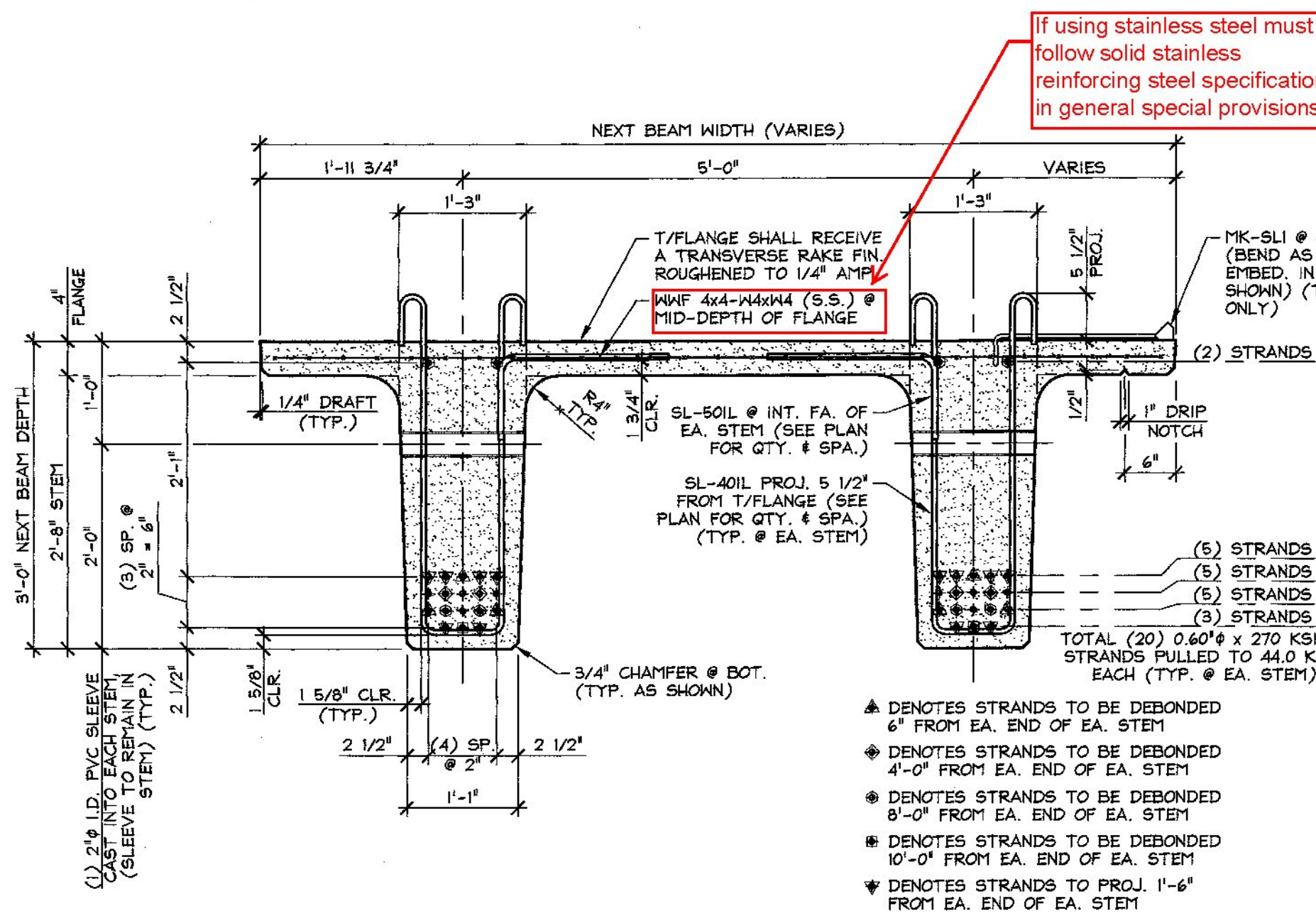


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B3

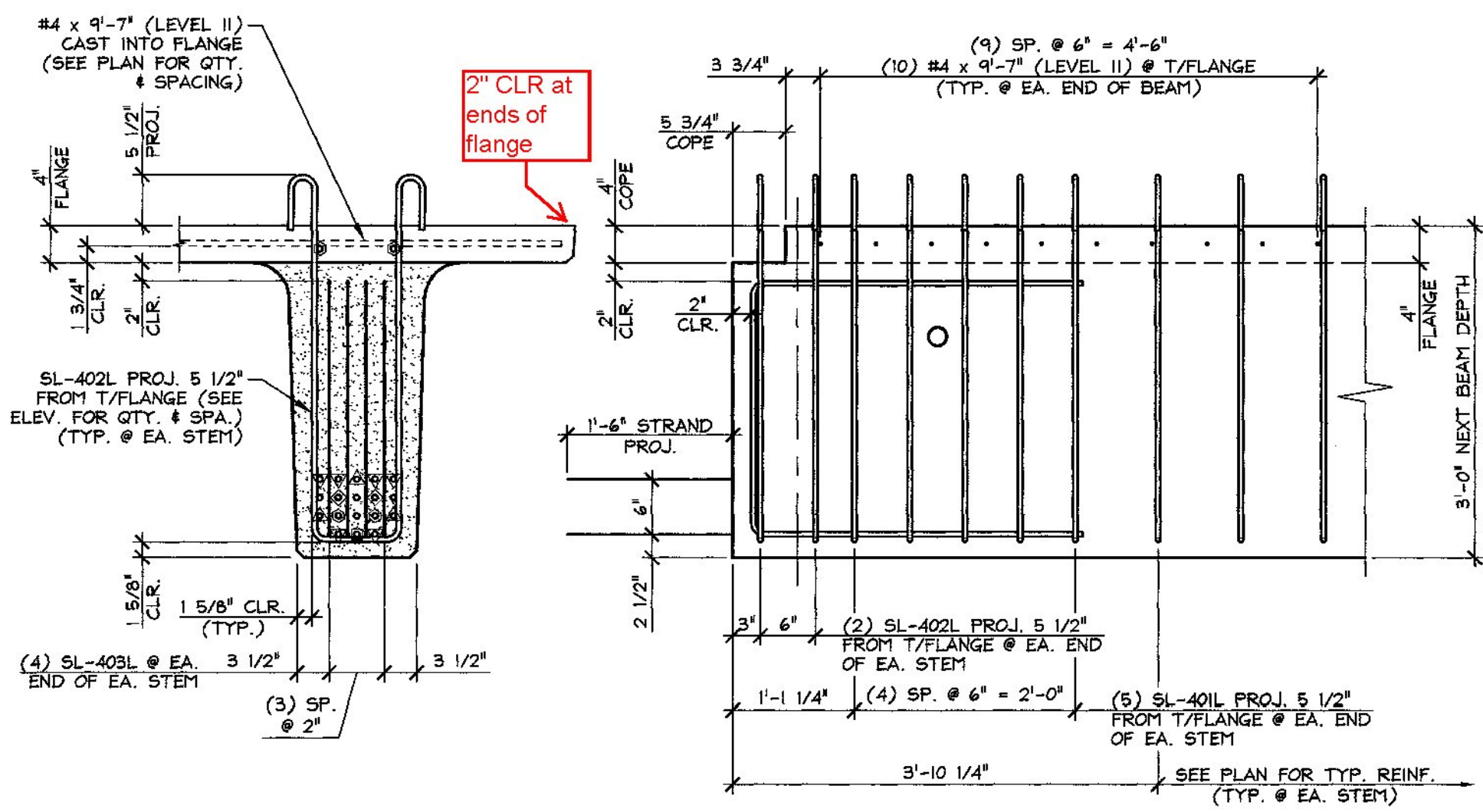
SHOP NOTE:
SEE SHEET "B4" FOR TOP
FLANGE CURVE DIMENSIONS



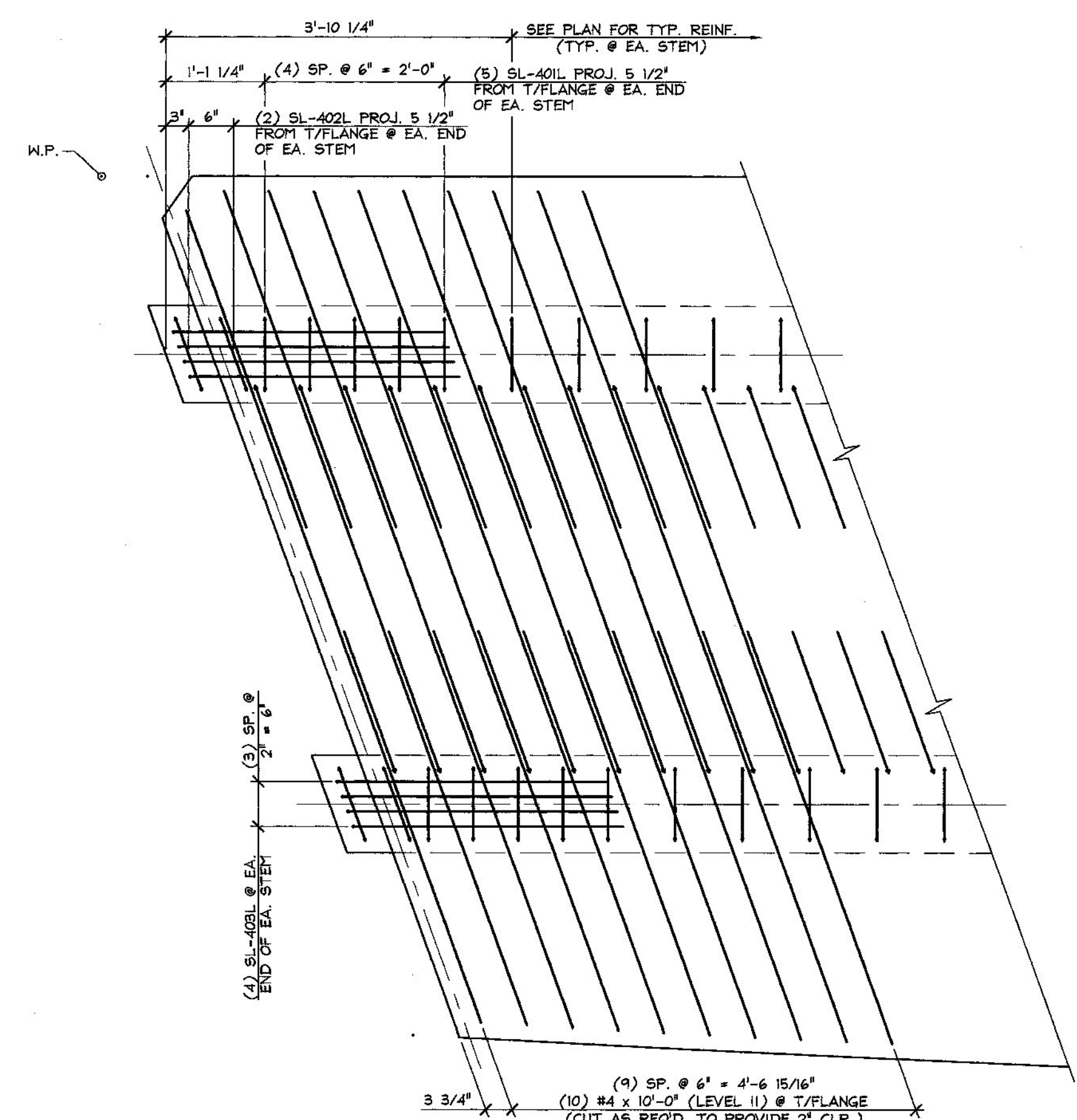
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B3



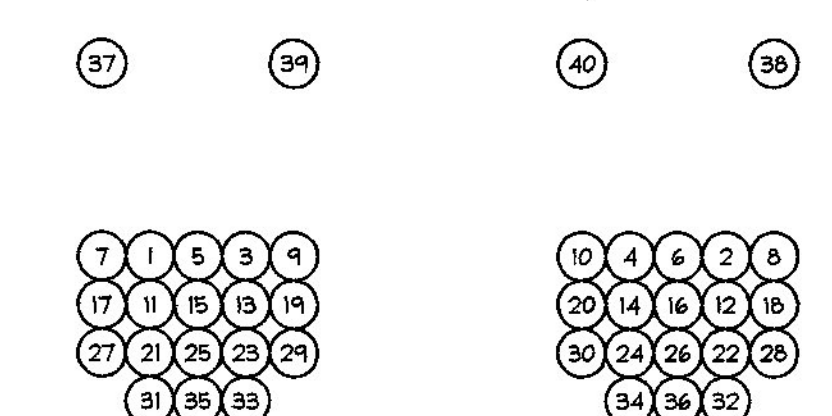
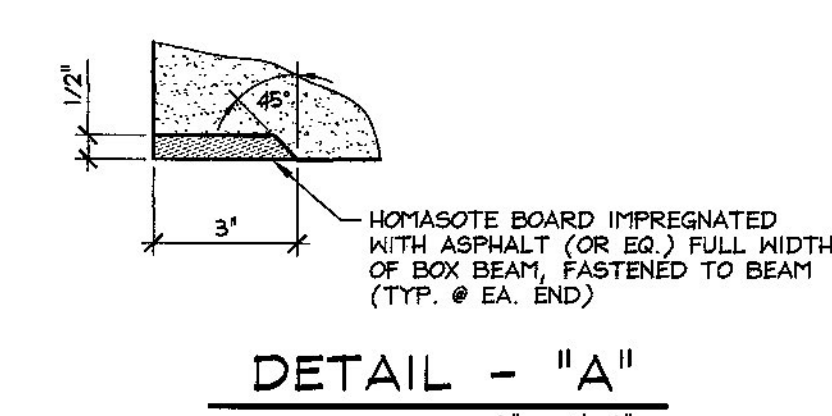
A DIMENSIONAL & REINFORCING SECTION
B3



B END BLOCK STEM REINFORCING DETAILS
B3



C END BLOCK REINFORCING PLAN
B3



DETENSIONING SCHEDULE
N.T.S.

MARK:	SL-3	QTY.: 1	WT.: 53.99 T	VOL.: 26.66 cy
MATERIAL LIST / NEXT BEAM				
ITEM	MARK	DESCRIPTION	QTY.	
1	SL-401L	#4 BENT BAR (LEVEL II)	202	
2	SL-402L	#4 BENT BAR (LEVEL II)	8	
3	SL-403L	#4 BENT BAR (LEVEL II)	16	
4		#4 x 10'-0\" (LEVEL II)	20	
5				
6	SL-501L	#5 BENT BAR (LEVEL II)	236	
7				
8				
9				
10	HK-SLI	MODIFIED DAYTON SUPERIOR C-24 45\" TYPE 4-APR HANGER (GALV.)	18	
11				
12		WNF 4x4-M4xM4 (STAINLESS STEEL) (10'-2\" x 7'-8\")	1	
13				
14		SET OF (4) 0.60\" x 270 KSI STRAND LIFTING LOOPS	4	
15				

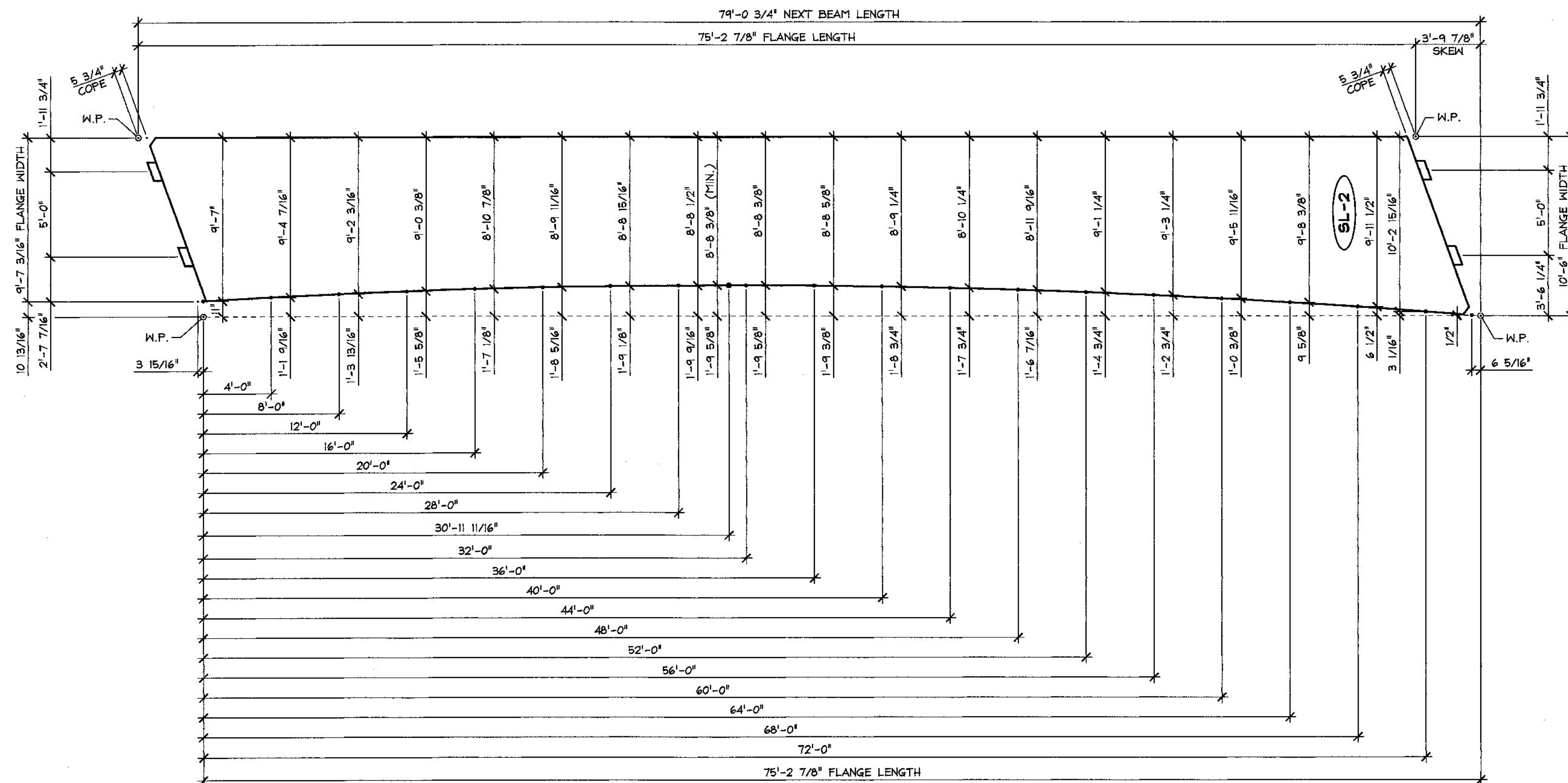
APPROVAL STAMP:	J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2464 CASE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010	AUSTIN CONSTRUCTION CONTRACTOR CONCORD, VERMONT
STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF LAMOILLE		DATE: SEPT. 6, 2013
TOWN OF STOWE ROUTE NO. VT 100, MINOR ARTERIAL BRIDGE NO.: 208 PROJECT NO.: BRP 029-1(17)		SCALE: NOTED
PRESTRESSED NEXT BEAM DETAILS		CHKD: - DFTM: B.L. JOB NO: 23398-013 DWG. NO: B3

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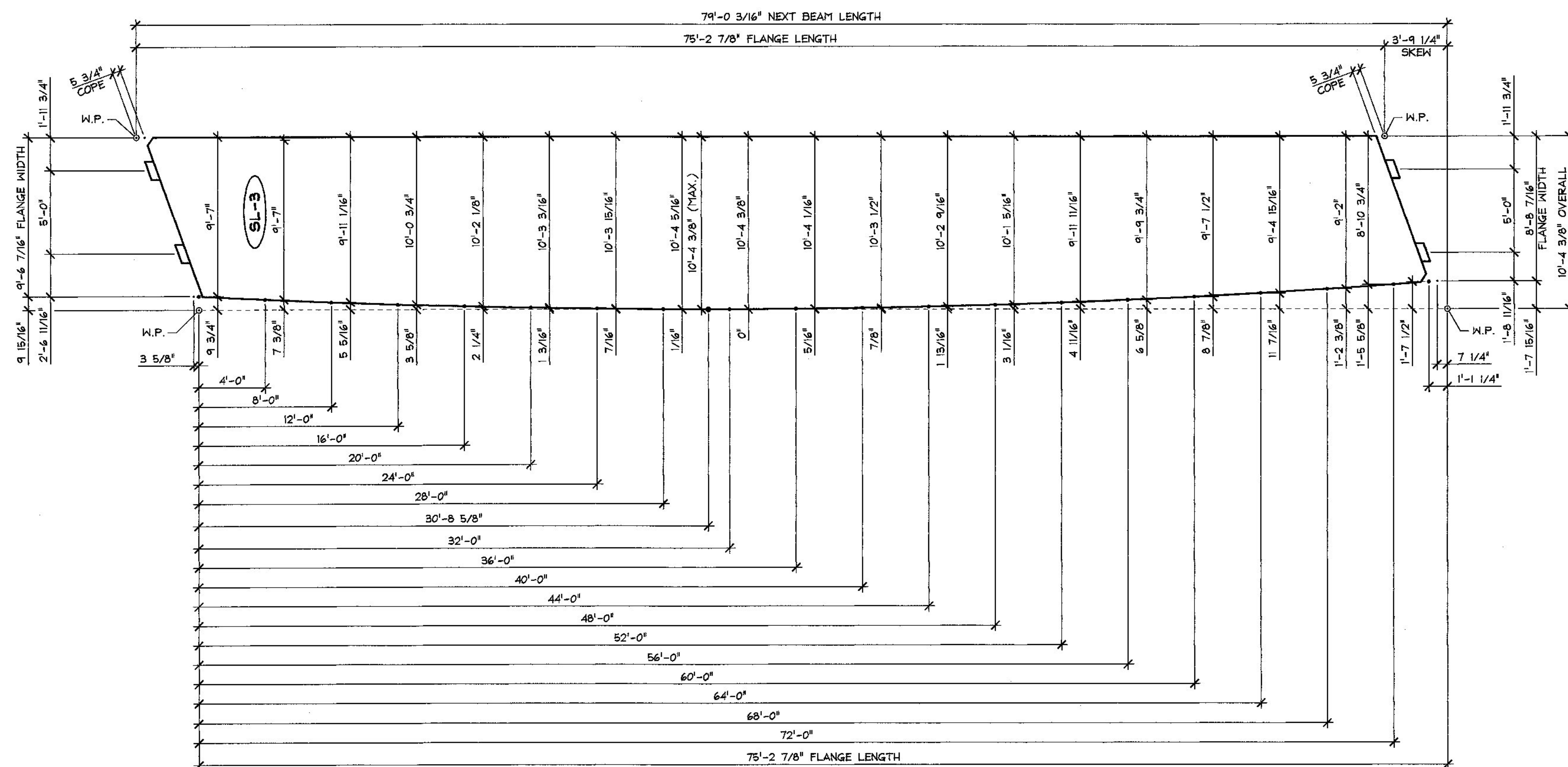
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September 9, 2013

RESUBMIT Approved AsNoted
BY C. Carlson DATE 10/02/2013



1 CURVED FLANGE LAYOUT
B4
3/16" = 1'-0"



2 CURVED FLANGE LAYOUT
B4
3/16" = 1'-0"

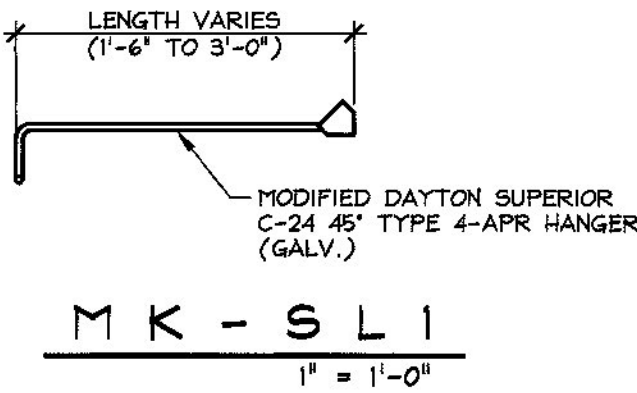
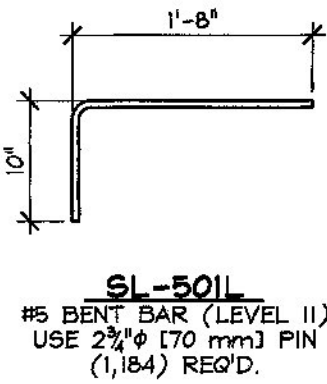
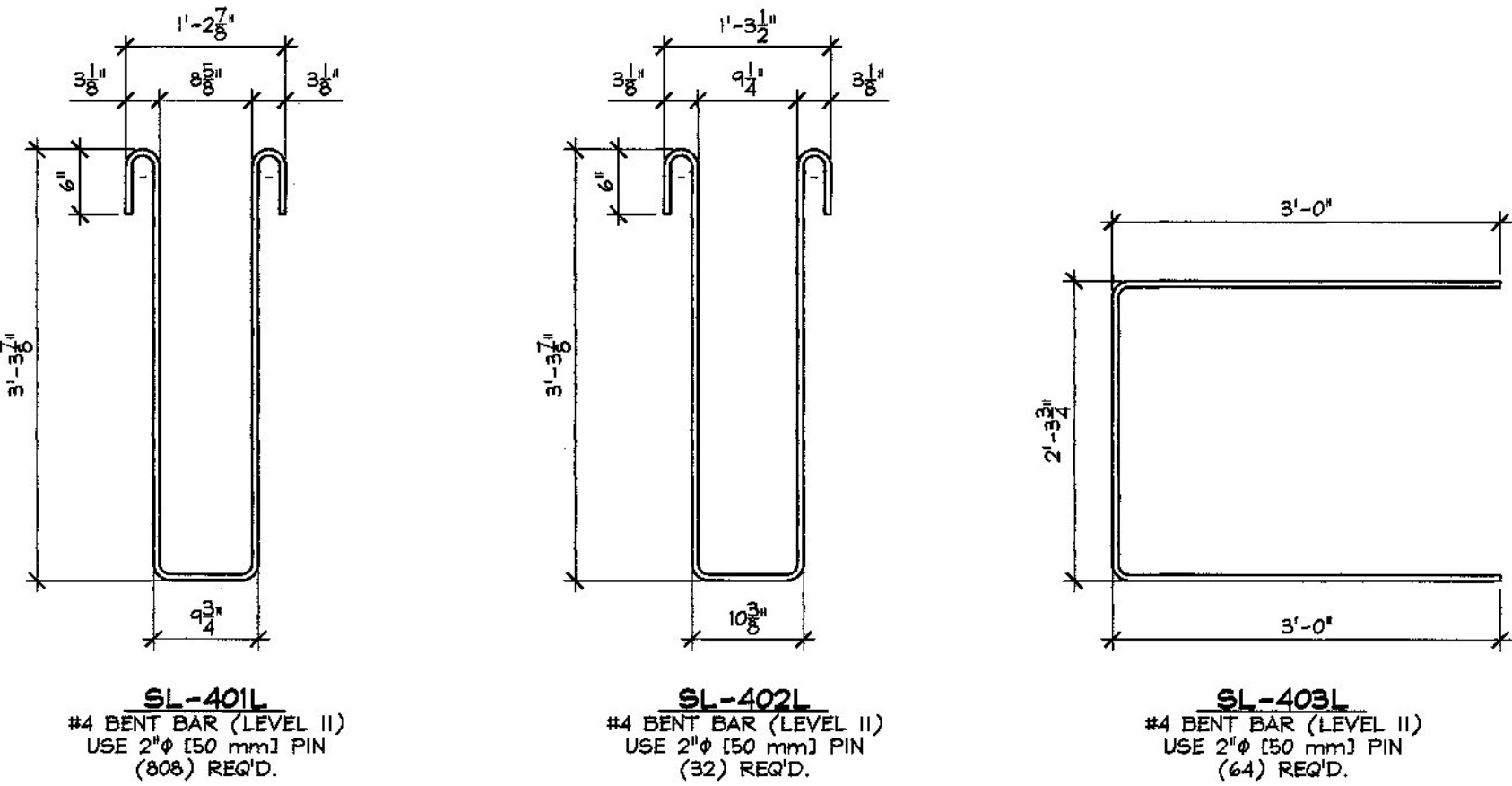
Vermont Agency of Transportation
RECEIVED

CK'D BY HIS OK'D BY CLB
September 9, 2013
RESUBMIT Approved
BY C. Carlson DATE 10/02/2013

APPROVAL STAMP:	J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2484 DGE STR., MIDDLEBURY, VERMONT 05753 Phone: (802)388-6361 Fax: (802)388-9010		AUSTIN CONSTRUCTION CONTRACTOR CONCORD, VERMONT	
	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF LAMOILLE		DATE: SEPT. 6, 2013	
	TOWN OF STOWE ROUTE NO. VT 100, MINOR ARTERIAL BRIDGE NO.: 208 PROJECT NO.: BRP 029-1(17)		SCALE: NOTED	
	TOP FLANGE CURVE DIMENSIONS		CHKD: - DFTM: B.L.	
			JOB NO: 23398-013	

DWG. NO: B4

MISCELLANEOUS MATERIALS				
ITEM	MARK	QTY.	DESCRIPTION	REMARKS
1		20	#4 x 8'-1" (LEVEL II)	
2		20	#4 x 10'-8" (LEVEL II)	
3		20	#4 x 10'-0" (LEVEL II)	
4				
5	MK-SLI	36	MODIFIED DAYTON SUPERIOR C-24 45° TYPE 4-APR HANGER (GALV.)	SEE DETAIL THIS SHEET
6				
7		2	W4F 4x4-W4x4 (STAINLESS STEEL) (7'-8" x 76'-10")	
8		2	W4F 4x4-W4x4 (STAINLESS STEEL) (10'-2" x 77'-8")	
9		16	SET OF (4) 0.60" x 270 KSI STRAND LIFTING LOOPS	
10				



Vermont Agency of Transportation

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Next F Beam Shop Drawings Approved.pdf

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September 9, 2013

RESUBMIT Approved
BY C. Carlson DATE 10/02/2013

APPROVAL STAMP:	J.P. CARRARA & SONS INC. Precast & Prestress Manufacturer 2404 GAGE STR., MIDDLEBURY, VERMONT 05753 Phone: (802) 388-6361 Fax: (802) 388-8010		AUSTIN CONSTRUCTION CONTRACTOR CONCORD, VERMONT	
	STATE OF VERMONT AGENCY OF TRANSPORTATION COUNTY OF LAMOILLE		DATE: SEPT. 6, 2013	SCALE: NOTED
	TOWN OF STOWE ROUTE NO. VT 100, MINOR ARTERIAL BRIDGE NO.: 208 PROJECT NO.: BRP 029-1(17)		CHKD: - DFTM: B.L.	JOB NO: 23398-013
	MATERIALS LIST		DWG. NO:	M1

Highway Safety Corporation

Glastonbury, CT

Welding Procedure Specification

Material specification A572 gr 50, A709 Gr 50
Welding process Gas Metal Arc Welding (GMAW) Spray Transfer
Manual, semi-automatic, or automatic Semi-Automatic
Position of welding Flat (1F) or Horizontal (2F)
Filler metal specification AWS A5.18
Filler metal classification ER70S-6
Electrode and manufacturer Lincoln Electric Lincoln Weld L-56
Flux and manufacturer N/A
Shielding gas 86% Argon / 14% CO2 Flow rate 35-45 CFM
Single or multiple pass Single or Multiple
Single or multiple arc Single
Welding current DCEP
Polarity Reverse - electrode positive
Welding progression Stringers
Root treatment clean base metal
Preheat and interpass temperature base metal up to 3/4" (50°F) ; over 3/4 thru 1-1/2" (150°F) : over 1-1/2" thru 2-1/2" (225°F)
Postheat treatment None
Electrode extension 3/4" ± 1/4"

WELDING PROCEDURE

Weld size	Pass no.	Electrode size	Welding parameters		Travel speed	Joint detail
			Amperes	Volts		
5/16"	1	0.062"	300 A ± 30	29 V ± 2	15 lpm ± 2	
7/16"	1 & 2	0.062"	↓	↓	15 lpm ± 2	

CK'D _____
Resubmit BY _____
JUL 18 2014
APPROVED _____
DATE 7/29/14

This procedure may vary due to fabrication sequence, fit-up, pass size, etc. within the limitation of variables given in section 5 of latest edition AWS D1.5

WPS no. W-VTPEDPOST1

Revision no. 0

Supporting PQR no. Pre-Qualified

Project Name STOWE, VT

Fabricator Highway Safety Corporation

Prepared By: Paul Radice

Date 07-14-14

Project Number BRF 029-1 (17)

Paul A. Radice
CWI 98070221
QC1 EXP. 7/1/2016

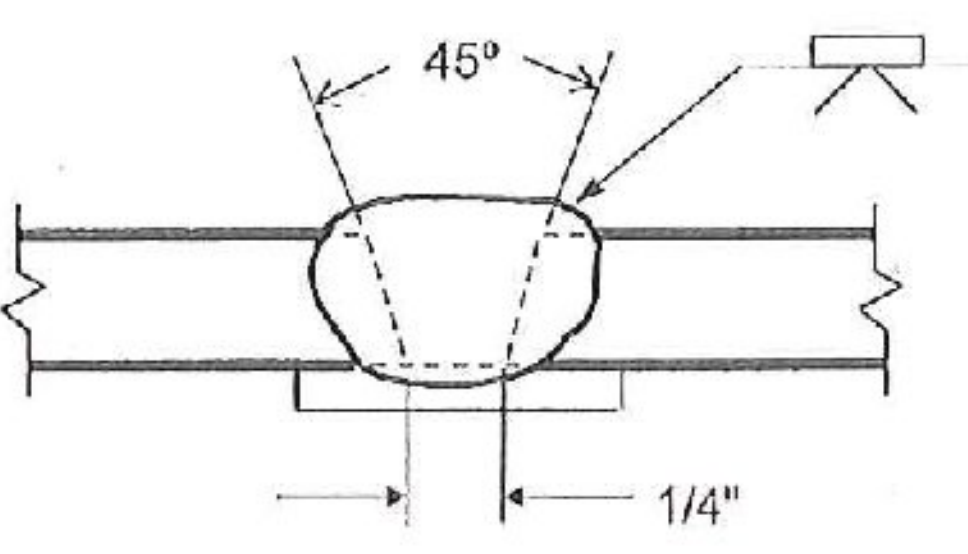
Highway Safety Corporation

Glastonbury, CT

Welding Procedure Specification

Material specification ASTM A500 gr B
Welding process Gas Metal Arc Welding (GMAW)
Manual, semi-automatic, or automatic Semi-Automatic
Position of welding Flat (1F) or Horizontal (2F)
Filler metal specification AWS A5.18
Filler metal classification ER70S-6
Electrode and manufacturer Lincoln Electric Lincoln Weld L-56
Flux and manufacturer N/A
Shielding gas 86% Argon / 14% CO2 Flow rate 35-45 CFM
Single or multiple pass Single
Single or multiple arc Single
Welding current DCEP
Polarity Reverse - electrode positive
Welding progression Stringers
Root treatment clean base metal
Preheat and interpass temperature base metal up to 3/4" (50°F)
Postheat treatment None
Electrode extension 3/4" ± 1/4"

WELDING PROCEDURE

Weld size	Pass no.	Electrode size	Welding parameters		Travel speed	Joint detail
			Amperes	Volts		
	1	0.063"	300 A ± 30	29 V ± 2	15 lpm ± 2	B-U2a-GF 
CKD JUL 18 2014 Resubmit BY APPROVED DATE 7/24/14 Vicans Received OK'd BY JWC						

This procedure may vary due to fabrication sequence, fit-up, pass size, etc. within the limitation of variables given in section 5 of latest edition AWS D1.1

WPS no. W-VGwBCK
Revision no. 0
Supporting PQR no. Pre-Qualified
Project Name STOWE, VT
Fabricator Highway Safety Corporation
Prepared By: Paul Radice
Date 07-14-14
Project Number BRF 029-1 (17)

Paul A. Radice
CWI #0070221
CWI Exp. 7/1/2016